

Leased Lines Charge Control

Proposals for a new charge control framework for certain leased lines services

Consultation

Publication date: Closing date: 5 July 2012 30 August 2012

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Section 1

Summary

Overview

- 1.1 This consultation document contains Ofcom's specific proposals for new charge controls for certain leased lines services provided by BT.
- 1.2 A leased line is, in essence, a communications service which provides dedicated transmission capacity between fixed locations, which can be used to carry voice and data traffic. Many organisations, both in the private and public sectors, use leased lines to support a wide variety of information and communications technology ('ICT') applications, such as access to the internet, private voice and data networks, backup and disaster recovery, remote monitoring and telemetry applications.
- 1.3 Leased lines are also used by communications providers ('CPs') as a key building block in their communications networks. For example, mobile network operators ('MNOs') use large volumes of leased lines to carry mobile voice and data traffic between their radio base stations and their switching centres. Similarly, providers of fixed broadband services use substantial volumes of leased lines to carry traffic between local aggregation points, such as BT's local exchanges, and their core networks.
- 1.4 On 18 June 2012 we published the Business Connectivity Market Review Consultation ('the BCMR Consultation') in which we set out our analysis of competition in the provision of leased lines services in the UK¹. This analysis indicates that BT has Significant Market Power ('SMP') in the provision of a number of wholesale leased lines services. To address this SMP a number of remedies are proposed, including charge controls in some of the relevant markets which we have identified. This separate consultation therefore supplements that publication by seeking views from interested parties about our specific charge control proposals.

Our approach

- 1.5 In developing and designing our charge control proposals we have had regard to a number of objectives², amongst which:
 - we want to ensure that the prices for wholesale leased lines services are not excessive and are broadly in line with the cost of provision. Wholesale prices for leased lines are likely to be reflected in retail prices. Excessive wholesale prices are likely to result in excessive retail prices, which would be to the detriment of consumers.
 - we are seeking to promote efficiency in the provision of wholesale leased lines services. Through the structure of the charge control, it is possible to provide BT with the opportunity to make efficiency improvements. These improvements would also be in the interest of consumers, as they can ultimately share the benefits of greater efficiency.

¹ See <u>http://stakeholders.ofcom.org.uk/consultations/business-connectivity-mr/</u>

² See paragraph 2.45.

- 1.6 We propose to introduce an RPI³-X type control for the proposed main basket controls. This type of control aims to align prices with cost at the end of the charge control period (i.e. 2015/16). This approach has been widely used in the regulation of UK utilities, including those in the telecommunications sector. However, where competition is more established, in the West, East and Central London Area (the 'WECLA'), we propose a more deregulatory approach, with a 'safeguard cap'.
- 1.7 In the BCMR Consultation, we set out why we have chosen a forward-looking period of three years for this review. We consider that the duration of the proposed charge controls should be consistent with this forward-looking period.
- 1.8 Similarly to the existing leased lines charge controls, we propose to charge control traditional interface ('TI') and Ethernet services (known as alternative interface ('AI')) in separate baskets. However, in contrast to the existing controls, we propose to incorporate some of the additional ancillary services in the main baskets, e.g., associated ancillary services and equipment. We also propose to apply a number of sub-caps on certain services where the overall basket cap may not offer sufficient protection to customers.
- 1.9 Overall, we consider that our charge control proposals are appropriate to secure or further our statutory duties, including to ensure that we further the interests of citizens and consumers in the relevant leased lines markets.

Summary of proposals

- 1.10 We are proposing to have two separate service baskets for wholesale services:
 - TI; covering low, medium and high bandwidth services outside the WECLA, low bandwidth services within the WECLA and regional trunk services at all bandwidths.
 - ii) Ethernet; covering services up to and including 1Gbit/s outside the WECLA and Ethernet services above 1Gbit/s outside the WECLA.
- 1.11 In addition, we are proposing to separately control excess construction charges ('ECCs'), accommodation services and AI services in the WECLA; covering AI services up to and including 1Gbit/s inside the WECLA.
- 1.12 Our proposed central cases for the TI basket and Ethernet basket are RPI+3.25% and RPI-12% respectively. In respect of the AI services in the WECLA, we are proposing to apply a safeguard cap of RPI-RPI on each relevant service.
- 1.13 For ECCs, we are proposing average starting charge adjustments of -30% and then a sub-cap of GBCI⁴-0% on each charge. For accommodation services, we are proposing a sub-cap of RPI-0% on each charge.
- 1.14 Following the recommendation within the BCMR, we also propose a safeguard cap on TI retail analogue services, which we propose to set at the same level as the overall TI basket of RPI+3.25%.
- 1.15 Table 1.1 below summarises our proposals.

³ Retail Price Index.

⁴ General Building Cost Index.

	Services within scope	Provisional value of X	Sub baskets & Sub- caps*
TI basket	Connection and rental charges for: Wholesale low, medium and high bandwidth PPCs outside the WECLA Wholesale low bandwidth PPCs inside the WECLA Regional Trunk (all bandwidths) – rental RBS, Netstream 16 Longline and SiteConnect TI equipment and infrastructure TI ancillary services(excluding ECCs)	RPI+3.25%	Point of Handover sub- basket (RPI-0%) RBS, Netstream 16 Longline and SiteConnect sub-basket (RPI+3.25%) Ancillary services, equipment and infrastructure sub-cap (RPI+3.25%) TI all other services sub- cap (RPI+10%)
Ethernet basket	Connection and rental charges for: Ethernet services (up to and above 1Gbit/s) outside the WECLA Ethernet services (above 1Gbit/s) outside the WECLA Ethernet ancillary services (excluding ECCs)	RPI-12%	Interconnection services sub-basket (RPI-12%) Ethernet all other services sub-cap (RPI-RPI)
Excess Construction Charges		GBCI-0% on each charge	
Accommodation services	Access Locate Administration Fee Cablelink	RPI-0% on each charge	
AI services in the WECLA	Wholesale low bandwidth Al services (up to and including 1Gbit/s) in the WECLA	RPI-RPI on each charge	
Retail Analogue basket	Rental charges	RPI+3.25%	Retail analogue sub-cap (RPI+10%)

Table 1.1 Summary of our proposals (based on a mid-point of our range)

*Sub-baskets control applies to the weighted average value of revenues of services within the basket. This is in contrast to a sub-cap which applies to each charge.

1.16 We consider that these charge controls proposals are sufficient to constrain BT's pricing. They will provide incentives to make efficiency improvements and are appropriate for achieving the other objectives pursued. We are therefore not proposing to impose a cost orientation obligation in addition to these charge controls.

Consultation

1.17 We welcome and invite views and comments on our proposals in this document by no later than 30 August 2012. Following our consideration of responses, we will consult with the European Commission, the Body of European Regulators for Electronic Communications ('BEREC') and national regulators in other member states before reaching our decision on our proposals. We expect to publish our statement early in 2013.

Section 2

Introduction

Background

- 2.1 In our recent consultation entitled, the 'Business Connectivity Market Review', published on 18 June 2012 (the 'BCMR Consultation')⁵, we set out our proposals based on our review of competition in the provision of leased lines in the UK.
- 2.2 In the BCMR Consultation, we proposed in particular that:
 - BT has significant market power ('SMP') in a number of retail and wholesale leased lines markets;
 - sector-specific obligations by means of SMP conditions should be imposed on BT to address its market power; and
 - the SMP conditions should include price controls in the form of either a charge control or a safeguard cap to address the risk of excessive pricing and pricing distortions.
- 2.3 This consultation contains our specific proposals for price controls, including the scope, design, form and levels of the charge controls. We supplement the BCMR Consultation by providing reasoning on how we propose the charge control would operate to address the competition concerns identified and how we expect BT to comply with the proposed price controls. In addition, this consultation document explains our reasoning relating to the implementation of the proposed price controls. In light of our proposals in this consultation, we also supplement the BCMR Consultation by providing further reasoning for our proposal not to impose a cost orientation obligation on BT in addition to the specific controls.
- 2.4 In this Section, we explain the background to our price control proposals. In particular, we start by recapping on some of the key characteristics of leased lines⁶. We then summarise the scope of current leased line charge controls (the 'LLCC 2009') that we imposed on BT in 2009 together with other matters that we have had regard to in making these specific proposals, including the need to balance specific policy objectives (as derived from our statutory duties) when developing our proposals.

The key characteristics of leased lines

- 2.5 Leased lines provide dedicated transmission capacity between fixed locations, and are essential components of information and communications technology ('ICT') services used by businesses.
- 2.6 Many organisations, both in the private and public sectors, use leased lines to support a wide variety of ICT applications, such as access to the internet, private voice and data networks, backup and disaster recovery, remote monitoring and telemetry applications.

⁵ See <u>http://stakeholders.ofcom.org.uk/consultations/business-connectivity-mr/</u>

⁶ See paragraphs 2.5 to 2.31 of the BCMR Consultation for a more detailed explanation of the characteristics of leased lines.

- 2.7 Leased lines are also used by communications providers ('CPs') as a key building block in their communications networks and hence support the consumer services provided by these CPs. For example, mobile network operators ('MNOs') use large volumes of leased lines to carry mobile voice and data traffic between their radio base stations and their switching centres and providers of fixed broadband services use substantial volumes of leased lines to carry traffic between local aggregation points, such as BT's local exchanges, and their core networks.
- 2.8 In this consultation we consider leased lines that employ technologies in common use in the UK. We classify those technologies in two groups: those delivered using the legacy Traditional Interface ('TI') technology and the newer Alternative Interface ('AI') technology.
 - **TI leased lines**: This group includes services which use legacy analogue and digital interfaces. These have hitherto been the most common types of leased line used in the UK, but their volume is now in sustained decline.
 - Al leased lines: This group of digital leased lines services uses modern interfaces, such as Ethernet, that are generally more suitable for transmission of Internet protocol ('IP') data, and are often more cost-effective in delivering high bandwidth services than legacy technologies.
- 2.9 We also consider leased lines delivered using wave division multiplexing ('WDM') technology, which is explained more fully in the BCMR Consultation and, is most commonly used to provide circuits with AI interfaces such as Ethernet or Fibre Channel⁷. However, it also supports the TI synchronous digital interface ('SDH') and is therefore multi-interface.
- 2.10 As noted in the BCMR Consultation, the capacity demanded of leased lines has been increasing in recent years and seems set to continue to increase⁸. Businesses' need for bandwidth is being driven by a number of factors, including increased adoption of remotely hosted ICT applications (often referred to as 'cloud computing'), greater consumption of bandwidth hungry applications and video content and increased reliance on the internet as a means of communicating and transacting with employees, customers and suppliers.
- 2.11 There has seen a shift in demand from legacy based leased lines to modern Ethernet and WDM services. This trend is forecast to continue over the course of the upcoming charge control period.

Scope of the LLCC 2009

2.12 Sector-specific regulation by means of SMP conditions to address possible risks of adverse effects arising from any price distortion by BT in relation to leased lines has been in place for many years. In our Statement concerning the LLCC published in 2009 (the 'LLCC 2009')⁹, we expanded the number of services that are subject to charge controls to include TI Trunk and low bandwidth AI services. This was a result of the conclusions we reached in the statement for the Business Connectivity Market Review published in 2008 (the 'BCMR 2008')¹⁰ in which we identified BT as having SMP in the wholesale Traditional Interface Symmetric Broadband Origination

⁷ See paragraph 3.247 of the BCMR Consultation.

⁸ See paragraphs 2.16 to 2.22 of the BCMR Consultation.

⁹ http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/llccstatement.pdf

¹⁰ http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr/statement/research.pdf

('TISBO') and Alternative Interface Symmetric Broadband Origination ('AISBO') markets for leased lines in the UK (excluding the Hull area), including:

- low bandwidth TISBO services up to and including 8Mbit/s;
- high bandwidth TISBO services above 8Mbit/s up to and including 34/45Mbit/s (outside the Central and East London('CELA') area);
- very high bandwidth TISBO services above 34/45Mbit/s up to and including 140/155Mbit/s (outside the CELA area);
- Iow bandwidth AISBO services up to and including 1Gbit/s; and
- TISBO trunk segments at all bandwidths.
- 2.13 In addition to imposing charge controls on the services listed above, we extended the charge controls to all interconnection and accommodation services relating to BT's provision of them. We also imposed sub-caps¹¹ on some individual prices and some sub-baskets¹² as part of the charge control, to seek to ensure that the charge controls delivered our stated policy objectives as set out in paragraphs 2.14 and 2.15 of the LLCC 2009 Statement.
- 2.14 The current leased line charge controls came into effect for the three years from 1 October 2009 to 30 September 2012. We summarise in Table 2.1 below the scope and levels of those controls.

Basket	Services in scope	Value of X	Value of sub-cap
TI	Wholesale low bandwidth TISBO (≤8Mbit/s) – connections and rental Wholesale high bandwidth TISBO (>8Mbit/s and ≤34/45Mbit/s) – outside CELA connections and rental Wholesale high bandwidth TISBO (>34/45Mbit/s and ≤145/155Mbit/s) – outside CELA connections and rental Trunk all bandwidths) - rental	RPI-3.25% ¹³	RPI-0% sub-cap on sub- basket of TISBO terminating segments RPI+5% sub-cap on each charge (excluding POH charges) RPI-0% sub-cap on each charge (POH charges only)
Equipment and Infrastructure (TI)	All relevant equipment and infrastructure charges	RPI-0%	No charge to increase by more than 5% in nominal terms

Table 2.1: Summary of the LLCC 2009

¹¹ Sub-caps are 'price-point' controls. These can be used in conjunction with basket controls, or as a stand-alone control.

¹² Sub-baskets control a group of services within a 'main' basket. Sub-baskets impose a constraint on the weighted average charge for the services in question. Therefore, the sub-basket maintains the flexibility to balance in a similar way as the main basket would allow.

¹³ Following the subsequent appeal of the LLCC 2009, this changed to RPI-1.75% for 2010/11 and 2011/12.

Ancillary Services (TI)	All relevant ancillary services used in the provision of TI services in scope of the TI Basket	RPI-0%	None
AI	Wholesale low bandwidth AISBO (≤1Gbit/s) – connection and rental	RPI-7%	RPI-0% sub-cap on sub- basket of BES RPI+5% sub-cap on each charge
Accommodation (AI)	Access Locate	3.5% nominal terms (2009/10) RPI+4.5%	Controlling percentage ± on each charge
	AI Accommodation Administration Fee	(2010/11)	RPI-0%
Ancillary Services (AI)	All relevant ancillary services used in the provision of Al services in scope of the Al Basket	RPI-0%	None

Appeal against the LLCC 2009 Statement

- 2.15 Cable and Wireless Worldwide ('C&WW') appealed a number of the decisions we made in the LLCC 2009, in relation to specific services in the TI basket.
- 2.16 The appeal was lodged to the Competition Appeal Tribunal ('CAT') and subsequently referred to the Competition Commission ('CC') for its consideration.
- 2.17 The CC issued its Final Determination ('CC Determination') on 30 June 2010¹⁴ followed by the CAT's order. The CC concluded that Ofcom had not erred in the decision in relation to a number of the grounds of appeal, such as our decision with respect to the cost of capital. However, the CC concluded that we had erred in respect of the following areas:
 - in permitting the starting charge increases for 2Mbit/s local ends as part of the one-off adjustments to starting charges¹⁵;
 - in the allocation of costs in relation to the 21CN cost adjustment and the allocation of costs to SiteConnect; and
 - in using BT's estimate of the costs to be recovered by the Point of Handover ('POH') charges, in determining that the recovery of POH charges was appropriate for promoting sustainable competition and in giving BT the discretion regarding future charges for POH.

¹⁴ <u>http://www.competition-</u>

<u>commission.org.uk/appeals/communications_act/final_determination_excised_version_for_publication</u> .pdf

¹⁵ We usually prefer to bring prices into line with costs gradually over the life of the control using an RPI-X glidepath. We sometimes also make one-off adjustments to charges at the start of a control where they are markedly out of line with costs. This was the case in the LLCC 2009. We made a number of such one-off changes, but also allowed a one-off increase in the 2Mbit/s local end charge proposed by BT in order to preserve an overall balance between one-off changes and the glidepath and hence maintain efficiency incentives. The CC did not agree with our justification for making this adjustment.

- 2.18 Following the CC's determination and the CAT's Ruling, BT was required to amend its 2Mbit/s local end charges and adjustments were made to BT's final year costs to reflect errors with respect to the allocation of 21CN and SiteConnect costs¹⁶. These adjustments resulted in a revised value of X from 3.25% to 1.75% for the TI basket for the charge control years 2010/11 and 2011/12¹⁷.
- 2.19 In September 2011, we also mandated that a number of POH charges are set at the long run incremental costs ('LRIC') from 1 October 2011 to 30 September 2012¹⁸. This is discussed in more detail in Annex 6.
- 2.20 In developing our proposals for these charge controls, we have had regard to the issues raised in the appeal where they may have some wider implications for our proposals in this consultation. In particular, we have considered:
 - the appropriateness of making start charge adjustments, including how the proposed adjustments impact the regulatory framework more widely including:
 - o the level of outperformance from previous charge controls;
 - o the impact of adjustments on key 'health' indicators of BT's financeability;
 - balancing between the appropriateness of these adjustments against the glide-path approach to allow for cost convergence over the charge control period;
 - alternative regulatory options for the appropriate cost standard for charges which are consumed by external parties only, for example interconnection products;
 - if it is appropriate for us to calculate a leased lines specific cost of capital or use the 'rest of BT' cost of capital; and
 - whether we should be setting the detailed pricing structures or leaving this to BT subject to an overall basket constraint on average charges.

Relationship with the BCMR Consultation

- 2.21 The purpose of the BCMR Consultation is threefold:
 - i) to identify and define the proposed relevant markets¹⁹;
 - ii) to propose whether any of those markets are effectively competitive. This involves proposing whether any operator has SMP in any of the markets²⁰; and
 - iii) where there has been a proposed finding of SMP, to propose the appropriate remedies which should be imposed, based on the nature of the competition problem identified in the proposed relevant markets²¹.

pricing/statement/final-statement.pdf

¹⁶ See Table 6.6 of the CC Determination.

 ¹⁷ See paragraph 1.11 of the LLCC 2009– Amendment to SMP Services Conditions
 <u>http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/LLCC_decision_final.pdf</u>
 ¹⁸ http://stakeholders.ofcom.org.uk/binaries/consultations/revision-points-handover-

¹⁹ See Sections 3 to 6 of the BCMR Consultation.

²⁰ See Section 7 of the BCMR Consultation.

²¹ See Sections 8 to 14 of the BCMR Consultation.

- As explained in the BCMR Consultation²², this consultation is one part of the market 2.22 review as a whole and falls under the third purpose, as set out above. Whilst it has been published separately to the BCMR Consultation, we have reached our views on the proposed price controls as part of our overall market analysis and proposals. This document should therefore be read in conjunction with the BCMR Consultation.
- 2.23 This consultation does not seek to duplicate all the information and reasoning set out in the BCMR Consultation, which remains relevant to fully understand why we have reached the present proposals, including the context for them. However, we supplement the BCMR Consultation in this document by providing more detailed reasoning for the specific proposals on which we now invite responses. We therefore set out in this document our additional reasoning as to why we consider our detailed proposals regarding matters such as methodology, form, scope and levels of proposed charge controls meet each of the relevant legal tests and duties set out in the Act, so that respondents can consider and respond to them.

Proposals not to impose cost orientation

- 2.24 The BCMR Consultation has specified the markets in which it proposes to find that BT has SMP. In addition, in light of the SMP assessment, the BCMR Consultation has identified a relevant risk of adverse effects arising from price distortion as a result of BT's ability and incentive to price excessively the services it provides that fall in the markets listed above. In order to address this risk, it has proposed that these services should be subject to some form of price control²³.
- As explained in the BCMR Consultation, a price control can take various forms, 2.25 including, but not limited to, a charge control, cost orientation and/or a safeguard cap²⁴. In summary, the BCMR Consultation has proposed that a charge control or a safeguard cap would be the most appropriate form of price control²⁵. These proposals are explained in greater depth in Sections 5 to 9 of this consultation. However, the BCMR Consultation also proposed that, in light of its market analyses and in seeking to address the risk of excessive pricing, it did not consider it necessary to impose a cost orientation obligation on the prices of services:
 - inside the scope of the proposed charge controls; and
 - outside the scope of the proposed charge controls.
- We are aware that this represents a change from the 2007/08 Review²⁶. In those 2.26 markets in which we imposed price control obligations, we decided that those obligations should include, alongside any charge controls, the imposition of a wider cost orientation obligation. The cost orientation obligation applied to charges for

²² See, for example, Section 2 and Annex 6 of the BCMR Consultation.

²³ See Sections 8 to 12 of the BCMR Consultation where, amongst other things, we identify the competition problems and set out the appropriate remedies that we propose to impose in each of the relevant markets.

²⁴ See section 87(9) of the Act, implementing Article 13 of the Access Directive (Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2022 on access to, and interconnection of, electronic communications networks and associated facilities, OJ L 108, 24.04.2002, p7, as amended). See also, in this respect, Sections 8 to 12 of the BCMR Consultation, in particular paragraphs 8.25, 9.134, 9.138 and 9.139, 10.102, 11.163, 12.74 and 12.153.

⁵ In this sub-Section, we use the term 'charge control' to include both charge controls and safeguard caps. ²⁶ See http://stakeholders.ofcom.org.uk/consultations/bcmr08/

services both within and outside of the scope of the charge controlled services in the relevant market.

- 2.27 However, it is important to highlight that the price control proposals set out in the BCMR Consultation and explained in greater detail in this consultation are those that we consider are appropriate now, in light of the market analysis we have carried out, to:
 - address the risk we have identified of BT engaging in excessive pricing;
 - promote efficiency;
 - promote sustainable competition; and
 - confer the greatest possible benefits on end-users.²⁷
- 2.28 Consequently, our proposals not to apply cost orientation both to services within and outside of the scope of the proposed charge controls are based on the market analysis we have carried out and in light of the particular design of the charge controls such that²⁸:
 - we do not consider there is a relevant risk of BT pricing these services excessively; and
 - it does not appear to us that imposing price controls on these services would be appropriate to promote efficiency and sustainable competition, and confer the greatest possible benefits on end-users.
- 2.29 In the paragraphs below we provide some clarification with regard to the proposal not to impose a cost orientation obligation on the prices of services outside the scope of the proposed charge controls²⁹.
- 2.30 The scope of the proposed charge controls encompass all services BT provides that fall in the markets to which the charge controls are proposed to apply, except for the services listed below,
 - TI retail low bandwidth (≤8Mbit/s) digital leased lines services;
 - Symmetric Digital Subscriber Line ('SDSL') services;
 - wholesale high bandwidth (>1Gbit/s) WDM MISBO services outside the WECLA and the Hull Area; and
 - Time Related Charges ('TRCs').
- 2.31 In relation to our reasoning as to why we do not propose to impose cost orientation on TI retail low bandwidth digital leased lines services, as explained in the BCMR Consultation, under section 91(2) of the Act³⁰ we may only impose retail regulation

²⁷ See, in this respect, section 88(1) of the Act.

 $^{^{28}}$ See Sections 5, 6, 7, 8 and 9 below in which we set out our proposed price controls in detail.

²⁹ Our reasoning for not imposing an additional cost orientation obligation on the prices of services within the scope of the proposed charge controls is set out in the relevant Sections below.

³⁰ Implementing Article 17(1) of the Universal Service Directive (Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights

where wholesale regulation in the upstream market would not suffice to achieve our duties and objectives with regards to the relevant downstream market.

- 2.32 Unlike the retail analogue services, BT provides upstream wholesale inputs for retail low bandwidth digital leased lines services. In light of its market analysis, the BCMR Consultation has considered it appropriate:
 - in relation to retail sub 2Mbit/s digital services, to rely on its proposals regarding the regulated provision, including a proposed charge control, of the relevant wholesale inputs to address the risk of BT pricing these services excessively;
 - in relation to retail 2Mbit/s services, that its proposals regarding the regulated provision, including a proposed charge control, of the relevant wholesale inputs are sufficient and that BT should not be subject to any SMP obligations; and
 - in relation to retail 8Mbit/s services, that its proposals regarding the regulated provision, including a proposed charge control, of the relevant wholesale inputs are sufficient and that it would be disproportionate to maintain retail regulation for these services³¹.
- 2.33 In relation to our reasoning as to why we do not propose to impose cost orientation on SDSL services, the BCMR Consultation has proposed that these services fall in the TI retail leased lines market³². The BCMR proposes to apply charge controls only to analogue services in this market. SDSL services are legacy services which BT does not intend to support beyond spring 2014³³ and consequently, we consider it would be disproportionate to subject SDSL services to a cost orientation obligation.
- 2.34 In relation to our reasoning as to why we do not propose to impose cost orientation on wholesale high bandwidth WDM MISBO services, as set out in the BCMR Consultation³⁴, this was due to a number of factors, in particular:
 - the technology and the services offered using this technology are still developing rapidly, so imposing a price control directly on these services could be too intrusive and prove harmful to the emergence of competition;
 - the proposed price control (in the form of a charge control) on single-service Ethernet MISBO services would constrain BT's pricing for WDM MISBO services;
 - our view that the combination of the limited competition from other CPs to provide MISBO products with WDM at customers' premises and our proposed obligations requiring BT to publish a reference offer and to provide its products on the basis of equivalence of inputs, together with the proposed charge control on singleservice Ethernet products would be likely to constrain BT's incentives to raise its prices for all MISBO products to an appreciable extent.

relating to electronic communications networks and services, OJ L 108, 24.04.2002, p.51, as amended).

³¹ See paragraphs 9.70 to 9.107 of the BCMR Consultation. See Section 10 of the BCMR Consultation for our proposals on the appropriate remedies for the relevant wholesale markets. See also Section 5 below where we set out the charge control proposals in relation to wholesale TI services and Section 9 for proposed controls on Retail analogue services. ³² See Section 4. The relevant market is the retail market for low bandwidth traditional interface

 ³² See Section 4. The relevant market is the retail market for low bandwidth traditional interface leased lines in the UK excluding the Hull Area, at bandwidths up to and including 8Mbit/s.
 ³³ In addition, there are alternative products available and BTW has made transition arrangements to

help customers migrate to an appropriate alternative in the run up to withdrawal of SDSL.

³⁴ See paragraphs 12.73 to 12.81.

- 2.35 In relation to our reasoning as to why we do not propose to impose cost orientation on TRCs, we do not propose to impose such an obligation for the same reason that we do not propose to include these services within the scope of the relevant charge control³⁵.
- 2.36 Additionally, as set out in the BCMR Consultation³⁶ and explained further in this consultation, under our proposed method of charge control regulation we make provision for new services that substitute, wholly or substantially, existing services in a charge control basket to be added to the basket.
- 2.37 If, however, BT were to subsequently introduce new services that fall outside the scope of the proposed charge controls³⁷ we propose to assess the introduction of any such new leased lines services in order to determine whether there may appear to be a relevant risk of adverse effects arising from price distortion as a result of the pricing of such services³⁸ and therefore whether it would be appropriate to subject their provision to a form of price control³⁹.

Relevant legal tests and statutory duties

- 2.38 As already mentioned, we explain in this consultation document why we consider the proposed SMP conditions for the price controls are appropriate to apply to BT in respect of its network and facilities under review. As part of our considerations, we have carefully assessed the test set out in section 88 of the Act. That section 88 prohibits in its effect the setting of SMP conditions under section 87(9) of the Act except where it appears to us, from the market analysis, that there is a relevant risk of adverse effects arising from price distortion; and it appears to us that the setting of the condition about network access pricing is appropriate for the purposes of promoting efficiency, promoting sustainable competition and conferring the greatest possible benefits on end users. We are also required to take into account the extent of BT's investment in the matters to which the condition relates.
- 2.39 We also explain why we consider that the proposed SMP conditions meet the test set out at section 47 of the Act. In summary, section 47 requires that any SMP condition must not be imposed unless it is:
 - objectively justifiable in relation to the network, services, facilities or apparatus to which it relates;
 - not such as to discriminate unduly against particular persons or against 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.

³⁵ See Section 6 below.

³⁶ See, in particular, paragraphs 10.109 to 10.110, 11.170 to 11.171, and 12.159 to 12.160.

³⁷ This would be where services do not wholly or substantially replace existing services.

³⁸ Within the meaning of section 88(3) of the Act.

 $^{^{39}}$ For the avoidance of doubt, here we are referring to price controls as a banner term to refer to the range of remedies we can impose under section 87(9) of the Act – e.g. charge control, cost orientation, safeguard cap, etc.

- 2.40 We also explain why the proposed SMP conditions are consistent with our general duties under section 3 of the Act and our duties for the purpose of fulfilling our Community obligations as set out under section 4 of the Act.
- 2.41 Under section 3, our principal duty in carrying out functions 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. In so doing, we are required to secure a number of specific objectives and to have regard to a number of matters set out in section 3 of the Act. As to the prescribed specific statutory objectives in section 3(2), we explain in the BCMR Consultation that the objective of securing the availability throughout the UK of a wide range of electronic communications services is particularly relevant to the markets we are reviewing, and therefore to the proposed regulation.
- 2.42 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 the BCMR Consultation, we considered that a number of such considerations were relevant to the market review, 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 Kingdom⁴⁰.
- 2.43 Section 4 of the Act requires us to act in accordance with the six Community requirements for regulation. In the BCMR Consultation, we explain that the first and fifth of those requirements are of particular relevance to this market review, namely to promote competition in the provision of electronic communications networks and services and associated facilities; and 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, efficient investment and innovation and the maximum benefit for customers of communications providers⁴¹.
- 2.44 As section 4(2) provides that the six Community requirements are to be read in light of Article 8 of the Framework Directive, we have also acted in accordance with our duty in Article 8(5) to apply objective, transparent, non-discriminatory and proportionate regulatory principles.
- 2.45 In light of the above, we have sought to balance a number of specific policy objectives as derived from those statutory duties when developing the price controls proposed in this consultation. In particular:
 - to prevent BT setting excessive charges for specific leased line services where it has SMP, while providing appropriate incentives for it to increase its efficiency;
 - to ensure prices are subject to appropriate controls, whilst still encouraging BT to maintain service quality and innovation;
 - to promote efficient and sustainable competition in the delivery of specific leased line services;
 - to provide regulatory certainty for BT and its customers and to avoid undue disruption;

⁴⁰ See paragraph 8.33 of the BCMR Consultation.

⁴¹ See Annex 6, paragraphs A6.34 to A6.36 of the BCMR Consultation.

- to encourage investment and innovation in the relevant markets; and
- to ensure that the delivery of the regulated services is sustainable, in that the prevailing prices provide BT with the opportunity to recover all of its relevant costs (where efficiently incurred), including the cost of capital.
- 2.46 We have taken due account of all applicable recommendations issued by the European Commission under Article 19(1) of the Framework Directive, as required by section 4A of the Act. For the proposals set out in this consultation, we have taken such account in relation to the Recommendation of 29 March 2005 on the provision of leased lines in the European Union – Part 2, Pricing aspects of wholesale leased lines part circuits and the accompanying explanatory memorandum (the 'Leased Lines Pricing Recommendation')⁴²; which we further discuss in Section 5 of this consultation. In addition, we have had regard to the European Regulators' Group ('ERG') common position on best practice in remedies imposed as a consequence of a position of SMP in the relevant wholesale leased lines markets⁴³ and the revised ERG common position on the approach to appropriate remedies in the regulatory framework for electronic communications and network services⁴⁴.
- 2.47 Finally, in developing our proposals, we have also taken into account the approaches we have taken in the following decisions:
 - Wholesale Broadband Access Charge Control (the 'WBA CC') through the application of the 'rest of BT' cost of capital⁴⁵;
 - Wholesale Line Rental & Local Loop Unbundling Charge Control (the 'WLR LLU CC') on issues relevant to the regulatory asset value ('RAV')⁴⁶; and
 - Point of handover pricing review (the 'POH Statement') on issues specifically relating to POH⁴⁷.

Impact assessment

- 2.48 The analysis presented in the rest of this consultation represents an impact assessment, as defined in section 7 of the Act.
- 2.49 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was proposed. They form part of best practice policy-making. This is reflected in section 7 of the Act, in accordance with which Ofcom generally has to carry out impact assessments where its proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom's activities. However, as a matter of policy

http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-

cc/statement/LLU_WLR_CC_statement.pdf. See Section 5 and 6 to see our reasoning.

⁴² http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:083:0052:0055:EN:PDF

⁴³ http://www.erg.eu.int/doc/publications/erg_07_54_wll_cp_final_080331.pdf

⁴⁴ http://www.erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf ⁴⁵ We published the WBA CC Statement in July 2011:

http://stakeholders.ofcom.org.uk/binaries/consultations/823069/statement/statement.pdf. See Section 5, 6 and Annex 7 to see our reasoning. ⁴⁶ We published the WLR LLU CC Statement on 7 March 2012:

We published the POH Statement in September 2011: http://stakeholders.ofcom.org.uk/binaries/consultations/revision-points-handoverpricing/statement/final-statement.pdf. See Section 5 and Annex 6 to see our reasoning.

Ofcom is committed to carrying out and publishing impact assessments in relation to the great majority of its policy decisions.

- 2.50 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.
- 2.51 In Sections 5 to 9, we specifically discuss the impact of choosing different options in relation to our proposals.

Equality Impact Assessment

- 2.52 Ofcom is also required by statute to assess the functions, policies, projects and practices on race, disability and gender equality. Equality Impact Assessments ('EIAs') also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers.
- 2.53 We have therefore also considered what (if any) impact the issues under consideration may have on equality. We do not consider the impact of the proposals in this consultation to be to the detriment of any group within society. In particular, we do not consider that they will have a differential impact on consumers in different parts of the UK or on consumers with low incomes. Leased lines are provided by BT to Other Communication Providers ('OCPs'), including MNOs, who either use leased lines to provide services to business customers or to support the delivery of a range of services (such as broadband and mobile) to consumers and businesses. We propose in the BCMR Consultation that BT should be required to publish its charges for certain regulated wholesale leased lines and to apply those charges on a non-discriminatory basis to all providers. Therefore, such sector-specific SMP regulation should ensure that providers will have access to those leased lines services on the same terms, conditions and charges (and by extension all end-users should be able to benefit from this competitive provision).
- 2.54 We have therefore 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 do not believe that our proposals, which primarily affect wholesale markets, would have a different impact in relation to people of different gender or ethnicity, or consumers in Northern Ireland or on disabled consumers compared to consumers in general.

Our approach to data and model disclosure

- 2.55 In developing our charge control proposals, we have undertaken modelling which:
 - calculates the appropriate level of costs to be recovered by BT Wholesale and Openreach from services within the scope of the LLCC based on BT's 2010/11 Regulatory Financial Statements ('RFS');
 - projects these costs forward to 2015/16 based on certain policy assumptions outlined in this consultation; and
 - calculates the implied path of prices which would permit BTW and Openreach to recover those costs in 2015/16.
- 2.56 The modelling is very detailed, to reflect the complexity of the network used to deliver TI and Ethernet services and to allow us to have confidence in the outcome of our

analysis. Inevitably such complex modelling brings risks of error. We have undertaken both external and internal reviews of the model. We are publishing a report from Ernst & Young alongside the model which confirms that they have not identified any issues within the model which could question the integrity of the model outputs.

- 2.57 We are also publishing as part of the consultation process a copy of our financial model including all the formulae used to generate the level of the charge control for the TI and Ethernet baskets. This model is unpopulated to reflect the confidentiality of much of the data.
- 2.58 The modelling undertaken as part of this review contains data supplied by BT with respect to its business which has been obtained under the Act. There is a general restriction under the Act on Ofcom disclosing such information without consent unless an exception applies⁴⁸. Ofcom has engaged closely with BT on model disclosure to obtain BT's consent to allow underlying data to be disclosed, including testing BT's assertions on confidentiality. The charge control models contain highly disaggregated data, much of which BT considers is commercially confidential or outside the scope of these charge control reviews.
- 2.59 One of the exceptions under the Act permits Ofcom to disclose data without consent for the purpose of facilitating the carrying out of its functions, including its functions as to consultation⁴⁹. In light of the level of disclosure consented to by BT, Ofcom has considered whether any further disclosure is required, including considering whether confidentiality concerns can be addressed by masking and/or aggregating data.
- 2.60 In undertaking this exercise, we have also considered our framework for disclosure of charge control models⁵⁰. We have concluded that the most appropriate approach to inform stakeholders is to provide a copy of the model populated with that proportion of the data which is not commercially confidential. This includes some aggregation of the actual data within the models, such that the published data is not commercially confidential. This approach to disclosure is consistent with that taken in the WLR LLU CC. In combination with our publication of a version of the model formulae, we consider this provides stakeholders with sufficient understanding of the process we have taken in developing the values of X used within our charge controls.

Consultation period and document structure

Consultation period

- 2.61 We invite views and comments from interested parties on our proposals contained in this consultation document by no later than 30 August 2012. The consultation will then be closed after this eight week period.
- 2.62 Details of the manner in which interested parties should respond to this consultation are set out in Annex 1, and information about our consultation processes and principles in general are included in Annex 2. One of our consultation principles referred to in Annex 2 is that we normally consult for up to ten weeks depending on

⁴⁸ Section 393 of the Act.

⁴⁹ Section 393(2)(a) of the Act.

⁵⁰ *Framework for Disclosure of Charge Control Models*' published in October 2010 <u>http://stakeholders.ofcom.org.uk/binaries/consultations/784024/Charge_control.pdf</u>. This has included meetings with Openreach and with the UK Competitive Telecoms Association ('UKCTA'). We have also held bilateral discussions on this issue with OCPs who have requested it.

the impact of our proposals and, if we are departing from a principle, we will explain why.

- 2.63 We consider that an eight week period for consulting on these specific proposals is appropriate, having regard to a number of considerations and also by reference to our general policy contained in our Consultation Guidelines of November 2007 (which recognise that each consultation will be different depending on the type of industry issue and the type of people and organisations likely to take an interest)⁵¹.
- 2.64 In reaching that view, we have carefully considered, firstly, the need of allowing stakeholders enough time to consider and respond to specific proposals in respect of which we believe respondents may require more time, including by possibly taking any expert advice. We anticipate that interested parties may require such time to inform their understanding and respond to, for example, on the matters set out below:
 - The proposed structure of the charge control, more specifically the aggregate impact of the basket, sub-basket and price point controls. Interested parties may want to undertake their own forward looking cost and revenue forecasting based on our proposals to understand the impact of the charge control on them.
 - Our proposals for adjustments to BT's base year costs. We expect that stakeholders may wish to undertake analysis as to the proportionality and scale of the adjustments, and to consider the impact of alternative approaches outlined in our consultation.
 - Our approach to cost forecasting where we recognise interested parties may wish to undertake their own forecasting analysis to satisfy themselves of the outcome of our analysis and to assess our assumptions, such as the rate of efficiency improvements.
 - The market trends which we have used to inform our analysis, for example, the volume forecasts. Interested parties may wish to provide their own views on market trends to inform the charge control, which they may need to commission from an external party.
- 2.65 We believe that our consultation period is sufficiently long to enable them to do so, without making any additional allowances for the summer holiday period. This is because the approach we have taken to structure the charge control is similar to the approach taken at the LLCC 2009 and the analysis interested parties may wish to undertake will be supported by the publication of a non-confidential version of the charge control model. This gives interested parties visibility of the approach underpinning the analysis we have undertaken in this charge control. We also consider that interested parties will be assisted in responding within this timescale by our detailed explanations in this consultation document, including our publication of the form of the charge control model and all non-confidential data. This allows stakeholders to understand our proposals and to analyse the approach taken by Ofcom to develop the level of the charge control, including the impact of any alternative assumptions that stakeholders may wish to propose.
- 2.66 In making no allowances for the summer holiday, we have taken into account that interested parties have been aware of the need to prepare and organise themselves, including instructing any experts, to respond to this consultation. In particular, we alerted stakeholders in our Call for Inputs published in April 2011 that it was possible,

⁵¹ <u>http://stakeholders.ofcom.org.uk/consultations/how-will-ofcom-consult</u>

following our SMP assessment, that we would propose that a charge control remedy commencing in 2012 would be necessary following the expiry of the current controls. In addition, we have had continuous engagement with stakeholders throughout our review, including by gathering information and explaining to the extent possible the purposes for which we might use the information.

- 2.67 Secondly, for other proposals, we consider that less time will be required to respond. We have particularly taken into account that, whilst this consultation contains important policy proposals, many of them will be of interest to a limited number of stakeholders who will be aware of the issues as explained above. For some proposals, we also consider that interested parties will be familiar with them from current regulation, such as the structure of and approach to the proposed charge control being broadly consistent with the current structure of the LLCC 2009. Also, we are proposing in this consultation to follow the approach we have taken for other charge controls in some respects (such as the cost of capital as per the WBA CC and the RAV as per the WLR LLU CC) Therefore, we consider that interested parties will require less time to respond to those proposals as they already have had opportunities to intelligently consider and respond to similar matters in the past.
- 2.68 Finally, we have sought to strike the right balance between the above considerations and us working to reach conclusions on our proposals within the timescales planned for this review. As already noted, the current charge controls expire in September 2012 and we therefore need to conclude the project within a specified timetable, allowing sufficient time for us to carefully consider the responses we receive and then to consult with the European Commission, BEREC and national regulators in other member states. We would therefore welcome responses at the earliest opportunity, ahead of our consultation closing date if possible, as they will inform our thinking.

Document structure

- 2.69 The rest of this document is structured as follows:
 - Section 3 outlines the form and duration of a charge control;
 - Section 4 outlines the charge control design;
 - Section 5 outlines the proposed charge controls for TI services;
 - Section 6 outlines the proposed charge controls for Ethernet services;
 - Section 7 outlines our proposed controls for Accommodation and Excess Construction Charges;
 - Section 8 outlines our proposed controls for AI services in the WECLA;
 - Section 9 outlines our proposed controls on Retail analogue services;
 - Section 10 sets out how we will implement this charge control.
- 2.70 In addition there are a number of Annexes which support our main conclusions. In particular:
 - Annex 5 on Ofcom's forecast model;
 - Annex 6 on Points of Handover;

- Annex 7 on the Cost of Capital;
- Annex 8 on the SMP Conditions;
- Annex 9 with a Glossary;
- Annex 10 covering a List of evidence.

Section 3

Form and duration of the charge control

Introduction

- This Section explains our proposed approach to determining the form of the leased 3.1 lines charge control and its duration.
- 3.2 In particular, we discuss:
 - the reasoning behind our proposal that the main controls should take the form of • an RPI-X price cap, including our choice of the RPI as the relevant inflation index⁵²; and
 - the reasons for proposing that the charge control should last for a period of three vears.

We propose to apply an RPI-X form of charge control

- We propose an RPI-X form of charge control for the leased lines services in question. 3.3 This form of control has been tried and tested over many years for telecoms charge controls and we also adopted this form of control for the LLCC 2009. It has a number of desirable properties, as explained below, such that we consider it is the form of control that would best meet the specific policy objectives referred to in Section 2 of this consultation⁵³. A particular feature of the RPI-X form of control is that it gives BT incentives to enhance its efficiency and make efficient investments. This is an important consideration for us and something we must consider under section 88 of the Act.
- 3.4 Such a charge control entails forecasting the efficiency gains that BT would need to make to achieve an efficient level of costs and determining the maximum permitted price change for particular groups of services. In order to maintain its profitability on these services, BT would have to make efficiency improvements to reduce its costs in line with the expected path set by the charge control⁵⁴.
- 3.5 In addition, the RPI-X form of charge control provides an incentive to make efficiency gains over and above those forecast as part of the control. If BT is able to deliver the required services at a lower cost than has been forecast, it can keep the profits resulting from these savings. In this way, an RPI-X type of control provides incentives to 'outperform' the charge control and improve efficiency over time. Customers also

⁵² We propose to make an exception to this proposal in relation to Excess Construction Charges ('ECCs'), for which we propose to use a different index, namely the General Building Cost Index ('GBCI'). This specific proposal is discussed further in Section 7. ⁵³ See paragraph 2.45 of this document.

⁵⁴ We are also mindful that a reduction in service quality would be one way in which BT could reduce its costs. However, BT has wider regulatory obligations aimed at ensuring that it maintains service standards. For example, BT reports on its service performance based on Key Performance Indicators ('KPIs'). In addition, BT is required to offer Service Level Guarantees ('SLGs') for the time it takes to repair circuits and to connect new circuits. It faces financial penalties for failing to connect and repair services within a certain period. Therefore, wider regulatory remedies on BT provide us with mechanisms to monitor service quality and to provide BT with incentives to maintain service standards.

benefit in the longer term, as these additional efficiency gains can be shared through lower prices when the charge control is reset.

- 3.6 The RPI-X approach can also provide incentives for efficient investment. The level of the charge control is usually set to allow the firm to earn a reasonable rate of return (the cost of capital) if it is efficient, and a consistent approach can be taken over charge control periods to encourage such investment.
- 3.7 Despite the fact that such a form is tried and tested and currently applies for charge controlled leased lines services, we have also considered whether alternatives to the RPI-X form of charge control might be appropriate in the current circumstances. In particular, we have considered whether the following forms might be more appropriate:
 - 'cost-plus' regulation; or
 - 'retail-minus' regulation.
- 3.8 As with RPI-X regulation, cost-plus regulation would allow BT to recover costs plus an appropriate mark-up. Under this approach, charges are set equal to actual costs including a regulated rate of return in each year of the control. In theory, this would ensure that BT is able to recover the costs of provision of its services, whilst ensuring that customers are protected from prices being set well above costs.
- 3.9 The key concern often identified with a cost-plus control is that it has poor incentive properties, as BT would earn a similar return regardless of the operating conditions. In particular, BT would have limited incentives for cost minimisation, since any reductions in costs would be required to be passed on directly to customers. Therefore, whilst in theory it would be efficient for prices to reflect actual costs, there would not be an incentive to minimise those costs and bring them to efficient levels⁵⁵. As noted above, we must, under section 88 of the Act, take a view on what appears to Ofcom to be appropriate for the purpose of (among other things) promoting efficiency. We have therefore taken account of the potentially poorer incentive properties of cost-plus controls in making our choice of the appropriate form for the leased lines services in question.
- 3.10 Retail-minus regulation controls the margin between the wholesale charge and the relevant downstream retail prices, rather than the absolute level of charges. The aim of retail-minus regulation is to ensure that charges for wholesale services are set at a level which allows efficient operators to compete to offer retail services.
- 3.11 However, since the absolute level of wholesale charges would not be controlled, a retail-minus control would normally do little to prevent prices from rising above the competitive level⁵⁶. As a result, we consider that a retail-minus based charge control on the leased lines services in question is less likely to be appropriate for the purpose of promoting sustainable competition. This is an important issue in addressing the competition problems we have identified in the BCMR Consultation and something that we must consider under section 88 of the Act in imposing any price controls.

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http://www.ofcom.org.uk/static/archive/oftel/publications/1999/consumer/llu0799.htm
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⁵⁵ See the discussion on allocative and dynamic efficiency at paragraphs 3.26 below.

⁵⁶ For further discussion of the circumstances in which a retail-minus approach may be appropriate, see Annex C of Oftel, '*Access to Bandwidth: Delivering Competition for the Information Age*', November 1999, available at:

- 3.12 We therefore believe that the RPI-X form of charge control is likely to best meet our specific objectives.
- 3.13 It should also be noted that in later Sections of this consultation document we will also consider particular variants of the RPI-X form of control that do not involve forecasting costs and setting prices according to these forecasts. We may propose this type of control where we believe that there is less risk of excessive pricing, but that some control on prices is still appropriate. For instance, we will consider setting 'safeguard' caps of RPI-0% or RPI-RPI (no real increases in prices and no nominal increases in prices respectively) where we believe that this is the most appropriate means to achieve our specific policy objectives. These variants of the RPI-X charge control are most appropriate where we consider that protection and incentives for efficiency may already exist, but additional protection is appropriate, either for certain groups of customers, or in case market conditions change⁵⁷.

The use of RPI as our benchmark for inflation

- 3.14 We propose to retain RPI as the relevant inflation index for our main charge controls. As in previous charge control reviews, we have considered alternatives to RPI because it includes items (e.g. mortgage interest rates and indirect taxes) which are not relevant to BT's costs. Alternatives to the RPI index exist, including:
 - sector-specific price indices, which would more accurately track the prices of relevant services;
 - RPIX index, which excludes mortgage interest payments;
 - RPIY index, which excludes mortgage interest payments and indirect taxes, such as VAT and excise duty; and
 - Consumer Price Index ('CPI'), which is an internationally comparable measure of inflation and is the basis for the UK's government's inflation target.
- 3.15 We have noted in the past that, whilst the RPI includes some items not relevant to BT's costs, it nonetheless has the advantage of familiarity to stakeholders and other benefits, such as being independent of BT's influence whilst providing a link between the index for the price control and the basis for the allowed rate of return. These features are discussed below.
- 3.16 We consider it is important that charge controls set price levels linked to a fixed inflation measure, outside the control of the firm subject to the price cap. RPI and CPI both fulfil this requirement. Telecommunications specific indices, on the other hand, have the disadvantage that BT's prices would be a major input to them and so there would be a circularity in setting price controls for BT on this basis. Other sector-specific indices would only be appropriate if they did not lead to circularity between BT's prices and the level of the index⁵⁸.

⁵⁷ See Section 5 and 6, paragraphs 5.46 and 6.47 respectively and, in particular, Section 8 (on our proposed control on wholesale AI low in the WECLA), where we consider applying these forms of control.

⁵⁸ In Section 7 we consider the use of a construction pricing index (GBCI) for setting a control on Excess Construction Charges ('ECCs'). This is due to particular circumstances relating to these services.

- 3.17 One respondent to the BCMR Call for Input ('BCMR CFI'), UK Competitive Telecommunications Association ('UKCTA'), debated the inflation measure to be used for future charge controls. In its view, the case for using CPI instead of RPI has strengthened in recent years in relation to both the government and BT (which now applies this index to its pension scheme). UKCTA argued that, regardless of whether any other sector regulator has elected to move away from RPI, Ofcom should undertake a full analysis of this issue⁵⁹.
- 3.18 We agree that it is important to ensure that the appropriate inflation measure is used in charge controls. We gave this issue significant prominence in the LLCC 2009 and concluded that RPI remained the most appropriate index and have continued to use the RPI index in recent charge controls, such as the WBA CC⁶⁰.
- In a report produced in 2007, the CC considered the use of RPI as the index for price 3.19 controls in its assessment of the economic regulation of Gatwick and Heathrow airports, noting the importance of indexation of significant cost items of regulated companies:

"Most sector regulators have concluded that the value of continuing to base controls on RPI is, first, that precedent favours RPI, and secondly that significant cost items of regulated companies, such as index linked bonds which are used to calculate the cost of capital and wage settlements, are generally linked to RPI [...]. We therefore see no reason to change the current approach of relating increases in charges to changes in the RPI."61

- 3.20 More recently the energy regulator, Ofgem, has conducted a review of the RPI-X approach to energy network regulation⁶². It stated that it thought that there was a case for moving to CPI, but that there were "significant practical problems with a wholesale move to CPI as corporate and government index-linked bonds continue to use RPI as the relevant index". It concluded that it was important to maintain "consistency between the indexation of the price control and the basis for establishing the allowed return⁶³. A similar issue arises for our leased line charge control in that the allowed return, as in other charge controls set by Ofcom, is determined by our calculations of BT's cost of capital⁶⁴. To do this we use the return on index linked bonds, for which the relevant index is RPI.
- 3.21 We recognise that some government agencies and other parties now use CPI as an index on which to base their policies. For example, state pensions and benefits are now generally linked to CPI. However, this relates to the specific form of costs which

⁵⁹ See page 4 of the UKCTA response to the BCMR CFI dated 17 June 2011, available at http://www.ukcta.org.uk/public_doc_11/110617%20BCMR%20call%20for%20inputUKCTAresponsefin al.pdf ⁶⁰ See paragraph 4.9 of the WBA CC Statement:

http://stakeholders.ofcom.org.uk/binaries/consultations/823069/statement/statement.pdf ⁶¹ See paragraphs 3.21 and 3.22 of the CC report available at:

http://www.competition-commission.org.uk/rep_pub/reports/2007/fulltext/532.pdf ⁶² Details of Ofgem's RPI-X@20 review can be found here:

http://www.ofgem.gov.uk/Networks/rpix20/Pages/RPIX20.aspx ⁶³ See paragraphs 5.4-5.13 of the consultation document:

http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/RPI-X@Recommendations.pdf and paragraphs 5.2-5.4 of the decision document: "RIIO: A new way to regulate energy networks", October 2010.

http://www.ofgem.gov.uk/Networks/rpix20/ConsultDocs/Documents1/Decision%20doc.pdf ⁶⁴ See Annex 7.

such payments are intended to meet, which are more closely linked to CPI. This is a less relevant argument for BT's costs in delivering leased lines services.

- 3.22 We have recently imposed a cap on the level that Royal Mail can charge for Second Class stamps⁶⁵ and have proposed a cap on the prices for sending large letters and packets⁶⁶, which are indexed to CPI rather than RPI. However, we explained that this was because these caps are intended to protect vulnerable consumers and, since the income of many vulnerable consumers comes from pensions and benefits that are linked to CPI, this was the appropriate index to use in this context. However, we do not consider that the same concerns are applicable to the case of leased lines services.
- 3.23 Therefore, for the proposals set out in this consultation, we believe that RPI is the most appropriate inflation index to use for our main charge controls. In cases where we consider that sector-specific indices are outside of BT's control, and where RPI may be a poor indicator of price trends, then we may propose a sector-specific index, but we do not consider that to be the case in general.

Question 1: Do you agree with our proposal to use an RPI-X form of charge control? If not, please explain why and propose an alternative approach with supporting information.

Duration of charge control

- 3.24 We propose a charge control that will run for a maximum of three years from the date of implementation.
- 3.25 We have considered the following factors when determining the duration of the charge control:
 - the balance between dynamic and allocative efficiency;
 - alignment with the forward-looking period of the market review; and
 - forecasting issues.

Dynamic and allocative efficiency

- 3.26 As noted above, we must, under section 88 of the Act, take a view on what appears to Ofcom to be appropriate for the purpose of (among other things) promoting efficiency. When assessing the question of duration of charge controls, we have therefore also considered the appropriate balance between dynamic and allocative efficiency.
- 3.27 Dynamic efficiency concerns, in essence, the ability of firms to innovate and make efficient investments, including activities designed to reduce costs over time. RPI-X charge controls generally provide strong incentives for dynamic efficiency, because they allow the charge controlled firm to earn profits in excess of the cost of capital if it is able to achieve costs savings beyond the level assumed in setting the RPI-X

⁶⁵ See paragraphs 8.111 to 8.114 of the Universal Postal Service Statement http://stakeholders.ofcom.org.uk/binaries/consultations/review-of-regulatoryconditions/statement/

⁶⁶ See paragraphs 3.19 and 3.20 of the consultation document: <u>http://stakeholders.ofcom.org.uk/consultations/postal-service-letters-packets/?a=0</u>

formula that regulates charges. These incentives can drive innovation and investment. All other things being equal, a longer charge control period creates stronger incentives for dynamic efficiency compared to a shorter period because a longer period gives the firm more opportunity to enhance its profitability through innovation and cost reduction.

- 3.28 In developing our proposals for the charge control, we have considered incentives for dynamic efficiency alongside the benefits of allocative efficiency. Allocative efficiency is achieved when prices reflect the underlying costs of production. This ensures that all customers who value a product at more than its cost are able to purchase it. Prices can diverge from costs over the life of a charge control if the costs of regulated services deviate from the projections used to set the RPI-X control. However, in establishing charge controls, regulators are able to ensure that allocative efficiency objectives are also met through the review mechanism and periodic re-setting of new controls. Shorter charge controls tend to give more weight to allocative efficiency, since prices have less scope to diverge far from costs or to remain out of line with costs for long.
- 3.29 Therefore, if charge controls are set correctly, they normally have built-in safeguards for both dynamic and allocative efficiency.
- 3.30 In previous charge controls imposed by Ofcom, we have on many occasions judged that a duration of four years provided an appropriate balance between dynamic and allocative efficiency. However, taking into account the factors discussed below, we believe that a shorter duration of approximately three years would be appropriate and, in our view, would not disrupt that balance unduly in relation to the leased lines services in question, as we consider that it would still provide adequate incentives for dynamic efficiency.
- 3.31 Our proposed charge control will not be in place by the time the current charge control regulations (set under the LLCC 2009) expire on 30 September 2012. We plan to implement our proposed charge control in the first quarter of 2013. We are proposing that the charge control would last for a maximum of three years from the date of implementation.

Alignment with the forward-looking period of the market review

- 3.32 We set out in the BCMR Consultation why we have chosen a forward-looking period of three years for this market review⁶⁷. In particular, we consider that this duration is appropriate in taking into account expected or foreseeable market developments.
- 3.33 We consider that this is also a factor that should be reflected in the duration of the proposed charge control. In the BCMR Consultation, we are proposing to set SMP conditions based on its analysis of potential market developments over this time period. Therefore we believe that it is appropriate to align the proposed charge control with this period.

Forecasting issues

3.34 The forecasting of BT's costs over the period of the control involves many detailed calculations and assumptions, which we describe further in Section 5 and 6 of this consultation. Among the inputs to this calculation are the forecasts of the demand for circuits on BT's network(s). With some services having a degree of fixed costs, this

⁶⁷ See paragraph 2.44 of the BCMR Consultation.

means that, with all other things being equal, increased (decreased) circuit numbers will decrease (increase) BT's average, or unit, cost of providing these services. This relationship between movements in costs resulting from volume changes is an important issue and forecast uncertainty would be exacerbated over time, potentially leading to over- or under-recovery of costs.

- 3.35 This forecast uncertainty would be mitigated by adopting a shorter charge control period. However, a shorter control (e.g. two years) would give less price certainty into the medium term and would be likely to reduce the strength of the investment and efficiency incentives. A period of regulatory stability and certainty is particularly important at a time when BT is investing in delivering new services and there is substantial technological change.
- 3.36 Therefore, we believe that a charge control period of approximately three years strikes an appropriate balance between forecast uncertainty and providing regulatory stability for stakeholders. As discussed in Section 10 below, should there be a short delay to implementation of the control, we may apply a charge control for a period of three years from the end of the current control (i.e. to September 2015), if this duration would be sufficiently close to three years to meet our objectives. We outline in the Section 10 the details of how we would implement such a control.

Question 2: Do you agree with our proposal for the charge control to run for a maximum of three years from the date of implementation? If not, please explain why and propose an alternative approach with supporting information.

Summary

- 3.37 We propose to impose charge controls for leased line services with:
 - the RPI-X form of control; and
 - a duration of a maximum of three years.

Section 4

Charge control design

Introduction

- 4.1 In this Section, we describe the key economic principles that have guided our approach in designing our proposed charge control. In particular, we explain:
 - how we propose to design the baskets within the charge control;
 - the basis on which we will forecast costs;
 - how we will assess the key determinants of these costs; and
 - our principles when considering whether to make starting charge adjustments.
- 4.2 At the end of this Section, we discuss other methodological issues, specifically whether to use prior year or current year revenues to weight price changes within the basket, how to treat discounts in assessing compliance and how to address the introduction, modification and withdrawal of services.
- 4.3 In summary, we propose to:
 - follow an approach to basket design based on our analysis of competitive conditions, the potential for efficient pricing and cost recovery and the influence of migration incentives;
 - use charge control baskets and sub-caps to control the prices of in-scope services;
 - use 2010/11 cost data for our base year;
 - apply current cost accounting ('CCA') with fully allocated costs ('FAC') as our cost standard;
 - use geographically disaggregated cost data that are specific to the services included in our proposed charge control;
 - explain a set of criteria to determine the appropriate technological basis for setting our proposed charge control;
 - set out our approach to considering whether to make any starting charge adjustments, but explain why we prefer to use glide paths;
 - use prior year revenue weights rather than current year revenue weights; and
 - not allow certain discounts to contribute towards meeting charge control obligations, but take existing discounts into account when calculating base year revenues.

Designing the charge control framework

- 4.4 There are five key steps in the methodology we have used to design the proposed charge control for leased lines services:
 - step 1 identify the relevant services and appropriate charge control baskets and sub-caps;
 - step 2 determine the base year costs for the services covered by the charge control;
 - step 3 forecast the costs of the services for the duration of the charge control;
 - step 4 consider the case for one-off adjustments to charges at the start of the charge control; and
 - step 5 calculate the value of X for the proposed basket(s) of services.
- 4.5 Figure 4.1 below illustrates these stages.

Figure 4.1: key stages in arriving at our charge control proposals



4.6 We discuss below the principles which support each of the five steps listed above. We have also included a detailed description of these steps in Annex 5.

Step 1: Identify relevant services and appropriate charge control basket structure

4.7 A charge control can either be applied to an individual service or a 'basket' of services. A charge control basket is defined as the group of products or services that

are subject to the same charge control restrictions. Combining services in a single basket means that the RPI-X constraint would apply to a weighted average of the changes in the prices of the services in the basket. We describe below the economic principles to which we have had regard when designing the baskets for this charge control.

Principles for basket design

- 4.8 In designing the charge control baskets for the leased lines services in question, we have been guided by the following principles:
 - i) ensuring relative prices are set at efficient levels and allowing for efficient cost recovery;
 - ii) safeguarding against the risk of adverse effects arising from price distortion, particularly excessive pricing or unduly discriminatory pricing; and
 - iii) giving the flexibility to allow for efficient migration when appropriate.
- 4.9 We explain below how these principles are relevant in determining the advantages and disadvantages of combining services into relatively broad baskets and discuss how those disadvantages could be addressed. We then discuss how we propose to implement our principles for basket design.

Advantages of broad baskets

- 4.10 A broad basket would give BT some pricing freedom to determine the structure of prices which meet the charge control. This pricing freedom may be more likely to result in charges which recover costs, particularly fixed and common costs, in an efficient way. This is important in the case of wholesale leased lines because their provision is characterised by high fixed and common costs and low marginal costs.
- 4.11 For example, costs do not normally increase in direct proportion to the bandwidth of the circuit. Simply setting all charges equal to a measure of accounting costs, such as FAC, may result in a lower level of output than with a more flexible pricing structure. In the example of bandwidth, this could mean spreading the fixed and common costs evenly across all products. This could push up charges for lower bandwidth products and reduce them for higher bandwidths. This may not be the most efficient way to recover common costs.
- 4.12 A broad basket also allows BT to respond to changes in demand and costs by changing relative prices and re-optimise charges for new patterns of demand. Narrow basket definitions mean that Ofcom determines the structure of relative prices at the start of a control period, and BT has little freedom to vary it thereafter. We think this is inappropriate in a market that is changing rapidly. Furthermore we believe that BT is better placed to assess the demand patterns in detail and set relative prices for each product.
- 4.13 A broad basket may also be advantageous where it is desirable to allow BT to set prices to encourage efficient migration between an old service and/or technology and a new replacement alternative. Where the customer (rather than BT) takes the decision to migrate, it can be optimal to set lower prices for services supplied using the lower cost (new) network and higher prices for services supplied using the old network. By reflecting cost differences in prices, customers are encouraged to make the cost-minimising choice. BT can be given the necessary flexibility to offer lower

prices on the new service, in order to encourage efficient migration, by including both old and new services in a single charge control basket.

4.14 For these reasons, Ofcom has often chosen to combine services into broad baskets, unless there are reasons not to do so. This has been our position in previous charge controls, such as LLCC 2009⁶⁸, Network Charge Controls ('NCCs')⁶⁹, WBA CC⁷⁰ and the ISDN30 charge control⁷¹.

Disadvantages of a broad basket

- 4.15 The main disadvantage of a broad basket is that, in some circumstances, the flexibility to set relative charges can be exploited by the regulated firm to harm competition. Two sets of circumstances are particularly relevant, as explained below.
- 4.16 First, BT may have an incentive to price in a manner that favours its downstream operations. Where BT and competing operators use different wholesale services to provide the same downstream service, BT may have an incentive to reduce the price of the wholesale service it uses most and increase the price of the wholesale service used by its rivals. Placing both wholesale services in a single charge control basket without further restrictions could give it the incentive and the ability to behave in this way, and this could harm competition.
- 4.17 Second, there may be differences in the intensity of competition which BT faces in the provision of different services. If competitive conditions differ between services within a single basket, BT may have an incentive to concentrate price cuts on the most competitive services and offset these with increases where competition is weaker. This might lead to excessive charges for the less competitive services and might also encourage anti-competitive pricing of the more competitive services.

Addressing the disadvantages

- 4.18 It is possible for both these concerns to be addressed by using more narrowly defined baskets. Each basket could be defined to include only services where there is broadly the same degree of competition, and there could be separate baskets for services which are used predominantly by BT on the one hand, and for services which are mainly used by its competitors on the other.
- 4.19 Sub-caps within a basket can also be used to address these disadvantages. It may often be preferable to define a broad basket and to prevent BT from setting charges which could harm competition by means of sub-caps. In this way, harm to competition can be prevented whilst, at the same time, retaining the benefits of pricing flexibility.
- 4.20 Whether a broad basket with sub-caps is preferable to a larger number of smaller baskets will depend on the circumstances of the case. In general, the benefits of broad baskets are greater the greater the extent of common costs and the stronger the incentives on BT to set efficient charges. Separate baskets may be preferable

⁶⁸ See paragraphs 4.14 and 5.16 of the LLCC 2009 http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/llccstatement.pdf

⁶⁹ See paragraphs 4.87-4.91 of the Network Charge Control Statement:

http://stakeholders.ofcom.org.uk/binaries/consultations/review_bt_ncc/summary/reviewbtncc.pdf ⁷⁰ See paragraphs 5.7-5.10 of the WBA CC:

http://stakeholders.ofcom.org.uk/binaries/consultations/823069/summary/condoc.pdf ⁷¹ See paragraphs 4.8-4.11 of the ISDN30 Charge Control Statement:

http://stakeholders.ofcom.org.uk/binaries/consultations/isdn30-2011/summary/isdn30-2011.pdf

where BT has a strong incentive to set charges in a way which disadvantages its rivals.

Cost orientation

- 4.21 Cost orientation can also be used in conjunction with charge controls as an additional constraint on BT's prices. A cost orientation obligation requires that services be sold at a price that is derived from a measure of the costs of providing those services.⁷² Ofcom's practice has been to consider that charges comply with cost orientation if they lie within the range of DSAC⁷³ to DLRIC, and to apply this test taking into account a number of other 'non-mechanistic' factors. These cost measures test whether a price is excessively high or low by defining varying amounts of common costs to be allocated to a given product, in addition to the incremental costs of provision.
- 4.22 The BCMR Consultation has proposed the imposition of price controls to address the risk of excessively high prices.⁷⁴ However, the BCMR Consultation has proposed not to impose cost orientation obligations on the services within the scope of the proposed charge control⁷⁵ it stated we would set out our reasoning in more detail in this LLCC consultation.
- 4.23 The reasoning set out in this consultation shows why, in our view, we consider the particular design, structure and scope of the proposed charge controls are appropriate.
 - to address the risk of excessively high prices; and
 - to provide sufficient certainty and clarity to BT, and to stakeholders in general, both with regards to how the risk is addressed and also with regards to compliance with the obligations imposed by the proposed charge controls.
- 4.24 We discuss the merits of sub-caps and cost orientation obligations in more detail in Sections 5 and 6, where we consider these potential measures in our proposals for TI and Ethernet services.

Market definition and basket design

4.25 Market definition is only one of a number of factors to take into account when designing the basket structure. There is no necessary reason to align basket composition and market definition. It will often be desirable to include services from two or more different markets within a single basket. This is because services in different markets can share common costs. As outlined above, a broad basket can lead to common costs being recovered in a more efficient way than if several smaller baskets were used or if individual charges were set equal to FAC. In the past, services from different markets have frequently been included in a single basket, e.g. the TI basket which included of Trunk and terminating segments in the LLCC 2009.

⁷² The BCMR 2008 set such an obligation, such that: "each and every charge offered, payable or proposed is reasonably derived from the costs of provision based on a forward looking long-run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital". See the Charge Control Conditions of the Statement at: http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr08/summary/bcmr08.pdf

⁷³ DSAC stands for Distributed Stand Alone Costs and DLRIC stands for Distributed Long Run Incremental Costs.

⁷⁴ See paragraphs 10.101, 11.161, 12.151 and 13.27 of the BCMR Consultation.

⁷⁵ See paragraphs 10.117-10.119, 11.175-11.177 and 12.161-12.162 of the BCMR Consultation.

- 4.26 However, market definition provides signals about competitive conditions and, as we explained above, competitive conditions are also relevant to basket design. Services which are in the same market will typically have similar competitive conditions. If a charge control were justified, these could safely be placed in a single basket. Indeed, in that case, an increase in the price of one may be constrained by switching to the other. This could, in theory, mean that a cap on the price of one service only could be a sufficient constraint, and the other service could be outside the charge control basket entirely. Where there is evidence that substitution to a charge controlled service is sufficiently strong to constrain the price of another service, then the more deregulatory option is likely to be preferred⁷⁶.
- 4.27 Competitive conditions in the supply of two services which are placed in different markets because they are not sufficient substitutes for each other can still be similar. If there is a marked difference in the intensity of competition between two services in separate markets, then it will be appropriate to reflect this difference in the design of any charge control. However, even where multiple markets are defined, there can be good reasons to make them subject to a single basket constraint, provided that (i) the intensity of competition in the markets is similar; (ii) in each case a charge control is justified; and (iii) the services in question share common costs.
- 4.28 Furthermore, competitive conditions may not be completely homogeneous even within a single market. There will often be some customers, or geographic areas, for which competition is less strong then others, and it may also be possible to distinguish between internal and external sales. Concerns about discrimination between these segments of a market could then arise and so there is still a role for additional restrictions on pricing flexibility even where a charge control applies to services in a single market only.

Implementing our principles for basket design

- 4.29 We have identified a set of principles to use when we evaluate whether it would be appropriate to combine certain services together in a broad basket or keep them in separately controlled baskets in our proposed charge controls. We propose to apply them in the ways set out below.
 - Efficient pricing where the services being considered share substantial common costs, a single basket is more conducive to efficient pricing and cost recovery.
 - **Competition** where the services being considered face different competitive conditions or where BT does not use the same wholesale inputs as its rivals, placing them in the same charge control basket may give BT an incentive to set prices in a way that undermines competition. In this case, we would consider introducing sub-caps or placing the services in separate baskets.
 - **Migration incentives** where it is appropriate for BT to encourage migration from a legacy service to a more efficient service, placing the services in the same basket would allow BT the flexibility to do so.
- 4.30 We will consider how to balance these principles when proposing a structure for the charge control baskets for TI and Ethernet services in Sections 5 and 6.

⁷⁶ For example, in the BCMR Consultation, we propose no price control on WDM MISBO products, in part because the proposed price control on Single Service Ethernet products is likely to act as some constraint on the WDM MISBO products. See paragraph 12.80 of the BCMR Consultation.
Step 2: Determine base year costs

- 4.31 In formulating our proposals to set the charge control, we need to be able to determine all costs relevant to providing charge-controlled services. We first need to determine the relevant cost base from which we can establish base year unit costs. To do this, we must establish:
 - the data period used for base year costs;
 - the choice of cost standard;
 - the approach to geographic costs;
 - the approach to Service Level Agreements ('SLAs') and Service Level Guarantees ('SLGs');
 - the approach to pension costs; and
 - technology benchmarks for the main baskets.
- 4.32 We are also proposing to make various adjustments to BT's cost data. These are specific to each charge control basket and will be discussed in Sections 5 and 6.
- 4.33 Once we have determined appropriate base year costs, we have a relevant reference point from which we can forecast BT's future costs (based on anticipated efficiency gains, volume changes and the estimated impact of volume changes on BT's costs).

Data period used for base year costs

4.34 The base year for this LLCC model is the financial year 2010/11. We are using BT's 2010/11 RFS data as they were the most recent fully audited regulatory statements presently available to us in developing our proposals⁷⁷. We have also taken into account relevant base year data from BT for services that have not been included in BT's RFS previously and that we are proposing to charge control for the first time, such as Ethernet services above 1Gbit/s.

We propose to use CCA FAC as our cost standard

- 4.35 Under a charge control, we typically set charges to allow BT to recover the incremental costs of provision plus an appropriate mark-up to allow for the recovery of common costs⁷⁸. In the context of determining the apportionment of common costs for this charge control, we have considered two main options.
 - CCA FAC under this approach, all the firm's costs are distributed among the services it provides. Under the CCA accounting convention, assets are valued and depreciated according to their current replacement cost⁷⁹.

⁷⁷ BT publishes its financial statements on its website and they are available at:

http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/index.htm ⁷⁸ Common costs are those which arise from the provision of a group of services, but which are not incremental to the provision of any individual service.

⁷⁹ An alternative to CCA would be HCA convention, where assets are valued and depreciated according to their historic purchase cost.

- Long Run Incremental Costs + Equi-proportional Mark-Up ('LRIC+EPMU') using this approach, we would allocate common costs across the different services in proportion to the LRIC of individual services⁸⁰.
- 4.36 When assessing the cost base for our charge control, we start with an assessment of forward-looking costs, and include sunk costs, by exception, where required for dynamic efficiency reasons. Both the CCA FAC and LRIC+EPMU options are charges based on forward-looking costs and provide appropriate incentives for entry and investment. Also, both approaches include an allocation of fixed common costs to allow for full cost recovery.
- 4.37 Duct costs are not forward looking costs (as they are sunk costs), but form part of the CCA accounts. We include duct costs in our cost base, for reasons of dynamic efficiency. If BT was not able to recover its sunk costs, this would deter future investment. However, this does not necessarily mean that BT should be allowed to recover the full replacement value of these sunk assets. In our assessment of base year costs, we will consider what a reasonable return would be on these sunk assets, so as to balance efficiency, whilst not deterring future investment.
- 4.38 While we think that either of the above options could reasonably be used as our cost standard, we have selected CCA FAC for the reasons set out below:
 - The use of CCA FAC is consistent with the approach we have adopted for other recent charge controls (such as the WBA CC)⁸¹. Consistency across the regulation of different services in BT ensures that all common costs can be recovered, whilst avoiding double recovery.
 - Monitoring BT's actual financial performance on a LRIC basis is not straightforward, as information on wholesale service profitability is generally prepared on a CCA FAC basis. A charge control based on CCA FAC data can be reconciled more easily to BT's RFS, which are audited and are in the public domain.
 - The LRIC+EPMU approach would require a more time-consuming exercise that would involve reviewing BT's LRIC estimates for individual services and ensuring that they provide an appropriate basis for attributing common costs.
 - A LRIC+EPMU approach requires that common costs are allocated in proportion to the LRIC costs of each service, whereas CCA FAC is based on BT's methodology for allocating common costs. As noted earlier, we consider that there can be benefits in allowing BT to determine the most appropriate way to recover common costs, provided we have taken into account the risks identified at paragraph 4.15 above.
- 4.39 We note that our use of CCA FAC was scrutinised by the CC in the appeal of the now expired WLR LLU CC 2009⁸². In its determination, the CC found that we were not in error in our use of CCA FAC. It also found that we had given sufficient weight

http://stakeholders.ofcom.org.uk/consultations/wba-charge-control/

⁸⁰ For example, if the LRIC of service X was £100/unit and the LRIC of service Y was £50/unit, then (assuming the same volumes of each service) we would have a 2:1 ratio. If BT had common costs of £6m, an equi-proportional mark-up would allocate £4m to service X and £2m to service Y.
⁸¹ See paragraphs 5.61 to 5.64 of the WBA CC Statement:

⁸² The Ofcom publications relating to the WLR LLU CC 2009 are available here: <u>http://stakeholders.ofcom.org.uk/consultations/wlr/</u>

to allocative and dynamic efficiency factors in adopting a CCA FAC approach to cost allocation⁸³.

4.40 Based on these arguments, we propose to use CCA FAC as our cost standard for setting the LLCC.

We propose to use geographically disaggregated cost data

- 4.41 In the BCMR Consultation we have proposed two geographic markets (the WECLA and the UK excluding both the WECLA and the Hull area) for wholesale medium and high bandwidth TISBO services and wholesale AISBO services. We have proposed that BT does not have SMP in the provision of these services in the WECLA and has SMP in the larger geographic market (the UK excluding the WECLA and the Hull area)⁸⁴.
- 4.42 BT's published RFS includes national cost (excluding the Hull area). However, some costs could vary by geography, leading to cost differences between the charge controlled and non-charge controlled areas. This would mean that, in order to accurately model the costs in the charge controlled area, we should in principle use geographically disaggregated costs, particularly if there were material differences in unit costs⁸⁵. Therefore, we requested BT to provide information on the disaggregation of costs between the WECLA and non-WECLA⁸⁶.
- Both BTW and Openreach have confirmed that there are cost differences between 4.43 the WECLA and the rest of the UK⁸⁷ and we propose to use these geographically disaggregated costs.
- 4.44 The analysis of geographic costs is explained in more detail in Annex 5.

We propose to include SLA/SLG costs in the cost stack for modelling our proposed charge control

- 4.45 SLAs form part of commercial contracts and set out a supplier's commitment to provide services to an agreed quality, e.g. within a specified period. The associated Service Level Guarantees ('SLGs') specify the level of compensation that the customer would be entitled to should the service not be provided to the quality specified in the SLA, e.g. if the service was late.
- 4.46 We believe that BT should be able to recover an efficient level of SLA/SLG costs. We would not expect BT to be staffing up to a level such that they would never have to make such payments, as this would be unlikely to be an efficient level. BT may sometimes fail to meet SLA/SLGs and have to make the required payments of which

⁸³ Competition Commission, The Carphone Warehouse Group plc v Office of Communications, Case 1149/3/3/09. See, for instance, paragraph 3.161. http://www.competitioncommission.org.uk/appeals/communications act/wlr determination.pdf

Our full market power assessment is set out in Section 7 of the BCMR Consultation.

⁸⁵ In the LLCC 2009 we used nationally averaged cost data to model the charge control, despite the deregulation of 34/45Mbit/s and 140/155Mbit/s TI services in CELA. At this time it was not possible to obtain geographically disaggregated cost data. We concluded that, in this case, the use of nationally averaged data was not likely to pose a risk to cost recovery or to competition or consumers. See paragraphs 3.196-3.215 of the LLCC 2009 Statement.

⁸⁶ BT response to Ofcom information request dated 1 July 2011.

⁸⁷ BT Wholesale response to Ofcom information request dated 11 April 2012 and Openreach response to Ofcom information request dated 30 April 2012.

they should be able to recover an efficient level of costs associated with meeting SLA/SLGs. This has been our policy in the WLR LLU CC for instance⁸⁸.

- 4.47 If SLA/SLG costs are included within the cost stack for the purposes of modeling our proposed charge control, BT would still have the incentive to improve its performance against the SLA/SLGs and to bring its costs of doing so down. Therefore we believe that our proposal is consistent with giving BT appropriate incentives to invest and minimise costs.
- 4.48 We note that the costs associated with SLAs and SLGs are included in the costs reported in the RFS, which we use as our base year. In theory, we should include only the efficient level of these costs. Determining the efficient level of these costs is a significant and time-consuming exercise, and we consider that it would only be worthwhile to undertake this in response to significant existing concerns or if a material change in terms were proposed. We are not aware of changes to existing SLA and SLG arrangements associated with TI and Ethernet services, and therefore propose no further adjustments to the existing level of costs that are in the cost stack.

We propose to include the ongoing costs of BT's pension scheme, consistent with our Pensions Review

- 4.49 We have considered the impact and treatment of contributions to BT's pension scheme for the purpose of our proposed charge controls. In so doing, we have had regard to our Pension Cost Guidelines as applied to the specific circumstances relevant to our present proposals in this consultation⁸⁹.
- 4.50 Those Guidelines set out our general policy as to the approach we normally expect to take in relation to the treatment of BT's pension costs when assessing the efficiently incurred costs of providing relevant regulated products or services. In summary, we have three specific Guidelines in this regard, namely:
 - **Deficit repair payments** We intend to disallow any deficit repair payments when setting regulated charges and therefore ignore the impact of any pension holidays BT may choose to take.
 - Ongoing service costs We intend to use statutory reported accounting costs as a measure of ongoing service costs when assessing pension costs as part of regulated charges.
 - **Cost of capital** We intend to make no adjustment to the cost of capital to account for a defined benefit pension scheme when setting regulated charges.
- 4.51 We have considered whether there are any reasons for taking a different approach in respect of deficit repair payments, in relation to our present proposals, as compared to our first Guideline set out above, having particular regard to the leased lines services we are proposing to include in our charge control. We have not identified any reasons for departing from that Guideline. As such, we are proposing not to include costs relating to the repair of BT's pension deficit in the cost stack for the purposes of our proposals.

⁸⁸ <u>http://stakeholders.ofcom.org.uk/consultations/wlr-cc-2011/</u>

⁸⁹ See Annex 1 of the Statement entitled 'Pensions Review', published on 15 December 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/btpensions/statement/statement.pdf

- 4.52 In reaching this view, we consider that, firstly, this proposed approach to deficit repair payments is appropriate to secure or further our statutory duties, including the objectives pursued by our proposals, and it is also needed to effectively address the applicable legal tests under the Act which we discuss in this consultation. Secondly, we are not aware of any new evidence that would demonstrate that there has been a material change in the circumstances since we adopted the Pension Cost Guidelines. Also, we have carefully considered our position in light of the conclusions of the Competition Commission in its recent Determination⁹⁰ concerning pension deficit repair payments for WBA services; although those conclusions were reached in light of the facts before the Commission, we consider that our proposal approach is consistent with its conclusions as applied to the present proposals for leased lines.
- 4.53 Nor have we identified any reasons for departing from the remaining Guidelines with regard to ongoing service costs and cost of capital in relation to pension costs for the leased lines services covered by our proposed charge control. We therefore propose, in our cost forecasts, to include the cost of ongoing pension contributions as reported by BT in the RFS and make no adjustment to the cost of capital to account for a defined benefit pension scheme (see Annex 7 for further issues concerning cost of capital).

Costs associated with the technology used to deliver leased lines services

The Modern Equivalent Asset approach

- 4.54 Ofcom's preferred approach to setting charges is to base costs and asset values on what is believed to be the most efficient available technology that performs the same function as the current technology. This is sometimes described as the modern equivalent asset ('MEA') approach to pricing.
- 4.55 In order to qualify as the MEA, a new, more efficient technology must be capable of at least delivering the same service, to the same level of quality and to the same customer base as the legacy technology.
- 4.56 The MEA approach protects customers from an SMP operator using an inefficient technology. If an SMP operator chooses to use an inefficient technology to deliver a service, then customers need not be penalised by this choice. Instead, prices are set as though the SMP operator had chosen to adopt the most efficient technology. This approach also encourages the SMP operator to adopt the most efficient technology⁹¹.
- 4.57 Setting prices on the basis of MEA costs is consistent with the asset valuation under the CCA framework where assets are valued at their current replacement cost. This is then reflected in changes in the underlying asset prices, which results in either holding losses (associated with reductions in the asset prices) or holding gains (increases in asset prices). In some circumstances the replacement asset might not be identical to the asset in use – it may well have superior functionality and/or support additional services. In such cases, the CCA value of the existing asset

⁹⁰ British Telecommunications plc (Wholesale Broadband Access Charge Control) v Office of Communications (1187/3/3/11). Full details available at:

http://www.catribunal.org.uk/237-7278/1187-3-3-11-British-Telecommunications-plc-Wholesale-Broadband-Access-Charge-Control.html

⁹¹ As explained below, the anchor pricing approach also incentivises the SMP operator to adopt the most efficient technology. The key point is that, under both approaches, costs are modelled independently of the technology actually used by the firm.

should be adjusted downwards to reflect the cost of a functionally identical modern asset⁹².

4.58 The MEA approach is also able to take into account gradual ('business-as-usual') technical progress. In an RPI-X charge control, we usually allow for both 'frontier shift' (the improvement in efficiency which an already-efficient company would expect to make due to technical progress) and 'catch-up' (the removal of inefficiencies existing at the start of the control period). Both of these can be taken into account in the RPI-X charge control model alongside the MEA approach through an assumed (exogenous) rate of annual real unit cost reduction.

The use of 'anchor pricing' during technological change

- 4.59 There are circumstances where we would not set charges on the basis of the costs of new technology. Although gradual technological change can be readily incorporated by the MEA approach, more radical technological changes may pose significant challenges as explained below. During a period of such technological change, we often adopt the approach to charge control setting which we refer to as 'anchor pricing'.
- 4.60 The principle behind anchor pricing is that following technological change, prices should not rise above the level implied by the hypothetical continuation of the existing technology. This ensures that the introduction of new technology which is intended to provide a greater range of services does not inappropriately increase the prices for the same services provided using the existing technology. Anchor pricing can be implemented in a number of ways, for example by using the current starting price as a starting point or by modelling based on the cost of existing technology, allowing for business-as-usual efficiency gains, rather than that of any new technology which might be adopted during the control period⁹³.
- 4.61 The anchor pricing approach means that charges do not immediately reflect the costs of a new technology but, for a time, may be based on the costs of an existing, proven technology. As we explain below, this approach is intended to give the regulated firm incentives to invest in new technology only when providing services over the new technology would lower its overall costs and/or would enable it to provide higher quality services for which consumers are willing to pay a premium. At the same time, consumers of existing services are not made worse off by the adoption of new technology. The price (and quality) of existing services are anchored by the legacy technology, even if the services are actually provided over new technology.
- 4.62 When we set a RPI-X charge control, we normally set X to bring projected revenues into line with projected costs by the end of the charge control period. We create a

http://www.btplc.com/thegroup/regulatoryandpublicaffairs/financialstatements/2010/detailedvaluation methodology2010.pdf

⁹² We note that it may take some time for a new technology to be recognised as the MEA for accounting purposes. In the case of leased lines services, BT has explained that it has not made any MEA changes in its CCA methodology as a result of the introduction of 21CN. See page 8 of BT's CCA Detailed Valuation Methodology:

⁹³ A detailed description of the principles of anchor product regulation was set out in our consultation on "*Future broadband: policy approach to next generation access*", 26 September 2007. In particular, see Annex 7 of the consultation document:

http://stakeholders.ofcom.org.uk/binaries/consultations/nga_future_broadband/summary/main.pdf http://stakeholders.ofcom.org.uk/binaries/consultations/nga/summary/future_broadband_nga.pdf In the document, we discussed the use of anchor product regulation in the context of investment in next generation access in the wholesale local access ('WLA') market.

financial model to make the necessary projections of the relevant revenues and costs. If we use the anchor pricing approach to set the control, our cost projections usually reflect an assumption that existing technology remains in use for the period of the control. Additionally, we are likely to assume that all customers are supplied using this technology. In other words, costs are projected as if no major technological change were expected for the period of the control.

We set out the criteria for assessing the most appropriate approach

- 4.63 In this section we outline the factors we consider in choosing whether to adopt an MEA or an anchor pricing approach for our proposed charge controls. We discuss below each factor in turn under these three sub-headings:
 - i) degree of certainty over costs;
 - ii) investment incentives; and
 - iii) customer migration.

Degree of certainty over costs

- 4.64 The MEA approach relies on Ofcom being able to set prices correctly based on the most efficient modern technology at a particular point in time. In some cases, it may be clear what the MEA is and the accurate cost data may be available. However, in other cases, there may be uncertainty regarding the 'correct' technology choice, as well as uncertainty around the corresponding costs. These practical challenges could mean that, in those cases, if Ofcom were to set charges on the basis of MEA, there is a risk of regulatory failure, which could lead to incorrect estimates of the forward-looking costs of providing leased lines services. Instead, the anchor pricing approach reduces the need to determine the relevant technology and the costs associated with this network.
- 4.65 There are a number of practical challenges to consider when setting prices on the basis of a technology that has not yet become established including that:
 - it would not always be clear what the most efficient new technology is at any point in time;
 - it would be very difficult to set the prices on the basis of a new reported unit cost for a technology in the early stages of its adoption because, initially, costs are unlikely to be a good indicator of their long-term values; and
 - to enable cost recovery with this approach, it requires the regulator to allow separately for any transitional costs (e.g. migration costs) and to choose the optimal path for transition.

Investment incentives

4.66 It is important that the cost standard we adopt is consistent with efficient investment incentives. The anchor pricing approach will in general give efficient signals for investment, although it may not ensure that the benefits of new, lower-cost technology are shared with consumers. Although the MEA approach allows customers to share in the benefits of new technology, we need to ensure that this is consistent with appropriate incentives for investment.

- 4.67 In a market with rapidly changing technology, the MEA for a given service may change frequently. There can be significant sunk costs involved in investing in a new technology as well as transition costs in moving from one technology to another. If these are not taken into account, then changes in the MEA may not allow efficient operators to recover those costs and so may disincentivise future investment.
- 4.68 We illustrate this by an example. Suppose BT invests in a technology (technology A) which at the time is considered to be the most efficient technology available. BT anticipates that it will recover its costs over a ten year period. After five years, a new lower cost technology emerges (technology B). The adoption of technology B as the MEA may mean that BT would not have recovered the costs involved in investing in technology A therefore resulting in a holding loss. This holding loss would not be a consequence of inefficiency, as at the time of investment, technology A was the most efficient technology available.
- 4.69 If this holding loss was difficult to forecast (and so could not been anticipated with any degree of confidence), then the MEA approach may not be the best approach given that the SMP operator should have a reasonable expectation of being able to recover its costs.
- 4.70 If BT has not had a fair opportunity to recover its investment in technology, then an approach that expropriates sunk costs has the potential to disincentivise future investment. However, this does not mean that the MEA approach should prevent losses that are caused by an operator's inefficiency. Nor should it lead to higher prices than would be charged under an anchor pricing approach. However, it does mean that in adopting the MEA approach, we may need to take into account holding losses associated with the legacy technology and/or transition costs associated with the new technology.
- 4.71 By contrast, the use of anchor pricing will tend to be consistent with efficient investment incentives. The anchor pricing approach allows BT to keep any efficiency gains made during the charge control period as a result of adopting new technology. Hence, if the costs of serving customers on the new platform are lower than we have forecast (using the anchor pricing model), BT would be able to retain any additional profits associated with those cost savings. This gives BT the incentive to make this investment if it is expected to reduce costs later, as would occur in a competitive market.
- 4.72 Using an anchor pricing approach means that the risk associated with introducing new technology is borne by BT. For example, if a new technology is successful and results in lower costs, then BT could retain the benefits of such cost savings, until prices are gradually adjusted to reflect the new technology. Conversely, if the new technology is unsuccessful, and leads to higher costs, consumers are protected from higher prices.
- 4.73 We recognise that the anchor pricing approach may not necessarily achieve allocative efficiency, because prices may not always equal costs at every point in time. However, this is a characteristic of RPI-X regulation in general and we believe this delivers consumers' interests in the long run. We consider that attaching a high weight to productive and dynamic efficiency would be of greater benefit to consumers

over time and that the anchor pricing approach should ultimately result in lower prices to consumers⁹⁴.

- 4.74 The anchor pricing approach is also consistent with consumer protection during a period of technological change. The anchor pricing approach ensures that the costs of existing services do not increase purely as a result of investment in and adoption of the new network. The price (and quality) of existing services are 'anchored' by the existing technology, even if the services are actually provided over the new technology.
- 4.75 Migration to a new technology will tend to lead to increases in the unit costs of the current technology services as volumes decline. Economies of scale and scope are prevalent in telecoms and this means that the average costs on both the old and new platforms will depend on the rate of migration between them, which may be difficult to forecast with any precision. In fact, whilst parallel running is in operation, average costs on both networks will tend to be higher than if there was a single network, due to the loss of economies of scale and scope, and this is one reason why total costs may initially rise when new technology is introduced. The anchor pricing approach can be used to protect customers from such increases in cost and give the firm appropriate incentives to recover them through subsequent efficiency gains.

Customer migration

- 4.76 Where the customer takes the decision to migrate, it can be efficient to set lower prices for services supplied using the new network and higher prices for services supplied using the old network. This would encourage migration to the new network, and allow the operator to benefit from economies of scale.
- 4.77 Under the MEA approach, in order to allow BT to encourage efficient migration in this way, the two types of service would have to be placed in the same charge control basket. This would allow BT to adjust the relative prices of the services. In this way, the MEA approach can be consistent with encouraging efficient migration.
- 4.78 The anchor pricing approach may be more appropriate during a period of significant technological change, when it is important that BT is given incentives to invest where it is efficient to do so, but when the migration path is unclear or when the benefits to customers of migrating are uncertain. In these circumstances the key decisions are made by BT, rather than customers, since it chooses whether to invest or not. The anchor pricing approach would incentivise such efficient investment whilst protecting customers from the risks involved.

Assessment criteria to be used

- 4.79 In the light of the factors discussed above, we have identified a set of questions that have guided our choice as to which approach we consider is most appropriate for our proposed charge controls.
- 4.80 Those questions are set out below.
 - i) Can we identify the relevant MEA for delivering the service in question?

⁹⁴ For instance, in its decision on the WLR LLU CC 2009 appeal, the CC found that we did not err in adopting the anchor pricing approach. See: <u>http://www.competition-</u> commission.org.uk/appeals/communications_act/wlr_determination.pdf

- ii) Can we calculate robust cost estimates for the services based on the MEA?
- iii) Would the use of the MEA approach allow an efficient operator to recover its costs?
- iv) Does the MEA approach give appropriate migration signals to consumers?
- 4.81 We address these questions for each of the technological changes to BT's network in Sections 5 and 6.

Step 3: Forecast costs for the duration of the charge control

- 4.82 Having modelled the relevant base year costs under step 2, the next step we have taken is to forecast (from this starting point) how costs are likely to change over the duration of the proposed charge control.
- 4.83 The key determinants of cost movements in our model are:
 - volume changes;
 - the impact of those changes on capital and operating expenditure (as reflected in the Asset Volume Elasticities ('AVEs') and Cost Volume Elasticities ('CVEs');
 - asset price changes;
 - anticipated improvements in BT's efficiency; and
 - the cost of capital.

Volume changes

4.84 In order to understand how costs are likely to change over the charge control period, we forecast the volume of leased lines services that BT is expected to supply. Changes in the volume of BT wholesale leased lines services will be affected by overall market growth, as well as BT's expected share of the leased lines markets. To assess this, we have reviewed forecasts based on information provided from various stakeholders and external sources. This is discussed in greater detail in Sections 5 and 6.

Relationship between costs and volumes

- 4.85 Having forecast the changes in volumes, we then model how the costs of the components that make up leased lines services will vary in response to volume changes for particular services. To do this, we use estimates of the AVEs and CVEs.
 - CVEs (defined as the percentage increase in operating costs for a 1% increase in volume) are used to determine the level of operating costs in response to changes in volume; and
 - AVEs (defined as the percentage increase in assets required for a 1% increase in volume) are used to determine the level of capital costs in response to changes in demand for leased lines services.

Asset prices

- 4.86 The price that BT has to pay for new assets will clearly impact on its costs. Changes in asset prices impact on BT's asset base valuation and give rise to holding gains or losses which are reflected in operating costs in the year in which they arise. In order to assess these costs, we forecast the likely changes in the price of assets over the duration of the charge control.
- 4.87 This is discussed in more detail in Annex 5.

Efficiency estimates

- 4.88 We forecast the expected efficiency improvements that BT might reasonably be expected to achieve over the duration of the charge control. These efficiency improvements relate to expected changes in real unit costs, which do not depend on changes in volumes, but reflect the general improvements in efficiency.
- 4.89 This is discussed in more detail in Annex 5.

Cost of capital

- 4.90 Under a charge control, we set the value of 'X' so that the value of BT's rate of return projected for the last year of the charge control is equal to its weighted average cost of capital ('WACC'). This approximates to the workings of a competitive market in which any excess profits are gradually eroded by competition.
- 4.91 We therefore need to estimate an appropriate value for the WACC to use in setting the charge controls that are the subject of this consultation.
- 4.92 Our approach to estimating the WACC was developed in a statement in August 2005 on Ofcom's views on a number of issues relating to risk and return⁹⁵. In that statement, we set out our approach to estimating disaggregated WACCs for different parts of BT to reflect variations in systematic risk between different activities. We concluded that it was appropriate to estimate a disaggregated WACC for BT's copper access business and to have another rate for 'the rest of BT'.
- 4.93 This disaggregated approach has been used in a number of charge controls, including the LLCC 2009, where we decided to use the 'rest of BT' rate. This decision was based on the view that leased lines services should not be classified within BT's access network for the purposes of an assessment of risk levels. Since the retail leased lines services from which the demand for wholesale services is derived are mostly used by small and medium enterprises ('SMEs') and corporate customers, future demand for these services, particularly in the case of the demand for new circuits, is likely to be more closely correlated with the economy-wide level of economic activity than other access services⁹⁶.
- 4.94 The CC found that we had not erred in the approach we took in the LLCC 2009 in estimating the relevant WACC for the charge control. In its determination on the appeal, it agreed that leased lines were similar to the 'rest of BT' business as the services had similar risk characteristics, whereas the profile for the access network

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<sup>96</sup> See, for instance, paragraph 3.262 of the LLCC 2009 Statement:
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⁹⁵ <u>http://stakeholders.ofcom.org.uk/consultations/cost_capital2/statement/</u>

http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/llccstatement.pdf

rate reflected the fact that demand for the Openreach copper access business would be more stable over the economic cycle⁹⁷.

- 4.95 We have since analysed the cyclicality of demand for various leased lines products, which was included in the consultation on price controls for wholesale ISDN30 services, published in April 2011⁹⁸. We considered the extent to which demand for these services has been correlated with the economic cycle. This analysis indicated that wholesale leased lines services experienced a relatively high variability of demand compared to both ISDN30 services and copper access and faced an accentuated decline in volumes in 2009/10 due to the economic downturn⁹⁹. It appeared that wholesale leased lines continued to be more subject to systematic risk than copper lines. Therefore, we continue to believe that the risk characteristics of leased lines services justify the use of the 'rest of BT' rate.
- 4.96 We discuss our proposals for the value of the WACC to use in our proposed charge controls on TI and Ethernet services in Sections 5 and 6 respectively.

Step 4: Consider whether to make starting charge adjustments

4.97 As part of our charge control assessment, we have considered whether to propose making any one-off adjustments to prices. Our general preference is to adopt a 'glide path' approach, whereby the charge control would bring about a gradual convergence of prices and unit costs over the period of the control, although in some cases adjustments could be justified at the start of the control where prices are markedly out of line with costs. We explain below the principles we are proposing to use when considering whether to make starting charge adjustments.

Our general preference is for glide paths

- 4.98 One of the features of price cap regulation is that profits may diverge from the level expected at the time when the control was set. Any such divergence may be taken into account when X is reset in the next price control review. In principle, one way in which this could be done is by a one-off adjustment to prices, which would bring the firm's expected rate of return to an acceptable level in the first year of the new cap. The main alternative is a glide path approach, which would set the control so that the expected rate of return reaches an acceptable level by the end of the price control period.
- 4.99 The benefit of the glide path approach is that it approximates more closely to the workings of a competitive market than one-off reductions, where excess profits are gradually eroded as rivals improve their own efficiency. It also avoids discontinuities in prices over time and leads to a more stable and predictable background against which investment and other decisions may be taken, by both suppliers and customers.
- 4.100 This approach also has greater incentives for efficiency as it allows the firm to retain the benefits of cost reductions made under a previous charge control for longer. This means that cost reductions feed into price reductions with an intentional regulatory

⁹⁷ See, in particular, paragraphs 4.308-4.333 of the Determination: <u>http://www.competition-</u> commission.org.uk/appeals/communications_act/final_determination_excised_version_for_publication .pdf

⁹⁸ See Annex 7 of the ISDN30 Consultation:

http://stakeholders.ofcom.org.uk/binaries/consultations/isdn30-2011/summary/isdn30-2011.pdf ⁹⁹ Leased lines are an input to ISDN30 services.

lag. One-off adjustments to prices would reduce the effective regulatory lag, and hence the incentives to reduce costs.

- 4.101 Whilst the above discussions relate to one-off reduction to prices, one-off increases would similarly raise concerns about incentives for efficiency. Allowing a rapid rise in charges (i.e. via one-off price adjustments) would signal to BT that cost increases would quickly be followed by price rises. Therefore, if cost increases resulted in swift price increases this could reduce the incentive to control costs. Indeed, one-off adjustments upwards could create an expectation that other one-off adjustments up or down will be made in future, and this could also have adverse effects on incentives.
- 4.102 This suggests that it is often not appropriate, for example, to apply one-off reductions simply because prices at the start of the control are out of line with costs. One-off reductions may also reduce incentives to invest and make efficiency improvements; they impact on regulatory certainty and stability; and they would not necessarily best reflect the outcomes in competitive markets (whereby surplus profits are gradually eroded). Therefore, if returns at the start of a control are initially high, cutting the difference between prices and costs via a glide path is generally preferable.

When might we consider starting charge adjustments?

- 4.103 Whilst the above suggests a general preference for glide paths in the context of RPI-X controls, we will still consider making one-off adjustments where there are good reasons to do so. The circumstances under which they could be appropriate include:
 - when there are strong allocative efficiency arguments for bringing charges into line with cost sooner (such as where BT's charges of particular services are out of line with cost-orientation requirements); and/or
 - where the previous charges were unregulated or were not subject to a charge control and where BT's charges are high relative to costs.
- 4.104 Therefore, if prices of individual services are out of line with costs to an extent which could distort competition, we may need to address this through one-off reductions. However, in assessing possible starting charge reductions (and increases), we need to balance this against alternative (and potentially more proportionate) regulatory approaches. It may be possible, for instance, for BT to make acceptable voluntary adjustments in prices without us having to mandate this through detailed one-off reductions (increases). We also need to consider the materiality of the issue (particularly given the risk of damage to incentives associated with one-off adjustments).

Step 5: Calculate the value of X for the proposed basket(s) of services

4.105 Having forecast costs for each basket, we then model the value of 'X' required to bring BT's prices at the start of the charge control in line with forecast costs in the last year of the charge control period. This provides us with an initial value of 'X' for each of the charge control baskets reflecting expected cost reductions and the elimination of any super-normal profits existing at the start of the charge control period.

- 4.106 If we apply adjustments to starting charges under step 4, this would also impact the value of 'X'. For example, if we applied a one-off downward adjustment to the starting charge this would mean that the value of 'X' required to bring prices in line with forecasts costs in the last year of the charge control period would be smaller in absolute terms.
- 4.107 We outline our specific proposals on the value of 'X' for each charge control basket in Sections 5 and 6 and explain our methodology behind our calculations in more detail in Annex 5.

Other methodological issues

- 4.108 We have also considered other methodological or policy issues in our proposed charge controls. These are as follows:
 - whether to use prior year or current year revenues to weight baskets;
 - how to treat discounts in assessing compliance with charge control basket(s); and;
 - how to treat the introduction, modification and withdrawal of services within the scope of the charge control.
- 4.109 We explain our proposed approach to these issues below.

We propose to use prior year revenues to weight price changes

- 4.110 The proposed controls on BT's wholesale circuit charges will limit the weighted average change in BT's charges to a maximum of RPI-X. Under the basket approach, it is necessary to calculate the weights apportioned to the services within the basket to determine the value of X and to assess BT's compliance with the controls. Regulators who have applied this form of control have generally used one of two main methods of calculating these weights 'prior year revenue weights' or 'current year revenue weights'.
- 4.111 Under the prior year weighting approach, basket weights are set equal to the proportions of basket revenues accruing to the relevant services in the year prior to the one in which the price change occurs. Under the current year weighting approach, the weights are set equal to the proportion of current year basket revenues accounted for by each service as a proportion of total current year revenues.
- 4.112 Ofcom has generally preferred prior year weighting. This is primarily because current year weights cannot be calculated with certainty until after the end of the price control year in which compliance is being assessed. This means that, to decide how far to reduce prices, the charge controlled firm has to make forecasts of weights, with the consequent need for it to make retrospective adjustment for errors in forecasting.
- 4.113 Another potential disadvantage with current year weights is that average revenue can be affected by a change in the product mix within the basket. For example, average revenue will fall if the quantity sold of a lower priced product within the basket increases relative to the quantity sold of a higher priced product, even if the prices of both products are unchanged. This is sometimes referred to as the 'apples and pears

problem'¹⁰⁰. In some markets (for example gas or electricity markets) in which average revenue controls have been used, output can be expressed in a convenient common unit, which avoids this problem, but this is much less likely to be true in telecoms markets.

- 4.114 By contrast, a prior year weighted control relies only on revenue information which is already known when setting prices to comply with the control. This makes BT's task of complying with the charge control less complex and makes it more transparent for stakeholders.
- 4.115 However, a feature of prior year weighting is that it does not allow for relative price or volume changes during the year in question (though these will of course be included in the weighting for the following year). This means that prior year revenue weights can have a disadvantage when revenues from different products within a basket are expected to change markedly relative to each other over the period of the charge control¹⁰¹.
- 4.116 Due to the factors explained above and, in particular, information being available to determine prior year weights, but not being available for current year weights we propose to use the prior year weighting approach given the greater certainty provided.

Certain discounts will not contribute towards BT meeting its charge control obligations

- 4.117 We now discuss our proposed treatment of certain discounts, namely: volume, geographic and term discounts¹⁰².
- 4.118 In the LLCC 2009 we noted that volume discounts would be likely to be unduly discriminatory due to the fact they would predominantly benefit BT itself.
- 4.119 In relation to geographic and term discounts, in both instances, we recognised that discounts can be part of a normal competitive process, but did not allow them to count towards meeting the charge control. However, we were concerned that if discounts limited to certain geographic areas or to long-term contracts were allowed to count towards the price cap, BT would have an incentive to meet its charge control obligations through such discounts. This could mean that the charge control would fail to adequately protect customers in less competitive geographic areas, whose prices may be permitted to rise. We considered that giving BT the flexibility to offer such discounts, but not allowing them to contribute to charge control obligations strikes an appropriate balance between giving BT pricing flexibility and customer protection.
- 4.120 We now discuss our proposals for each type of discount and explain why we believe that they should not contribute towards compliance with the charge control. We then explain why we believe it is appropriate that actual revenues (including discounts)

¹⁰⁰ So called because if apples and pears are sold at different prices, compliance with a control on the average revenue from fruit will be affected by changes in the relative quantities of apples and pears sold.

¹⁰¹ This is particularly relevant in the case of the migration from legacy Ethernet to new Ethernet services, which is discussed in detail in Section 6. There we explain how we propose to deal with this issue.

¹⁰² Our proposals on the treatment of each of volume, geographic and term discounts are the same as those implemented under the LLCC 2009. See paragraph 3.283 of the LLCC 2009: http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/llccstatement.pdf

should be taken into account when we calculate base year revenues in our charge control model.

Volume discounts

- 4.121 As set out in the BCMR Consultation, we remain of the view that volume discounts are likely to be unduly discriminatory¹⁰³.
- 4.122 By volume discounts we refer to unit prices which vary with the number of circuits (of given bandwidth) purchased. We are concerned that, if BT were to offer volume discounts for its wholesale products, the main beneficiary of those discounts would be downstream providers with the highest market shares. In many markets this is likely to be BT itself, allowing it to undercut competitors in downstream markets.
- 4.123 We also propose not to allow volume discounts to count towards meeting charge control caps. We consider that, if volume discounts were allowed to contribute towards compliance with the proposed charge controls, BT would have an undue incentive to apply volume discounts, which could be detrimental to sustainable competition.

Geographic discounts

- 4.124 In the BCMR Consultation, we conducted a detailed geographic analysis of each of the retail and wholesale product market. Our analytical framework for this analysis focused on the presence of common pricing constraints and geographic variations in competitive conditions. On the basis of this analysis, we noted that for the geographic markets where we have proposed SMP, the underlying costs and competitive conditions would not be completely homogenous throughout the UK (even outside the WECLA).
- 4.125 This suggests that some freedom to charge in a way that reflects more accurately the costs incurred and to respond to the local characteristics of competition that exist in these markets would be efficient. Moreover, given the level of cost differences that may exist and the extent of competition in some areas, BT's ability to compete could be limited if it were required to maintain nationally uniform prices. Hence, geographically differentiated prices may reflect BT responding legitimately to cost differences in the face of competition.
- 4.126 However, if geographic discounts were allowed to count towards the charge control, then BT would face a strong incentive to comply with the charge control by concentrating discounts in areas where it faced more competition. Such an incentive would mean that prices may rise in less competitive areas. This may undermine the effectiveness of the price control in protecting customers.
- 4.127 Therefore we propose to continue not to allow such discounts to contribute towards meeting charge control obligations. In this way, if BT wishes to offer price reductions for a subset of customers on a geographic basis to reflect lower costs or to respond to emerging competition then it would be free to do so. However, any such discounts would need to be self-financing for example by the increase in customer volumes such discounts may generate.

¹⁰³ See paragraphs 10.88, 11.146 and 12.104 of the BCMR Consultation.

Term discounts

- 4.128 Term discounts mean that customers who sign up for longer contracts face lower annual rental charges than customers who have a shorter contract term. For example, BT has an annual rental charge of £9,500 for an EAD 1Gbit/s circuit¹⁰⁴. This annual rental charge reduces to £6,300 if a customer commits to a 60 month rental term. In other words, customers who commit to a five -year contract for EAD 1Gbit/s benefit from a 33% discount on annual rental charges.
- 4.129 Firms offer discounts for long-term contracts for a number of reasons. Longer-term contracts may be most suitable to some customers' needs and can have some efficiency benefits, such as savings in transaction costs. Longer term contracts also offer a company greater security of revenues. In its response to the CFI, BT has indicated that discounts provide:

*"customers with greater choice of pricing and contract flexibility and better reflecting the market norm"*¹⁰⁵.

- 4.130 We also note that we should not automatically view term discounts as harmful. However, longer-term contracts may raise barriers to entry or expansion by increasing switching costs, thus tending to entrench SMP. This concern would be higher the greater the length of the contract. This may create a disincentive for CPs to switch away from BT, for example, by expanding their own network or switching to an alternative infrastructure provider during the minimum contract term.
- 4.131 If term discounts were allowed to count towards the charge control caps, BT may seek to make price reductions conditional upon customers taking up longer-term contracts. Given that the charge control requires overall reductions in the prices of BT's services, it should not be able to provide these cuts only where long-term contracts are signed. We are concerned that if term discounts count towards the charge control Openreach may have an excessive incentive to offer them. If term discounts give rise to efficiency savings, then they should be self-financing. Therefore, we propose not to count term discounts in assessing compliance under charge control caps.
- 4.132 We propose to continue with the current approach of not allowing term discounts to count towards compliance with the charge control. This gives BT some flexibility in pricing, but also ensures that CPs who are unwilling to commit to a longer contractual term are adequately protected. We note that under the present charge control, BT has offered some such discounts despite them not counting towards charge control compliance. This gives us comfort that the proposed approach strikes an appropriate balance between giving BT pricing flexibility and customer protection.

Treatment of discounts in starting prices

4.133 In the discussion above we concluded that discounts should not count towards compliance with the charge control cap. As BT has been offering geographic and

¹⁰⁴ Prices correct as at 28/06/2012. See

http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=0d0zetWg ShsjqKWjcN2Y5WJA8BGGqsBLxL7IgSM4fRpZ6rNZujnCs99NbIKJZPD9hXYmiijxH6wr%0ACQm97G ZMyQ%3D%3D. ¹⁰⁵ Page 10, BT response to the BCMR CFI:

http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr-inputs/responses/BT.pdf

term discounts during the current charge control period, we need to consider whether to take such pre-existing discounts into account in the starting revenues.

4.134 Under the charge control, we set a value of X so as to bring revenues into line with costs (including a return on capital) by the final year of the charge control. If we were to ignore discounts prevailing in the starting revenues, then it is possible that the charge control may require BT to reduce its prices to below its cost of capital. This would be inconsistent with our principle of cost recovery.



Figure 4.2 Implication of ignoring discounts in base year revenues

- 4.135 Figure 4.2 shows a glide path calculated based on gross revenues (i.e. ignoring any discounts), such that gross revenues are brought into line with costs by the end of the charge control period. However, if BT had been offering discounts in the base year, actual revenues (net revenues) in the base year would be below gross revenues.
- 4.136 If this same glide path (i.e. applying the same value of X, and so the same slope of the line) is applied to net revenues (as would be the case if BT maintained the same discount policy as before), then BT would earn less than its cost of capital by the end of the charge control period.
- 4.137 This suggests that we may need to take into account discounts in the starting prices when calculating the value of X. The potential solution is to calculate the value of X using BT's actual revenues in the base year. This has the merit that, assuming no change in discount policy. BT would recover its cost of capital. This will reduce the value of X.
- 4.138 A potential drawback is that if BT were to reverse or remove its existing discounts, then it may be able to reduce prices by less than required under the charge control. BT could then earn more than its cost of capital by the end of the charge control

period. This risk could arise if reducing the level of the discount would have little impact on volumes. We consider that this risk is limited.

- 4.139 As discounts are not taken into account in assessing compliance with the charge control, BT has an incentive only to introduce such discounts when they are self-financing or are in a response to geographic competition. This would mean that BT would not generally have an incentive to remove these discounts and raise prices back up to the undiscounted level.
- 4.140 We discuss this further below in relation to the geographic and term discounts offered by BT.

Geographic discounts

- 4.141 As noted in the BCMR Consultation, BT has introduced, to a limited extent, geographic variations in its pricing of some Ethernet products within the charge controlled area¹⁰⁶. These include a time-limited discount on connection (but not rentals) of the 1Gbit/s EAD products in the London, Birmingham and Manchester metro areas for instance¹⁰⁷.
- 4.142 It seems reasonable to assume that such geographic discounts as do exist are aimed at increasing demand and generating higher revenues or are in response to geographic competition. On this basis we believe that the risk of BT unwinding such discounts and raising the discounted prices back up to the undiscounted level is low.
- 4.143 We note that, if BT were to reduce the level of the undiscounted prices without reducing the discounted prices in proportion, the relative discount would fall. However, we do not consider that such a change in the rate of discount would give cause for concern, as long as BT complied with the charge control cap. We also note that the majority of geographically discounted prices offered by BT are in WECLA, which is not part of our proposed charge control and where the revenues are not included in the base year revenues for setting the charge control. Geographic discounts within the proposed charge control area are limited and would not have a significant impact on average prices.

Term discounts

4.144 BT also offers term discounts for customers signing up to a three year or five year term for its EAD 1Gbit/s product. Since such discounts are not allowed to count towards charge control caps, BT has an incentive only to introduce such discounts when they are self-financing. In particular, we note that for term discounts, customers will only commit to a longer term contract if it results in a lower price relative to a short term contract. We consider it reasonable to assume that if BT were not to offer such discounts, then its profitability would reduce.

Proposal

4.145 We therefore take into account discounts in the base year when setting the value of X. We note that although we take pre-existing discounts into account when setting

¹⁰⁶ See paragraph 5.163 of the BCMR Consultation.

¹⁰⁷ We also note that the majority of this 'metro discount' applies to circuits in the WECLA area. We will need to make an adjustment so that only the non-WECLA proportion of the discount applies in the charge control.

the value of X, discounts do not count towards charge control compliance¹⁰⁸. This means that during the charge control period, customers in less competitive geographic areas, or who do not wish to commit to a long-term contract, are protected by the charge control.

Introduction, modification and withdrawal of services within the scope of the charge control

- 4.146 When setting a charge control basket we have to determine the products and services within the scope of the charge control. The products and services within the scope of the relevant charge control baskets are listed in full in the relevant charge control conditions as annexes to each relevant SMP conditions, which are included as Annex 8 to this consultation.
- 4.147 The list of products and services only includes BT's services we expect to exist when the charge control commences. Particular issues we have to consider are new services that are not on this list that BT may subsequently launch as replacements or variants of existing charge controlled services. Telecoms markets are subject to ongoing product development and innovation and we need to consider this when setting our charge control conditions. In particular, we want to ensure that any services that BT might develop that wholly or substantially replace the products or services defined within the SMP conditions to fall within the scope of the charge control. We also want to avoid creating artificial incentives on BT to change its service definitions. It might have an incentive to do this, for instance, in an attempt to reduce the number of services captured by the charge control.
- 4.148 We have therefore included a clause within the list of services in the SMP conditions to deal with this. If BT introduces a new service that wholly or substantially replaces an existing service, using for example a new more efficient technology, then these replacement services would fall within the scope of the proposed charge control.
- 4.149 It is important to note that new services that replace an existing service within the scope of the charge control would face the same charge control conditions. For example, new services that fall within scope of relevant TI or Ethernet basket caps should remain subject to that same overall basket cap for the duration of the charge control period, irrespective of the underlying technology that BT uses to provide those services. This provides BT with incentives to introduce new more efficient services. The process by which this will work in practice is set out in Section 10.

Question 3: Do you agree with our overall proposal for the design of the charge control? If not, please explain why and propose an alternative approach with supporting information.

Summary

- 4.150 There are five key steps in the methodology we have used to design the proposed charge control for leased lines services:
 - step 1 identify the appropriate charge control baskets and sub-caps;

¹⁰⁸ We note that the onus remains on BT to show that its discount schemes are not unduly discriminatory.

- step 2 determine the base year costs for the services covered by the charge control;
- step 3 forecast the costs of the services for the duration of the charge control;
- step 4 consider the case for one-off adjustments to charges at the start of the charge control; and
- step 5 calculate the value of X for the proposed basket(s) of services.
- 4.151 We also propose to use prior year weights and to exclude discounts from the calculation of charges for services for the purposes of compliance with the charge control formula.

Section 5

Proposed controls for TI services

Introduction

- 5.1 In this Section, we set out our proposals on the charge controls for the basket of TI services, comprising primarily TI terminating segments and 'regional' trunk services. In particular, we explain our proposals with regard to:
 - the scope and design of the charge control basket;
 - the need for sub-basket constraints and/or cost orientation in addition to the controls on the baskets of services;
 - how technological change has influenced our proposals;
 - the proposed cost adjustments to BT's base year costs in order to determine the relevant cost basis for forecasting purposes;
 - our approach to forecast costs over the period of the charge control; and
 - the proposed range for the values of X for the basket.
- 5.2 This Section follows the proposed framework for charge control design set out in Section 4, similarly with our proposals for the charge control for Ethernet services in Section 6.

Summary of key proposals

We propose a single TI basket charge controlled at RPI+3.25%¹⁰⁹

- 5.3 We propose to charge control TI services within a single basket ('TI basket'), capped at between RPI+0% to RPI+6.5%, with a midpoint of RPI+3.25%. We are also proposing a number of sub-cap and sub-basket controls¹¹⁰ where we believe that the overall basket cap would not offer sufficient protection to customers.
- 5.4 Table 5.1 below summarises our proposals with further details about the specific services falling within this proposed TI basket, together with our proposed sub-cap and sub-basket constraints, based on the mid-point of our proposed range for the value of X.

¹⁰⁹ These are provisional based on the mid-point of our consultation range.

¹¹⁰ Sub-baskets impose a constraint on the weighted average charge for a group of services and subcaps impose a constraint on each charge.

Services within scope	Basket cap	Sub-cap and sub-basket constraints	
<u>Connection and rental charges for:</u> Wholesale low bandwidth TISBO (up to and including 8Mbit/s)	3.25%		
Wholesale medium bandwidth TISBO (above 8Mbit/s up to and including 34/45Mbit/s) outside the WECLA		Point of handover services (sub-basket set at RPI-0%) RBS, Netstream 16 Longline and SiteConnect (sub- basket set at RPI+3.25%) Ancillary services, equipment and infrastructure (sub- cap set at RPI+3.25% on each charge) Sub-cap on all other charges (RPI+10% on each charge)	
Wholesale high bandwidth TISBO (above 34/45Mbit/s up to and including 140/155Mbit/s) outside the WECLA			
Regional trunk (all bandwidths)			
RBS, Netstream 16 Longline and SiteConnect			
TI equipment and infrastructure			
TI ancillary services (excluding Excess Construction Charges)			

Table 5.1 Proposed TI basket control (based on the mid-point of our consultation range)¹¹¹

- 5.5 The volume of TI services is forecast to decline substantially over the period of the proposed charge control as demand increases for higher bandwidth services. As volumes decline, unit costs may rise, since fixed costs are shared over a fewer sales and economies of scale are lost. This is important in the context of setting the charge control, as we seek to uphold the principle that customers should not be disadvantaged by technological change, whilst also allowing for efficient pricing signals so that customers are incentivised to migrate to alternative, more efficient services where appropriate.
- 5.6 Within our charge control modelling, we are proposing to reallocate £101m of costs from the TI basket to the Ethernet basket. This is because we consider that TI services would attract a declining allocation of certain costs (e.g. duct, fibre, management) as TI service volumes decline and Ethernet volumes rise. As explained in Annex 5, this change in allocation is not readily captured by an approach of modelling the costs of separate baskets and so we need to make a specific adjustment.
- 5.7 As a result, we are proposing to limit the extent to which TI prices may increase to an overall cap ranging from RPI+0% to RPI+6.5%, with a midpoint of 3.25%. This reflects the rise in unit costs experienced as volumes decline faster than costs.

Comparison with the LLCC 2009 basket design

5.8 Our proposed basket structure for TI services is similar to the one currently in place (see Table 5.2 below). The LLCC 2009 also incorporated a relatively broad TI basket including relevant terminating and trunk segments with a number of sub-basket constraints. We also propose to maintain a sub-basket constraint of some form on all charges to prevent prices for any individual service from rising too steeply.

¹¹¹ Our proposals exclude the Hull area.

Basket	Services within scope	Basket cap	Sub-cap and sub-basket constraints
TI basket	Connection and rental charges for: Wholesale low bandwidth TISBO (up to and including 8Mbit/s) Wholesale medium bandwidth TISBO (above 8Mbit/s up to and including 34/45Mbit/s) outside CELA Wholesale high bandwidth TISBO (above 34/45Mbit/s up to and including140/155Mbit/s) outside CELA Trunk (all bandwidths)	RPI-3.25% ¹¹²	TISBO terminating segments (sub- basket at RPI-0%) Each PoH charge (sub-cap of RPI-0%) Sub-cap on all other charges (RPI+5%)
Equipment & Infrastructure (TI)	All equipment and infrastructure charges	RPI-0%	Each charge (RPI+5%)
Ancillary services (TI) (including ECCs)	All ancillary services used in the provision of TI services within the scope of the TI basket	RPI-0%	No sub-cap

Table 5.2 Structure of baskets under the LLCC 2009 (TI services, Equipment &Infrastructure and Ancillary services)

- 5.9 In contrast to the LLCC 2009, for the purpose of our proposals in this consultation, we now consider it appropriate to include further products and services within the basket and have proposed a different set of sub-cap and sub-basket constraints in order to address the risk of BT pricing these services excessively, as set out below:
 - we propose to bring TI equipment and infrastructure and ancillary services (except ECCs) within the scope of the TI basket. The LLCC 2009 kept these in separate charge control baskets. Due to their small weight in the basket, we propose that these services are controlled by a sub-cap and we propose that this should be set at the same value as the overall basket cap (currently. RPI+3.25%, based on the midpoint of our consultation range).
 - we propose to include Radio Base Station ('RBS') backhaul and other services provided to mobile operators (NetStream 16 Longline and SiteConnect) in the TI basket. These services were not charge controlled in the LLCC 2009.
- 5.10 Also, we propose not to have a specific sub-basket constraint on TI terminating segments. This is because we propose in the BCMR Consultation to identify separate regional and national trunk markets for TI trunk, with BT having SMP in regional trunk, but not in national trunk. Therefore, unlike the situation in the LLCC 2009, where the trunk segments were potentially more competitive than terminating segments, the regional trunk services, which we propose not to deregulate and which we propose to place in the TI basket, face similar competitive conditions to terminating segments¹¹³.
- 5.11 Additionally, as discussed below, we are not proposing an additional cost orientation obligation as we did in the LLCC 2009.

¹¹² This was revised to RPI-1.75% for 2010/11 and 2011/12 following the decision of the Competition Appeal Tribunal as a result of the Cable & Wireless appeal of the LLCC 2009. See: http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/statement/LLCC decision final.pdf

¹¹³ See Section 7 and Table 81 on page 397 of the BCMR Consultation.

We propose not to include a cost orientation obligation

5.12 We do not propose to impose a cost orientation obligation for TI services. The BCMR Consultation identified the risk of BT engaging in excessive pricing¹¹⁴ and we believe that this risk will be sufficiently constrained by our proposed charge control basket and sub-basket caps. In our view, having additional cost orientation obligations would, in this case, not be proportionate (see paragraph 5.69 below).

We propose to adopt the anchor pricing approach to modelling TI services

- 5.13 Our analysis suggests that there is no MEA with reliable cost data for TI services. In other words, we have not identified any alternative technologies that are more efficient than the ones currently in use, which are also capable of delivering the same service, to the same level of quality and to the same group of customers as TI services for which reliable cost data is available.
- 5.14 In these circumstances, we propose to use the anchor pricing approach. Anchor pricing ensures that, during technological change, prices should not rise above the level implied by the hypothetical continuation of the existing technology. We propose to implement anchor pricing by modelling the costs and asset values based on the existing technology. We believe that this approach maintains appropriate signals for investment and migration. This is explained in more detail in paragraph 5.75 below.

We propose adjustments to BT's base year costs in 2010/11

- 5.15 We propose adjusting the cost data provided by BT to ensure that these are representative of the relevant level of costs for forward-looking charge control purposes, whilst remaining consistent with the principle of cost recovery. Those adjustments are:
 - adjustments to reflect the composition of the basket for which we are explicitly forecasting costs (i.e. excluding those services that will not form part of the basket and including those that have been separately reported but that we are proposing to charge control within the same basket). This also includes amendments to base year data in BT's reported figures to provide a relevant and reliable accounting view of costs and revenues; and
 - adjustments to provide a suitable basis for forecasting costs for the purposes of setting the charge control. This includes removing one-off or irregular levels of costs and revenues, as well as adjustments to reflect how we expect BT to recover certain costs in the future.
- 5.16 Our proposed adjustments are discussed from paragraph 5.89 below.

We forecast costs associated with the main TI services

5.17 For the purposes of setting the value of X for the TI basket, we propose to forecast the costs associated with PPCs, RBS, Netstream 16 Longline and SiteConnect. For PPC rentals, our costs and revenues include both standard maintenance as well as enhanced maintenance as set out in BT Wholesale's carrier price list¹¹⁵. These

 ¹¹⁴ See Section 10 of the BCMR Consultation, in particular paragraph 10.101.
 ¹¹⁵ PPC charges are available at:

https://www.btwholesale.com/pages/downloads/service_and_support/pricing_information/carrier_price_list/browsable_carrier_price_list/section_b3/B8.03.rtf

services make up over 90% of the total TI market as reported in BT's RFS in 2010/11¹¹⁶.

- 5.18 Our cost forecasts are based on how different types of costs might vary with respect to the underlying volume changes, subject to assumptions such as efficiency, asset price changes and the WACC.
- 5.19 We have determined what the revenues would be at the end of the charge control by multiplying service volumes by their respective prices. In effect, this is what the revenues would be in the absence of any price changes from current levels. We have then calculated the value of X so as to bring our forecast prices into line with forecast costs in the final year of the charge control.
- 5.20 Our proposed assumptions are discussed from paragraph 5.132.

Basket design

We propose a single basket for TI services

- 5.21 We propose a single basket, the TI basket, which comprises the following groups of services (as defined in SMP condition 5.1.):
 - wholesale low bandwidth TISBO (up to and including 8Mbit/s) connection and rental (standard maintenance and enhanced maintenance);
 - wholesale medium bandwidth TISBO (above 8Mbit/s up to and including 34/45 Mbit/s) outside the WECLA – connection and rental (standard maintenance and enhanced maintenance);
 - wholesale high bandwidth TISBO (above 34/45Mbit/s up to and including 140/155 Mbit/s) outside the WECLA – connection and rental (standard maintenance and enhanced maintenance);
 - regional trunk (all bandwidths) rental (standard maintenance and enhanced maintenance);
 - RBS backhaul, Netstream 16 Longline and SiteConnect;
 - interconnection services;
 - TI Equipment and Infrastructure; and
 - TI ancillary services excluding ECCs.
- 5.22 We propose that Ethernet services are separately controlled within a different charge control basket. We discuss the rationale for not proposing a combined TI and Ethernet basket in detail as part of our proposals in respect of Ethernet services more generally in Section 6.

¹¹⁶ See BT's 2010/11 RFS, where total reported revenues for the TI market were £898m. From these revenues, we exclude those associated with points of handover, ancillary services and SDSL (£73m). Then we apply revised volumes and geographic disaggregation to reduce revenues by a further £72m, resulting in TI basket revenues of approximately £753m. See Table A5.3 modelling annex for more detail.

We propose a number of sub-baskets and sub-caps

- 5.23 In addition, we propose a number of sub-baskets and sub-caps where we believe that a further safeguard would be necessary to effectively control the prices of certain services, namely:
 - a sub-basket on RBS backhaul, Netstream 16 Longline and SiteConnect;
 - a sub-basket on interconnection services (i.e. Points of Handover);
 - a sub-cap on ancillary services, equipment and infrastructure; and
 - a sub-cap on all other charges (i.e. those services not included in the other subbaskets and sub-caps specified above).
- 5.24 We explain the reasons for our proposed basket structure in further detail below.

We propose a broad basket combining the main TI services

- 5.25 As discussed in Section 4, in determining the appropriate number of charge control baskets, we have sought to balance the following two potentially opposing considerations:
 - efficient pricing where the services being considered share substantial common costs, a single basket can be more conducive to efficient pricing and cost recovery; and
 - **competition** where the services being considered face different competitive conditions or BT does not use the same wholesale inputs as its rivals, placing them in the same charge control basket may give BT an incentive to set prices in a way that undermines competition.
- 5.26 We set out below our consideration of these two factors, including why we are proposing to include or exclude certain services from our proposed TI basket by reference to these factors. We discuss:
 - why we propose to have a single basket to achieve these objectives comprising services within different markets; and
 - why we consider certain sub-caps and sub-baskets are appropriate to support the effectiveness of the basket in delivering our objectives.
- 5.27 In Section 4 we also discussed the importance of efficient migration when designing charge control baskets and how including services within the same basket could allow for appropriate incentives to migrate from one service to another. As explained in the BCMR Consultation¹¹⁷, we do not anticipate significant migration between different TI services. However, over the course of the proposed charge control period, we expect that many customers of TI services will migrate to Ethernet services. We note that our proposed values of X for the TI and Ethernet baskets, respectively, are consistent with such migration.

¹¹⁷ See paragraphs 3.31 to 3.74 of the BCMR Consultation.

Bandwidth breaks across PPCs

Relative competitive conditions

- 5.28 We proposed in the BCMR Consultation to identify separate markets at different bandwidths for TISBO services. However, as explained in Section 4, having a particular market definition does not mean that charge control baskets must be defined along the same lines. Services that have been found to be in separate markets can be combined in the same basket where it appears to us from our market analysis that the competitive conditions in those markets are sufficiently similar such that we can identify a risk of adverse effects arising from a price distortion¹¹⁸ that is common to all the markets. In this case, designing a common charge control obligation e.g. a common basket cap would in our view, be appropriate.
- 5.29 Our analysis, set out in the BCMR Consultation, suggests that, whilst the competitive conditions are not completely homogeneous across the defined bandwidth breaks, BT has SMP in each relevant market for TISBO services outside the Hull and the WECLA areas¹¹⁹. In particular, we summarise in Table 5.3 below our analysis of BT's market share and other indicators discussed in the BCMR Consultation.

Product market	Geographic scope	BT market share	Other indicators of market power
Low bandwidth TISBO (up to and including 8Mbit/s)	UK excluding Hull	86%	 BT's control of infrastructure not easily duplicated Existence of barriers to entry and expansion BT's economies of scale and scope Lack of countervailing buyer power Lack of prospects of competition
Medium bandwidth TISBO (above 8Mbit/s up to 45Mbit/s)	UK excluding Hull & WECLA	74%	 BT's control of infrastructure not easily duplicated Existence of barriers to entry and expansion BT's economies of scale and scope Lack of countervailing buyer power Lack of prospects of competition
High bandwidth TISBO (above 45Mbit/s up to and including 155Mbit/s)	UK excluding Hull & WECLA	49%	 BT's control of infrastructure not easily duplicated Existence of barriers to entry and expansion BT's economies of scale and scope Lack of countervailing buyer power Lack of prospects of competition

Table 5.3 BT market share in TI services¹²⁰

5.30 As can be seen from that analysis, BT's market share remains persistently high in each of these wholesale markets and the competitive conditions are such that we do not believe that there is the prospect for them to become competitive over the forward-looking period covered by our review. Whilst BT's market share for high bandwidth TI wholesale terminating segments is not as high as it is for the lower bandwidth markets, all three markets are declining and there are high barriers to entry or expansion for competitors¹²¹. These factors support our proposal that it would be appropriate to design a combined basket that includes services at different bandwidths.

¹¹⁸ See, in this respect, section 88(1)(a) of the Act.

¹¹⁹ See paragraphs 7.62 to 7.179 of the BCMR Consultation.

¹²⁰ See Tables 48, 51 and 56 in Section 7 of the BCMR Consultation.

¹²¹ Also, high bandwidth TI services make up a small proportion of TI services in the basket, so lower prices on high bandwidth services would not materially alter the constraint on the other services.

- 5.31 Competitive concerns could, however, be raised if the wholesale services purchased by BT differed from other CPs. In such a circumstance, BT may face an incentive to concentrate price reductions on those inputs it purchases itself, while increasing prices to inputs which are purchased disproportionately by external customers.
- 5.32 We have examined whether there is any difference between the PPCs circuits purchased internally by BT and those sold to external customers. The figure below shows the extent to which BT and its external customers use PPCs as wholesale inputs in 2010/11. All bandwidths are used both internally and by external customers and the majority of volumes are internal at each bandwidth. Across the bandwidths up to 34/45Mbit/s, the proportion consumed internally is largely consistent, between 60% and 85%. The 140/155Mbit/s circuits are largely purchased internally, but this accounts for less than 0.5% of the total. Any rebalancing in favour of 140/155 Mbit/s circuits would not materially affect the price level of the rest of the TI basket. In addition, as the potential for new 140/155 Mbit/s circuits are limited, we do not consider that there would be a material impact on competition. We therefore do not believe that the differences we have identified in internal and external consumption of TI services at different bandwidths raise any competitive concerns.



Figure 5.4 BT's PPC volumes in 2010/11

5.33 None of the factors described above suggests that there would be serious competitive concerns about placing TI wholesale markets at different bandwidths in a single charge control basket. In addition, the BCMR Consultation identified a risk of BT engaging in excessive pricing in each of the TI markets referred to in Table 5.3 above¹²². Consequently, under these circumstances, a relatively broad basket can be beneficial by allowing BT to recover costs in an efficient way, as explained further below.

¹²² See paragraph 10.104 of the BCMR Consultation.

Efficient pricing and cost allocation

- 5.34 TI services across different bandwidths share substantial common costs. For reasons already explained in Section 4, by placing the services in a single charge control basket, we consider that BT would have the incentive to set prices and recover common costs efficiently. In contrast, if we were instead to create separate baskets for each bandwidth, we would have to decide on the appropriate allocation of common costs to be recovered within each basket. Given the complexity of these allocations and the need for a certain degree of flexibility, we consider that it is more appropriate that BT works out how these costs should be recovered.
- 5.35 We should note, however, that our proposed sub-caps would limit the extent to which BT can rebalance its charges in favour of certain services over others.

PPC trunk and terminating segments

- 5.36 In the LLCC 2009, we placed TI trunk and terminating segments in a single charge control basket. We noted, however, that trunk segments were potentially more competitive and, to reflect this, we decided to create a sub-cap for TI terminating segments.
- 5.37 For the purpose of the proposals set out in this consultation, we have reconsidered whether such a measure would still be needed. As explained below, we consider that, in light of our proposal set out in the BCMR Consultation to deregulate national trunk routes, such a sub-cap would no longer be necessary since the remaining trunk segments, which we are not deregulating, face similar competitive conditions to terminating segments.

Relative competitive conditions

- 5.38 Our view is that the competitive conditions in the relevant trunk¹²³ and terminating segments markets are similar and we do not believe that they pose an impediment to placing trunk and terminating segments together in the TI basket. For instance, the analysis in the BCMR Consultation suggested that BT's market share in regional TI trunk is 89% and that this market is characterised by similar competition concerns as the terminating segments, such as BT's economies of scale and scope and the existence of barriers to entry and expansion¹²⁴.
- 5.39 In the BCMR Consultation, we discuss our proposals to deregulate national trunk routes, which we have found to be effectively competitive¹²⁵. The shorter distance routes, in relation to which we are proposing in the BCMR Consultation that BT still has SMP, face similar competitive conditions to terminating segments. This means that the main concerns about placing trunk and terminating segments in a single basket are now less apparent. Therefore, we propose to remove the separate subcap on terminating segments.

Efficient pricing and cost allocation

5.40 We consider that a combined basket would be more conducive to efficient recovery of common costs, as it would allow BT to choose prices to better reflect demand elasticities; it would also enable BT to respond to changes in demand and recover

¹²³ The relevant trunk market is the proposed wholesale market for regional trunk segments in the UK.

¹²⁴ See Table 81 at page 397 of the BCMR Consultation.

¹²⁵ See paragraphs 7.434 to 7.486 of the BCMR Consultation.

common costs efficiently. As we believe that competitive conditions are similar, we propose to keep regional trunk segments and terminating segments in the overall TI basket.

We propose a sub-basket on RBS backhaul, Netstream 16 Longline and SiteConnect services

Radio Base Station backhaul services

Relative competitive conditions

- 5.41 We propose in the BCMR Consultation that RBS backhaul services form part of the market for TI wholesale terminating segments up to 8Mbit/s, in which market we are proposing that BT has SMP¹²⁶. In 2010/11, PPCs made up 64%¹²⁷ of total TI market revenues in 2010/11 and RBS made up a further 19%¹²⁸. RBS backhaul services are provided using the same underlying components as PPC circuits. Therefore, CPs are likely to face similar conditions when competing to provide these types of services.
- 5.42 However, one difference between the two sets of services is that, whilst PPCs are provided both externally and internally, RBS backhaul services are sold mainly to external customers, i.e. mobile operators. These mobile operators also provide some competition for BT's downstream voice service. In these circumstances, there may be an incentive for BT to concentrate price reductions on PPCs, rather than RBS backhaul services. Therefore, we consider that it would be appropriate to have an explicit safeguard within the charge control to counteract this incentive.

Efficient pricing and cost allocation

- 5.43 As noted above, RBS backhaul services are provided using the same components as PPCs. Under these circumstances, we believe that it would be appropriate to allow BT to recover common costs in the most efficient way, unless there are competitive reasons why this would be undesirable. We believe that imposing a sub-basket constraint on RBS backhaul services within the TI basket provides a safeguard against potential competition concerns, whilst still allowing BT relative flexibility to set prices and recover common costs efficiently.
- 5.44 We propose to include RBS backhaul services within the TI basket, but to subject them to a sub-basket cap that is consistent with the overall basket cap (currently RPI+3.25%)¹²⁹. This would retain the advantages of including RBS backhaul in a broad basket, thereby allowing for efficient cost recovery. However, we also consider that the sub-basket would protect RBS backhaul customers from any potential incentives BT may have to discriminate against mobile operators.

Netstream 16 Longline and SiteConnect

Like RBS backhaul services, Netstream 16 Longline and SiteConnect services are 5.45 sold to external customers only, namely mobile operators¹³⁰. The reasoning set out

¹²⁶ See paragraphs 7.62 to 7.179 of the BCMR Consultation.

¹²⁷ Total TI market revenues include SDSL. See BT's RFS for 2011. http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2011/CurrentCostFin ancialStatements2011.pdf

BT Wholesale response to Ofcom information request of 21 May 2012.

¹²⁹ Based on the mid-point of our consultation range.

¹³⁰ Note that BT also sells some other Netstream services as retail services to other business customers. These Netstream products are not covered by the present charge control.

above for RBS backhaul services therefore also applies to these services. We also propose to include these services in the RBS backhaul sub-basket.

We propose a sub-basket constraint on interconnection services

- Each PPC purchased by a CP requires a connection between the CP's network and 5.46 BT's network. This interconnection is provided through a Point of Handover ('POH') that CPs must purchase from BT. POHs are only purchased by CPs (and not BT itself) and are essential for infrastructure based competition among providers of leased lines.
- 5.47 Given that POH services are purely sold externally by BT and are essential for infrastructure competition, there would be a competitive risk of placing them in a broad basket without any further constraints. Since POH services make up less than 1% of the overall revenues in the TI market¹³¹, we believe that a sub-basket constraint will offer adequate protection for customers. We therefore propose to include PPC POH services in the main TI basket under a sub-basket of RPI-0%.
- In our statement entitled 'LLCC PPC Points of Handover pricing review' published on 5.48 21 September 2011 (the 'POH Statement')¹³², we explained why CPs should only face the LRIC caused by their demand for POH and we accordingly developed a bottom-up LRIC model for the charges covered in the POH Statement¹³³. We consider that these charges remain at an efficient level, since they were based on the estimated LRIC for the relevant services in September 2011 and we do not consider that costs will have changed materially since then.
- 5.49 In addition, we have considered the level of other PPC POH charges that were not covered in the POH Statement¹³⁴. Our assessment of these charges is described in Annex 6. For PPC POH connection charges, we consider that, as the revenues associated with these charges are very low (only £0.2 million in 2010/11), it would be disproportionate to undertake a detailed review of these costs.
- 5.50 We have examined the rental changes which were not covered by the POH Statement. There were a total of 108 different types of rental charges which collectively accounted for total revenues of under £4m in 2010/11 RFS. We took a sample of nine of these charges, which accounted for over half of the revenues, and used the model developed for the POH Statement to calculate LRIC estimates for them. We found that the overall level of the charges was consistent with our LRIC estimates (this is discussed in further detail in Annex 6).
- 5.51 As set out above, we propose that RBS backhaul services should be subject to a sub-basket within the TI basket. Similarly to PPCs, each RBS backhaul service is connected between a mobile operator's network and BT's network through a POH. BT's current regulatory reporting does not provide cost and revenue data for RBS backhaul POH. However, given the similarities in the services, we have been able to compare the prices of RBS backhaul POH with the corresponding PPC POH¹³⁵. Our analysis shows that the RBS backhaul POH charges are 4.4% lower than its

¹³² LLCC PPC Points of Handover pricing review, 21 September 2011

http://stakeholders.ofcom.org.uk/consultations/revision-points-handover-pricing/final-statement/

¹³¹ £8m out of £898m. See BT's RFS for 2010/11.

There were eight charges, known as Type II rental charges and Type I additional charges, and these made up over 50% of the total TI POH revenue for 2010/11. See Annex 6.

These remaining charges relate to Type I connection and rental charges.

¹³⁵ There are 79 rental and 71 connection RBS backhaul POH charges that have corresponding charges for the PPC POH.

equivalent PPC POH (see Annex 6). We therefore consider that the level of these charges is consistent with our LRIC estimates derived for PPC POH. In our view, it is appropriate to place these services together with PPC POH services in the main TI basket.

- 5.52 We propose to have a constraint on the overall POH sub-basket, rather than having a cap on each charge. Our modelling suggested that the weighted average level of POH charges was consistent with LRIC. However, within this average, some charges were above our LRIC estimates and others were below (see Annex 6 for details). We therefore propose to use a sub-basket, which would allow BT some scope for rebalancing to bring all charges into line with LRIC. We do not believe that BT has any strategic incentive to re-balance the charges across different POHs because, given that all are purchased by CPs, there is no clear reason to favour one type of POH product over another.
- 5.53 We propose that a sub-basket cap of RPI-0% is appropriate, despite this being tighter than the overall TI basket cap. We note that POH services may be seen as particularly important for competition as they are essential for infrastructure competition, and consequently we consider it appropriate to err on the side of lower rather than higher charges We have chosen RPI-0% as a level which will ensure that POH charges overall will be at no more than their current level in real terms throughout the charge control period.
- 5.54 We also consider that POHs may be less subject to economies of scale than TI circuits as a whole. Therefore the unit costs of providing these services may not increase in the same way as other TI services as volumes fall. This is because a POH provides a CP with the capacity to aggregate large volumes of services over the interconnection. The CP faces the same charge regardless of the utilisation rate of the POH. Therefore, it is the CP, rather than BT, that is subject to economies of scale.
- 5.55 We also note that, since POH revenues are small in relation to the overall TI basket, if there is any shortfall on POH services, it can be recovered from other services without having a significant impact on the level of those charges.

We propose a cap on each ancillary service and equipment and infrastructure charge

- 5.56 Ancillary services are charges that BT makes for providing other services used in the provision of core TI services. They have traditionally been comprised of services such as ECCs, protected path variants and other charges¹³⁶.
- 5.57 Our proposed treatment of ECCs is discussed in Section 7, where we explain that we are proposing to remove ECCs from the list of ancillary services and instead to impose a charge control on them in a separate basket. As ECCs previously accounted for the majority of ancillary services revenues, it could be disproportionate to still have a separate basket for the remaining ancillary services.
- 5.58 Similarly, we consider that it could be disproportionate to set a separate charge control basket for equipment and infrastructure charges. Our analysis of the RFS and information that BT provided to demonstrate compliance with the LLCC 2009

¹³⁶ For example, those covered in B8.06 of BT Wholesale's price list.

https://www.btwholesale.com/pages/static/Library/Pricing_and_Contractual_Information/carrier_price_ list/cpl_sectionb8partialprivatecircuits.htm

indicates that these account for less than 5% of the combined revenue for all TI services.

- 5.59 Given the number of charges included under ancillary services, equipment and infrastructure charges, and the small size of each individual service (both in terms of costs and revenues), we do not think it is proportionate to carry out an assessment of these charges. Furthermore, these services are purchased in different ways compared to leased lines services, which makes forecasting of service volumes complex and subject to additional assumptions. Placing them within the wider TI basket would allow any under-recovery or over-recovery of costs through these charges to be offset against revenues from the main TI services. However, there are still risks of including these services within the wider TI basket. In particular, if the trend in unit costs for ancillary services and equipment and infrastructure were to be different to the unit cost trends for TI services more generally:
 - BT could be unable to recover the costs of the services; or
 - this could result in prices rising faster than efficient costs.
- 5.60 In considering the impact of these risks, we have considered the materiality of the impact of our proposals. As a share of total costs, the ancillary services are small and, in our view, the risks referred to above are unlikely to result in disproportionate impacts on BT or on particular groups of customers. As a result, our initial view is that ancillary services and equipment and infrastructure charges associated with TI services should be included in the TI basket.
- 5.61 For ancillary services and equipment and infrastructure charges, we are concerned that, due to the low weight that would be associated with these services, including them within the main TI basket without any further safeguard may not result in an effective control of their prices.
- 5.62 We believe that a sub-cap on each charge, rather than a sub-basket covering the overall group of products is necessary in this case because of the diverse and individualised nature of the various ancillary services, equipment and infrastructure sold by BT. This diversity means that the prior year weighting used in the charge control formula may not give an adequate control as the products and services purchased may differ from one year to the next. This proposal also has the merit that it is easy to monitor and for BT to demonstrate compliance.
- 5.63 We propose to impose a sub-cap on each charge at the same level as the overall basket cap, to ensure that customers using these services are not disproportionately affected by price rises. Given our consultation range, this sub-cap is provisionally RPI+3.25% and can be expected to be in the range of RPI-0% to RPI+6.5%.

We propose a cap on each charge for all other services within the TI basket

- 5.64 We have explained above that we are proposing sub-baskets and sub-caps on particular services, where we have concerns that these charges would not be adequately protected by the overall basket cap.
- 5.65 In addition, we propose to set a sub-cap on the prices that BT may charge for other services we propose should fall within the TI basket. Such a sub-cap would limit BT's ability to increase the prices of particular services in any given year. Our overall TI basket is broad and includes a large number of individual charges. As explained

above, this broad basket gives BT flexibility to set prices in an efficient way to recover common costs. Nevertheless, we consider that this flexibility should not be unlimited.

- 5.66 We have used such sub-caps in a number of previous charge controls, including LLCC 2009. The choice of a level for the sub-cap is largely based on judgment, and balancing the benefits of flexibility for BT with the risks to customers or potentially disruptive effects to competition of sharp increases in prices for some services.
- 5.67 We propose to set this sub-cap at RPI+10% and apply it to all services in the TI basket that are not otherwise controlled under the other sub-caps that we are proposing¹³⁷. We consider that this level for the sub-cap would be proportionate in providing BT with a certain degree of flexibility to balance charges and recover costs efficiently, whilst also promoting sustainable competition by preventing BT from undue rebalancing of charges, and conferring the greatest possible benefits on end-users by restricting BT's ability to increase any given charge too quickly.
- 5.68 Our proposed sub-cap of RPI+10% is based on the mid-point of our indicative range for the value of X. If we set X at a level towards the top or bottom of our range, we will consider adjusting the level of the sub-cap to provide a similar level of flexibility for BT.

We propose not to impose a cost orientation obligation

- 5.69 We are proposing not to impose a cost orientation obligation on BT for TI services. We consider that the competition problems we are seeking to address with regard to pricing – i.e. excessive pricing – can be effectively addressed by the sub-baskets and sub-caps and, consequently, we consider that an additional cost orientation obligation would be unnecessary and disproportionate. We discuss below the considerations we have taken into account in reaching this proposal.
- 5.70 Our proposal for the TI basket is relatively broad, encompassing low bandwidth TISBO services (inside and outside the WECLA), medium and high bandwidth TISBO services outside of the WECLA and regional trunk services. The flexibility that this gives to BT is conducive to efficient pricing and cost recovery, as explained in Section 4.
- 5.71 The BCMR Consultation has proposed the imposition of price controls to address the risk of excessively high prices for TI services¹³⁸. We propose to address the risk of excessive pricing through our proposed basket control in three ways:
 - The overall basket cap of RPI+3.25% that we propose will bring BT's aggregate level of charges for TI services into line with our forecast of their costs of provision (including the cost of capital) by the end of the charge control period. The charge control will consequently address the risk of excessive pricing at an overall level for TI services.
 - **Sub-baskets and sub-caps** for those services where we have identified, in light of our market analysis, that additional, specific constraints are necessary to provide an adequate constraint against excessive pricing. These comprise sub-

¹³⁷ This would mean that the cap would apply to all services in the TI basket, except for interconnection services, ancillary services, equipment and infrastructure, RBS backhaul services, Netstream 16 Longline and SiteConnect.

¹³⁸ See paragraphs 10.101 of the BCMR Consultation.

baskets for RBS backhaul and interconnection services, and a sub-cap on each ancillary and equipment and infrastructure charge.

- A sub-cap of RPI+10% on all other charges not covered by specific subbaskets and sub-caps which is intended to reduce the risk of excessive pricing for these individual services by preventing BT from undue rebalancing of charges, and benefits end-users by restricting BT's ability to increase any given charge too quickly.
- 5.72 As a result, we consider the particular design, structure and scope of the proposed charge controls provides the most proportionate means of addressing the risk, identified as a result of our market analysis, of excessive pricing, and therefore we consider imposing the additional constraint on BT's prices via cost orientation obligations would be disproportionate.
 - First, given the context of the TI markets, the charge control and sub-caps give a greater degree of certainty to stakeholders in this market than cost orientation. Under the charge control, the overall level of X is known in advance, and our proposed sub-caps and sub-baskets provide stakeholders with certainty over the limits of any change in charges. We consider that cost orientation gives stakeholders relatively less certainty, as the levels of DSACs and DLRICs are known to BT's customers only with a lag. Over the course of the charge control, we forecast that TI services will decline by over 70%. We are also proposing to reallocate £101m in costs from the TI to the Ethernet basket. This anticipated volume decline, combined with the cost reallocation, may make the DSAC and DLRIC figures with regard to TI services more difficult to predict than they have been in the past or in other markets.
 - Secondly, our proposed overall basket cap seeks to bring BT's prices into line with its costs of provision (including a return on capital) by the end of the charge control. In contrast, with regard to cost orientation, the DSAC ceiling is, for most services we proposed to include in the TI basket, significantly above current price levels. Consequently, if BT were to set all charges to just under DSAC levels, it would earn a return substantially above its cost of capital.
 - Thirdly, we have also proposed sub-caps and sub-baskets to constrain individual charges for certain services. In doing so we have designed the proposed charge controls to take into account where, in light of our market analysis, we consider for certain services the risk of excessive pricing is greater and thus where additional specific pricing constraints are warranted. We consider the proposed overall basket cap and further sub-baskets and sub-caps, are an effective means of addressing the varying risks of excessive pricing for the services we propose to include in the charge control and, as such, we consider the imposition of additional cost orientation obligations would be disproportionate.
- 5.73 In our regulatory judgement the most proportionate way of providing certainty to BT, and to stakeholders in general, in the TI markets in which we propose to find BT has SMP for the three year period covered by our review is through appropriate charge control proposals which address the risk of excessive pricing that our market analysis has identified as the relevant risk.
- 5.74 Given the above reasons, we consider the imposition of cost orientation to the TI services we propose to include in the scope of the charge controls, in addition to the proposed charge controls, would be disproportionate to the aim we are seeking to achieve which is to address the risk of excessive pricing.
We propose to adopt an anchor pricing approach for TI services

- 5.75 As discussed in Section 4, we often adopt an approach when setting charges whereby we base costs and asset values on the most efficient available technology that can be used to deliver the service in question. This is known as the MEA approach. However, in some circumstances, we adopt an alternative, 'anchor pricing' approach and instead assess costs on the basis of the older technology that is in use. The principles behind these approaches were set out in Section 4. In this Section, we apply these principles to the services in the TI basket.
- 5.76 In order to apply an MEA approach, we need to be able to identify the MEA for the services in question, and to be able to calculate robust estimates for the services based on their respective MEA. We also need to consider whether the adoption of the MEA approach gives appropriate signals for operators to invest and appropriate migration signals for consumers.
- 5.77 In this section, we consider the arguments for adopting either the MEA or the anchor pricing approach for TI services. We deal with two distinct parts: TI terminating segments and the delivery of TI services over BT's core network, as the relevant technological change is different in the two cases.
- 5.78 In both cases, we consider that it is not possible to identify an appropriate MEA and/or calculate robust cost estimates on an MEA basis. Therefore, we propose to use the anchor pricing approach for our cost modelling of TI services. We also consider that this approach would provide appropriate signals for investment and customer migration.

TI terminating segments

- 5.79 In order to qualify as the MEA, a new and more efficient technology must be capable of delivering the same services as those provided by TI terminating segments, to the same level of quality and to the same base of customers. We have considered three alternative technologies as potential MEAs: broadband, VPNs and Ethernet. We consider each of those technologies in turn below and we consider that none of them represents an MEA.
- 5.80 In the BCMR Consultation, we set out our consideration as to whether these technologies may be effective substitutes for TI services. We propose in that Consultation that none of these alternatives could be considered as an effective substitute¹³⁹. As a result, we consider that this supports our view that they would also be unlikely to be suitable MEAs¹⁴⁰. Nonetheless, we set out below our views as to whether they would meet the specific criteria for being an MEA for TI terminating segments.
- 5.81 Some customers who use TI terminating segments may find that broadband would be able to match the capacity of TI leased lines services (at least in terms of download speeds). However, there are significant differences between the service characteristics of broadband and TI services. For instance, broadband does not offer

¹³⁹ See paragraphs 3.75 to 3.86 (VPN), 3.87 to 3.172 (broadband) and 4.21 to 4.51 (Ethernet) of the BCMR Consultation.

¹⁴⁰ Note that the MEA for a service need not necessarily form part of the same relevant market. For example, a new product may perform an equivalent service more efficiently than an older product (and so constitute the MEA), but may not be included in the same market if consumers would incur high switching costs in changing to that product.

dedicated point-to-point connectivity between two customer end points or guaranteed transmission speeds and may suffer delays and bandwidth decreases during busy times (although less so for business-grade broadband products). Broadband also lacks the security, repair times and synchronisation of leased lines¹⁴¹. We therefore do not believe that broadband would fulfil the requirements of the MEA to be the most efficient way of delivering the same service, to the same level of quality, as the current technology.

- 5.82 We also believe that VPNs, both those accessed by broadband and those accessed by leased lines services, do not fulfil the criteria for being an MEA. VPNs accessed via broadband do not provide the reliability, performance or security as leased lines services, so they cannot be said to provide the same service to the same level of quality. In contrast, VPNs accessed via leased lines do offer equivalent service features but they make heavy use of leased lines as an input and involve the additional provision of a network management function. For this reason, these VPNs are best characterised as a downstream service rather than as a substitute to leased lines and therefore cannot be considered as an MEA.
- 5.83 Nor do we consider that Ethernet is appropriate as the MEA, since it is not yet able to replicate certain service characteristics of TI services that are important to customers¹⁴². For instance, Ethernet cannot currently achieve the same standards in terms of synchronisation, resilience, latency and jitter, so it could not be said to provide the same service to the same level of quality to the same base of customers.
- 5.84 In light of our view that there is no appropriate MEA for TI terminating segments, we propose to adopt an anchor pricing approach. In this case, we propose to base our cost calculations on the cost of the technology that is currently used to provide TI services. Anchor pricing is a practical approach when the costs of new technology are uncertain. It also ensures that, in the process of technological change, prices should not rise above the level implied by the hypothetical continuation of the existing technology. For a further description of the principles behind the anchor pricing approach, see Section 4.
- 5.85 Under the anchor pricing approach, we propose to set charges for TI terminating segments by basing our estimates of costs and asset values on the technology that is currently used to deliver these services. We also propose to make appropriate adjustments to these values, as set out below.

TI services in the core

5.86 The delivery of leased lines services over BT's core network has traditionally been based on SDH technology¹⁴³. The development of 21CN technology (including next generation of SDH technology) in the core is progressing and BT has migrated some internal services to be delivered over the 21CN core¹⁴⁴. BT has also carried out performance tests on this trial network to ensure that other CPs receive a consistent customer experience as new 21CN SDH technology is introduced into their services. Current data available from testing has indicated that it is capable of delivering the same service to customers, at the same level of quality as the 20CN technology. It

¹⁴¹ See paragraphs 3.87 to 3.172 of the BCMR Consultation.

¹⁴² See paragraphs 4.21 to 4.51 of the BCMR Consultation.

¹⁴³ See Section 2 of the BCMR Consultation on relevant technical background.

¹⁴⁴ For instance, BTW has informed us that some of the SDH 155 bearers used to convey the ATM service are now provided over the 21CN Core rather than legacy SDH platforms. See https://www.btwholesale.com/shared/document/21CN_Consult21/c21_MG_015_DSP_Jan12_Issue17 .pdf

appears likely that 21CN SDH technology will eventually be used to deliver TI leased lines services over the core of BT's network.

- 5.87 However, the MEA approach may not be practical in this case, due to the difficulty in obtaining robust estimates of what the MEA costs for the 21CN network would be for the reasons set out below.
 - Current proportion of circuits routed over 21CN knowledge of this proportion is required in order to estimate what an efficient level of network costs would be if all circuits were routed over 21CN. BT Wholesale informs us that current volumes of TI services that have been migrated across the 21CN core have been made on an ad hoc basis. Most migration has occurred as a result of faults in legacy equipment being replaced in part or in full by 21CN components. This suggests that data on 21CN costs may not provide a reliable basis on which to estimate costs for the core part of the SDH network.
 - Proportion of 21CN core costs attributable to individual circuits 21CN core is expected to be used for other services, including other regulated services as well as non-regulated services. We would therefore need to be able to assess how these costs have been allocated to TI services. We would also need to consider whether individual circuits vary in the extent to which they use the core network and what this means in terms of estimating costs of a TI circuit.
 - Forecast of circuits to be routed over 21CN if we were to adopt the MEA approach to setting charges, we may have to assume what an efficient migration path for routing TI services would be. This is because we acknowledge that it is not possible to have costless transition between technologies, particularly at each and every point in time. BT does not currently have information on future routing of TI circuits.
- 5.88 In conclusion, for the purposes of this charge control, we propose to adopt the anchor pricing approach. For reasons discussed above, we do not believe there is sufficient information available for us to adopt the MEA approach for this charge control. We believe that the anchor pricing approach will provide BT with the incentive to adopt new technology and migrate TI services where it is efficient to do so, since this routing decision is made by BT, rather than its customers. Therefore, BT would be able to benefit from efficient investment, which would also be in its customers' long term interests. We note that we make certain adjustments in order to ensure that we have captured only the efficient costs associated with providing TI services.

We propose adjustments to base year costs and revenues

- 5.89 Our starting position for the base year costs are BT's audited RFS for 2010/11. The information requests we have issued to BT Wholesale ('BTW') provide us with detailed disaggregation of costs that have been prepared on the same basis as those in the RFS. They are the latest fully audited set of regulatory accounts that we had at our disposal when we started the charge control modelling.
- 5.90 We propose adjusting the cost data to ensure that these are representative of the relevant level of costs for forward looking charge control purposes. We also consider whether to make one-off adjustments to starting charges, which requires reliable cost data matched to revenues.
- 5.91 We propose two main types of adjustments:

- adjustments to reflect the composition of the basket; and
- adjustments to reflect forward-looking efficient costs for the purposes of forecasting costs to 2015/16.
- 5.92 The table below is a summary of the impact of our adjustments on the reported 2010/11 data. Further details of these adjustments are provided in Annex 5. We note that:
 - for the adjustments made in order to reflect forward-looking efficient costs, the figures shown in the table below reflect the impact only to the basket, rather than the TI markets as a whole; and
 - these adjustments are made in the base year and rolled forward using the same assumptions as applied to the base year costs. As such, the return on capital employed ('ROCE') figures shown are for illustrative purposes only, i.e. they reflect what the base year profitability would be if BT's regulatory accounts took into account all the adjustments we propose.
- 5.93 The overall effect of our proposed adjustments is to increase the TI basket ROCE from 14.2% as reported in the RFS to around 27%.

Adjustment	Revenues (£m)	Operating costs (£m)	Capital costs ¹ (£m)	Mean capital employed (£m)	ROCE (%)
RFS All TISBO and TI trunk markets	898	342	344	1,497	14.2%
Points of handover	-8	-7	-9	-28	
TISBO and TI trunk	890	335	335	1,469	15.0%
Ancillary services Resilience circuits, separation & diversity, ECCs, 3rd party customer infrastructure	-54	-4	-43	-18	
Additional protected paths costs	-	-2	-1	-8	
Additional separation & diversity costs	-	-1	-1	-7	
Exclusion of ECC assets	-	-	-	-39	
TISBO and TI trunk core services	836	328	290	1,397	15.6%
SDSL	-11	-2	-1	-5	
TISBO and TI trunk core services excl. SDSL	825	326	289	1,392	15.1%
Volume update					
Updated estimate of TI main link and local ends following audit of CTCS database	-25	-	-	-	
TISBO and TI trunk core services volume update	800	326	289	1,392	13.3%
Geographic disaggregation Exclude medium and high TI services delivered within the WECLA	-47	-9	-18	-87	
TISBO and TI trunk core services outside the WECLA	753	317	271	1,305	12.6%
Ofcom cost adjustments Current cost normalisation		-	-61	-	
Exclusion of 21CN costs		-4	-11	-42	
Payment terms		-	-	-148	
Regulatory asset value (RAV) adjustment to duct assets		-	-14	-179	
Total TI basket in 2010/11	753	314	185	937	27.2%

Table 5.5 Impact of adjustments to the TI basket in 2010/11¹⁴⁵

Adjustments to reflect the composition of the basket

Non-modelled services

- 5.94 For the purposes of modelling the costs and revenues for the TI basket, we focus on the main set of TI services for which there is a clear disaggregation of costs and revenues available from BT. Together these services account for approximately 90% of the total TI market, and more as a proportion of the total TI basket:
 - PPCs;
 - RBS backhaul;

¹⁴⁵ BT Wholesale response to S135 Notice of 21 May 2012, BT Group response to S135 Notice of 1 July 2011. Not all columns and rows may total correctly as numbers have been rounded.

- Netstream 16 Longline; and
- SiteConnect.
- 5.95 We do not propose to model ancillary services (excluding those associated with ECCs), because we do not have detailed volume forecasts and/or cost volume relationships for these services. We discuss the implications for this in Section 4 above. For POH, we analyse these charges on a different basis, as set out in Annex 6. For these reasons, we propose to exclude them from our base year costs.
- 5.96 For ancillary services, BTW identified additional costs associated with protected paths and separation and diversity options that were reported against PPC services¹⁴⁶. We have removed these costs from the cost base, since the revenues calculated for these PPC services exclude revenues from such service enhancements.

Services out of scope of the TI basket

5.97 We exclude the costs and revenues associated with services outside the TI basket from our analysis of BT's base year costs for 2010/11. We therefore propose to exclude the costs and revenues of SDSL services from the cost base¹⁴⁷. We also propose to remove the costs and revenues associated with ECCs in line with our revised approach to such charges outlined in detail in Section 7 below.

Removal of assets built under 'excess construction'

- 5.98 BT includes the cost of providing 'excess construction' services within the base data for TI services. These services are out of scope of the TI basket and therefore we need to remove associated costs and revenues from BT's accounts. BT estimates the costs of ECCs in its RFS.
- 5.99 BT also capitalises and depreciates all ECC costs. However, these costs do not need to be recovered as part of ongoing revenues to ensure cost recovery because customers have to pay BT upfront when they incur ECCs. We therefore propose to remove capital employed associated with ECC costs from Mean Capital Employed ('MCE')¹⁴⁸ of other services to avoid double recovery.
- 5.100 Based on information provided by BTW¹⁴⁹, we estimate that the valuation of assets created under excess construction is £39m. We propose to eliminate this from base year costs. We note that the removal of MCE from the cost base has the following two effects on the cost stack of the TI basket:
 - a reduction in the allowed return on capital because we calculate the allowed return on capital as the Weighted Average Cost of Capital ('WACC') multiplied by the MCE¹⁵⁰; and
 - a holding loss or gain. A holding loss would arise if the average asset price change associated with the MCE is expected to be negative.

¹⁴⁶ BT Wholesale response to S135 Notice of 21 May 2012.

¹⁴⁷ This is a legacy product which BT does not intend to support beyond spring 2014.

¹⁴⁸ See Table A5.17 in Annex 5 for an explanation of accounting terms used.

¹⁴⁹ BT Wholesale response to S135 Notice of 21 May 2012.

¹⁵⁰ See Annex 5 for a description of the cost forecasting approach used.

Geographic cost adjustments

- 5.101 We propose in the BCMR Consultation that no operator has SMP in medium and high bandwidth TI services in the WECLA¹⁵¹. We therefore propose to exclude the costs and revenues associated with these services in the WECLA from our modelling. If costs differ between the charge controlled and non-charge controlled areas, then in order to accurately model the costs in the charge controlled area, we should use geographically disaggregated costs.
- 5.102 BTW has analysed the costs for TI services that vary by geography and has provided to Ofcom its calculations of the extent of the difference between the WECLA and the rest of the UK¹⁵². We summarise below BTW's methodology.
- 5.103 First, BTW categorised the costs attributed to medium and high bandwidth TI services in the WECLA into the following categories:
 - access related costs¹⁵³, which include duct and fibre which are considered to vary in relation to distance from the local exchange;
 - equipment related costs¹⁵⁴, which include power and maintenance and are considered to vary in relation to the equipment at the local exchange; and
 - other costs¹⁵⁵, which are mainly admin costs which are not considered to vary by geography.
- 5.104 Secondly, BTW calculated the extent to which access and equipment related costs would differ between the WECLA and the UK national average.
 - BTW considered that per unit access costs would be lower in the WECLA than the national average as local end lengths were shorter in the WECLA. BTW calculated the difference in local end lengths and considered that access related costs would vary by this differential.
 - BTW considered that unit equipment related costs would be lower in the WECLA as the utilisation of equipment was higher. BTW calculated the volume of equipment at the WECLA exchanges and the number of local ends and main links connected to this equipment. This found that equipment in the WECLA had a higher utilisation than the national average resulting in lower unit costs. This unit cost differential was applied to equipment related costs.
- 5.105 Thirdly, the unit cost differentials for access and equipment related costs, were applied to the overall share of these costs categories in the circuit¹⁵⁶.
- 5.106 We have assessed BTW's methodology for assessing geographic costs. We consider that it is reasonable that, to the extent that local end distances are shorter and that equipment has a higher utilisation in the WECLA, there may be lower costs than the rest of the UK. We have also conducted a detailed review of the

¹⁵¹ See Table 46, Section 7 of the BCMR Consultation.

¹⁵² BT Wholesale response to S135 Notice of 21 May 2012.

¹⁵³ Access costs include copper, fibre and duct.

¹⁵⁴ Equipment related costs include land, network equipment, buildings, motor transport, provision and installation, and maintenance.

¹⁵⁵ These include finance and billing, customer service and other overhead type activities.

¹⁵⁶ BTW considered that there were no access related costs for links, so the unit cost differential for links relates to equipment related costs only

spreadsheets and calculations that BT has used to derive the above estimates. Our detailed review has not highlighted any apparent calculation errors or inconsistencies in BT's estimates. See Annex 5 for further details.

5.107 We propose to adjust the nationally averaged cost data based on this geographic analysis when modelling medium and high bandwidth TI services, as we believe that this provides a more accurate picture of the costs in the charge controlled area than nationally averaged data. Our analysis suggests that the costs for medium and high bandwidth circuits are 10% to 20% higher in the charge controlled area than the non-charge controlled area.

BT volume update

5.108 BT updated its 2010/11 volume data for main links and local ends based on revised data from BT's costing system¹⁵⁷. BT identified errors in the estimates used in the RFS of mainly internal volumes following a detailed review of the system as part of the work on geographic costing that we requested. We have reviewed the data provided by BT and we consider that the new data is likely to be more accurate and therefore more suitable for use within our model.

Adjustments to reflect forward-looking efficient costs

5.109 We propose four different adjustments to base year costs to make them suitable for forecast modelling. These are considered in turn below.

We propose to recalculate holding gains/losses

- 5.110 In its RFS, BT calculates holding gains/losses in relation to:
 - cost movements in the underlying assets experienced in the year ('cost' holding gain/loss) - a real holding gain (loss) is the additional value (loss) that accrues to the holder of an asset as a result of an increase (decrease) in its price relative to the prices of goods and services in the general economy; and
 - other holding gains/losses in the year ('other' holding gain/loss) this is by far the biggest category of costs. These are non-recurring items that typically arise as a result of BT changing its valuation methodologies or sampling differences.
- 5.111 For example, in 2010/11 a number of assets moved from an absolute valuation ('CCA') basis to an HCA basis. The difference between the CCA and HCA asset values was included as 'other CCA adjustments'.
- 5.112 In 2010/11 there were also other one-off adjustments attributable to the factors set out below:
 - changes to the sample of Local Exchanges used in the CCA valuations to value Duct. The changes to the sample led to differences when the sample was extrapolated to the whole network;
 - using new standard job times led to asset valuation differences when these were used in the CCA valuation. This affected the copper and fibre valuations; and

¹⁵⁷ For circuits above 2Mbit/s BT's Core Transmission Costing System ('CTCS') is the central system for determining how circuits are provisioned within the network.

- 21CN assets changed from HCA to a CCA valuation. Asset price changes relating to prior years were included within 'other CCA adjustments'¹⁵⁸.
- 5.113 Holding gains/losses are included in the cost stack as a part of CCA depreciation base so that we have a forward-looking projection which is consistent with the asset price changes we assume in the model. We propose two adjustments to the total holding gains/losses when including these in our analysis:
 - We exclude other holding gains/losses this will ensure that our own asset valuation is consistent with the holding gains/losses we propose to allow.
 - We only take into consideration the effect of cost inflation we propose to only take into account the cost element of the holding gains/losses. To do this, we recalculate the effect of cost inflation based on the historic five year average in the trend of real asset price changes as a proxy for future asset price changes.

Regulatory Asset Value of access duct

- 5.114 In the 2005 Review, we decided the basis that we would adopt in valuing BT's access assets¹⁵⁹. The decision was that we revert to the Historical Cost Accounting ('HCA') value for the duct assets that BT had in place in 1997, but indexed at RPI going forward, while adopting CCA replacement value for assets that had been built since 1997. This followed an earlier 1997 decision to change the valuation methodology for BT's entire asset base from HCA to CCA.
- 5.115 The reason for this decision in 2005 was that, as a result of the 1997 revaluation, there was a risk that BT would earn an excessive return on pre 1 August 1997 ('pre-1997'). This was a consequence of the change in accounting approach during the lifetime of the assets.
- 5.116 The revaluation of duct assets resulting from the 2005 Review is not reflected in the RFS. The value in the RFS represents BT's estimate of the cost of replacing the duct that has been constructed in the last 40 years - a CCA valuation.
- 5.117 Our final statement on the WLR LLU CC was published in March 2012¹⁶⁰. We reviewed whether RAV valuation was still appropriate and we concluded that it was. We also considered if the post-1997 CCA value of duct was appropriate. We concluded that CCA is the appropriate method of valuation but proposed a different method of determining the post-1997 duct CCA valuation, that is, by indexing actual capital expenditure by RPI. This decision is currently under appeal.
- 5.118 We also looked into RAV in more detail as part of the duct revaluation question. We concluded in the WLR LLU CC that it is clear that the value of duct is the main remaining part of RAV.
- 5.119 Duct is used by a variety of services, provided both over copper and fibre, and it is impossible to determine what specific services use pre-1997 duct. Therefore, it is not necessarily the case that services that were added after 1997 do not use pre-97 duct. The only assumption we can make is that services that utilise a duct component use some proportion of pre-1997 and post-1997 duct.

- ¹⁵⁹ <u>http://stakeholders.ofcom.org.uk/binaries/consultations/copper/statement/statement.pdf</u>
- ¹⁶⁰ http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-cc-2011/statement/statementMarch12.pdf

¹⁵⁸ BT Wholesale's response to Ofcom's information request.

- 5.120 For the purposes of our proposals in this consultation document, we refer to the 'RAV adjustment' as the adjustment of BT's total CCA duct value to Ofcom's view in line with the WLR LLU CC, namely indexed HCA for pre-1997 assets and indexed capital expenditure for post-1997 assets.
- 5.121 We apply the RAV adjustment to the TI basket of services because:
 - if we do not take into account the RAV adjustment for the value of pre-1997 access duct and cable consumed by TI terminating segments, this would lead to an over-recovery of BT's investment in these assets; and
 - for consistent economic regulation, assets should be valued on a similar basis for all the services that consume those assets. Using different valuation approaches would risk distorting relative prices and decisions based on those prices. Going forward, we will apply a RAV adjustment uniformly across all charge controls to all services that consume access copper and duct.
- 5.122 To prevent any under or over-recovery resulting from the change in the accounting treatment of the pre-1997 copper access assets (duct and copper cable), we propose to apply the RAV adjustment to TI services within scope of the charge control. We use BT's RAV model as submitted to Ofcom and BT's indication of the proportion of the duct and copper that is related to TI services in order to determine the value of the RAV adjustment.
- 5.123 We propose to allocate the adjustment across all TI services within the scope of the TI basket. In the LLCC 2009 the adjustment was applied only to local ends on the basis that the local ends consume most of pre-1997 copper.
- 5.124 Data provided by BT indicates that TI services utilise approximately 10% of the total duct assets within the RAV¹⁶¹. We apply this percentage to the difference between BT's absolute valuation and RAV valuation. The RAV valuation is calculated in the manner described in the WLR LLU CC. This approach results in a RAV adjustment for MCE of £179m and depreciation of £14m.

Removal of 21CN costs

5.125 TI basket services include an element of the cost BT is investing in its 21CN network. In line with our proposal on the anchor pricing approach, we consider that the costs to be recovered from customers should not increase as a result of the 21CN investment, particularly as the decision to migrate customers to 21CN is BT's and not the customers'. As such, these costs should be excluded from our cost base. We propose to eliminate an estimate of 21CN costs reflected in TI services.

Payment terms

- 5.126 Part of the relevant capital employed includes the cost to BT of financing the payment terms it offers. BT reflects this cost as notional debtors. BT's value for notional debtors reflects 33 days of revenues across all services, which differs from the terms actually offered on individual services.
- 5.127 We propose to adjust notional debtors to reflect BT's actual payment terms for each service.

¹⁶¹BT Wholesale's response to information request.

We propose not to make any starting charge adjustments

- 5.128 At the start of a new charge control, we often consider whether it is appropriate to make one-off adjustments to prices if they are significantly out of line with costs. To inform this assessment, we typically compare the charges to cost orientation benchmarks (i.e. DRLIC and DSAC), as this would provide an indication of whether charges are likely to give rise to distortions in competition.
- 5.129 We have calculated DLRIC floors and DSAC ceilings for our base year and extrapolated these costs measures forward on the basis that they would move in line with FAC. Our model predicts that, in 2012/13, none of BT's charges would exceed the DSAC ceiling. However, a number of charges would fall below the DLRIC floor¹⁶².
- 5.130 If prices of individual services are out of line with costs they could give rise to distortions to competition. However, we have not identified any distortions to competition which could arise from these specific services. The main distortion which could arise from low pricing is that it would deter efficient entry. However, given the decline in the TI market, and the lack of ongoing availability of TI equipment, such entry is unlikely in any case.
- 5.131 We have also reviewed BT Wholesale's current charging structure in detail in Annex 5. Based on our assessment of the current level of charges and the charging structure, we do not believe there is sufficient evidence to make one-off adjustments to current prices charged by BTW.

We forecast costs to 2015/16

- 5.132 Following the calculation of base year costs, we forecast the evolution of costs and revenues to the end of the charge control period. In this section, we explain our key forecasting assumptions. Specifically, we describe our proposals on:
 - volume forecasts;
 - efficiency assumptions;
 - WACC;
 - cost volume relationships;
 - asset price changes; and
 - reallocation of costs from the TI basket to the Ethernet basket.

We propose to take into account multiple TI volume forecasts in arriving at our base case

5.133 We have received volume forecasts for TI services from various sources, including BT Wholesale and other CPs.

¹⁶² For example: PPC 64kbit/s Trunk, PPC 64kbit/s Connection, PPC 64kbit/s Link, PPC 64kbit/s Distribution, PPC 2Mbit/s Connection, RBS Sub 2Mbit/s Connection, RBS 2Mbit/s Connection, PPC 34/45Mbit/s Local end, PPC 140/155Mbit/s Distribution, PPC 622Mbit/s Trunk.

- 5.134 We have found that the trends shown in the forecasts appear to be reasonable and are broadly consistent across the different sources. We therefore propose to take into account all of the volume forecasts received to arrive at our base case for our cost modelling, conducting sensitivity testing where appropriate.
- 5.135 In proposing this charge control, we have taken into account an anticipated decline in the volume of TI services. By the end of this charge control, the total number of TI circuits is forecast to decline by over 70% compared to 2010/11, equivalent to a decline of around 20% per annum as shown below.



Figure 5.6 Ofcom forecast of TI services to 2015/16 (number of circuits)

- 5.136 Our modelling indicates that the main driver of the declining volumes in the TI market is the increasing demand for higher bandwidth services which, in general, can be delivered more efficiently using Ethernet services as well as potentially via high speed broadband services, for example Next Generation Access ('NGA'), Ethernet and VPNs. As a consequence, there is expected to be migration from TI to higher bandwidth services delivered using Ethernet and other technologies, with the Ethernet forecasts supporting this view of growth in high bandwidth services.
- 5.137 It is likely a residual customer base will remain on TI services over the charge control period due to characteristics which cannot currently be replicated using Ethernet services. The disincentive to migrate from TI services is likely to reduce when Openreach introduces its synchronous Ethernet service.
- 5.138 We have used our volume forecasts to derive a view of the capacity BT will deliver over TI services. By multiplying the circuit volumes by the relevant bandwidths, we forecast that the capacity delivered over the TI network will decline rapidly from 2010/11 to 2013/14 but more slowly thereafter. This is shown in Figure 5.7 below. In 2015/16, TI capacity is estimated to be less than 30% of capacity in 2010/11.



Figure 5.7 Ofcom's forecast of TI services capacity

We propose an operating cost efficiency of 0% to 3% for TI services

- 5.139 In calculating the appropriate value of X for the charge control, we take into account an assumed efficiency gain that BT is expected to make over the period of our proposed charge control. Greater efficiency is achieved when a given level of output is produced with fewer input resources or when a greater level of output is produced with a given level of input resources. Our proposed efficiency assumption is based on several sources of analysis which assess what BT might realistically achieve in terms of reducing its costs over the period of the charge control.
- 5.140 The efficiency rate used in the calculation of the value of X is the expected year-onyear savings in real unit operating costs that BT is expected to achieve in the normal course of its operations, abstracting from volume and input price changes. It is possible to apply this efficiency assumption to both new capital expenditure and operating costs.
- 5.141 In our modelling of TI services, we have applied the assumption only to operating costs for two main reasons:
 - the forecast decline in volumes for TI services means it is unlikely there will be significant new capital expenditure, the consequence of this is that any potential efficiencies in procurement and investment are less relevant; and
 - the other consequence of falling volumes is the associated negative capital expenditure ('capex'), which essentially consists of asset disposals. An efficient operator would be expected to dispose of its unused assets in an efficient manner. Given the type of assets employed in the TI market, it is unlikely that even an efficient operator could command a high price for its unused assets. We therefore set the forecast year-on-year efficiency gain for capex at zero and focus on operating costs.

- 5.142 We have considered a range of indicators to estimate the efficiency improvement that could reasonably be expected from BT. These can be categorised into three broad headings:
 - TI-specific historical trends, where we analyse the actual achieved efficiency in recent years;
 - internal efficiency targets; and
 - external benchmarking studies.
- 5.143 These indicators are summarised in Table 5.8 below, including two sets of external benchmarking studies. Our analysis of this evidence is described in more detail in Annex 5.

Table 5.8 Evidence on TI efficiency assumption

	TI specific historical trend analysis	BTW internal efficiency targets	2012 Deloitte Study ¹⁶³	Statistical analysis (NERA, Deloitte) ¹⁶⁴¹⁶⁵
Efficiency (%)	1.2-2.0%	[×]	2.25%	~2%
Comments	Ofcom analysis of BTW's historical TI cost data	Relates only to SG&A costs, which account for only a small proportion of total BTW costs	Benchmark against five other European operators	Benchmark against US LECs

- 5.144 To arrive at an appropriate range of efficiency savings we believe most weight should be placed on the sources of evidence which are specific to the TI market, i.e. the historical trend analysis. Our historic trend analysis suggests that a range of 1% to 2% would be appropriate to use in the sensitivity analysis of our modelling.
- 5.145 We have also considered BT's internal planning documents, but these are based primarily on selling, general & administrative (SG&A) costs only¹⁶⁶. We believe that this does not cover a sufficiently wide range of BTW's activities for it to be extrapolated and applied to BTW's provision of TI services. Therefore, we have chosen not to place significant weight on this source relative to the historical trend analysis.
- 5.146 The benchmarking studies conducted by Deloitte and NERA are not specific to the TI market. We place relatively less weight on these results compared to the TI-specific analysis of historic data.
- 5.147 Given the various sources of evidence and the respective weights we have decided to place on each source, we suggest an appropriate efficiency range for BT Wholesale's provision of TI services is 0 3%. We note that this range may be considered a relatively low target for efficiency improvements compared to those used in other charge controls on BT. However, TI services are mature and declining

¹⁶³ Deloitte, 'Analysis of the Efficiency of BT's Regulated Operations', A report for BT, dated 16 February 2012.

 ¹⁶⁴ NERÁ, 17 March 2008, The comparative efficiency of BT Openreach.
 <u>http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/annexes/efficiency.pdf</u>
 ¹⁶⁵ Deloitte, 29 March 2011, 'WBA consultation response'

http://stakeholders.ofcom.org.uk/binaries/consultations/823069/responses/BT2.pdf¹⁶⁶ BT Group response to S135 Notice of 1 July 2011.

and we believe that there is no reason that would justify making a stronger efficiency assumption.

Return on capital

- 5.148 As discussed in Section 4, we set the value of X in an RPI-X charge control so that the projected return for the last year of the control is equal to the WACC. This approximates to the workings of a competitive market, in which excess profits are gradually eroded by competition.
- 5.149 Also in Section 4, we discussed our view that leased lines services should not be classified within BT's access network for the purposes of an assessment of risk levels. Since these services are mostly bought by SME and corporate customers of BT, future demand for these services, particularly in the case of the demand for new circuits, is likely to be more closely correlated with the economy-wide level of economic activity than other access services.
- 5.150 We estimated the WACC for Openreach, BT Group and the Rest of BT, respectively, in detail in the WBA Statement¹⁶⁷ in July 2011. In that Statement, we explained that we intended to use the WACC figures estimated in the WBA Statement for future relevant charge controls, provided that the estimates remain relevant. We noted that consistency is important, but that this needs to be balanced against the possible need for updating those cost of capital estimates.
- 5.151 In light of this position, we considered whether our estimate of BT's cost of capital calculated for the purposes of the WBA CC remained appropriate in the subsequent WLR LLU CC Statement¹⁶⁸ (which we published in March 2012). In the WLR LLU CC Statement, we reviewed the most recent evidence on the individual parameters to ensure that the estimates remained relevant, and we concluded that they were appropriate.
- 5.152 Our provisional view is that the cost of capital estimated in the WBA Statement remains appropriate for the proposed charge control set out in this consultation document, without the need to update the estimates. This is because our updated analysis was performed just a few months ago in the WLR LLU CC Statement. As noted above, we found that the cost of capital estimated in the WBA CC remained appropriate and we have not identified any reasons for a need to undertake additional analysis for the purposes of this consultation. In reaching this view, we have also taken account of the CC's recent Determination in respect of BT's appeal against our decisions in the WBA CC concerning the cost of capital.
- 5.153 We are therefore using a pre-tax real cost of capital estimate for the 'Rest of BT' of 6.5% within our proposed charge control.
- 5.154 However, we intend to consider any movements in the cost of capital parameters prior to reaching a decision on the proposals set out in this consultation document for leased lines in order to ensure that the proposed estimate of the WACC remains appropriate. If the relevant parameters have changed materially, we will consider

http://www.catribunal.org.uk/237-7278/1187-3-3-11-British-Telecommunications-plc-Wholesale-Broadband-Access-Charge-Control.html

¹⁶⁷ The cost of capital estimated in the WBA Statement was appealed by BT. This appeal has recently been concluded and the CAT upheld Ofcom's estimate for the purposes of that Statement. Full details are available at:

¹⁶⁸ See paragraph A8.15 to A8.47 of the WLR LLU CC Statement.

whether a change to our cost of capital estimates would be appropriate. We outline the potential impact of such a change in our sensitivity analysis below.

5.155 Further details on our proposed approach are included in Annex 7 on the cost of capital.

We propose to use BTW's cost volume relationships with Ofcom adjustments

- 5.156 The impact that forecast changes in volumes have on forecast costs in our model (before efficiency improvements are taken into account) is determined by AVEs and CVEs. We summarise below our proposed approach to modelling AVEs and CVEs for the LLCC 2012. A more detailed discussion is in Annex 5.
- 5.157 We have a number of options to choose from when deciding on which values to use for the AVEs and CVEs, both for TI services and Ethernet services, as set out below:
 - **option 1:** use the AVEs and CVEs from the LLCC 2009. We propose that it is not appropriate to use these values because they were based on a top-down model of BT's costs that formed part of the 1997 Network Charge Controls¹⁶⁹. We consider that we can no longer rely on these estimates, since they were calculated over ten years ago and it is likely that the relationship between costs and volumes will have changed since then;
 - option 2: base the AVE and CVE estimates on an analysis of how actual costs have changed in the recent past as volumes of TI and Ethernet services have changed. We found that such estimates are highly dependent on certain assumptions, such as the extent of efficiency gains made by BT and the allocation of costs across a varying mix of services¹⁷⁰. As such, we do not believe it is possible to calculate reliable estimates using this method;
 - **option 3:** use AVEs and CVEs submitted by BT in response to a formal information request; and
 - option 4: assess BT submissions under Option 3 and make certain adjustments.
- 5.158 Our proposed approach is to forecast BT's costs using data submitted by BT for AVEs and CVEs for LLCC 2012, after making the following adjustments:
 - apply the individual component-level AVEs and CVEs, rather than using an arithmetic average of each of these values;
 - weight the 'indicative' CVEs by the corresponding AVEs to get a final CVE; and
 - make a reduction of 10% to the submitted CVE for the category of 'General Management and Other' and for Admin CVEs.
- 5.159 We believe that this provides the most reliable estimates of AVEs and CVEs, since the values submitted by BT are based on the most up-to-date information, but require certain adjustments for the purposes of the proposed charge control.

¹⁶⁹ <u>http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/pricing/nccjul97.htm</u>

¹⁷⁰ For instance, for TI services, varying the efficiency assumption from 1% to 2% changes the implied weighted average CVE from 0.08 to 0.58.

We propose to use five-year historic average asset price change

5.160 Asset price changes have offsetting effects on the cost base.

- The first is a holding gain as a result of the asset price increases. Such a gain reduces costs in the year that it occurs. The reverse is true for holding losses.
- The second effect is the impact on the real return. An asset price rise increases the value of the asset base, and therefore increases the required return in the cost base. Similarly, a fall in the asset price would reduce the value of the asset base and in turn reduce the cost base to be recovered through the charges in the charge control basket.
- 5.161 As a result, the impact of real price changes depends on which effect dominates and it is not known a priori whether it will increase or decrease the overall cost base.
- 5.162 In order to calculate holding gains or losses, we need to make assumptions about how underlying asset prices change over and above underlying inflation. Forecasting asset price changes is clearly a difficult task. In the LLCC model, we take an average of asset price changes over the past five years, as supplied by BT, and these are shown in Table 5.9 below. We assume that the real asset price changes apply over the period from 2012/13 to 2015/16.

Asset	5 year average nominal price change between 2006/07 and 2010/11	Real price change
Duct	3.6%	0.0%
Local Exchange	-0.1%	-3.6%
Main Exchange	0.0%	-3.4%
Transmission	-0.2%	-3.6%
Other Network Equipment	0.0%	-3.4%
Motor Transport	0.0%	-3.4%
Land & Buildings	0.1%	-3.3%
Computers & OM	0.0%	-3.4%
Other intangibles	0.0%	-3.4%
Other	-0.3%	-3.8%
Cable – Copper*	4.7%	1.7%
Cable – Fibre	1.9%	-1.6%

Table 5.9 Asset price changes assumed in Ofcom's cost forecasts¹⁷¹

* For copper cable we use the five year average from 2005/06 to 2010/11 excluding 2009/10 due to one off events in 2009/10

- 5.163 For copper cable, we use the five-year average from 2005/06 to 2010/11 excluding 2009/10 data. This is because in 2009/10 there was a very significant increase in the price of copper driven by the recovery of the world economy. We consider that the 2009/10 increase was a one-off and would distort the average if included.
- 5.164 'Other network equipment', 'Motor Transport', 'Computers & OM' and 'Other' categories have zero holding gain or loss. This is because these assets are now

¹⁷¹ BT Group response to information request of 1 July 2011.

valued at historical cost, and therefore to be consistent with the accounting treatment of these asset, they do not have a holding gain/loss. This means their values reduce in real terms over the duration of the charge control¹⁷².

5.165 To forecast the value of duct, we assume that the nominal changes in the price of duct in the future will equal RPI. The five-year average is not representative of future duct values given a large one-off holding gain on duct in 2009/10 and a holding loss in 2010/11 that occurred for reasons that did not involve changes to the underlying asset. The use of RPI to forecast the value of duct is consistent with Ofcom's view of the RAV approach. A detailed description of the approach is available in the WLR LLU CC.

We propose a make a re-allocation of costs from the TI basket to the Ethernet basket

- 5.166 By the end of the charge control period, our forecasts of TI circuits decline by more than 70% compared to 2010/11 levels. As TI volumes decline, our model predicts that revenues will fall faster than fully allocated costs. This means that if prices are held constant in real terms, then revenues by the end of the charge control period will fall significantly below costs.
- 5.167 Figure 5.10 below illustrates the costs and revenues of Ethernet services based on our modelling assumptions. The costs illustrated are from our model and are before the effect of any reallocation adjustment and before charges are impacted by our proposed charge control.

¹⁷² The 'Other' category also includes 21CN assets that were revalued for the first time in 2010/11. As we removed 21CN assets from modelling for TI as a result of anchor pricing approach, the historical asset price change applies. In any case, the revaluation effect is small and does not change the five year average.





- 5.168 Figure 5.10 shows the evolution of costs and revenues predicted by the LLCC model before any reallocation. This shows that, at constant prices, revenues are forecast to decrease sharply, as represented by the blue line. Costs are also predicted to fall, but by less than revenues. This would mean that by 2015/16, revenues at current prices would be insufficient to cover costs.
- 5.169 Many of the costs required to deliver TI and Ethernet services are common. For example, assets (such as duct, land and buildings) as well as operational and administration costs are used to support leased lines across the two markets. Consequently, many of the same costs incurred in supporting the SDH networks in place at the beginning of the period will still be incurred in operating the 21CN/WDM infrastructure we expect to be in place by the end of the charge control period.
- 5.170 Cost components are defined in BT's system such that TI and Ethernet services do not share the same underlying cost components, even though these components use the same underlying assets. So, if TI volumes fall by 75%, the unit cost of the duct allocated to TI at the start of the period would increase significantly, to reflect the fact that fixed costs would then only be allocated over a quarter of the original volumes. Conversely, if Ethernet volumes rise by 50% the unit cost allocated to Ethernet would fall significantly. As the definition of cost components does not reflect common asset use, there is a need to explicitly reallocate some costs between the TI and Ethernet baskets.
- 5.171 As set out in Annex 5, we note that capital and operating costs are available at different levels of detail:

- capital costs can be divided into costs for TI-specific assets and costs for common assets which are used to provide other services in addition to TI services; and
- operating costs are split into two broad categories: pay and non-pay. These
 include direct costs that relate specifically to the delivery of the services in
 question, such as general support and maintenance, as well as fixed and
 common costs such as finance, billing, general management, personnel and
 administration. We do not have the detailed breakdowns of costs into these cost
 types.
- 5.172 Our analysis shows that the largest share of capital costs associated with TI services relate to assets that are not specific to TI services, such as cable, duct and land and buildings. These costs are allocated by BT to services in relation to their usage to provide those services. As one service declines, and another increases, the growing service will attract an increasing allocation of these common costs.
- 5.173 In the LLCC 2009 control, we addressed the issue through allowing the recovery of some costs from the declining services from the growing services. We reallocated 62% of TI non-marginal costs to the AI basket¹⁷³. We now propose make a similar adjustment for this charge control, with a modified approach to reallocating capital costs.
- 5.174 We calculate the amount of capital costs to be reallocated as follows:
 - Calculate what the total capital costs would be using the AVEs. This is determined by the volume forecasts in conjunction with the AVEs, asset price changes and WACC. Across the TI services, this would imply a threefold increase in unit capital costs compared to 2010/11 levels.
 - ii) Calculate what the total capital costs would be assuming constant 2010/11 unit capital costs for the identified assets (i.e. duct, cable, and land and buildings), taking into account the AVEs for the remaining asset types.
 - iii) The difference between (i) and (ii) is the amount of costs to reallocate.

Table 5.11 Approach to reallocation of capital costs from TI to Ethernet basket

Description	Capital costs
Total costs in 2015/16	£149m
Capital costs associated with cable, duct and land & buildings in 2015/16	£75m
Capital costs in 2015/16 if real unit costs were held constant at 2010/11 levels	£29m
Reallocation to Ethernet basket	£46m

Source: Ofcom modelling

5.175 For operating costs, we do not have a detailed breakdown of the different cost types and we therefore cannot use a similar approach to capital costs. Instead, operating

¹⁷³ See paragraphs 4.254-4.263 of the LLCC 2009.

costs are split by pay and non-pay. We propose a similar approach as set out in the LLCC 2009¹⁷⁴ in determining the amount of operating costs to reallocate.

- i) Calculate total operating costs to be recovered based on the volume forecasts, CVEs and efficiency.
- ii) As with the LLCC 2009 approach, we calculate the proportion of these operating costs that are 'non-marginal', i.e. fixed with respect to volume changes. This is done by multiplying the operating cost forecasts for each component with their respective CVEs. For example, if a component has a CVE of 0.6, this implies that 40% of costs (i.e. 1-0.6) are non-marginal.
- iii) Of the non-marginal costs, we have allocated a proportion in line with the decline in TI services. This proportion is based on the reduction of TI circuits in 2015/16 compared to its 2010/11 levels, i.e. 74%. We have assumed that these nonmarginal, or fixed, costs do not vary with volume. In practice these costs would then be allocated on a top-down basis as the underlying volumes change. Our adjustment assumes that the result of this would be that unit cost for these operating costs for TI services will stay constant in real terms. This is consistent with our approach to capital costs, where we also assume that unit costs stay constant until 2015/16. The total amount of non-marginal operating costs that we reallocate to the Ethernet basket is £55m.
- 5.176 The table below summarises the calculations for operating costs, based on our forecasts of future volumes and costs within our model:

Description	Operating costs
Total costs in 2015/16	£157m
Non-marginal operating costs in 2015/16	£74m
Reduction in TI circuits in 2015/16 from 2010/11 levels	74%
Costs in 2015/16 calculated as: Unit costs in 2010/11 * Service volumes in 2015/16	£19m
Reallocation to Ethernet basket	£55m

Table 5.12 Approach to reallocation of operating costs from TI to Ethernet basket

Source: Ofcom modelling

- 5.177 We therefore propose a reallocation from TI to Ethernet of £101m (equal to £46m in capital costs and £55m in operating costs). This reduces the TI cost base in 2015/16 from £307m to £206m, and reduces the charge control for TI from RPI+18.75% to RPI+3.25%. This impact is offset by a change in the charge control for Ethernet basket from RPI – 17.50% to RPI – 12.00%. There is a neutral impact on BT's total revenues.
- 5.178 We consider that these proposals are consistent with migration from TI to Ethernet services. Although the reallocation reduces the differential between TI and Ethernet services, the differential remains large. Over the course of the charge control, TI prices will increase in real terms, whereas those of Ethernet services will decrease. This is consistent with appropriate migration signals because the increase in charges reflects the increase in forward-looking costs.

¹⁷⁴ See paragraphs A7.179 to A7.193 of the LLCC 2009.

Value of X and sensitivity analysis

- 5.179 From the information above, the model produces cost forecasts for each service for each year. These are compared against the service revenues. We then calculate the X values so that in the final year forecast revenues and costs are equal. Based on the proposals outlined in this Section, the provisional value of X is 3.25%, which is the mid-point of our consultation range.
- 5.180 The value of X is sensitive to changes in any of the input assumptions described in this Section. A change in any of these assumptions could impact the value of X. In particular, it is possible that our value of X could be affected by the following:
 - changes in base year cost data, for example if there is a material change in cost data. We also make a number of adjustments to BT's data, as discussed above. If consultation responses or further information provided by BT indicate that our adjustments need to increase or decrease, this could result in a change to the X;
 - changes in the assumed level of operating efficiency, for example, if we move towards the lower or high end of our proposed range. This could change the X by 1% in either direction;
 - a change in the approach to calculating AVEs and CVEs;
 - a change in the WACC. A change in the WACC of 1% up or down would change the X by 0.5%;
 - a change in impact of geographic disaggregation, for example if new information suggests that the cost differential between costs inside and outside the WECLA differs from our current assumption. However, our sensitivity analysis indicates that the impact would be likely to be less than 0.25% and not impact the X; and
 - changes in the volume forecasts, for example if volume forecasts are revised. This could have a significant impact. A change of 10% in the volume forecast alone could, other things being equal, change the X towards the top or bottom of our range. However, under that circumstance, and if it were offset by a change in the volumes on Ethernet services, it may impact our approach to the reallocation from TI to Ethernet which we explain above. We consider that the total impact of a change in volumes is unlikely to require us to move outside our range for X.
- 5.181 We have examined the potential impact of X to changes in our underlying assumptions. Table below presents the results of our sensitivity analysis on the values of X for the TI basket. We note that each sensitivity analysis is calculated on a discrete basis unless otherwise stated.

Scenario	Description	TI basket
Base case		RPI + 3.25%
Opex efficiency (1.5%)		
	Low: 0%	RPI + 4.25%
	High : 3%	RPI + 2.25%
CVE (component-level LF	RIC:FAC ratio, adjusted)	
	Base case minus 25%	RPI + 3.75%
	Base case plus 25%	RPI + 2.75%
	Component-level LRIC:FAC ratio, unadjusted	RPI + 3.25%
	0.24, using methodology from 2009 LLCC	RPI + 4.00%
WACC (6.5%)		
	5.5%	RPI + 2.75%
	7.5%	RPI + 3.75%
Geographic disaggregati		
	BTW Trunk inside the WECLA Low	RPI + 3.25%
	BTW Trunk inside the WECLA High	RPI + 3.25%
Alternative volume foreca		
	TI: Ofcom assumption that volumes 10% lower	RPI + 5.75%
	TI: Ofcom assumption that volumes 10% higher	RPI + 1.50%

Table 5.13 Base case proposal and sensitivity analysis

5.182 Our sensitivity analysis suggests, that individual changes to inputs could result in the value of X varying to between RPI+1.5% and RPI+5.75%, with most sensitivities lying in the range from RPI+2.5% to RPI+4.00%. Based on the issues outlined in this section and the results set above, we propose RPI+3.25% for the TI basket as the base case, with a range of RPI+0% and RPI+6.50%.

The proposed TI basket control meets the relevant tests under the Act

Powers under sections 87 and 88 of the Act

- 5.183 We are proposing to apply a charge control on BT as an SMP condition under section 87(9) of the Act. The details of the charge control are outlined in Table 5.1. above.
- 5.184 The proposed TI basket control applies to specific services in the four TI wholesale markets identified in the BCMR Consultation¹⁷⁵. The specific services, and the

¹⁷⁵ These are: the wholesale market for low bandwidth traditional interface symmetric broadband origination in the UK excluding the Hull Area, at bandwidths up to and including 8Mbit/s; the wholesale market for medium bandwidth traditional interface symmetric broadband origination in the UK excluding the Hull Area and the WECLA, at bandwidths above 8Mbit/s and up to and including 45Mbit/s; the wholesale market for high bandwidth traditional interface symmetric broadband

markets to which the proposed TI basket control applies, are set out in the draft SMP condition at Annex 8 of this consultation document.

- 5.185 Section 88 of the Act states that Ofcom should not set an SMP condition falling within section 87(9) except where it appears from the market analysis that there is a relevant risk of adverse effects arising from price distortion and it also appears that the setting of the condition is appropriate for the purposes of:
 - promoting efficiency;
 - promoting sustainable competition; and
 - conferring the greatest possible benefits on the end-users of the public electronic communications services.
- 5.186 In proposing charge controls, section 88 also requires that we must take account of the extent of the investment in the matters to which the condition relates of the person to whom the condition is to apply i.e. BT.

There is a relevant risk of adverse effects arising from price distortion

5.187 As set out in the SMP analysis of the BCMR Consultation¹⁷⁶, and explained further above in this Section, we consider the relevant risk of adverse effects arising from price distortion is the risk that BT might so fix and maintain its prices for the specific services we propose to include in the basket control in the relevant TI wholesale markets at an excessively high level.

Promoting efficiency

- 5.188 We consider that the setting of the proposed SMP condition is appropriate for the purpose of promoting efficiency, since:
 - in the absence of competitive pressures, we believe that BT would have limited incentives to seek to reduce its costs of providing wholesale leased lines services (see Section 10 of the BCMR Consultation);
 - in setting the proposed charge controls, we are proposing to use an RPI-X formulation, so that BT is encouraged to achieve greater efficiency in providing wholesale TI services (see Section 3). This would be achieved, since this form of charge control would allow BT to keep any super-normal profits that it earns within the defined period by reducing its costs beyond the efficiency gains we have assumed in setting the proposed charge control. In the longer run, these cost savings could be passed on to customers;
 - by bringing charges more into line with forecast costs, our charge control proposals would increase allocative efficiency (see Section 3); and
 - the broad basket that we have proposed would allow BT to recover common costs in an efficient manner (see Section 4).

origination in the UK excluding the Hull Area and the WECLA, at bandwidths above 45Mbit/s and up to and including 155Mbit/s; and the wholesale market for regional trunk segments in the UK. ¹⁷⁶ See Section 7 of the BCMR Consultation.

Promoting sustainable competition and conferring the greatest possible benefits on end-users

- 5.189 We also consider that the proposed charge controls are appropriate to promote sustainable competition and to confer the greatest possible benefits on end-users of public electronic communications services.
- 5.190 The market analysis conducted by the BCMR suggests that there is a sufficient risk that BT might fix or maintain its charges for the services within the scope of the proposed TI basket at an excessively high level, which would be to the detriment of competition¹⁷⁷. Preventing excessive pricing via an RPI-X type of charge control would promote sustainable competition, which we consider is likely to be the most effective way of benefiting end-users of public electronic communications services. It would enable greater choice of services for end users in terms of choice, price, quality of service and value for money.
- 5.191 Although our proposed charge control applies to baskets of services, we have proposed appropriate safeguards to ensure that BT does not use the pricing flexibility offered to it in an anti-competitive manner (see paragraphs 5.21-5.68).

Investment matters

- 5.192 When proposing the TI basket control we have also taken into account the need to ensure BT has the correct incentives to invest and innovate. We have done this in the following three respects:
 - first, in modelling BT's forecasted costs, we have built in a reasonable return on investment (see paragraphs 5.148-5.155);
 - second, we have proposed an RPI-X form of charge control, which encourages and rewards investment in new, more efficient technologies, since BT would be able to keep any efficiency gains that go above and beyond our efficiency assumptions over the course of the charge control (see Section 3); and
 - third, we have proposed to adopt the anchor pricing approach for the TI basket control, which incentivises investment in innovative and more efficient technology (see paragraphs 5.75-5.88).

We have considered the tests under section 47 of the Act

- 5.193 Any SMP condition must also satisfy the tests set out in section 47 of the Act, namely that it must be:
 - objectively justifiable in relation to the networks, services or facilities to which it relates;
 - not such as to discriminate unduly against particular persons or a particular description of persons;
 - proportionate as to what it is intended to achieve; and
 - in relation to what it is intended to achieve, transparent.

¹⁷⁷ See Section 7 of the BCMR Consultation.

5.194 We consider these tests are satisfied.

The proposed SMP condition is objectively justifiable

- 5.195 In the BCMR we have proposed that BT has SMP in the markets covered by our proposed TI basket control¹⁷⁸. In the absence of any charge control, this would allow BT to set charges unilaterally, leading to a risk of excessive pricing. This would have an adverse impact on both the ability of companies to compete in the downstream provision of leased lines services and on consumer choice and value for money. Our charge proposed charge controls have been designed to address this risk while allowing BT the ability to recover its costs, including a reasonable return on investment.
- 5.196 As a result of our analysis set out above we consider the proposed SMP condition is objectively justifiable.
- 5.197 We have set a range for X based on our assessment of forward-looking costs and on our forecasting assumptions as set out from paragraph 5.89-5.127. We have conducted a range of sensitivity checks as set out in Table 5.13, based on this we proposed a value of X in the range from 0% to 6.5%.
- 5.198 We propose sub-basket constraints on those services where we have identified a particular risk of excessive pricing as set out in paragraphs 5.21-5.68.
- 5.199 We have set out the basis on which we propose to adopt the anchor pricing approach (see paragraphs 5.75-5.88)
- 5.200 We have conducted an analysis of which costs are common between the TI and Ethernet baskets as set out in paragraphs 5.166-5.178. Based on this analysis, we propose to reallocate £101m from the TI basket to the Ethernet basket.

The proposed SMP condition does not discriminate unduly

5.201 The proposed charge controls would not discriminate unduly against particular persons or a particular description of persons, since any CP (including BT itself) can access the services at the proposed level of charges. We consider that the proposed charge controls do not discriminate unduly against BT as the controls address BT's market position, including its incentive and ability to set excessive charges for services falling within the scope of the controls.

The proposed SMP condition is proportionate

- 5.202 The charge controls are proportionate because they directly address the risk of excessive pricing identified by the BCMR and are focused on ensuring that there are reasonable prices for the services in question. The charge controls allow for BT to have the ability to make a reasonable return on investment and provide BT with the incentives to invest and develop its network.
- 5.203 For the reasons set out above, therefore, we consider the proposed SMP condition is:
 - appropriate to achieve the aim of addressing BT's ability and incentive to charge excessive prices for the services we propose to include in the TI basket control;

¹⁷⁸ See Section 7 of the BCMR Consultation.

- necessary in that it does not, in our view, impose controls on the prices BT may charge for the services we propose to include in the TI basket control that go beyond what is required to achieve the aim of addressing BT's ability and incentive to charge excessive prices for these services; and
- such that is does not, in our view, produce adverse effects which are disproportionate to the aim pursued which is to address BT's ability and incentive to charge excessive prices for the services we propose to include in the TI basket control.

The proposed SMP condition is transparent

5.204 Finally, for reasons discussed above, we consider the proposed SMP condition is transparent. Its aims and effect are clear and it has been drafted in the proposed SMP condition so as to secure maximum transparency. The proposed text of the SMP condition has been published with this consultation. Its intended operation is also aided by our explanation in this consultation. We have also set out the likely impact of the proposed TI basket control on charges for the duration of the control.

We have considered sections 3 and 4 of the Act

- 5.205 We also consider that the proposed TI basket control fits with our duties under sections 3 and 4 of the Act.
- 5.206 Whilst our market analysis has shown the relevant wholesale TI markets are declining, we consider it appropriate and desirable to continue to further the interests of citizens in relation to communication matters and the interests of consumers in the downstream retail markets by promoting competition in the relevant wholesale TI markets. We consider the proposed TI basket control which applies to specific services in the relevant wholesale TI markets will achieve this and so also contribute to securing the availability throughout the United Kingdom of a wide range of electronic communications services.
- 5.207 We have also had regard in proposing the TI basket control to the desirability of encouraging investment and innovation in the other wholesale markets in which the BCMR Consultation proposes we should impose a charge control and which therefore also form part of the proposals on which we are consulting in this consultation document. In addition, we have had regard to the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom.
- 5.208 Finally, in performing our duty to further the interests of consumers, we have also had regard in proposing the TI basket control, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money.

We have taken into account the EC Leased Lines Pricing Recommendation

5.209 The Leased Lines Pricing Recommendation relates to pricing aspects of wholesale leased lines part circuits and includes recommended EC Price Ceilings for leased line part circuits to *"inform and guide a national regulatory authority ("NRA") as to how to apply the best current practices in leased lines provision when devising*

regulatory remedies for leased line markets that are not effectively competitive in their territory"¹⁷⁹.

- 5.210 We have taken utmost account of the Leased Lines Pricing Recommendation when developing our charge control proposals. The EC Price Ceilings are based on prices for leased lines part circuits from Member States in June 2004. Since then, however, both prices and costs have changed. Demand for TI leased lines has fallen significantly and this trend is forecast to continue. We expect customers to migrate from TI circuits to Ethernet circuits, which is associated with a significant increase in the unit cost of TI services.
- 5.211 Given the above, we consider that the RFS data (as adjusted by Ofcom) is more relevant in setting prices for the next charge control period and that, given the changes in market conditions, the use of the EC Price Ceilings could result in prices below the efficient cost of provision. By using up-to-date cost accounting data from BT's RFS, the LLCC Model and our efficiency assessment, we consider that we have ensured that prices are at an efficient level.

Question 4: Do you agree with our proposals for TI services, specifically: basket design; anchor pricing approach; base year adjustments; and forecasting assumptions? If not, please explain why and propose alternative approaches with supporting information.

Summary

- 5.212 In this Section we outlined our proposals for the charge controls to be applied to TI services. We proposed:
 - a single basket covering all charge controlled TI services (excluding ECCs);
 - sub-baskets in respect of POH services, RBS, Netstream and Siteconnect; and
 - sub-caps on all other charges, including more tightly controlled sub-caps for accommodation and ancillary services.
- 5.213 We outlined how we proposed to determine the level of the charge control. We propose to make adjustments to base year costs and to assume operating cost efficiency improvements of 0% to 3% per annum.
- 5.214 Based on this analysis, and taking into account the relevant legal tests, we propose that the level of the charge control within the basket for TI services will be between RPI+0% and RPI+6.5%.

¹⁷⁹ Explanatory Memorandum, page 6, available at http://ec.europa.eu/information_society/policy/ecomm/doc/library/recomm_guidelines/leased_lines/expmem_rec_ll_part2_en.pdf

Section 6

Proposed controls for Ethernet services

Introduction

- 6.1 In this Section we set out our specific proposals on the charge controls for Ethernet services, which include the combination of wholesale AISBO services¹⁸⁰ as well as wholesale MISBO single-service Ethernet above 1Gbit/s that are provided outside the WECLA and Hull. In particular, we explain our proposals with regard to:
 - the scope and design of charge control basket;
 - the need for sub-caps and/or cost-orientation in addition to the controls on the baskets of services;
 - how technological change has influenced our proposals;
 - the proposed cost adjustments to BT's base year costs in order to determine the relevant cost basis for forecasting purposes;
 - our approach to forecasting costs over the period of the charge control; and
 - range for the values of X for the baskets of services.
- 6.2 This section follows the proposed framework for charge control design set out in Section 4, similarly with our proposals for the charge control for TI services in Section 5.

Summary of key proposals

We propose a single Ethernet basket controlled at RPI-12%¹⁸¹

- 6.3 We propose a single charge control basket covering AISBO and above 1Gbit/s Ethernet services outside the WECLA (the 'Ethernet basket'). We are also proposing a sub-basket and sub-caps where we believe that the overall basket cap would not offer sufficient protection to customers.
- 6.4 Table 6.1 below summarises our proposals with further details about the specific services falling within this proposed Ethernet basket, together with our proposed subcap and sub-basket constraints, based on the mid-point of our proposed range for the value of X.

¹⁸⁰ In the BCMR Consultation we proposed to address the competition problems (in particular, the risk of excessive pricing) we have identified in our analysis of the low bandwidth AISBO market in the UK (excluding the WECLA and the Hull Area) by imposing a price control - see paragraphs 11.161-11.171 of the BCMR Consultation. We also propose to address the competition problems we have identified in the Multiple Interface Symmetric Broadband Origination services ('MISBO') market in the UK (excluding the WECLA and the Hull Area) by imposing a price control on single-service Ethernet MISBO products. See paragraphs 12.151-12.160 of the BCMR Consultation.

¹⁸¹ These are provisional based on the mid-point of our consultation range.

Table 6.1 Proposed control on the Ethernet basket (based on the mid-point of our consultation range)¹⁸²

Basket	Services within scope	Basket cap	Sub-cap and sub-basket constraints
Ethernet basket	Connection and rental charges for: Wholesale low bandwidth AISBO services (up to and including 1Gbit/s) outside the WECLA Ethernet services (above 1Gbit/s) outside the WECLA Ethernet ancillary services (excluding ECCs)	RPI-12% ¹⁸³	Sub-basket on interconnection services (RPI-12%) Sub-cap on other charges (RPI-RPI) (excluding interconnection services)

- 6.5 The volume of Ethernet services, and overall capacity, is forecast to increase substantially over the period of the proposed charge control as demand increases for higher bandwidth services.
- 6.6 Within our charge control modelling, we are proposing to reallocate £101m of costs from the TI basket to the Ethernet basket. This is to reflect the fact that TI and Ethernet services are delivered using some common assets (such as duct) and we propose to deal with the common costs by reallocating some costs from the declining TI markets to the growing Ethernet markets.

Comparison with the LLCC 2009 basket design

6.7 Our proposed basket structure for Ethernet services is similar to the one currently in place (see Table 6.2 below). The LLCC 2009 also incorporated a relatively broad basket with a number of sub-caps. We also propose to continue to include a sub-cap of some form on all charges to prevent prices for any individual service from rising too steeply.

Table 6.2 Structure of baskets under the LLCC 2009 (AI services and Ancillary Services)

Basket	Services within scope	Basket cap	Sub-cap and sub-basket constraints
AI basket Ethernet services up to and including 1Gbit/s	Connection and rental charges for: Wholesale low bandwidth AISBO (up to and including 1Gbit/s)	RPI-7%	Sub-basket of BES services (RPI-0%) Sub-cap on all other charges (RPI+5%)
Ancillary services (Al)	All relevant ancillary services used in the provision of AI services within the scope of the AI Basket (including ECCs)	RPI-0%	None

¹⁸² Our proposals exclude the Hull area.

¹⁸³ Provisional value based on the midpoint of our consultation range of RPI-8% to RPI-16%.

- 6.8 We are, however, proposing some differences for this Ethernet basket as compared to the LLCC 2009, namely:
 - as a consequence of our proposals set out in the BCMR Consultation concerning the market power assessment for MISBO services, we propose to extend our control to single-service Ethernet above 1Gbit/s;
 - we also propose to incorporate the associated ancillary services (except ECCs) within the Ethernet basket. Due to their small weight in the basket, we propose that these services should now be controlled by a sub-cap;
 - we no longer propose to have a sub-basket for Backhaul Extension Services ('BES'). In our view, such a sub-basket would be unnecessary and inconsistent with our proposals for adopting the MEA approach, for reasons discussed below;
 - we propose to impose a sub-cap for the interconnection services (specifically Bulk Transport Link ('BTL')). Given that they are essential for infrastructure based competition and that they are solely used by CPs, we consider that a sub-cap would offer adequate protection to customers.
- 6.9 Whilst we are proposing that each charge should be subject to a sub-cap of some form, we are not proposing an additional cost orientation obligation as we did in the LLCC 2009. We believe that the proposed set of sub-baskets and sub-caps would provide sufficient protection to customers and we will set out below why a cost orientation obligation would not be proportionate.

We propose to adopt the MEA approach to modelling Ethernet services

- 6.10 Our analysis suggests that it is appropriate to adopt the MEA approach for modelling Ethernet services. This will mean that we model legacy Ethernet services¹⁸⁴ based on the most efficient technology that delivers the same service, to the same level of quality and to the same group of customers.
- 6.11 In undertaking this modelling assumption, we recognise that where the MEA changes frequently, it may not be possible for even an efficient operator to adopt the MEA seamlessly at all points in time. We therefore propose to take into account a 'migration credit' associated with the costs Openreach would incur in migrating customers from legacy to new Ethernet services.

We propose to make adjustments to BT's base year costs in 2010/11

- 6.12 As with the TI basket proposals, we propose adjusting the cost data provided by BT to ensure that these are representative of the relevant level of costs for forward looking charge control purposes. Those adjustments are comprised of:
 - adjustments to reflect the composition of the basket for which we are explicitly forecasting costs (i.e. excluding those services that would not form part of the basket and including those that have not been reported but that we are proposing to charge control); and

¹⁸⁴ By legacy Ethernet, we mean services such as WES, WEES and BES services up to and including 1Gbit/s. We use the term 'new Ethernet services' to refer to the more modern and efficient services, such as EAD, EBD and BTL.

 adjustments to provide a suitable basis for forecasting costs for the purposes of setting the charge control. This includes removing one-off or irregular levels of costs and revenues as well as adjustments to reflect how we expect BT to recover certain costs in the future.

We forecast costs associated with the Ethernet services

- 6.13 For the purposes of setting the value of X for the Ethernet basket, we propose to forecast the costs of the main Ethernet services. Our cost forecasts are based on how different types of costs might vary with respect to the underlying volume changes, subject to assumptions such as efficiency, asset price changes and the WACC.
- 6.14 We have calculated what the revenues would be at the end of the charge control by multiplying service volumes by their respective prices. In effect, this is what the revenues would be in the absence of any price changes from current levels. We have then calculated the value of X so as to bring our forecast prices into line with our forecast costs in the final year of the charge control.

Basket design

We propose separate TI and Ethernet baskets

6.15 As per the existing charge controls, we propose to maintain separate baskets for TI and Ethernet services. This reflects the conditions of the markets identified in the BCMR Consultation. It is also consistent with BT's internal operating structure. Further, currently, these products have very different characteristics in terms of growth and costs.

We propose a single basket for Ethernet services

- 6.16 We propose a single charge control basket, the Ethernet basket, for the the following groups of services (as defined in SMP condition 5.3):
 - wholesale low bandwidth AISBO services (up to and including 1Gbit/s) outside the WECLA – connection and rental;
 - wholesale Ethernet services above 1Gbit/s outside the WECLA connection and rental; and
 - Ethernet ancillary services (excluding ECCs).
- 6.17 In addition, we propose two sub-caps within the Ethernet basket where we believe that a further safeguard may be necessary to effectively control the prices of certain services. They are:
 - a sub-basket on interconnection services (i.e. BTL); and
 - a sub-cap on all other charges within the Ethernet basket (i.e. all charges except interconnection services).
- 6.18 As set out in Section 4, in determining the design of charge control baskets, we have sought to address the following considerations:

- **efficient pricing**: where the services being considered share substantial common costs, a single basket is more conducive to efficient pricing and cost recovery;
- **competition**: where the services being considered face different competitive conditions or BT does not use the same wholesale inputs as its rivals, placing them in the same charge control basket may give BT an incentive to set prices in a way that undermines competition; and
- **migration incentives**: where it is appropriate for BT to encourage migration from a legacy service to a more efficient service, placing the services in the same basket would allow BT the flexibility to do so.
- 6.19 We discuss each of these considerations below and explain the case for a broad Ethernet basket that includes both relevant AISBO and MISBO services.

There are a number of reasons why we propose a broad Ethernet basket

6.20 As discussed above, in 2009 we proposed a number of baskets for the services which we now propose to include in a single basket. We now consider that it is more appropriate to have a broad basket rather than multiple baskets for reasons discussed below.

Efficient pricing and cost allocation issues tend to point towards a broad basket

- 6.21 We firstly explain why we consider, in relation to these services, that efficient pricing and cost allocation across bandwidth breaks and over different service types may be best achieved through combining them in a single basket.
- 6.22 Among Ethernet services of different types and across different bandwidths there are substantial common costs. As set out in Section 4, by placing the services in a single charge control basket, we would give Openreach the incentive to set prices and recover common costs in the most efficient way. If we were instead to create separate baskets for different types of Ethernet service or for each bandwidth, we would have to decide on the appropriate allocation of common costs to be recovered within each basket. Given the complexity of these allocations and the need for a certain degree of flexibility, we believe that it is more appropriate that Openreach determines how these costs should be recovered, under the overall charge control caps that we propose.
- 6.23 We note that the CC supported Ofcom's LLCC 2009 decision not to 'micro-manage' BT's pricing structure. The CC noted that "*in an industry with large common costs, the 'correct' cost of each product is very difficult to know*"¹⁸⁵ and that providing BT with the flexibility to price on a cost-reflective basis, subject to the sub-caps is "*a sensible division of powers… and reflected a considered judgement by Ofcom consonant with the purposes of the 2003 Act*"¹⁸⁶.
- 6.24 We are, however, mindful that such flexibility may result in BT's pricing strategy towards the bandwidth gradients to be different to the marginal cost gradient. On the other hand, this may be an efficient way to recover fixed and common costs,

¹⁸⁵ See paragraph 3.253 of the CC's determination on the Cable & Wireless UK appeal to the LLCC 2009, 20 September 2010. <u>http://www.catribunal.org.uk/237-4334/1112-3-3-09-Cable--Wireless-UK.html</u>

¹⁸⁶ See paragraph 3.268 of the CC's determination.

particularly when this is accompanied by decreasing average costs of bandwidth. In Annex 5, we assess Openreach's current pricing structure and we consider that there is no clear strategic incentive to price in a distortionary and/or anti-competitive way.

6.25 Taking into account all of these considerations, we consider that for these services it is appropriate to design a broad basket that provides a reasonable balance between giving Openreach the flexibility to efficiently allocate costs and set prices where services share a substantial proportion of fixed and common costs, and to impose the sub-cap restrictions to offset such flexibility in order to avoid or mitigate potential risks to competition.

Competition concerns may tend to point towards having separate baskets

- 6.26 We propose in the BCMR Consultation that Ethernet services faster than 1Gbit/s fall in a different market to low bandwidth Ethernet (AISBO) services¹⁸⁷. However, as explained in Section 4, having a particular market definition does not mean that charge control baskets must be defined along the same lines. Services that fall into separate relevant markets can be combined in the same basket if the competitive conditions in the markets are sufficiently similar, such that a common basket cap would be appropriate.
- 6.27 Research carried out as part of this market review suggests that, whilst the competitive conditions are not completely homogeneous across the defined bandwidth break, there are some similarities in the competitive conditions¹⁸⁸, as shown in the table below:

Product market	Geographic scope	Openreach market share	Other indicators of market power
Low bandwidth AISBO (Up to and including 1Gbit/s)	UK excluding Hull & the WECLA	67%	 High barriers to entry and expansion Relatively low value of services makes it difficult for OCPs to justify investments
MISBO (Above 1Gbit/s)	UK excluding Hull & the WECLA	59%	 High barriers to entry and expansion BT benefits significantly from extent of existing access network infrastructure

Table 6.3 Competitive conditions for Ethernet services

- 6.28 High bandwidth (above 1Gbit/s) single-service Ethernet services are a sub-set of the MISBO market, but the competitive conditions described in the table above reflect features of the market that are common across all services.
- 6.29 One of the differences in competitive conditions is the value of the services. High bandwidth Ethernet services generally have a greater value than low bandwidth Ethernet services and this may justify greater investment by competitors. This difference may suggest that there is some reason for placing these Ethernet services in different charge control baskets. However, we do not consider that this differential is sufficient, as Openreach's market shares outside the WECLA are only slightly lower for above 1Gbit/s services compared to low bandwidth Ethernet services.
- 6.30 If there were a substantial difference in the extent to which different bandwidth services were sold to internal and external customers, such that BT did not consume the same wholesale inputs as its rivals, this may be another reason for considering

¹⁸⁷ See paragraphs 4.52-4.101 of the BCMR Consultation.

¹⁸⁸ See Table 63 on page 347 of the BCMR Consultation.

placing the services in different charge control baskets. In such cases, if the services were placed under a single basket cap, BT may have an incentive to concentrate price cuts on internally consumed bandwidths and discriminate against external customers, leading to a distortion in competition. However we do not believe that this is a concern with regards to low bandwidth (up to and including 1Gbit/s) and high bandwidth (above 1Gbit/s) Ethernet services. Across the bandwidths, the majority of sales are to internal customers¹⁸⁹. Therefore, we do not consider that Openreach would have strategic incentives to discriminate in favour of either high or low bandwidth services if they were placed in a single charge control basket.

Migration incentives

- 6.31 A broad basket may be advantageous where it is desirable to allow the firm to set prices to encourage efficient migration between an old technology and a new, replacement technology. Where the customer, rather than the firm, takes the decision to migrate, it can be optimal to set lower prices for services supplied using the lower cost (new) network than for services supplied using the old network. By reflecting cost differences in prices, customers are encouraged to make the cost-minimising choice.
- 6.32 We consider that it would be appropriate for Openreach to have the flexibility to reflect differences in costs between different Ethernet services. The decision over whether to migrate to a new Ethernet service is made by customers and Openreach may need to reflect such cost differences in prices in order to encourage migration where it is efficient to do so. This would require the two types of service to be placed in the same charge control basket.
- 6.33 This would also be consistent with our proposals to adopt the MEA approach to pricing, which involves modelling legacy services (such as WES and BES) on the basis of the most efficient way of delivering the service. If the services were kept in separate charge control baskets, the ability of Openreach to set relative prices would be restricted. Therefore, we consider that allowing for migration incentives would, in principle, support the case for having a broad Ethernet basket.

Proposal for a combined basket for Ethernet services

6.34 Given our discussion of the criteria for basket design above, we propose to adopt a broad Ethernet basket covering the main Ethernet services provided by Openreach. We do not consider that competitive conditions are sufficiently diverse to necessitate separate baskets. In addition, a single basket would be more conducive to efficient pricing and cost recovery and would allow Openreach to provide customers with migration signals.

We propose a number of sub-caps

We propose a sub-cap on Interconnection services

6.35 In order to consume wholesale access services, CPs need to be able to interconnect their network with that of BT. This interconnection is thus essential for any wholesale remedy to be effective.

¹⁸⁹ External sales made up 38% of total sales for low bandwidth services in 2010/11 and we forecast this proportion to fall slightly by 2015/16. For high bandwidth Ethernet services, the proportion of external sales was 17% in 2010/11 and this is forecast to grow by 2015/16, but to still account for a minority of sales.

- 6.36 For wholesale AISBO services, BT currently offers the following types of interconnection:
 - Customer-Sited Handover ('CSH'). BT provides two types:
 - <u>Without aggregation</u>: BT terminates individual circuits at the CP's site without aggregation (i.e. interconnection is part of the service and there is not separate interconnection link). This method is commonly used for WES and EAD circuits;
 - <u>With aggregation</u>: BT supplies Bulk Transport Link ('BTL') which aggregates multiple EBDs services for delivery over a single interconnection link to the CP's site. As with TISBO CSH BT provides a POC at the site of the interconnecting communications provider. In order to do so, BT has to extend its network out to the point of interconnection and provide a CSH link along with CSH POC equipment;
 - In Building Handover ('IBH'): BT provides a POC at collocation space rented by a CP in a BT local exchange. Currently BT terminates individual circuits in the collocation space without aggregation.
- 6.37 CPs do not need to purchase a specific interconnection product from BT to connect EAD and WES circuits to their network. Both IBH and CSH (without aggregation) are already incorporated within the EAD and WES circuits.
- 6.38 However, CPs who wish to aggregate multiple EBD circuits at a customer site currently need to purchase the BTL product. Current take-up of BTL has been low. There were just 41 BTL circuits in 2010/11¹⁹⁰. We forecast this to fall to zero by the end of the charge control period.
- 6.39 Given that there are similarities in the characteristics of BTL products with the interconnection products in the TI market, we have considered three different options for the pricing of BTL:
 - **option 1:** no separate charge for interconnection products and recover costs across all products;
 - option 2: BTL prices recover FACs including an allocation of common costs; or
 - option 3: BTL prices are set based on LRIC.
- 6.40 Option 1, of having no separate charge for interconnection products and instead recovering all costs across other products would mean that OCPs would be able to receive BTL services at no direct cost with the cost being recovered through all relevant leased line rentals. Although this would mean that OCPs would not at a competitive disadvantage to BT, OCPs would have no incentive to minimise the costs associated with the provision of BTL. This is likely to lead to static inefficiency as it removes the incentives for OCPs to co-locate at OHPs even where this might be an economically efficient option. As a result too many BTLs could be purchased. We therefore propose that interconnection charges should relate to costs (either option 2 or option 3).

¹⁹⁰Openreach response to S135 Notice of 25 May 2012.
- 6.41 Option 2 would mean that the charges for BTL would make a contribution to common costs, which would avoid the static inefficiency of option 2. However, since only OCPs need to purchase BTL, whilst BT does not, this option would place OCPs at a competitive disadvantage relative to BT.
- 6.42 Option 3, setting BTL prices to LRIC would result in lower BTL prices than option 2. This makes it superior on competition grounds. In terms of efficiency, it is superior to option 1 and similar to option 2, since OCPs would have an incentive to minimise BTL costs and only purchase them when the benefits exceed the costs. Although option 3 means that BTL will not contribute to common costs (unlike option 2), it is not clear that there is any difference in overall efficiency. BT would still recover its common costs from other products. We therefore consider that charges for BTL should be set equal to the LRIC of those products.
- 6.43 We requested BT to provide us with a breakdown of its BTL costs¹⁹¹. BT has explained that due to the way its system allocates costs and the small volume of BTL purchased it is unable to break these costs down any further¹⁹². In order to set BTL charges to LRIC we would therefore need to undertake a detailed bottom-up modelling exercise, such as was undertaken for the POH statement¹⁹³.
- 6.44 In deciding to undertake such a modelling exercise, we need to be mindful of the proportionality of such an exercise. BTL volumes are currently very low, and are forecast by BT to fall to zero. We also note that the BCMR Consultation is proposing that BT should consider the development of new AISBO CSH, IBH and In-Span Handover ('ISH') products¹⁹⁴. We anticipate that, if successfully developed, take-up of these new products will be higher than that of BTL. Our experience on the POH statement shows that constructing our own LRIC estimate involves significant resources. Given current and projected BTL volumes, and the planned new interconnection product proposed by the BCMR we consider that such a modelling exercise would be disproportionate.
- 6.45 Nonetheless, there is a possibility that the low volumes purchased of BTL may be due to a price level which exceeds LRIC. BT may have an incentive to increase the price for this product as it is only purchased by OCPs.
- 6.46 We propose to set a sub-basket to cover BTL products which is the same as the overall value of X for the Ethernet basket, currently RPI-12%¹⁹⁵. We consider that this is an appropriate balance between the importance of the product for competition and cost recovery. By reducing the price of the product, the competitive disadvantage OCPs face relative to BT is reduced. In relation to cost recovery, we forecast BTL volumes to be zero by 2013/14. If this is correct, then the BTL sub-cap would not jeopardise cost recovery. Even if volumes turn out to be higher, they are likely to be small in relation to overall Ethernet volumes and so unlikely to jeopardise cost recovery. As BTL will have a small weight in the basket, any difference between BTL charges and the LRIC for BTL can be recouped through other services.

http://stakeholders.ofcom.org.uk/consultations/revision-points-handover-pricing/final-statement/ ¹⁹⁴ See paragraphs 13.31-13.33 of the BCMR Consultation.

¹⁹¹ Openreach response to S135 Notice of 25 May 2012.

¹⁹² BT Group response to S135 Notice of 1 July 2011.

¹⁹³ LLCC PPC Points of Handover pricing review September 2011 - Final Statement on modification of SMP Conditions. Available at:

¹⁹⁵ Based on the mid-point of our consultation range. This cap will be set at the same value of X as for the overall Ethernet basket.

We propose a sub-cap on charges for all other services within the Ethernet basket

- 6.47 We propose to set a sub-cap to cover the charges for all other services within the Ethernet basket, i.e. excluding those already covered under the interconnection subcap. This would limit Openreach's ability to increase the prices of particular services in any given year. We apply the same rationale as within the TI basket to conclude that a sub-cap is appropriate. As with TI, the level of the sub-cap is based on judgment as to what level appropriately balances our objectives.
- 6.48 We propose to set this cap at RPI-RPI and apply it to all services in the Ethernet basket that are not otherwise controlled under sub-caps¹⁹⁶. If RPI were to increase significantly to above 5%, we propose that the cap would adjust to RPI-5%, to avoid the differential between the basket cap and the sub-cap becoming too small. We believe that this maintains a certain degree of flexibility for Openreach to balance charges and recover costs in the way that it judges to be efficient, whilst restricting its ability to increase any given charge. Given the proposed value of X for the basket, and our assessment of starting charges, we consider that there is no need for Openreach to increase any charge in nominal terms.
- 6.49 As with the level of the sub-cap for the TI basket, our proposal is based on the basket cap being set around the middle of our range. We will take into account our decision on where within the range we set the basket cap in coming to our decision on the level of the sub-cap.

BES

- 6.50 The LLCC 2009 set a sub-basket cap applied to BES services (RPI-0%) and we have considered whether it would be appropriate to continue to impose such a sub-basket cap within our proposed Ethernet basket. We consider that it would be unnecessary and inconsistent with appropriate migration incentives.
- 6.51 BES services are largely sold to external customers. We forecast this to remain the case over the course of the proposed charge control.
- 6.52 When a service is mainly sold to external customers, this may give the dominant provider an incentive to set prices in a way that discriminates against these customers. However, in the case of the Ethernet basket, we must also take into account the consistency of any sub-caps with allowing Openreach the flexibility to encourage efficient migration. In particular, although our MEA approach allows BT to only recover the costs of new Ethernet services, a price differential may be more consistent with dynamic efficiency, as it may lead to economies of scale by encouraging customers to migrate to the new network.
- 6.53 For this charge control, we propose to include the legacy and modern technologies in the same charge control basket. As discussed previously, the different objectives we set out suggest a single basket for all Ethernet services. This means that Openreach would have the flexibility to set relative prices for legacy WES and BES services¹⁹⁷ and newer Ethernet services (such as EAD and EBD) to reflect cost differences and to encourage optimal migration patterns.

¹⁹⁶ This would mean that the cap would apply to all services in the Ethernet basket except for interconnection services.

¹⁹⁷ By legacy Ethernet, we mean services such as WES, WEES and BES. By new Ethernet we mean services such as EAD, EBD and BTL.

- 6.54 If we were to impose a sub-basket cap on BES products, this remedy may detract from Openreach's ability to encourage efficient migration by limiting Openreach's flexibility in determining the optimal pricing structure. For example, if a sub-cap required BES prices to reduce significantly in real terms, it could discourage customers from moving to the alternative services. It may mean that Openreach would not benefit from economies of scale.
- 6.55 Based on the above, we consider that it would not be appropriate in this case to place a specific sub-basket cap on BES services and that our general sub-cap to cover all charges other than interconnection products (at RPI-RPI) would be sufficient to protect BES customers. This sub-cap would ensure that no price will increase in nominal terms, and so will protect BES customers against any price increases in their services, whilst providing Openreach with a certain degree of flexibility to balance charges and recover costs in the way that it judges to be efficient.

Ancillary services

- 6.56 Ancillary services are payments that Openreach levies from customers for other services used in the provision of core Ethernet services. They have traditionally been comprised of services, such as ECCs, circuit upgrades and migrations and additional resilience options.
- 6.57 Our proposed treatment of ECCs is discussed in Section 7, where we explain that we are proposing to remove ECCs from the list of ancillary services and charge controlling them in a separate basket. We are proposing to apply a different cap to ECCs which reflects the particular competition and pricing concerns we have in relation to these services. ECCs previously accounted for the majority of ancillary services revenues. Based on our analysis of the size of ancillary services remaining in the basket we believe that it would be disproportionate and impractical to still have a separate basket for the remaining ancillary services. Instead, we propose to include ancillary charges within the main Ethernet basket.
- 6.58 There may be some concern that, due to the low weight that would be associated with ancillary services, including them within the main Ethernet basket without any further safeguard may not result in an effective control of their prices.
- 6.59 We consider that our proposal for a sub-cap on each charge within the Ethernet basket (discussed above) addresses these concerns. Given that it is a cap on each charge, rather than a sub-basket constraint on the overall group of products, it covers the diverse and individualised nature of the various ancillary services sold by Openreach and has the merit that it is easy to monitor and for Openreach to demonstrate compliance.
- 6.60 Finally, we have also considered whether Time Related Charges ('TRCs'), which are also ancillary services, should be within the scope of the proposed charge control for Ethernet services.
- 6.61 TRCs relate to the provision of services such as faults repair, providing or rearranging services where the work is not covered within Openreach's terms of service¹⁹⁸. TRCs are provided across different markets and not just for Ethernet services. TRCs can be charged on a per engineer visit or per hour basis or per items

¹⁹⁸See

http://www.openreach.co.uk/orpg/home/products/serviceproducts/timerelatedcharges/timerelatedcharges/downloads/TRCs.pdf.

used to provide or repair services. TRC charges can also vary depending on when the work takes place.

- 6.62 The majority of TRC revenue comes from services other than Ethernet. The TRC revenue associated with the Ethernet services constitutes less than 1% of the overall Ethernet revenues¹⁹⁹. Currently, Openreach applies the same price regardless of whether the work is carried out for WLR, LLU or Ethernet services. We also note that TRCs are already subject to a cost orientation obligation as set out in the WLR/LLU Statement²⁰⁰. We therefore consider that any further regulation would not be proportionate, as the pricing of TRCs related to services within the scope of the LLCC will already be constrained by the regulatory constraints within the other markets in which Openreach offers TRCs.
- 6.63 In light of the above, we propose that TRCs should remain outside the scope of the charge control.
- 6.64 If Openreach were to discriminate between types of product user to distort competition between users, we would consider whether more direct intervention was warranted. However, for clarificatory purposes, the BCMR Consultation proposes to impose SMP conditions other than charge controls in these markets the ambit of which would include the services to which TRCs relate²⁰¹.

Synchronised Ethernet services

- 6.65 In the BCMR Consultation, we discuss a specific variant of the EAD services, known as SyncE, that BT is due to launch²⁰². In addition to providing the standard features of an EAD service, SyncE allows the distribution and monitoring of accurate network timing over Ethernet. Such services are likely to be used in the first instance by mobile operators for mobile backhaul²⁰³.
- 6.66 While EAD is currently charge controlled, if we did not also include any additional charges for SyncE variants in the charge control, there is a risk that BT could price these services excessively. We want to ensure that we have ex-ante regulatory measures in place to prevent this happening, including the ability to intervene in a timely manner.
- 6.67 We consider it appropriate that the SyncE variant of EAD falls within the scope of the Ethernet basket, and we therefore expect that SyncE services are likely to be included in the Ethernet basket. We consider that this protection is needed to ensure that BT does not set excessive charges for SyncE services on an ongoing basis.
- 6.68 BT's current plan is to introduce SyncE prior to publication of our LLCC Statement. At the point when BT confirms the launch and pricing of SyncE, our current expectation

¹⁹⁹ This is based on the revenues for 2010/11.

 ²⁰⁰ See paragraphs 4.322 to 4.342 of the WLR LLU CC Statement published on 7 March 2012 available at <u>http://stakeholders.ofcom.org.uk/consultations/wlr-cc-2011/statement-march2012/</u>
 ²⁰¹ The relevant markets are, as identified in the BCMR Consultation.
 ²⁰²See

http://www.openreach.co.uk/orpg/aboutus/refineSearch.do?navigationGroup=Updates&navigationId= 4294967252&queryRefins=qi%3Asynchronous%2Bethernet%5Bsk%3AAll&searchSection=all&sortTy pe=relevance

²⁰³ Accurate synchronisation of base stations is critical to minimise service disruptions and for the accurate setting of the operating radio frequencies. Without accurate synchronisation, the mobile technologies will not work to specifications, resulting in failed call setups, releases, handovers, and interference between adjacent cells.

is that we will put forward a short consultation to propose the inclusion of the relevant SyncE services within the basket, including the need for any start charge adjustments.

Technological change and the MEA Approach

- During the course of the charge control period, Openreach expects customers to 6.69 migrate from its legacy to new Ethernet services. Openreach has already withdrawn certain bandwidths of WES/WEES and BES circuits from new supply²⁰⁴ and is encouraging existing purchasers of legacy Ethernet circuits to migrate to the new Ethernet products²⁰⁵
- 6.70 When we conducted the LLCC 2009, the new Ethernet services were only just being introduced, we adopted the anchor pricing approach to modelling the costs of these services²⁰⁶. This meant that customers of the legacy Ethernet services would not see the price of their existing products increase purely as a result of the introduction of the new Ethernet services. However, it also means that the benefits of a lower cost technology may not initially be passed on to consumers.
- Our decision to use the anchor pricing approach for the LLCC 2009 was based on 6.71 the following reasons²⁰⁷, in particular:
 - a lack of robust data on the underlying costs of these services meant that • implementing the MEA approach raised a high possibility of error:
 - we were concerned that the adoption of the MEA approach at that time may not have allowed Openreach to recover the relevant costs;
 - the anchor pricing approach would give Openreach the incentives to invest in • more efficient technology; and
 - the anchor pricing approach would allow Openreach the flexibility to encourage its customers to move to the more efficient technology.
- 6.72 In contrast, we consider that the conditions are now appropriate to adopt the MEA approach for Ethernet services. Our rationale for this position is set out below.

We propose to adopt the MEA approach for Ethernet services

- 6.73 We have explained the steps we would follow when deciding on our approach in Section 4 (on Charge Control Design). To recap, these steps consisted of addressing four questions:
 - i) Can we identify the MEA for delivering the service in guestion?

http://www.openreach.co.uk/orpg/home/updates/briefings/ethernetservicesbriefings/ethernetservicesb riefingsarticles/eth00912.do ²⁰⁶ For example, see Paragraphs 3.89 to 3.112 of the LLCC 2009.

²⁰⁴ Openreach announcement of 31 January 2011 available at http://www.openreach.co.uk/orpg/home/products/ethernetservices/wholesaleextensionservices/wes/d ownloads/WES_BES_WEES_withdrawal_fact_sheet.pdf²⁰⁵ For example, Openreach has offered reductions on EAD connection fees for CPs migrating from

legacy Ethernet products. See:

²⁰⁷ See paragraphs 3.77-3.107 of the LLCC 2009.

- ii) Can we calculate robust cost estimates for the services based on the MEA?
- iii) Would the use of the MEA allow an efficient operator to recover its costs?
- iv) Does the MEA give appropriate migration signals to consumers?
- 6.74 When the answers to all these questions are positive, it is likely to be appropriate to adopt the MEA approach. In Section 5, we explain why we consider that the answers to these questions did not support the adoption of the MEA approach for TI services.

We can identify the MEA for delivering the services in guestion

- 6.75 We believe that new Ethernet services can be identified as the MEA for delivering legacy Ethernet services.
- 6.76 At the end of January 2011, Openreach announced the withdrawal of WES, WEES and BES, up to an including 1Gbit/s, from new supply as these "have been superseded by Ethernet Access Direct (EAD), a more flexible, cost-effective and *future-proof access option*"²⁰⁸. EAD services also include additional features not available as standard compared to WES and BES, for example enhanced diagnostics and Resilience Option 1. Openreach announced that it would continue to support the legacy services for existing customers for the foreseeable future. The higher bandwidth products (WES, WEES, BES at 2.5Gbit/s and 10Gbit/s) remain available for new supply.
- 6.77 Openreach has also commented on the ways in which EAD can deliver the same service as the old Ethernet products in response to an information request stating that WES/WEES/BES and EAD are 'functionally equivalent'²⁰⁹.
- 6.78 To be considered as the MEA, the new technology must be able to deliver the same service, to the same level of quality and to the same base of customers as the legacy technology. We believe that EAD services meet these criteria. In fact, they appear to include functionalities over and above these WES services can provide.
- 6.79 It is important to remember that the choice of new technology by Openreach and the rate of adoption should not affect whether we identify that technology as the MEA. If we were to link the question of what is the MEA with the adoption of technology by BT, then such an approach might provide perverse incentives for Openreach in its selection of the appropriate technology to use based on its view of our regulatory response. Instead, the identification of the MEA should be determined only by whether the technology is the most efficient established way of delivering a particular service to the same level of quality and to the same customer base as the old technology. We consider that new Ethernet services meet these criteria and can be identified as the MEA for AI services.

We have cost estimates for the services based on the MEA

The costs for new Ethernet services, such as EAD, have been prepared in BT's 6.80 financial statements the same way as the costs of the legacy Ethernet products²¹⁰.

²⁰⁸ See Openreach Fact sheet.

http://www.openreach.co.uk/orpg/home/products/ethernetservices/wholesaleextensionservices/wes/d ownloads/WES_BES_WEES_withdrawal_fact_sheet.pdf²⁰⁹ BT Group response to S135 Notice of 1 July 2011.

- 6.81 We are aware that the initial unit costs of a new technology are not always a reliable indicator of long-term values. However, networked Ethernet services have been sold for the duration of the current charge control period. We consider that the cost data for these services are sufficiently detailed and stable for us to make projections of the relevant costs²¹¹.
- 6.82 We also believe that it is not necessary to make any adjustments to the costs of the new Ethernet services when using them as the basis for the costs of the legacy Ethernet services. We note that we could reduce the costs to reflect the differences in service quality between WES and EAD services²¹², but we believe that the reduction would be small relative to the overall cost of the circuit. Furthermore, to carry out such an analysis would require significant additional information on the marginal costs of these additional functionalities as well as customers' valuation of them. We do not believe such an analysis is likely to change our results significantly. This is because the relevant cost forecast is one for 2015/16 where we forecast the proportion of the legacy WES circuits remaining to be small relative to the Ethernet market.
- 6.83 Finally, we include the costs associated with BT's 21st Century Network ('21CN') in the Ethernet basket. This differs from our approach in the LLCC 2009²¹³ where we excluded costs specific to 21CN from the then AI basket consistent with our anchor pricing approach. That is, given that the 21CN upgrade was a necessary part of the investment required to provide the networked Ethernet services, EAD, EBD and BTL, which we are using as our reference for costs, it is necessary to have these costs included in the cost base.

The use of the MEA would allow an efficient operator to recover its costs

6.84 We believe that the MEA approach for Ethernet services should to be consistent with an efficient operator having the opportunity to recover its costs as a result of the transition to new services and/or new technology. This may mean that we may need to take into account holding losses or transition costs associated with the change in the MEA. We discuss this further below.

Incentive to invest in the new technology

6.85 At the time of the LLCC 2009, we were concerned that the MEA approach may not have allowed for cost recovery or have given Openreach the appropriate incentives to invest, so instead we adopted the anchor pricing approach. We explained²¹⁴ that it was important that Openreach was given the incentives to undertake investments that would lead to improvements in efficiency and that would ultimately benefit customers.

²¹⁰ Note that if Openreach had not adopted the MEA technology, we could still have implemented an MEA approach by obtaining cost estimates from other sources.

²¹¹ We note that volumes of EAD circuits are expected to grow significantly during the charge control. This can be expected to reduce unit costs due to scale economies. We capture this by estimates of the cost volume relationships. Openreach has provided details of which new Ethernet products could be considered as the MEA for each of the legacy products. This mapping is described in Annex 5. ²¹² Note that if the alternative technology costs more for the same functionality, it cannot be the MEA. If it costs less and has additional functionality then it is the MEA, and an adjustment should be made

to reflect the quality differential. ²¹³ See paragraphs 3.77 to 3.80 of the LLCC 2009.

²¹⁴ See paragraphs 3.89 to 3.100 of the LLCC 2009.

6.86 Below is an illustration of a potential cost recovery profile that we presented in the LLCC 2009 that was applied to the rollout of BT's 21CN investment as well as introducing the new Ethernet services. This is applicable in general to cost recovery during a period of technological change.



Figure 6.4 Approach to cost recovery on new services

- 6.87 The left hand side, up to 2012/13, represents the profile during the period covered by the LLCC 2009, and the right hand side represents potential profiles during the LLCC on which we are consulting.
- 6.88 The green line in the period up to 2012/13 shows the path for prices in the charge control based on the hypothetical ongoing network using the anchor pricing approach. Under this approach, the costs of the existing service should not rise as a result of the new investment. The blue line shows the potential profile for the prices set under a charge control starting with current costs and migrating to the cost base under the MEA assumption.
- 6.89 As shown in Figure 6.4, in the early stages of the initial charge control the red line would be above the green line, illustrating that, with a lower volume of customers on the new technology and transition costs, unit costs may be above those of the technology in place.
- 6.90 However, once sufficient customers migrate to the new technology, Openreach would be able to make greater use of economies of scope and scale and make savings arising from the higher efficiency of the new technology.
- 6.91 For Openreach to recoup its investment in the new technology, it would need to cover any initial higher costs with the additional profits resulting from the new technology outperforming the hypothetical network that was used as the basis for setting the charge control. As explained in the LLCC 2009, we were concerned that the recovery of these losses may not be possible during a single charge control period. For Openreach's investment to be viable, it may need a longer payback period. Therefore, if we were to bring charges down to the level corresponding to the more efficient new Ethernet services at the start of this charge control period (from 2012/13 to 2015/16), this may not have provided sufficient time for Openreach to recover its investment costs.

- 6.92 In the LLCC 2009, we stated that we could not make commitments about price controls to be set in 2012/13, and would need to assess the situation at the time²¹⁵. However, in Section 4 we highlighted our preference for the use of glide paths, rather than one-off adjustments. This would involve using the MEA approach to bring prices into line with the costs of the new Ethernet services in the final year of the charge control. The use of a glide path is also consistent with giving Openreach incentives to invest in the new technology, as charges are only brought into line over time, rather than immediately as a new technology is introduced.
- 6.93 Given that we adopted the anchor pricing approach in the LLCC 2009, and that a full charge control period has elapsed since the introduction of the new Ethernet products, we consider that the time period is appropriate to move from an anchor pricing to an MEA approach. By using a glide path, we propose to bring Openreach's prices into line with the costs of the new Ethernet technologies only by the end of this charge control period. We consider that this is a sufficient time period to allow BT to recoup its original investment and to have given BT incentives to introduce the new Ethernet services.

Holding losses and transition costs for the legacy technology

- 6.94 As set out in Section 4, in adopting the MEA approach, it is important to ensure that an efficient operator should have the opportunity to recover its costs. In that Section, we have described how, in a market with rapidly changing technology, the MEA for a given service may change frequently. There can be significant sunk costs involved in investing in a new technology as well as transition costs in moving from one technology to another. If these are not taken into account, prices which immediately reflect changes in the MEA may not allow efficient operators to recover those costs and as a result may deter future investment.
- 6.95 For example, consider an SMP operator which invests in a technology (technology A), which at the time is considered to be the most efficient technology available. This technology is expected to last for ten years and so upfront investment costs are depreciated accordingly. After five years, a new lower cost technology emerges (technology B) and this becomes the MEA. In order to move to technology B, the operator will have to reconfigure certain parts of its network and will incur concomitant costs. In a charge control, the MEA approach will allow the operator to recover the upfront capital costs and ongoing operating costs of technology B but may not allow it to recover any unrecovered capital costs on technology A nor the costs of transitioning from technology A to technology B.
- 6.96 This has two implications for cost recovery:
 - firstly, there may be a holding loss associated with technology A, if the remaining depreciation costs are higher than those applicable to technology B; and
 - secondly, there may be transition costs associated with the move to technology B. Although technology B may have lower operating costs, a provider using technology A may not be able to achieve such costs without incurring transition costs.
- 6.97 If only the forecast costs associated with technology B were allowed to be recovered, then the SMP operator may not be able to recover its costs. However, this under-recovery of costs would not be a consequence of inefficiency as at the time of the

²¹⁵ See paragraphs 3.172-3.177 of the LLCC 2009.

investment, technology A was the most efficient technology available. Therefore, it is important under the MEA approach, to make forecasts of holding losses and/or transition costs.

- 6.98 Forecasting the level of holding losses can be difficult in a period of technological change. The adoption of the anchor pricing approach in LLCC 2009 was a response to this concern. In this case, the use of the anchor pricing approach in LLCC 2009 and a glide path in the present charge control may be considered to have provided Openreach with the opportunity to recover its investment in legacy services, removing the need to take holding losses into account.
- 6.99 Nevertheless, we requested Openreach to provide estimates of any holding losses associated with the adoption of the MEA approach²¹⁶. Openreach has not submitted any such estimates. For legacy WES and BES services provided prior to 2010/11, the equipment and installation costs were allocated to connections²¹⁷. However, Openreach explained that legacy Ethernet services use more fibre than new Ethernet services, and so the adoption of the MEA approach means that fewer fibre costs can be recovered from legacy Ethernet services²¹⁸. We consider that this does not constitute a holding loss, as the fibre costs are common with other services (including new Ethernet services) and would be reallocated and recovered from other services, rather than written-off.
- 6.100 Transition from legacy Ethernet services to new Ethernet services is not costless. In order to move a customer from a legacy Ethernet service, such as WES 100Mbit/s, to a new Ethernet service, such as EAD 100Mbit/s, an operator needs to install new equipment at the customer's premises. The cost of connecting a customer to a new service is recovered by Openreach via a connection charge. However, if we model existing WES 100Mbit/s circuits as having the same ongoing costs as an EAD 100Mbit/s circuit, then there is a risk that an efficient provider would not be able to recover its full costs. EAD circuits have significantly lower ongoing costs than WES circuits, but Openreach cannot reduce its underlying costs to the efficient level without installing EAD equipment.
- 6.101 This situation is analogous to the situation of a new entrant. If a new entrant were to offer EAD rentals, then it would also need to install EAD equipment. We therefore consider that it is appropriate to afford Openreach a 'migration credit' to account for the costs of transition to a more efficient network.
- 6.102 We propose to calculate this migration credit based on the underlying costs of connecting legacy Ethernet customers to new Ethernet circuits. We have based our estimate on the unit costs of connection of new Ethernet circuits and the volume of customers forecasted to be renting legacy Ethernet services at the start of charge control. Using the methodology as set out in Annex 5, we have estimated the migration credit that we will allow will be approximately £43m. In the charge control, we propose to take the migration credit into account by assuming that legacy Ethernet customers migrate evenly over the course of the charge control.
- 6.103 Our proposed migration credit is lower than that proposed by Openreach. Openreach conducted market research among its legacy Ethernet customer base which found that many customers would need substantial discounts on EAD connection charges in order to migrate to new Ethernet services. Openreach provided calculations of the

²¹⁶ Ofcom's information request of 5 January 2012.

²¹⁷ Based on discussions with Openreach, March 2012.

²¹⁸ BT Group response to S135 Notice of 1 July 2011.

revenue it would lose if it had to provide discounts on connection charges for migrating charges. In total, Openreach estimated that migrating all legacy Ethernet customers to new Ethernet services would cost it $\mathfrak{E}[\aleph]$.²¹⁹ As explained in Annex 5, we have rejected this approach as we consider that the most relevant measure of transition costs for the purposes of setting the charge control is the underlying costs of connection.

The MEA would give appropriate migration signals to consumers

- 6.104 Openreach's customers that currently take a legacy Ethernet service have the choice whether to continue with this service or to take a service provided with new Ethernet technology that would meet their requirements. In other words, the decision to migrate is made by customers, rather than Openreach.
- 6.105 We consider it appropriate that Openreach is given the flexibility to encourage customers to migrate from legacy to new services where it is efficient to do so. We also propose to allow for the transition costs associated with migrating legacy Ethernet customers to new Ethernet services. This will allow Openreach flexibility to discount the connection charge for EAD services for customers migrating from legacy products, or to take other measures necessary to encourage migration. Therefore, we consider that the adoption of the MEA approach in this charge control will be consistent with giving appropriate migration signals to customers.
- 6.106 We believe that our proposed migration credit will compensate Openreach appropriately for migrating customers. Therefore, it is limited to our proposed charge control and is not a policy that we propose to extend indefinitely. This is regardless of how many customers Openreach migrates to the new Ethernet services, since our policy proposals should not be determined by Openreach's actions. Rather, they should provide the conditions under which Openreach is incentivised to become more efficient. We believe that this will prevent Openreach from having an incentive to delay migrations, with the aim of attempting to justify further migration credits in future.

Use of prior year weights

- 6.107 Over the course of the charge control period, customers are predicted to migrate from legacy to new Ethernet services. The use of prior year weights in the model will tend to mean that legacy Ethernet services are given a higher weight in terms of compliance with the basket than if we used in-year weights, particularly in the earlier part of the charge control. Although prior year weights do not cause problems if each charge is reduced by the same amount, they can raise issues if Openreach wishes to reduce some charges by less than others. For example, if Openreach wishes to make all price reductions on EAD services (and none on legacy Ethernet services) to encourage migration, prior year weights would mean that the price reduction required would be greater than if in-year weights were used.
- 6.108 We have therefore examined the pricing structure for EAD and WES rentals in the base year to assess whether it is consistent with migration incentives. This comparison is shown in the Table below.

²¹⁹ Openreach response to S135 Notice of 4 April 2012.

	WES	EAD	% difference
10Mbit/s	£5,077	£3,353	-34%
100Mbit/s	£4,235	£3,629	-14%
1Gbit/s	£10,000	£9,500	-5%

Table 6.5 Differential between WES and EAD rental charges (£/annum)

Note: Pricing information from Openreach price list, correct as at 30 May 2012. Based on one year term, excluding connection and main link charges

6.109 We consider that the existing differential between WES and EAD rentals is consistent with such migration²²⁰. This differential is greater for 10Mbit/s and 100Mbit/s circuits than for 1000Mbit/s. Although the differential for 1000Mbit/s is relatively low, these circuits have a relatively low weight in the basket in the base year, so the use of prior year weighting should not cause significant issues. As the pricing gap of rental charges at the start of the charge control is already consistent with an incentive to migrate, and we have made an allowance for migration costs in setting our value of X, we consider that using prior year weighting to assess compliance will be consistent with efficient migration signals.

We propose not to impose a 'Basis of Charges' (cost orientation) obligation

- 6.110 We are proposing not to impose a cost orientation obligation on BT for Ethernet services. We consider that the competition problems we are here seeking to address with regard to pricing i.e. excessive pricing can be effectively addressed by the sub-baskets and sub-caps and, consequently, we consider that an additional cost orientation obligation would be unnecessary and disproportionate. We discuss below the considerations we have taken into account in reaching this proposal.
- 6.111 Our proposal for the Ethernet basket is relatively broad, encompassing both low bandwidths AI services and above 1 Gbit/s Ethernet services outside of the WECLA. The flexibility that this gives to BT is conducive to efficient pricing and cost recovery, as discussed above at paragraph 6.34 onwards. However, we need to take a view on what specific pricing remedy we consider is appropriate to address the competition problem, as identified in the BCMR Consultation, of BT fixing and maintaining its prices for Ethernet services at an excessively high level. This means that there is a need to limit Openreach's flexibility to protect against that risk.
- 6.112 The BCMR Consultation has proposed the imposition of price controls to address the risk of excessively high prices for Ethernet services. We propose to address the risk of excessive pricing through our charge control in three ways:
 - The overall basket cap of RPI-12%²²¹ that we propose to impose will bring BT's aggregate level of charges for Ethernet services into line with our forecast of their costs of provision (including the cost of capital) by the end of the charge control period. The charge control will consequently address the risk of excessive pricing at an overall level for Ethernet services.

²²⁰ Note that prior year weighting does not pose concerns in terms of connections, as the legacy products have been withdrawn from new supply as of June 2011. Legacy connections will therefore have only a small weight in the first year and none thereafter. See Openreach Fact sheet.
²²¹ As set out in this Section, we are consulting on the appropriate value of X within the range of RPI-

²²¹ As set out in this Section, we are consulting on the appropriate value of X within the range of RPI-8% and RPI-16%, with our base case value of RPI-12%.

- **Sub-baskets and sub-caps** for those services where we have identified, in light of our market analysis, that additional specific constraints are necessary to provide an adequate constraint against excessive pricing. These comprise sub-caps on interconnection services, and on each ancillary and equipment and infrastructure charge.
- A sub-cap of RPI-RPI on all other charges not covered by sub-baskets and sub-caps which is intended to reduce the risk of excessive pricing for these individual services by preventing BT from undue rebalancing of charges, and benefits end-users by restricting BT's ability to increase any given charge too quickly.
- 6.113 As a result, we consider the particular design, structure and scope of the proposed charge controls provides the most proportionate means of addressing the risk, identified as a result of our market analysis, of excessive pricing, and therefore we consider imposing the additional constraint on BT's prices via cost orientation obligations would be disproportionate.
 - First, in the context of Ethernet services, we consider that the charge control and sub-caps give a greater degree of certainty to stakeholders than cost orientation. Under the charge control, the overall level of X is known in advance, and our proposed sub-cap provides stakeholders certainty over the limits of any change in charges. We consider that cost orientation gives stakeholders relatively less certainty, as the levels of DSACs and DLRICs are known only with a lag to BT's customers. Over the course of the charge control, we forecast that the number of Ethernet circuits will increase by over 75%. In addition, within the Ethernet services, we forecast that there will be a shift from low capacity to high capacity circuits. We are also proposing to reallocate £101m in costs from the TI to the Ethernet basket. This anticipated volume increase, migration from low to high bandwidth circuits, combined with the cost reallocation, may make the DSAC and DLRIC figures more difficult to predict than they have been in the past or in other markets.
 - Secondly, our proposed overall basket cap seeks to bring BT's prices into line with its costs of provision (including a return on capital) by the end of the charge control. In contrast, with regard to cost orientation, the DSAC ceiling is, for most services we proposed to include in the Ethernet basket, significantly above current price levels. Consequently, if BT were to set all charges to just under DSAC levels, it would earn a return substantially above its cost of capital.
 - Thirdly, we have also proposed sub-caps and sub-baskets to constrain individual charges for certain services. In doing so we have designed the proposed charge controls to take into account where, in light of our market analysis, we consider for certain services the risk of excessive pricing is greater and thus where additional specific pricing constraints are warranted. We do not consider it necessary or proportionate to impose cost orientation where the impact on the prices of the Ethernet services of such an obligation is already sufficiently provided for by the particular design i.e. the proposed overall basket cap, the sub-baskets and the sub-caps of the proposed charge controls.
- 6.114 Given the above reasons, we consider the imposition of cost orientation to the Ethernet services we propose to include in the scope of the charge controls, in addition to the proposed charge controls, would be disproportionate to the aim we are seeking to achieve which is to address the risk of excessive pricing.

We propose adjustments to base year costs

- 6.115 As with the TI basket analysis, the starting position for base year costs are BT's RFS for 2010/11 as well as the more granular data provided by Openreach that reconciles to these accounts. They are the latest fully audited set of regulatory accounts that we had at our disposal when we started the charge control modelling.
- 6.116 We propose adjusting the cost data to ensure that these are representative of the 'relevant' level of costs for forward looking charge control purposes. There are two types of adjustments:
 - adjustments to reflect the composition of the basket; and
 - adjustments for reflect forward-looking efficient costs for the purposes of forecasting costs to 2015/16.
- 6.117 Below is a summary of our cost and revenue adjustments on the reported 2010/11 data for the purposes of the charge control. For more details on the calculations of our proposed cost adjustments see Annex 5.
- 6.118 The overall effect of our proposed adjustments is to increase the Ethernet basket Return on ROCE from the reported level of 4.5% in 2010/11 to around 16.7%. We note that:
 - for the adjustments made in order to reflect forward-looking efficient costs, the figures shown in the table below reflect the impact only to the basket, rather than the Ethernet markets as a whole;
 - these adjustments are made in the base year and rolled forward using the same assumptions as applied to the base year costs. As such, the ROCE figures shown are for illustrative purposes only and do not reflect actual profitability achieved in 2010/11.

Adjustment	Revenues (£m)	Operating costs (£m)	Capital costs ²²² (£m)	Mean capital employed (£m)	ROCE (%)
RFS. All Ethernet market (i.e. Ethernet services up to 1Gbit/s)	554	193	303	1,301	4.5%
All services above 1Gbit/s	[⊁]	[⊁]	[⊁]	[×]	
Internal BES, EBP, ONBS services	[⊁]	[⊁]	[⊁]	[×]	
Out of scope services Cablelink, Street Access, CCTV Access, Broadcast Access, WDM services	[×]	[×]	[⊁]	[×]	
Ancillary services, including ECCs and TRCs	-	-	-4	-	
Exclusion of ECC assets	-32	-	-	-25	
Ethernet basket	584	207	325	1,361	3.8%
Geographic disaggregation Exclude services delivered within the WECLA	-49	-18	-23	-93	
Ethernet services outside the WECLA	536	189	302	1,268	3.5%
Ofcom cost adjustments Current cost normalisation			-85	-	
Exclusion of transmission equipment			-30	-67	
Payment terms			-	-21	
Regulatory asset value (RAV) adjustment to duct assets			-11	-145	
Total Ethernet basket in 2010/11	536	189	174	1,035	16.7%

Table 6.6 Impact of adjustments on the Ethernet basket in 2010/11

Adjustments to reflect the composition of the basket

Services out of scope of Ethernet basket

6.119 We propose to exclude the costs and revenues associated with services outside the Ethernet basket from our analysis. We therefore propose to exclude revenues and costs associated with ECCs. We also propose to exclude costs and revenues from Cablelink, Broadcasts Access, CCTV access, Street Access services. We propose in the BCMR Consultation to exclude these from either TI or the AI markets as they are considered as retail applications outside of standard business connectivity services²²³.

Removal of assets built under 'excess construction'

6.120 BT includes the cost of providing 'excess construction' services within the base data for Ethernet services. These services are out of scope of the Ethernet basket and therefore we need to remove associated costs and revenues from BT's accounts. BT estimates the costs of excess construction charges in its RFS.

²²² Capital costs includes depreciation and holding losses (gains).

²²³ See paragraphs 4.298-4.332 of the BCMR Consultation.

6.121 BT also capitalises and depreciates all ECC costs²²⁴. However, these costs do not need to be recovered as part of ongoing revenues to ensure cost recovery because customers have to pay BT upfront when they incur ECCs.

Non-core Ethernet services

6.122 We only model core services as we do not have volume forecasts or cost-volume relationships for the ancillary services. We therefore propose to exclude both revenues and costs of ancillary services from our modelling analysis and the determination of the value of X to be applied to the basket. Ancillary services account for less than 5% of the basket revenues

Ethernet services not in BT's RFS

6.123 We include Ethernet services that are part of the main Ethernet services we model (internal BES, ONBS and EBD up to and including 1Gbit/s and their associated main link distances, and above 1Gbit/s Ethernet services and their associated main link distances). This information is not in the RFS. Internal BES, ONBS and EBD costs have been estimated assuming the same unit costs as their external counterparts. Data on the above 1Gbit/s Ethernet services was provided by Openreach as part of their response to Ofcom's formal information request.

Geographic cost adjustments

- 6.124 In the BCMR Consultation, we propose that the competitive conditions in the market for low bandwidth AISBO services in the WECLA are different from those outside the WECLA and accordingly we propose to regulate these areas differently²²⁵. In particular, we propose less onerous remedies in the WECLA than for the rest of the UK²²⁶.
- 6.125 We also propose in the BCMR Consultation that no operator has SMP in the MISBO market in the in the WECLA. Accordingly, we do not propose any regulation in the MISBO market within the WECLA²²⁷.
- 6.126 We therefore propose to exclude the costs and revenues associated with the WECLA from our modelling. If costs differ between the charge controlled and non-charge controlled areas, then in order to accurately model the costs in the charge controlled area, we should use geographically disaggregated costs.
- 6.127 Openreach has provided data on the proportion of Ethernet circuits in the WECLA, and the cost differential with respect to the rest of the UK (excluding Hull)²²⁸. We have undertaken a preliminary review of this submission. Taking account of the data provided by Openreach, and given the materiality of the impact of cost differentials within the WECLA on the rest of the Ethernet basket, we do not consider it proportionate at this stage to undertake a detailed assessment of the relevant geographic cost differentials for Ethernet services. For the purposes of this consultation, we propose to use the estimate of the proportion of the WECLA circuits from the BCMR, and to assume that the cost differential for Ethernet is the same as for high bandwidth TI circuits.

²²⁵ See paragraphs 7.180-7.242 of the BCMR Consultation.

²²⁴ Openreach response to S135 Notice of 25 May 2012.

²²⁶ Excluding Hull.

²²⁷ See paragraphs 7.293-7.312 of the BCMR Consultation.

²²⁸ Openreach response to S135 Notice of 29 March 2012.

Adjustments to reflect forward-looking efficient costs

6.128 We propose four different adjustments to the base year costs to make them suitable for forecast modelling. These are considered in turn below.

We propose to recalculate holding gains/losses

6.129 As with the approach taken in the TI basket, we propose to calculate future holding losses or gains by using forward-looking asset price changes, rather than actual inyear asset price changes. We also propose to exclude other holding gains or losses that BT reports in its RFS. This is covered in more detail in Section 5.

Regulatory Asset Value of access duct

- 6.130 As set out in Section 5, we propose to make RAV adjustments to the valuation of access duct that form part of BT's asset base. In particular, we propose to apply a RAV adjustment both for pre 97 and post 97 access duct to the Ethernet basket of services because:
 - One of the inputs to provision of Ethernet services is duct and there is no evidence to suggest that Ethernet services do not use pre-1997 duct. Although Ethernet services did not exist pre-1997, the services utilise existing as well as new duct network.
 - For consistent economic regulation assets should be valued on a similar basis for all the services that consume those assets. Using different valuation approaches would risk distorting relative prices and decisions based on those prices. We apply the RAV adjustment uniformly across all charge controls to all services that consume duct.
- 6.131 We note that this approach differs from that taken in the LLCC 2009. In that charge control, we did not make the RAV adjustment for Ethernet services for the following three reasons:
 - they were based on fibre and so the RAV adjustment for the copper access cable is not relevant;
 - fibre/Ethernet services were expected to make less use of pre-1997 duct than copper based services; and
 - to encourage investment by CPs in new fibre services.
- 6.132 The first consideration in relation to the RAV adjustment for copper still holds. Ethernet services use fibre and so we do not make the RAV adjustment which relates to copper access cable.
- 6.133 In relation to the RAV adjustment for duct, we consider that these considerations are not sufficient to justify a different regulatory approach for duct for Ethernet services compared to other services which consume these assets. Although Ethernet services use fibre, the fibre uses duct some of which predates 1997.
- 6.134 The final consideration relates to the extent to which not making the RAV adjustment would encourage infrastructure investment by OCPs. Unlike the LLCC 2009, we propose in the BCMR Consultation that this Ethernet charge control does not apply nationally, but instead excludes the WECLA area. This charge control therefore

would exclude the area where infrastructure competition has been found to be greatest.

- 6.135 The BCMR Consultation proposes to find that BT has SMP for low bandwidth AISBO services outside the WECLA and high bandwidth Ethernet (single-service Ethernet) outside the WECLA²²⁹. The BCMR Consultation has considered the prospect of there being effective infrastructure competition to BT. The BCMR Consultation has proposed that, given the high sunk costs associated with building networks, the economies of scale and scope, and the other barriers to entry and expansion discussed above, competition is not likely to become sufficiently effective in the next three years for low bandwidth AISBO services outside the WECLA²³⁰. In relation to high bandwidth Ethernet services outside the WECLA, the BCMR Consultation proposes that the high value of services in this market, combined with the rapid growth in demand implies that OCPs should be better able to justify the investment required to reach new customer sites than in most of the other relevant symmetric broadband origination markets. However, the BCMR Consultation proposes that other limitations, such as the absence of effective interconnection products, exacerbate the advantages that CPs derive from access network ownership and generate a significant barrier to entry and expansion for CPs without these network assets. Therefore the BCMR Consultation does not consider that competition is likely to become sufficiently effective over the course of the review period²³¹.
- 6.136 In the light of the findings of the BCMR Consultation, we do not consider that excluding the RAV would make any material difference to investment by CPs, sufficient to justify a different regulatory approach from other services.
- 6.137 To prevent any under- or over-recovery resulting from the change in the accounting treatment of the pre-97 duct, we propose to apply the RAV adjustment to Ethernet basket. We use BT's RAV model as submitted to Ofcom and BT's indication of the proportion of the duct that is related to AI services in order to determine the value of the RAV adjustment. We allocate the adjustment across all Ethernet services within the Ethernet basket.
- 6.138 BT estimated that 7% of total duct is used by services supplied by Openreach. As with the TI basket, we apply this percentage to BT's absolute duct valuation less duct valuation based on RAV to get the relevant RAV adjustment for MCE, Gross Replacement Cost ('GRC') and depreciation.

Removal of transmission asset costs

- 6.139 Up to 2010/11, BT recovered the cost of the transmission equipment deployed at either end of an Ethernet circuit and which are wholly dedicated to that service, through the local end connection charges. BT also capitalised and depreciated this equipment over its useful economic life.
- 6.140 In the LLCC 2009, we made an adjustment to match costs and revenues by eliminating MCE and depreciation of the assets and replacing them with a measure of fully expensed cost of the equipment on connection.
- 6.141 In 2010/11, BT changed the accounting policy to recover the cost of transmission equipment through rentals. This approach could result in a double recovery of the

²²⁹ See paragraphs 7.180-7.211 and paragraphs 7.243-7.292 of the BCMR Consultation.

²³⁰ See paragraph 7.207–7.211 of the BCMR Consultation.

²³¹ See paragraphs 7.287-7.292 of the BCMR Consultation.

costs that were previously fully expensed on connection per our adjustment in the previous charge control. We therefore propose to remove the costs associated with transmission equipment assets capitalised before 2010/11, namely depreciation and MCE.

Payment terms

6.142 Similar to the approach taken in the TI basket, we adjust notional debtors to reflect BT's actual payment terms for each service.

We do not propose any starting charge adjustments

- 6.143 At the start of a new charge control, we often consider whether it is appropriate to make one-off adjustments to prices if they were significantly out of line with costs. To inform this assessment, we typically compare the charges to cost orientation benchmarks (i.e. DRLIC and DSAC).
- 6.144 We have calculated DLRIC floors and DSAC ceilings for our base year and extrapolated these costs measures forward on the basis that they would move in line with FAC. Our model predicts that, at the start of the charge control, each of the relevant charges covered by the Ethernet basket would be within the cost orientation benchmarks. Therefore, we do not consider that there is any further reason to consider making starting charge adjustments. This is explained in more detail in Annex 5.

Forecasting of service costs

- 6.145 Following the calculation of base year costs, we forecast the evolution of costs and revenues to the end of the charge control period. In this section, we explain our key forecasting assumptions. Specifically, we describe our proposals on:
 - volume forecasts and the MEA assumption;
 - efficiency assumptions;
 - WACC.
 - cost volume relationships;
 - asset price changes; and
 - impact of reallocation of costs from the TI basket.
- 6.146 We propose to take into account all the various Ethernet volume forecasts we have gathered in arriving at our base case
- 6.147 We have received volume forecasts for Ethernet services from various sources, including Openreach, two other CPs and an industry analyst.
- 6.148 Annex 5 sets out these forecasts in greater detail and draws comparisons to check consistency. We have found that the trends shown in the forecasts appear to be reasonable and are broadly consistent across the different sources. Furthermore, the pattern of growth in Ethernet is consistent with the decline in TI volumes discussed in Section 5. We therefore propose to take into account all of the volume forecasts

received to arrive at our base case for our cost modelling, conducting sensitivity testing where appropriate.

- 6.149 In our base case forecast of Ethernet service volumes, we predict significant growth in demand for higher bandwidth Ethernet services. We consider that the overall trend in demand over the next few years is likely to be driven by the following factors:
 - increasing demand for broadband and greater capacity required by end-user applications is driving the backhaul bandwidth requirements of LLU operators and broadband providers;
 - the need to transmit increasingly large amounts of data quickly is driving the need for greater bandwidth. As a result, the bandwidth profile of Ethernet services is likely to change over time, with a trend towards higher capacity circuits;
 - the deployment of Next Generation Access ('NGA') and new services delivered over 4G mobile networks will further increase the requirement for backhaul capacity;
 - the lower unit cost of Ethernet by bandwidth is likely to drive further significant growth in the demand for Ethernet services.
- 6.150 Our forecast of Ethernet circuit volumes, as summarised in (Figure A5.6 of Annex 5)²³², shows that there has been significant growth over the period from 2007/08 to 2010/11, and that this trend is expected to continue to 2015/16. Of the growth in overall circuits, the most pronounced came from circuits up to and including 1Gbit/s, while from 2011/12 onwards, circuits faster than 1Gbit/s are forecast to grow at a faster rate than lower bandwidth Ethernet circuits (albeit from from a lower base).



Figure 6.7 Capacity delivered through Ethernet services

²³²Openreach response to S135 Notice of 25 May 2012.

6.151 We have used our forecasts of circuit volumes to derive a forecast of the capacity delivered using Ethernet services. Figure 6.7. shows the trend over the period 2007/08 and 2010/11 has exhibited significant growth, and this is forecast to accelerate after 2010/11.

Application of the MEA approach

- 6.152 As discussed above, we propose to adopt an MEA approach for the purposes of modelling the costs of the legacy WES and BES services. We propose to model these services using the costs of what we consider to be the modern equivalent. To this end, Openreach has supplied us with a mapping of the legacy WES and BES services over to the nearest equivalent EAD or EBD service, and is set out in Table A5.6 in Annex 5²³³. We note that this mapping is independent of actual decisions that customers may make when transitioning from legacy to new services and whether they take the opportunity to upgrade their bandwidth at the same time.
- 6.153 Figure 6.8 below shows our forecast decline of WES volumes, and the growth of EAD volumes from 2010/11 through to 2015/16.



Figure 6.8 Ofcom volume forecasts reflecting WES migrations

- 6.154 The forecasts show a significant increase in EAD volumes, of which only a proportion appear to be as a consequence of WES migrations. This growth is also likely to capture the migration from legacy TI services to Ethernet. A similar pattern is seen for BES and EBD circuits as shown in Figure A5.11 in Annex 5. BES circuits are forecast to decline, whilst those of EBD are forecast to rise.
- 6.155 As discussed in Section 4, in adopting the MEA approach, we need to make sure that an efficient operator can reasonably expect to recover its costs. We also noted that it may not be possible for even an efficient operator to seamlessly transition from one

²³³ BT Group response to S135 Notice of 1 July 2011.

MEA to another. We therefore propose to allow Openreach a migration credit, based on the underlying costs of migrating customers from legacy to new Ethernet services.

6.156 As set out in Annex 5, we have calculated that the migration credit we propose to allow will be approximately £43m. In the charge control, we propose to take the migration credit into account by assuming that legacy Ethernet customers migrate evenly over the course of the charge control. As a result, the migration credit will be applied by subtracting our estimate to the forecasted revenues at the end of the charge control in 2015/16. The combined impact of the MEA approach and the migration credit increase the value of X by approximately 1%.

We propose an operating cost efficiency of 2% to 5% for Ethernet services

- 6.157 In modelling the costs of Ethernet services, we have considered what efficiency improvements to assume for operating costs and new capital expenditure.
- 6.158 We propose to apply the assumptions on expected efficiency gains only to opex for Ethernet services. Aspects relating to efficiencies in capex are already taken into account through our use of the MEA approach and asset price changes:
 - our MEA approach to modelling Ethernet services involves assumptions on the use of the most efficient available technology to deliver the services in question. Under this approach, we propose to shift our modelling of costs from being based on the costs of legacy services to being entirely based on the costs of new Ethernet services; and
 - our asset price changes take account of changes in the valuation of certain assets, such as copper and duct.
- 6.159 We have considered a range of indicators to estimate the operating cost efficiency improvement that could reasonably be expected from BT. These can be categorised into three broad headings, namely:
 - Ethernet-specific historical trends, where we analyse the actual achieved efficiency in recent years;
 - internal efficiency targets; and
 - external benchmarking studies.
- 6.160 These sources of evidence are summarised in Table 6.9 below and are discussed in more detail in Annex 5.

	Ethernet- specific historical trend analysis ²³⁴	Openreach internal efficiency targets ²³⁵	2012 Deloitte Study ²³⁶	Statistical analysis (NERA, Deloitte) 237238	KPMG study
Efficiency (% per annum)	2.7-4.6%	[≻] %	2.25%	~2%	2.3-2.6%
Comments	Ofcom analysis of Openreach's historical cost data	Internal targets set for the subsequent 3 years	Benchmark against 5 other European operators	Benchmark against US LECs	Excludes fault rates and task times

Table 6.9 Evidence on Ethernet efficiency assumption

- 6.161 We believe it is appropriate to place most weight on the sources of evidence which are most relevant to Ethernet services. In the absence of historic data and forecasts specific to Ethernet services, we place most weight on the past and projected efficiency savings achieved by Openreach²³⁹. Over the four years from 2007/08 to 2010/11, we estimate that Openreach achieved operating efficiency savings ranging from 2.7% to 4.6% per annum.
- 6.162 We placed less weight on BT's internal planning documents and an extrapolation of their latest rolling forecast. These contained targets for efficiency savings of between [%] and [%] per year from 2011/12 to 2014/15. [%]. We are also mindful of the need for Openreach to have incentives to make efficiency improvements. If Openreach's internal targets form the basis of the charge control (and so are all passed onto consumers), then Openreach would face reduced incentives to make such efficiency savings in future.
- 6.163 We consider that the benchmarking studies conducted by NERA and Deloitte are less specific to Ethernet services and we have therefore attributed little weight to these. In addition, the NERA study and the 2008 and 2009 Deloitte studies which made use of the US LEC data were problematic due to data not being directly comparable. We also have concerns over the 2012 Deloitte study due to a limited number of observations in the sample, and minimal variation in the output variables²⁴⁰. Nevertheless, we note that these suggest efficiency savings in the region of 0.6-2.6% per annum.
- From our consideration of the available evidence, we have proposed an efficiency 6.164 rate for the provision of Ethernet services of 2% to 5% per annum gross. This places most weight on the historical evidence of efficiency gains made by Openreach.

http://stakeholders.ofcom.org.uk/binaries/consultations/llcc/annexes/efficiency.pdf ²³⁸ Deloitte, 29 March 2011, "WBA consultation response"

http://stakeholders.ofcom.org.uk/binaries/consultations/823069/responses/BT2.pdf

²³⁴ Ofcom analysis of BT Group response to S135 Notice of 1 July 2011.

²³⁵ BT Group response to S135 Notice of 1 July 2011.

²³⁶ Deloitte, "Analysis of the Efficiency of BT's Regulated Operations", a report for BT, dated 16 February 2012. ²³⁷ NERA, 17 March 2008, "The comparative efficiency of BT Openreach."

We note that in our proposals on AVEs and CVEs we have rejected estimates purely based on historic data. Our analysis of the data provided by BT indicates that the same problems do not apply in using such data to assess the potential for efficiency savings.

²⁴⁰ Our approach to assessing the different sources of analysis around efficiency gains is set out in greater detail in Annex 5.

- 6.165 This target is consistent with that made under the WLR LLU CC, given that we focus only on Opex efficiency saving, rather than including capex efficiency as well²⁴¹. We also note that, whilst this target range is below Openreach's internal targets, we believe it is realistic and provides Openreach with an incentive to meet those internal targets and outperform the targets set under the charge control.
- 6.166 We also note that our proposed efficiency rate for Ethernet services is higher than what we have proposed for TI services. We believe that this is consistent with TI markets being more mature than Ethernet markets and there being greater scope for improvements in efficiency in Ethernet markets.

WACC

6.167 As with our approach to TI services, our provisional view is that we should use a pretax real cost of capital estimate for the 'rest of BT' of 6.5%. This is the same cost of capital we have applied in the recent WBA²⁴² and in the subsequent WLR LLU Statement²⁴³. Further details on the reasoning, and how we propose to consider the impact of changes in market trends prior to the Statement is covered in paragraphs -5.148 – 5.155 above and in Annex 7 (Cost of capital).

We propose to use Openreach's cost volume relationships with Ofcom adjustments

- 6.168 Given the volume forecasts, we need to model how the costs of components that make up Ethernet services will vary in response to changes in the demand for particular services. We calculate the extent to which costs are expected to change in relation to volume changes through AVEs and CVEs. As further explained in preceding Sections of this consultation document, AVEs and CVEs are, in essence, the percentage changes in capital and operating costs respectively for a 1% change in volumes.
- 6.169 Section 5 outlines our approach to modelling CVEs in respect of the TI basket. To ensure that we take a consistent approach to the charges offered by BT in respect of increasing Ethernet volumes and falling TI volumes, it is appropriate that the same approach to modelling CVEs is used in the Ethernet basket.
- 6.170 As with TI services, our proposed approach is to forecast BT's costs using data submitted by Openreach for AVEs and CVEs, after making the following adjustments:
 - apply the individual component-level AVEs and CVEs, rather than using an arithmetic average of each of these values;
 - weight the 'indicative' CVEs by the corresponding AVEs to get a final CVE; and
 - make a reduction of 10% to the submitted CVE for the category of 'General Management and Other' and for Admin CVEs.

We propose to use five-year historic average asset price change

6.171 We propose to adopt the same asset price change for assets used by Ethernet services as those used by TI services. As with our approach on RAV, this approach

²⁴¹ Note that we account for Capex efficiency gains in other ways, as explained at paragraphs above.

²⁴² WBA CC, July 2011, <u>http://stakeholders.ofcom.org.uk/consultations/wba-charge-control/</u>

²⁴³ http://stakeholders.ofcom.org.uk/consultations/wlr-cc-2011/?a=0

ensures that the same assets are valued in the same way even if they are used for different services. Detailed discussion of the asset price assumptions are covered in Annex 5.

We propose to include costs reallocated from the TI basket

- 6.172 In Section 5, we explain in detail that we propose an adjustment to reallocate costs from the TI basket to the Ethernet basket. In summary, this adjustment takes account of the following considerations:
 - many of the assets (such as duct) and other costs used by the network are shared between TI and Ethernet. In the base year, costs these are allocated to TI and Ethernet services;
 - the AVEs and CVEs described above do not take into account the opportunity for these shared costs to be reallocated among services as volumes for one service falls and another rises;
 - absent any reallocation, the unit costs applying to TI services, which are declining, would appear to rise sharply, and the unit costs applying to Ethernet services would appear to fall sharply; and
 - In practice, such shared costs would be reallocated by BT using an appropriate accounting methodology over time. It is therefore appropriate to make a reallocation adjustment which, in our view, would be consistent with the approach likely to be taken by BT.
- 6.173 Annex 5 outlines our proposed methodology for the adjustment in detail. We propose to use an approach largely consistent with a similar adjustment made in the LLCC 2009.
- 6.174 We propose a reallocation from TI basket to Ethernet basket of £101m. This increases the Ethernet cost base from £486m to £587m, and changes the charge control for Ethernet services from RPI-17.50% to RPI-12.00%. This impact is offset by the change in the charge control for TI discussed above from RPI + 18.75% to RPI + 3.25%. We note that this results in a neutral impact on BT's total revenues.

Value of X and sensitivity analysis

- 6.175 From the information above, the model produces cost forecasts for each service for each year. Those forecasts are compared against the service revenues. We then calculate the X values so that in the final year forecast revenues and costs are equal. Based on the proposals outlined in this Section, the provisional value of X is 12%.
- 6.176 Figure 6.10 below illustrates the costs and revenues of Ethernet services based on our modelling assumptions. The costs illustrated are from our model and are before the effect of any reallocation adjustment and before charges are impacted by our proposed charge control.



Figure 6.10 Ethernet basket cost stack before cost reallocation and revenues before impact of our charge control

- 6.177 The value of X is sensitive to changes in any of the input assumptions described in this Section. In particular, it is possible that our value of X could be affected by the following:
 - changes in base year cost data, for example if there is a material change in cost data. As with our approach to TI, we make a number of adjustments to BT's data, and if consultation responses or further information provided by BT indicate that our adjustments need to increase or decrease, this could result in a change to the X;
 - changes in our approach to technological change. Removing our MEA and migration credit adjustment would reduce the X by 1%;
 - changes in the assumed level of operating efficiency, for example, if we move towards the lower or high end of our proposed range. This could change the X by 0.5% in either direction;
 - a change in the approach to calculating AVEs and CVEs. If we were to adopt those used in the last LLCC, this would reduce the X by 0.75%;
 - a change in the WACC. A change in the WACC of 1% up or down would change the X by 0.75%;
 - a change in impact of geographic disaggregation, for example if new information suggests that the cost differential between costs inside and outside the WECLA differs from our current assumption; and

- changes in the volume forecasts, for example if volume forecasts are revised. This could have a significant impact. A reduction of 10% in the volume forecast or in the rate of migration could change the X by close to 2%.
- 6.178 We have examined the potential impact of X to changes in our underlying assumptions. Table 6.11 below presents the results of our sensitivity analysis on the values of X for the Ethernet basket. We note that each sensitivity analysis is calculated on a discrete basis unless otherwise stated.

Scenario	Description	Ethernet basket
Base case	RPI – 12.00%	
MEA assumption (all W		
	No MEA / migration credit	RPI – 11.00%
Opex efficiency (3.5%)		
	Low: 2%	RPI – 11.50%
	High: 5%	RPI – 12.50%
CVE (component-level		
	Base case minus 25%	RPI – 11.00%
	Base case plus 25%	RPI – 12.50%
	Component-level LRIC:FAC ratio, unadjusted	RPI – 12.00%
	0.24, using methodology from 2009 LLCC	RPI – 10.50%
WACC (6.5%)		
	5.5%	RPI – 12.75%
	7.5%	RPI – 11.25%
Geographic disaggrega		
	Ethernet Low: low volume of circuits inside the WECLA and low unit cost differential between the non-WECLA and WECLA	RPI – 12.25%
	Ethernet High: Openreach volume of circuits inside WECLA, high unit cost differential between the non-WECLA and the WECLA	RPI – 10.50%
Alternative volume fore		
	Ethernet: Ofcom assumption that volumes 10% lower	RPI – 9.50%
	Ethernet: Ofcom assumption that volumes 10% higher	RPI – 14.00%
	Ethernet: Ofcom assumption that 10% more WES volumes migrate to EAD	RPI – 10.25%
	Ethernet: Ofcom assumption that 10% less WES volumes migrate to EAD	RPI – 13.50%

Table 6.11 Base case proposals and sensitivity analysis

6.179 Our sensitivity analysis suggests, that individual changes to inputs could result in the value of X varying to between RPI-9.5% and RPI-14%, with most sensitivities lying in the range from RPI-10% to RPI-14.00%. Based on the issues outlined in this section

and the results set above, we propose RPI-12% for the Ethernet basket as the base case, with a range of RPI-8% to RPI-16%.

The proposed Ethernet basket control meets the relevant tests under the Act

Powers under sections 87 and 88 of the Act

- 6.180 We are proposing to apply a charge control on BT as an SMP condition under section 87(9) of the Act. Table 6.1 above summarises the proposed Ethernet basket control.
- 6.181 The proposed Ethernet basket control applies to specific services in two markets identified in the BCMR Consultation²⁴⁴. The specific services, and the markets to which the proposed Ethernet basket control applies, are set out in the draft SMP condition at Annex 8 of this consultation document.
- 6.182 Section 88 of the Act states that Ofcom should not set an SMP condition falling within section 87(9) except where it appears from the market analysis that there is a relevant risk of adverse effects arising from price distortion and it also appears that the setting of the condition is appropriate for the purposes of:
 - promoting efficiency;
 - promoting sustainable competition; and
 - conferring the greatest possible benefits on the end-users of the public electronic communications services.
- 6.183 In proposing charge controls, section 88 also requires that we must take account of the extent of the investment in the matters to which the condition relates of the person to whom the condition it to apply - i.e. BT.

There is a relevant risk of adverse effects arising from price distortion

6.184 As set out in the SMP analysis of the BCMR Consultation, and explained further above in this Section, we consider the relevant risk of adverse effects arising from price distortion is the risk that BT might so fix and maintain its prices for the services we propose to include in the proposed Ethernet basket control at an excessively high level²⁴⁵

Promoting efficiency

- 6.185 We consider that the setting of the proposed SMP condition is appropriate for the purpose of promoting efficiency, since:
 - in the absence of competitive pressures, we believe that BT would have limited incentives to seek to reduce its costs of providing wholesale leased lines services;

²⁴⁴ These are: the wholesale market for low bandwidth alternative interface symmetric broadband origination in the UK excluding the Hull Area and the WECLA, at bandwidths up to and including 1Gbit/s; and the wholesale market for multiple interface symmetric broadband origination in the UK excluding the Hull Area and the WECLA.²⁴⁵ See paragraph 11.161 of the BCMR Consultation.

- in setting the proposed charge controls, we are proposing to use an RPI-X formulation, so that BT is encouraged to achieve greater efficiency in providing wholesale services; and
- the broad basket that we have proposed would allow BT to recover common costs in an efficient manner.

Promoting sustainable competition and conferring the greatest possible benefits on end-users

- 6.186 We also consider that the proposed charge controls are appropriate to promote sustainable competition and to confer the greatest possible benefits on end-users of public electronic communications services.
- 6.187 The market analysis conducted by the BCMR suggests that there is a sufficient risk that BT might fix or maintain its charges for the services within the scope of the proposed Ethernet basket at an excessively high level, which would be to the detriment of competition²⁴⁶. Preventing excessive pricing via an RPI-X type of charge control would promote sustainable competition, which we consider is likely to be the most effective way of benefiting end-users of public electronic communications services. It would enable greater choice of services for end users in terms of choice, price, quality of service and value for money.

Investment matters

- 6.188 When proposing the Ethernet basket control we have also taken into account the need to ensure BT has the correct incentives to invest and innovate. We have done this in the following three respects:
 - first, in modelling BT's forecasted costs, we have built in a reasonable return on investment (see paragraph 6.167);
 - second, we have proposed an RPI-X form of charge control, which encourages and rewards investment in new, more efficient technologies, since BT would be able to keep any efficiency gains that go above and beyond our efficiency assumptions over the course of the charge control (see Section 3); and
 - third, our proposed implementation of the MEA approach would allow BT the ability to recover its costs and would provide incentives to invest in innovative and more efficient technology (see paragraphs 6.69-6.106).

We have considered the tests under section 47 of the Act

- 6.189 Any SMP condition must also satisfy the tests set out in section 47 of the Act, namely that it must be:
 - objectively justifiable in relation to the networks, services or facilities to which it relates;
 - not such as to discriminate unduly against particular persons or a particular description of persons;
 - proportionate as to what it is intended to achieve; and

²⁴⁶ See paragraph 11.161 of the BCMR Consultation.

• in relation to what it is intended to achieve, transparent.

6.190 We consider these tests are satisfied.

The proposed SMP condition is objectively justifiable

- 6.191 Our rationale for proposing the Ethernet basket control is that in the absence of such a mechanism BT would have the ability and incentive to price the services we propose to include in the basket control excessively. As a result of our analysis set out above we consider the proposed SMP condition is objectively justifiable.
- 6.192 We have set a range for X based on our assessment of forward-looking costs and on our forecasting assumptions as set out from paragraph 6.115. We have conducted a range of sensitivity checks as set out in Table 6.12, based on this we propose a value of X in the range from RPI -8% to RPI-16%.
- 6.193 We propose a sub-cap on interconnection services as we have identified a particular risk of excessive pricing as set out in paragraphs 6.35-6.46.
- 6.194 We propose to assess the profitability of Ethernet services using the MEA approach. We have set out our analysis for this approach in paragraphs (6.69-6.109).
- 6.195 We have conducted an analysis of which costs are common between the TI and Ethernet baskets as set out in paragraphs 6.172-6.174. This analysis is based on our view of a probable scenario for the actual reallocation of costs currently allocated to TI services to Ethernet services by the end of the charge control period. Based on this analysis, we propose to reallocate £101m from the TI to Ethernet basket.

The proposed SMP condition does not discriminate unduly

- 6.196 The proposed SMP condition will not discriminate unduly against a particular person or particular persons because any provider of communications networks, services or associated facilities can request relevant Ethernet services within the scope of the proposed Ethernet basket control from BT.
- 6.197 We consider the proposed SMP condition does not discriminate unduly against BT as it is the only CP to hold SMP in the two relevant markets and the proposed Ethernet basket control seeks to address that market position, in particular BT's ability and incentive to set excessive prices for the services we propose to include in the basket control.

The proposed SMP condition is proportionate

- 6.198 The charge controls are proportionate because they directly address the risk of excessive pricing identified by the BCMR and are focused on ensuring that there are reasonable prices for the services in question. The charge controls allow for BT to have the ability to make a reasonable return on investment and provide BT with the incentives to invest and develop its network.
- 6.199 For the reasons set out above, therefore, we consider the proposed SMP condition is:
 - appropriate to achieve the aim of addressing BT's ability and incentive to charge excessive prices for the services we propose to include in the Ethernet basket control;

- necessary in that it does not, in our view, impose controls on the prices BT may charge for the services we propose to include in the Ethernet basket control that go beyond what is required to achieve the aim of addressing BT's ability and incentive to charge excessive prices for these services; and
- such that is does not, in our view, produce adverse effects which are disproportionate to the aim pursued which is to address BT's ability and incentive to charge excessive prices for the services we propose to include in the Ethernet basket control.

The proposed SMP condition is transparent

6.200 Finally, for reasons discussed above, we consider the proposed SMP condition is transparent. Its aims and effect are clear and it has been drafted in the proposed SMP condition so as to secure maximum transparency. The proposed text of the SMP condition has been published with this consultation. Its intended operation is also aided by our explanation in this consultation. We have also set out the likely impact of the proposed Ethernet basket control on prices for the duration of the control.

We have considered sections 3 and 4 of the Act

- 6.201 We also consider that the proposed Ethernet basket control fits with our duties under sections 3 and 4 of the Act.
- 6.202 For the reasons set out above, we consider the proposed Ethernet basket control will promote competition in the relevant markets and will therefore further the interests of citizens in relation to communication matters and the interests of consumers in the downstream retail markets.
- 6.203 We consider the proposed basket control will, together with our other charge control proposals set out in this consultation and those set out in the BCMR consultation, secure the availability throughout the United Kingdom of a wide range of electronic communications services.
- 6.204 We have also had regard in developing our proposals for the Ethernet basket control to, in particular:
 - the desirability of promoting competition in the relevant market;
 - the desirability of encouraging investment and innovation in the relevant market; and
 - the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom.
- 6.205 Finally, in performing our duty to further the interests of consumers, we have also had regard in proposing the Ethernet basket control of RPI-RPI, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money.

Question 5: Do you agree with our proposal for Ethernet, specifically: basket design; modern equivalent asset approach; base year adjustments; and forecasting assumptions? If not, please explain why and propose alternative approaches with supporting information.

Summary

- 6.206 In this Section we outlined our proposals for the charge controls to be applied to Ethernet services. We proposed:
 - a single basket covering all charge controlled Ethernet services (excluding ECCs);
 - a sub-basket in respect of interconnection services (BTL); and
 - sub-caps on all other charges.
- 6.207 We outlined how we proposed to determine the level of the charge control. We propose to make adjustments to base year costs and to assume operating cost efficiency improvements of 2% to 5% per annum.
- 6.208 Based on this analysis, and taking into account the relevant legal tests, we propose that the level of the charge control within the basket for TI services will be between RPI-8% and RPI-16%.

Section 7

Proposed controls for Accommodation and Excess Construction Charges

Introduction

- 7.1 In order to use the regulated wholesale services that BT provides in the leased lines markets, CPs must also purchase certain accommodation products or, on occasion, request construction work. Accommodation services such as space and power in BT's local exchanges are an important technical element of the regulated services. Similarly, ECCs allow access network extensions that are specific to an individual customer. As both types of services are an essential part of the overall provision, the BCMR Consultation considered it necessary to subject them to price controls²⁴⁷.
- 7.2 In the LLCC 2009, we included ECCs in the ancillary services basket separately for TI and AI services. As explained in Sections 5 and 6, our current proposal is to place ancillary services (with the exception of ECCs) within the TI and Ethernet services baskets.
- 7.3 In this section, we discuss the details of our proposed charge control framework for ECCs²⁴⁸ and accommodation products. In particular, we cover:
 - issues around accounting treatment of ECCs and their level;
 - regulation of ECCs going forward; and
 - our approach to regulating accommodation products.

Summary of proposals

- 7.4 In response to the BCMR CFI, several CPs raised concerns with regards to ECCs. We have reviewed the accounting treatment of ECCs and the level of ECCs. As a result of our analysis, we propose to:
 - adjust our base year costs (2010/11) by removing ECC costs from the Mean Capital Employed ('MCE') of other leased line services in order to avoid double recovery by £28m for AI services MCE and £39m of low bandwidth TI services MCE; and
 - implement a change to the recovery of ECC costs through a starting charge adjustment of, on average, 30%. This will reduce Openreach's leased line revenues by approximately £10m per year.
- 7.5 We also propose to impose a separate control on ECC charges. Most ECC costs incurred by BT are passed through from its contractors, and are therefore based on underlying trends in input costs within the construction industry. We are concerned that the use of an RPI cap may place BT at risk of not recovering its costs, as BT

²⁴⁷ See paragraphs 10.108, 11.169 and 12.158 of the BCMR Consultation.

²⁴⁸ For the avoidance of doubt, where we discuss ECCs, we refer to ECCs specific to leased line services.

may have less control over these costs than it does in other areas. We therefore consider that it is more appropriate to use the General Building Cost Index ('GBCI'), which is a national index that measures the costs of construction work including materials and labour. We consider that the use of the GBCI in this case does not raise the issues that can be caused by sector-specific indices²⁴⁹. We propose to impose a cap of GBCI-0% on each ECC used for leased line services.

7.6 In the WLR LLU CC Statement, Ofcom maintained charge controls on accommodation services that CPs require to locate their equipment at BT's local exchange buildings²⁵⁰. Those products have been included in the Co-mingling ancillary services basket²⁵¹. Since the Co-mingling ancillary services basket includes accommodation services which are used by CPs for Leased Line products as well as LLU, our view is that they should be subject to the same regulation. We therefore propose to require Openreach to price accommodation products used for leased lines purposes the same as for LLU co-mingling products. With regard to the Access Locate Administration Fee²⁵², we propose to continue with the current regulation of RPI-0%. We also propose to subject Cablelink to a price cap of RPI-0%.

Excess Construction Charges

Background

- 7.7 Openreach levies ECCs whenever customer-specific network construction work is required in association with an order²⁵³. ECCs cover activities such as a site survey, the installation of new duct, new blown fibre and drilling through walls²⁵⁴. Although most ECCs are charged by Openreach, BTW also levies some ECCs for the provision of new TISBO circuits. These are mostly a pass-through of Openreach charges.
- 7.8 ECCs are charged in addition to normal connection charges and apply whether the service requested is fibre or copper. The ECCs paid by CPs cover the full costs incurred by BT, plus an additional mark-up over costs.
- 7.9 Several respondents to the BCMR CFI raised concerns about ECCs. The BCMR Consultation discussed the stakeholder comments about whether Openreach's network extension practices are efficient and comments about possible unequal

http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf

²⁴⁹ See discussion in Section 3.

 ²⁵⁰ See the WLR LLU CC Statement http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-cc/statement/LLU_WLR_CC_statement.pdf
 ²⁵¹ For a definition of Comparison consultation of Comparison consultations and statement.pdf

²⁵¹ For a definition of Co-mingling services see page 215 of the Wholesale Local Access market review Statement;

 ²⁵² This product has been developed to enable LLU CPs to use their existing POPs to locate switching equipment for aggregating their Openreach Ethernet services.
 ²⁵³ Only those elements that are unique to a single end-user site are chargeable as ECCs.

²⁵³ Only those elements that are unique to a single end-user site are chargeable as ECCs. Construction work that forms part of Openreach's common network (i.e. can serve more than one end-user site) falls outside the scope of ECCs. ECCs are also incurred if the customer requests a method of delivery which is not Openreach's first choice or if an additional circuit is required for resilience purposes.

²⁵⁴ Details of ECCs are available at:

http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=ZdqG%2F xv%2FjSuBEEITnogh5uNOEwQ2%2FKws5WBAVcIIcholMnGHsqdC0vzO163bJmh34D91D7M0q8u% 2F%0AIISgtIFAKw%3D%3D. Correct as at 03/7/2012.

treatment between CPs and BT²⁵⁵. In this consultation, we consider the accounting treatment of ECCs and the level of ECCs.

Accounting treatment of ECCs

We propose to remove capitalised ECCs from the asset base

- In its response to the BCMR CFI, UKCTA raised concern about the accounting 7.10 treatment of ECCs²⁵⁶.
- BT's accounting policy is to capitalise ECCs expenditure and add it to its asset base. 7.11 This allows BT to earn a return on capital on this capitalised expenditure. However, the full costs of ECCs are recovered upfront through charges to CPs. Tthis accounting treatment raises a risk of double-recovery. That is, there is a risk that BT recovers the costs of excess construction upfront, and in addition recovers these from rental charges over time. BT make an adjustment in the accounts to remove depreciation related to ECCs from the costs of other services. However, there is no equivalent adjustment for the MCE attributable to ECCs, which remains allocated to services. In order to avoid this double-recovery, we propose to remove capitalised ECCs from the asset base.
- 7.12 To estimate the amount of MCE applicable to ECCs, we have calculated the proportion of depreciation attributable to these services²⁵⁷. On the basis of our analysis, we propose to adjust our base year costs to remove £28m of AI services MCE and £39m of low bandwidth TI services MCE²⁵⁸. This adjustment prevents double-recovery of ECC costs.

Level of ECCs

We have estimated the costs of ECC provision

- Some CPs raised concerns over the level of ECCs which in their view were higher 7.13 than commercial construction rates²⁵⁹. CPs also said that ECCs represented a significant increase in the cost of a new circuit, and that they were levied on a considerable proportion of new orders.
- 7.14 To assess the starting charges for ECCs, we have examined the data in BT's 2010/11 RFS. In 2011, BT reported revenues for leased line services totalling £39m and estimated the costs of provision of £25m. This indicates a mark-up over estimated costs of 56% and a margin of 35%. The RFS provides only estimated

http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr-inputs/responses/UKCTA.pdf ²⁵⁷ Based on BT's reported numbers, we have calculated the percentage of all depreciation

²⁵⁵ See paragraphs 11.107 -11.114 of the BCMR Consultation, http://stakeholders.ofcom.org.uk/binaries/consultations/business-

connectivity/summary/sections815.pdf ²⁵⁶ See UKCTA response, page 3 available at

attributable to ECCs, separately for AI and TI services. We then applied this percentage to the total MCE for each service on the assumption that all assets were depreciated on the same basis. The resulting MCE number has been split across all services in proportion to MCE reported for those services. ²⁵⁸ For Multiple Interface services, BT has not reported any ECCs for those services. Device 17: LKCTA response, page 4: and [X]; V

²⁵⁹ CWW response to the BCMR CFI, page 17; UKCTA response, page 4: and [**×**]; Verizon response to question 17. The responses are available at http://stakeholders.ofcom.org.uk/consultations/bcmrinputs/?showResponses=true&pageNum=1#responses

costs because BT's accounting system does not distinguish between construction work for ECCs and other construction.

- 7.15 In the absence of actual cost data, we have requested information on the costs of ECC supply for a sample of Ethernet projects. Openreach provided data on the level of ECCs incurred for all projects between 24 and 30 September 2011²⁶⁰. The sample included all projects from that week (which is a statistically significant number), of which the majority were for BT divisions.
- 7.16 In order to estimate the costs of ECC provision for this sample of projects, Openreach compared the ECC price list the charges its own contractors apply for the same type of work. BT has explained that some ECC work is carried out by external contractors and some may be carried out by its own personnel, particularly when the construction work involves blown fibre and associated tubing. However, Openreach has not provided details of the costs for ECC work when it is carried out internally.
- 7.17 Our view is that the external contractor price list provides an appropriate estimate of the underlying costs of ECC provision. It is reasonable to expect Openreach to use its contractor for ECC work whenever it is efficient to do so. In particular, when the costs of ECC work are lower using a contractor than for internal provision. In some cases, it is possible that the ECC costs could be lower if conducted by Openreach internally, such that Openreach's internal costs would represent the efficient cost. However, given the practical difficulties in estimating such internal costs, we consider that the external contractor price list provides an appropriate benchmark.
- 7.18 Openreach explained that it faces other costs in ECC provision in addition to the contractor costs. These include the costs for additional materials costs for Openreach, costs for Wayleaves and Openreach's overhead costs. The other materials cover items such as frames and covers for footway boxes which Openreach supplies from its own stores. Wayleaves refer to charges payable for land access. The overhead costs include procurement and other administration costs which Openreach incurs in ECC provision. Openreach provided an estimate of the average Wayleave rate for items such as duct where footway charges may be applicable. Openreach estimated that overhead costs added [≫] to ECC work²⁶¹.
- 7.19 We have analysed Openreach's data on its costs of ECC provision. Our analysis reveals that Openreach is making significant margins on most of its ECCs. Across all charges in the sample, Openreach's weighted average margin is 30%²⁶².

We have considered what margin would be appropriate for Openreach to earn on ECCs

- 7.20 The 30% margin quoted above covers Openreach's incremental costs of provision including a contribution to overheads (common costs). We have therefore considered whether this margin is an appropriate return on capital employed. In considering the appropriate level, we have particularly taken into account:
 - the level of Openreach capital employed in the provision of ECCs; and
 - the impact on BT and customers of different approaches.

²⁶⁰ Openreach response to S135 Notice of 25 May 2012.

^{261 [×]}

²⁶² This margin is a weighted average margin derived from the overall incidence of ECC charges.
- 7.21 The data provided to us by Openreach show that Openreach deploys minimal capital expenditure in the provision of ECCs. As discussed above, the full costs of ECCs are recovered from CPs at the time of connection, and BT will only commit to construction costs once it has a commitment from the CP to meet the cost. We have reviewed the issue of capital employed ,which may relate to working capital used by Openreach to fund any gap in payment between when Openreach pays its contractors and when CPs pay Openreach. On the basis of our analysis we have not identified any significant relevant cost for Openreach in the provision of ECC services²⁶³.
- 7.22 We have not identified any significant level of capital employed in the provision of ECCs. The justification for a margin to be applied above the costs of provision of the services rests on the need to provide a return on the capital employed. On that basis, no margin above the recovery of incremental costs and a contribution to overheads is justified. We note that this is similar to connection charges where BT recovers its operating costs and not a return on capital employed.
- 7.23 In terms of other relevant factors, we note that, although the total expenditure on ECCs constitutes around 4% of the overall size of the leased line market, the impact on customers and competition is important. The level of ECCs is significant in relation to the cost of a new circuit. Most ECC's paid by CPs in the period between April and September 2011 fell within the range of £1,000 and £5,000²⁶⁴. This can represent a significant increase in the cost of a circuit. We have calculated that over a one year term, the ECC can increase the total cost of a circuit, by as much as [≫]²⁶⁵. Even assuming a three year rental period, the ECC can increase the total cost of ownership by over [≫].

Proposed changes to ECCs

We propose to reduce the level of ECCs

- 7.24 Our analysis suggests that Openreach currently earns a margin of 30% on its excess construction work.
- 7.25 We consider that ECCs should be set on the basis of forward-looking incremental costs and an appropriate mark-up for the recovery of common costs. To the extent that BT employs any capital in the provision of ECCs, then it should also be allowed an appropriate return on that capital. This is the same approach as for other charge control products, where we set our charge controls to bring revenues into line with costs, including a return on capital.²⁶⁶ However, as discussed, we propose to no longer have ECCs in the main TI and Ethernet baskets, but to subject them to a separate control.
- 7.26 At this stage, we have not been provided with any evidence of any significant capital, and so we are proposing to set a level for the new ECC basket which will reduce the level of charges for ECCs.

²⁶³Openreach response to S135 Notice of 25 May 2012.

²⁶⁴ Openreach response to S135 Notice of 25 May 2012.

²⁶⁵ Based on an EAD 10 circuit, excluding main link charges, using the average ECC paid by CPs of $[\sum_{n=1}^{\infty}]$

 $^{[\}times]$ ²⁶⁶ For example, the charge control on Ethernet products is set so as to bring forecast revenues for Ethernet services into line with forecast costs (including a return on capital) by the end of the charge control period.

- 7.27 We propose to implement the change to ECC prices through a starting charge adjustment. Although Ofcom's general preference is for glide paths, we do not consider that there are sufficiently strong reasons to justify a glide path in this case. As discussed in Section 4, a glide path can be appropriate as an incentive for efficiency in cases where BT has earned higher returns through reducing costs faster than anticipated. In the case of ECCs, we consider that the high returns do not result from efficiency by BT. ECCs are based on a pass-through of BT's contractor costs plus a mark-up. We also note that, in the cases where they apply, ECCs are large in relation to the overall costs of a circuit and therefore are material to customers.
- 7.28 The data we have received to date allows us to compare individual ECC charges with our estimate of costs for many of the individual charges. Cumulatively, these charges cover approximately 90% of the ECC revenues in the sample. Where we have estimated the costs for a specific charge, we are proposing to apply a specific reduction to the Openreach price to bring it into line with our current estimate of cost. For the remaining charges, we are proposing to apply a blanket 30% reduction to the price. Our proposed start charges are given in Table 7.1 below.

Table 7.1 Proposed start charges ex-VAT

	Proposed start charge £
Survey Fee	250
Drilling each external wall	235
Drilling each internal wall non concrete	45
Drilling each internal wall concrete	140
Cable installed into duct, buried or installed on poles including any jointing required per metre	4.30
Blown Fibre per metre	3.05
Blown fibre tubing in duct per metre	2.75
Internal cabling (including internal blown fibre tubing) per metre	5.00
New ductwork (including wayleave costs)	
- under soft surface per metre	20
- under foot way per metre	40
- under carriage way or roads per metre	80
Trunking & traywork within customer's curtilage per metre	28
New footway box small (surface area up to 0.5 sqm)	690
New footway box medium (surface area between 0.5 and 1sqm)	1,525
New footway box large (surface area greater than 1sqm)	2,630
Provision of a Small carriageway box (surface area up to 1sqm)	2,410
Provision of a medium carriageway box (surface area between 1and 1.25 sqm)	3,000
Provision of a small carriageway box (surface area above 1.25 sgm)	3.375

*There are four items in the ECC price list (Provision of pole, Copper cable, Directly buried cable and Moleploughing cable or fibre in subduct) which are not included in our proposed start charge adjustments. These items are used only rarely for leased line purposes, and over 90% of their use comes from other markets. Of these items, only the provision of a pole features in our ECC sample, and then only in 1% of orders). We propose also to exclude these items from the ECC basket.

7.29 The proposed start charges will reduce Openreach's ECC revenues for leased line services by approximately £10m per year.

Charge control on ECCs going forward

We propose a separate control on ECCs

- 7.30 In arriving at our proposal, we have considered the following basket design options for ECCs:
 - option 1 a combined Ethernet basket including ECCs; and
 - option 2 a separate control on ECCs.

Option 1 - a combined basket including Ethernet services with associated ECCs

7.31 This option would give the greatest pricing flexibility to Openreach. As discussed in Section 4, we often have a preference for broad baskets as they allow for the efficient recovery of common costs. In LLCC 2009, we included ECCs in the main service

baskets. This meant that the margin for ECCs was part of the overall value of X for these baskets.

7.32 However, for this control, we consider that this would not be the most appropriate approach for ECCs for three reasons. Firstly, ECCs share very few common costs with other Ethernet and TI services, as they are essentially construction costs rather than circuit costs²⁶⁷. Secondly, the anticipated future trend of the costs is different. Thirdly, ECCs represent a low value compared to the overall Ethernet basket (£32m in the 2010/11 RFS) and this means that placing them in a combined basket would not in itself result in an effective control of their prices, without an additional sub-cap.

Option 2 - a separate control on ECCs

- 7.33 We generally seek not to constrain BT's pricing behaviour unduly by having baskets that are too narrowly defined. Having a separate control on ECCs would, however, reflect the fact that ECCs share very few common costs with TI and Ethernet services and are likely to follow a different cost trajectory. Placing a separate control on ECCs also has the advantage that the ECCs apply both to TI and Ethernet services, whereas including them in the baskets for the relevant circuits could mean two controls on the same ECCs.
- 7.34 We therefore propose that these services are subject to a separate control, distinct from the main basket controls.

We propose to use a sub-cap of GBCI-0% on each ECC charge

- 7.35 Having made starting charge adjustments, we then need to apply a cap going forward. We normally use RPI-0% or RPI-RPI for safeguard caps, which would keep charges constant in real or nominal terms.
- 7.36 However, we are concerned that the use of RPI may be inappropriate for ECCs as a significant proportion of the costs is simply passed through from the contractor, and thus these costs may follow a different cost trend from Openreach's overall costs. The use of an RPI-0% cap may place Openreach at risk of not recovering its costs, if its contractors' cost or Wayleaves costs increase faster than RPI. We have therefore considered two alternatives:
 - the use of an alternative index which specifically reflects construction costs; or
 - regulation of BT's mark-up over its construction costs.

Use of an alternative index

7.37 We have considered regulating ECCs based on the GBCI of construction costs published by the Royal Institute of Chartered Surveyors ('RICS')²⁶⁸. The GBCI is a national index which measures the costs of construction work including materials and labour. Our view is that this construction index is a better indication of the cost trend for ECC than RPI. In Section 3, we explained that we sometimes have concerns in using sector-specific cost indices where BT's own costs form a significant proportion of the index. If the index is not independent of BT, then there is a risk that BT has

²⁶⁷ The only common costs are the overhead costs allocated relating to the administration of ECCs.
²⁶⁸ The General Building Cost Index is published by the Building Cost Information Service ('BCIS'), a service of the RICS. Information on the GBCI and the GBCI data is available at http://www.bcis.co.uk/construction

fewer incentives to minimise its costs as any cost increase would be passed on because they themselves affect the index. In the case of ECCs, we consider that this risk is low. ECCs are likely to constitute a small proportion of the overall GBCI, so the overall index should be independent of BT's actual ECC costs.

Regulating the mark-up over construction costs

- 7.38 We have also considered regulating BT's mark-up over its construction costs, including an allowance for overheads. This has the benefit of protecting BT against any rise in construction costs. The approach of regulating the mark-up will be most appropriate where BT has no control over its input costs, and therefore there is no need to provide incentives for efficient procurement of costs.
- 7.39 Whilst BT's actual charges have been largely based on a pass-through of input costs, we propose to reject this approach as such cost pass-through mechanisms have very poor incentives for cost minimisation. BT retains some control over how it manages its contractor costs, and under this approach it would have little incentive to minimise these costs as it would not retain the benefit. We are also concerned that regulating a mark-up may reveal commercially sensitive information, such as the level of BT's input costs.
- 7.40 We consider that the GBCI index is more appropriate for the ECC basket than the RPI index or regulating BT's mark-up over contractor charges.

Sub-caps on each charge

- 7.41 We have also considered whether to apply the GBCI-0% control to an overall ECC basket, or to each ECC charge. As noted in Section 4, our general preference is for wide baskets. We have not identified any anti-competitive incentive on Openreach to discriminate between different ECCs. Applying the cap at the basket level may also be appropriate as, whilst on average ECC costs may be expected to increase at the level of the GBCI, it is possible that some individual charges may increase slower or faster than this.
- 7.42 However, in order to demonstrate compliance with an overall ECC basket, BT would need to provide prior year revenue weights for ECCs. BT has indicated that this data is difficult for it to provide. This may mean that it would be difficult for BT to demonstrate compliance in the event that ECCs changed by differing amounts. Based on this information, we propose to apply the constraint of GBCI-0% on each and every charge, although we would consider reverting to a basket structure if the difficulties relating to compliance with a basket could be resolved.

Cost orientation

- 7.43 As discussed above, we propose to adjust starting charges and apply a cap of GBCI-0% to each charge in the basket. In our view, this approach will be effective at constraining the level of the ECC charges. As such, we do not see the need to apply a cost orientation obligation on those services as well.
- 7.44 Given our analysis above, we propose to impose a cap of GBCI-0% on each ECC.

Question 6: Do you agree with our approach and proposals for controls for excess construction charges? If not, please explain why and propose an alternative approach with supporting information.

Accommodation products

Accommodation products are used by CPs for LLU and leased lines

- Accommodation services are used by CPs for Local Loop Unbundling ('LLU') as well 7.45 as leased line purposes. Openreach currently provides two types of accommodation services: Co-mingling and Access Locate. Co-mingling is exclusively provided in support of LLU whilst Access Locate enables CPs to put site-specific communications equipment in BT's exchanges. Access Locate and LLU Co-mingling services are currently charged at the same price²⁶⁹.
- 7.46 Any CP wishing to use disaggregated Ethernet or TI products is required to purchase Access Locate if they want to deploy their own equipment in a BT exchange, unless that product is LLU backhaul, in which case, the terminating equipment can be deployed in the LLU co-mingling area. By paying an administration fee, an LLU provider using Co-mingling services can upgrade its space in the exchange from Comingling to Access Locate and use it for different purposes.
- 7.47 As set out in the BCMR Consultation, the availability of accommodation in BT exchanges is an important enabler in encouraging the use of disaggregated services in TISBO, AISBO and MISBO markets²⁷⁰. The BCMR highlighted the need to regulate the price of accommodation products²⁷¹.

We propose to require Openreach to price leased lines accommodation products the same as LLU co-mingling products

- The LLU WLR charge control, which commenced on 1 April 2012, implemented a 7.48 separate basket for Co-mingling ancillary services with charge controls of RPI+1.8% for 2012/2013 and a RPI-3.6% for 2013/2014²⁷².
- 7.49 There are currently 44 Openreach accommodation products which CPs may use for leased lines that are also regulated as part of the WLR LLU charge control in the comingling ancillary services basket²⁷³. These overlap products are identical except for:
 - an Access Locate Administration Fee²⁷⁴ of £215 (per exchange site) that is payable by LLU operators who want to convert their Revised agreement for Access Network Facilities to Access Locate terms and conditions; and
 - CPs can house a wider range of equipment under Access Locate terms than under LLU.²⁷⁵

²⁶⁹ See Openreach Price list

http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=Hj5ChEAy JAPNdhmoASx5w1Q7mlHQ7knfZecxPaxSmFxZ6rNZujnCs99NblKJZPD9hXYmiijxH6wr%0ACQm97 GZMyQ%3D%3D ²⁷⁰ See paragraph 13.37 and 13.39 of the BCMR Consultation.

²⁷¹ See paragraph 13.38 of the BCMR Consultation.

²⁷² See Figure 1.1 in the 2012 WLR LLU CC Statement -

http://stakeholders.ofcom.org.uk/binaries/consultations/wlr-cc-2011/statement/statementMarch12.pdf The relevant products are listed in Annex8.

²⁷⁴ The exact name of this charge is Contract conversion From RANF to Access Locate. http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=Hj5ChEAy JAPNdhmoASx5w1Q7mlHQ7knfZecxPaxSmFxZ6rNZujnCs99NblKJZPD9hXYmiijxH6wr%0ACQm97 GZMyQ%3D%3D

- 7.50 Given that the accommodation products are already charge controlled under the WLR LLU CC, we have considered what would be the most appropriate regulatory treatment for the purpose of leased lines.
- 7.51 We are concerned that if we were to implement a separate regulation on the overlapping products in the LLCC, this may lead to a different level of control for those products and create compliance issues for Openreach. This is because the LLCC starting and end dates are not aligned with the WLR LLU CC. While the WLR LLU CC will expire on 31 March 2014, the next LLCC is not set to end before 30 September 2015 at the earliest. This means that even if we were to adopt the WLR LLU CC values in this charge control, compliance issues may still be raised if the next WLR LLU CC imposes a different obligation.
- 7.52 We therefore recognise that if different conditions were imposed by the LLU and LLCC charge controls, Openreach may not be able to comply with both the LLCC and the obligations imposed in the WLR LLU CC²⁷⁶. It is not desirable for the same services to have different charge control obligations and we would want to avoid a situation where BT must breach one set of SMP conditions in order to comply with the other set of SMP conditions. We therefore believe it would be disproportionate to subject these services to a separate charge control in addition to the one set in the WLR LLU CC.
- 7.53 Going forward, our view is that the overlapping products should be subject to one charge control only. Since the majority of volumes are associated with the provision of LLU services, we consider it appropriate that the WLR LLU CC should determine their level. This ensures that consistent charge controls are applied to the same services supplied in both markets.
- 7.54 Given the widespread deployment of LLU, we believe that the incremental costs of providing co-mingling space in support of Ethernet and TI products should be minimal and, where those costs are incurred, should be recovered in a manner similar to the existing LLU co-mingling product. Ofcom therefore expects that the pricing for co-mingling in support of Ethernet and TI products should be no more than the pricing of co-mingling in support of LLU, and its prices transparent and nondiscriminatory²⁷⁷.

We propose to subject the Access Locate Administration Fee to a price cap

With regard to the Access Locate Administration Fee²⁷⁸, which is not regulated under 7.55 the LLU charge control, we propose that this charge should be subject to a cap of to RPI-0%. Given the relatively small size of this product, we consider this is proportionate and appropriately balances the need for cost recovery with the need to ensure that CPs have transparency over future prices and are protected from excessive price rises.

²⁷⁵ Accommodation products used for leased lines allow CPs to locate equipment listed under http://stakeholders.ofcom.org.uk/telecoms/policy/bt-undertakings/ annex 4.

Openreach response to the WLR LLU CC Consultation 2011, paragraph 400.

²⁷⁷ We also note that in setting the charge controls for accommodation services, the LLU analysis has taken into account the use of these services by non-LLU customers (e.g. Ethernet services).²⁷⁸ This charge covers the costs of administration such as receipt of order, notifying the CP that the

transfer is actioned, updating the billing and reporting systems.

We propose to subject Cablelink to a price cap

- 7.56 In addition to the accommodation products described above Openreach also provides a further accommodation product in support of interconnection services called Cablelink. The BCMR Consultation considered it an essential element of the accommodation services given that it allows, for example, CPs to connect their Point of Presence within the BT exchange with the CP's fibre outside the exchange²⁷⁹.
- 7.57 The BCMR Consultation proposed that BT will be required to meet reasonable request for accommodation services, including Cablelink, under the general network access obligation²⁸⁰. The BCMR Consultation also proposed that we should consider the need for a charge control.
- 7.58 We have considered the purchases of Cablelink and any risks to customers buying Cablelink. The volumes attributable to Cablelink are small, and the revenues in 2010/11 account for significantly less than 1% of the total Ethernet basket. We also note that Cablelink prices have not changed since May 2005²⁸¹. In our view, the potential harm to customers of price rises is low. Due to the low revenues and volumes, BT does not report these costs separately. As a result, we do not have detailed costs readily available in order to set an explicit charge control on Cablelink. Given the size of this service as a proportion of the market, we also believe it would be disproportionate to do so. Nevertheless there is still a risk that Openreach could increase its prices significantly. We therefore propose to apply a safeguard cap to Cablelink charges. We specifically propose to impose a cap of RPI-0%. We believe that this should provide BT with flexibility to cover its costs, and is consistent with our approach to other comparable services where BT has SMP.

Cost orientation

7.59 As discussed above, we propose to apply a cap of RPI-0% to Access Locate Administration Fee and individual Cablelink charges. In our view, this approach will be effective at constraining the level of these charges. As such, we consider that an additional cost orientation obligation would not be proportionate.

Question 7: Do you agree with our approach and proposals for charge controls for accommodation? If not, please explain why and propose an alternative approach with supporting information.

The proposed ECC and Accommodation services control meets the relevant tests under the Act

Powers under sections 87 and 88 of the Act

7.60 We are proposing to apply a charge control on BT as an SMP condition under section 87(9) of the Act. In respect of ECC services, we propose to apply a sub-cap of GBCI-0% on each individual charge. In respect of Accommodation services, we

²⁷⁹ See paragraph 13.21 of the BCMR Consultation.

²⁸⁰ See Table 87 in the BCMR Consultation.

²⁸¹ See

http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=kgnGm8X SPQZEY5UMJxGwO9yDfzzeTWgW5o%2FPQLWLvfwlMnGHsqdC0vzO163bJmh34D91D7M0q8u%2 F%0AllSgtIFAKw%3D%3D

propose to impose a sub-cap of RPI-0% on both Cablelink services and the Access Locate Administration Fee.

- 7.61 The proposed controls for ECC and Accommodation services apply to specific services relating to the provision of TI and Ethernet services within the scope of the TI and Ethernet basket. The relevant ECC and Accommodation services are listed in Annex 8 of this consultation document.
- 7.62 Section 88 of the Act states that Ofcom should not set an SMP condition falling within section 87(9) except where it appears from the market analysis that there is a relevant risk of adverse effects arising from price distortion and it also appears that the setting of the condition is appropriate for the purposes of:
 - promoting efficiency;
 - promoting sustainable competition; and
 - conferring the greatest possible benefits on the end-users of the public electronic communications services.
- 7.63 In proposing charge controls, section 88 also requires that we must take account of the extent of the investment in the matters to which the condition relates of the person to whom the condition it to apply i.e. BT.

There is a relevant risk of adverse effects arising from price distortion

7.64 As set out in the SMP analysis of the BCMR Consultation²⁸², and explained further above in this Section, we consider the relevant risk of adverse effects arising from price distortion is the risk that BT might fix and maintain its prices for the specific services we propose to include in the price control in the relevant wholesale markets at an excessively high level.

Promoting efficiency

7.65 We consider that the setting of the proposed SMP condition is appropriate for the purpose of promoting efficiency, since in the absence of competitive pressures, we believe that BT could seek to impose charges not related to the costs of providing the services. By bringing prices more in line with the underlying costs, our charge control proposals will increase allocative efficiency.

Promoting sustainable competition and conferring the greatest possible benefits on end-users

- 7.66 We also consider that the proposed charge controls are appropriate to promote sustainable competition and to confer the greatest possible benefits on end-users of public electronic communications services.
- 7.67 The market analysis conducted by the BCMR suggests that there is a sufficient risk that BT might fix or maintain its charges for the services within the scope of the proposed controls on ECC and Accommodation services at an excessively high level, which would be to the detriment of competition. Preventing excessive pricing via a sub-cap would promote sustainable competition, which we consider is likely to be the

²⁸² See for example paragraphs 10.196; 11.116 and 12.84 of the BCMR Consultation.

most effective way of benefiting end-users of public electronic communications services. It would enable greater choice of services for end users in terms of price.

7.68 In addition to reducing the level of ECCs, we have proposed appropriate safeguards in a form of sub-caps on individual ECC and Cablelink charges to ensure that Openreach does not price in an anti-competitive manner to the detriment of any enduser.

Investment matters

7.69 When proposing the ECC and Accommodation control we have also taken into account the need to ensure Openreach has the correct incentives to invest and innovate. In particular, we have sought to ensure that Openreach will be able to recover its costs. In relation to ECC services, we proposed the GBCI index which provides better indication of the trend increase in the cost of ECC provision.

We have considered the tests under section 47 of the Act

- 7.70 Any SMP condition must also satisfy the tests set out in section 47 of the Act, namely that it must be:
 - objectively justifiable in relation to the networks, services or facilities to which it relates;
 - not such as to discriminate unduly against particular persons or a particular description of persons;
 - proportionate as to what it is intended to achieve; and
 - in relation to what it is intended to achieve, transparent.
- 7.71 We consider these tests are satisfied.

The proposed SMP condition is objectively justifiable

7.72 In the BCMR we have proposed that BT has SMP in the markets covered by our proposed ECC and Accommodation services controls. In the absence of any charge control, this would allow BT to set charges unilaterally, leading to a risk of excessive pricing. This would have an adverse impact on both the ability of companies to compete in the downstream provision of leased lines services and on consumer choice and value for money. Our charge proposed charge controls have been designed to address this risk while allowing BT the ability to recover its costs, including a reasonable return on investment.

The proposed SMP condition does not discriminate unduly

7.73 The proposed charge controls would not discriminate unduly against particular persons or a particular description of persons, since any CP (including BT itself) can access the services at the proposed level of charges. We consider that the proposed charge controls do not discriminate unduly against BT as the controls address BT's market position, including its incentive and ability to set excessive charges for services falling within the scope of the controls.

The proposed SMP condition is proportionate

- 7.74 The charge controls are proportionate because they directly address the risk of excessive pricing identified by the BCMR and are focused on ensuring that there are reasonable prices for the services in question. Openreach's obligations apply to the minimum set of charges required for the delivery of bottleneck services. They are focused on ensuring that there are reasonable prices for those access services, which are critical to the development of a competitive market. Openreach is also allowed to recover its costs. The charge controls provide Openreach with the incentives to invest and develop its network.
- 7.75 For the reasons set out above, therefore, we consider the proposed SMP condition is:
 - appropriate to achieve the aim of addressing BT's ability and incentive to charge excessive prices for ECC and accommodation services;
 - necessary in that it does not, in our view, impose controls on the prices BT may charge for ECC and accommodation services that go beyond what is required to achieve the aim of addressing BT's ability and incentive to charge excessive prices for these services; and
 - such that is does not, in our view, produce adverse effects which are disproportionate to the aim pursued which is to address BT's ability and incentive to charge excessive prices for ECC and accommodation services.

The proposed SMP condition is transparent

7.76 Finally, for reasons discussed above, we consider the proposed SMP condition is transparent. Its aims and effect are clear and it has been drafted in the proposed SMP condition so as to secure maximum transparency. The proposed text of the SMP condition has been published with this consultation. Its intended operation is also aided by our explanation in this consultation.

We have considered sections 3 and 4 of the Act

- 7.77 We also consider that the ECC and Accommodation services control fits with our duties under sections 3 and 4 of the Act.
- 7.78 For the reasons set out above, we consider that the proposed control will, in particular, further the interests of citizens and of consumers in relevant markets by the promotion of competition in accordance with section 3 of the Act. In particular, we have had regard to the development of effective competition in downstream markets.
- 7.79 We have also had regard in proposing the control on ECC and Accommodation services to the desirability of encouraging investment and innovation in the wholesale markets in which the BCMR Consultation proposes we should impose a charge control and which therefore also form part of the proposals on which we are consulting in this consultation document.

Summary

7.80 In this Section we outlined our proposals for the charge controls to be applied to Accommodation services and ECCs.

- 7.81 We propose a series of caps relating to the individual services. In each case the caps are proposed to relate to each charge within the groups of services. We propose:
 - that ECCs be subject to a cap based on GBCI-0%;
 - that accommodation services (Access Locate and to Cablelink) be subject to a cap of RPI-0%.
- 7.82 We propose to require Openreach to price relevant leased lines accommodation products no more than the pricing co-mingling services in support of LLU.
- 7.83 In addition, we propose that the starting charge for the new ECC basket should include a starting charge adjustment of 30%, to be applied by setting specific starting charges for certain I services where data is available and a general 30% across other services.

Section 8

Proposed controls for AI services in the WECLA

Introduction

- 8.1 In the BCMR Consultation, we are proposing to identify a geographic market covering an area that we refer to as the West, East and Central London Area (the 'WECLA') for wholesale low bandwidth alternative interface symmetric broadband origination ('AISBO') at bandwidths up to and including 1Gbit/s (we will refer in this Section to services falling within that proposed market as 'AI services in the WECLA'). We are proposing to make a market power determination that BT has SMP in that market, based on our overall assessment of the economic characteristics²⁸³. However, in the BCMR Consultation our view is that the prospects for competition in this market over the course of the forward-looking period are better than in other markets, noting especially that demand is expected to continue its rapid growth and a number of large operators have significant network infrastructure in the WECLA.
- 8.2 This Section sets out our proposals for a charge control to be imposed on BT in respect of AI services in the WECLA. We first set out the background by summarising our proposal in the BCMR Consultation that BT has SMP in this market and we then identify and discuss possible price control options.

Our proposal

- 8.3 We have proposed in the BCMR Consultation that the risk of an adverse effect arising from price distortion by BT through its incentive and ability to charge excessive prices for AI services in the WECLA should be addressed by the imposition of an appropriate charge control²⁸⁴. However, we have recognised in the BCMR Consultation that, due to the existence of alternative access infrastructure in the WECLA, there are better prospects for the development of competition in this market and this matter should be taken into account in our specific proposal for the appropriate charge control²⁸⁵.
- 8.4 In light of the above considerations and our assessment of the options we discuss below, we propose to impose a safeguard cap on each relevant AI service in the WECLA. We consider a control based on a safeguard cap is the most appropriate way of addressing our concerns for the AI services in the WECLA. This is because it would provide a sufficient protection against excessive pricing, while also giving appropriate incentives for the further development of competition and innovation in light of the economic characteristics of this market.

²⁸³ See paragraph 7.239 of the BCMR Consultation.

²⁸⁴ See paragraphs 11.165 and 11.166 of the BCMR Consultation.

²⁸⁵ See paragraph 11.168 of the BCMR Consultation

Background

Prospects for competition are greater in the WECLA

- 8.5 In the BCMR Consultation, we explain the reasons for our proposal that BT has SMP in the market for AI services in the WECLA and we do not expect this position to change over the forward-looking period²⁸⁶. We nonetheless consider that over the course of the charge control the prospects for competition in this market are relatively better than in other markets. In the BCMR Consultation, we state that demand for Ethernet services is expected to continue its rapid growth and a number of large operators already have significant network infrastructure in the WECLA. In particular, we expect a considerable amount of demand from MNOs and we forecast more competition from alternative Ethernet services²⁸⁷. That said, we propose in the BCMR Consultation that this market will not become effectively competitive over the course of the review period.
- 8.6 As a result, we propose in the BCMR Consultation that in principle some form of price control is appropriate in the rest of the UK (excluding Hull) and in the WECLA for relevant AI services, for reasons summarised above.

Options for controlling charges for the relevant AI services

We have considered two options for the price controls for AI services in the WECLA

- 8.7 We have identified two options for controlling charges of the AI services in the WECLA. They are:
 - option 1 Full charge control: under this option, we would apply a full RPI-X type control for relevant services such that the X is set to bring charges into line with the forecast level of costs (including a return on capital). This option includes considerations of possibly making such services subject to an overall AI basket control, possibly together with any sub-caps applied to services within the AI basket;
 - option 2 Safeguard cap: under this proposal, we would apply a safeguard cap so that BT could not increase charges in nominal terms (i.e. safe-guard cap of RPI-RPI applied to each and every charge); and
- 8.8 As set out in Section 2, in proposing the charge controls in this consultation, we have sought to balance a number of regulatory objectives. These include, among other things: preventing BT from setting excessive charges; promoting efficient and sustainable competition in the delivery of leased line services; and encouraging investment and innovation. The weight that we apply to different regulatory objectives in setting a charge may vary depending on the particular circumstances and services we are dealing with and the likely concerns arising from the market analysis we have carried out.
- 8.9 As explained above, the prospects for competition in relation to the AI services in the WECLA are better than in other markets. We therefore consider that, in choosing one

²⁸⁶ See paragraph 7.212 of the BCMR Consultation

²⁸⁷ This includes from Ethernet in the First Mile services which can be provided by LLU operators using copper loops leased from BT albeit limited to low bandwidths (a theoretical maximum of 40Mbit/s).

of the above-mentioned options, we should have particular regard to the desirability of promoting competition in this market in a way that is most likely to provide other operators with appropriate incentives to develop their own networks, thus encouraging investment and innovation.

Option 1: Full RPI-X type control

- 8.10 Option 1 would offer greatest protection against the risk of excessive pricing. Typically, such a charge control would require BT to reduce the price for AI services in the WECLA to cost, including a ROCE, by the end of the charge control period.
- 8.11 There is a potential risk, however, that by allowing CPs to access BT's network at cost, it could dampen other operators' incentives to invest in alternative infrastructure. Clearly, it should not be an objective of a charge control to keep a firm's charges artificially high, as this would not provide the right incentives to BT's competitors for efficient entry or investment in alternative infrastructure. On the other hand, it may be that competitors could face higher costs than BT in the short run, but might bring greater dynamic benefits to consumers in the long run. Therefore, if we were to apply an RPI-X% charge control, this could ultimately reduce the benefits to consumers in the long-run associated with greater competition, as further competitive entry could bring innovation and investment and so constrain BT's prices.
- 8.12 We therefore consider that this option would not be appropriate. While option 1 would be likely to address the risk of excessive pricing, it may not be effective at achieving our other regulatory objectives particularly with regard to encouraging other operators to invest, innovate and compete with BT.

Option 2: Safeguard cap

- 8.13 A safeguard cap, based on constant prices, would recognise that the market for Al services in the WECLA is prospectively more competitive. This is because, unlike a full charge control (i.e. option 1), a safeguard cap would not require BT to bring its charges down to cost for AI services in the WECLA. If BT continued to charge up to the safeguard cap, this could provide a greater potential for profitable investment in competing infrastructure. Therefore, this option 2 has the potential of providing CPs with greater incentives to develop their own networks.
- 8.14 This option 2 also addresses the relevant competition problems we have identified as the safeguard cap would act as an overall ceiling, thereby preventing BT from increasing prices²⁸⁸. However, for the safeguard cap to be effective to achieve that aim, we consider it necessary that the cap applies to each service charge set for Al service in the WECLA. A full list of these services can be found at Annex 8 of SMP Condition 5.2.
- 8.15 An alternative might be a single safeguard cap covering the aggregate of AI services in the WECLA (such that the average price of all AI services cannot increase either in real or nominal terms). However, the number of services covered by a single safeguard cap would be very wide. While we consider that the WECLA is prospectively competitive, the emergence of competition may not be entirely uniform. The wide number of services and the variability in competitive conditions may allow BT to concentrate price increases on less competitive services or to price in a way that favoured its downstream retail arm. A sub-cap on each charge protects

²⁸⁸ See paragraphs 11.161 to 11.171 of the BCMR Consultation.

customers of services which may face less competition and therefore we consider that a safeguard cap applied to each charge provides the protection needed.

- 8.16 The next issue for consideration is the particular level at which it would be appropriate to set the safeguard cap. Given the general trend for increased volumes of Ethernet services resulting in expected lower unit costs, a nominal terms safeguard cap (RPI-RPI) rather than in real terms cap (RPI-0%) would be appropriate. We note that, in applying a safeguard cap, we have assessed that none of BT's starting charges for AI services is above the relevant DSAC threshold (see Annex 5).
- 8.17 A safeguard cap in the form of RPI-RPI on each and every charge for AI services in the WECLA would, in our view, also be more transparent, practicable and simple to monitor. In particular, both BT and CPs would have certainty around the maximum charges permitted under such a cap.
- 8.18 We also note that in addition to the safeguard cap, BT would still be subject to other SMP obligations such as non-discrimination and the requirement to provide services on an equivalence of input basis (as proposed in the BCMR Consultation). We consider that these remedies in combination with a safeguard cap would provide a proportionate set of remedies given the potential of some prospective competition for relevant AI services in the WECLA.

We propose to apply a safeguard cap of RPI-RPI

8.19 In light of our assessment above, we propose that a safeguard cap of RPI-RPI should be imposed on BT with regard to AI services in the WECLA, i.e. we favour option 2 above. In particular, this proposal means that BT would be precluded from increasing the charge of any AI service in the WECLA in nominal terms (i.e. safeguard cap of RPI-RPI would be applied to each charge). We note that, in proposing this safeguard cap, we have also assessed that each of BT's starting charges are within the relevant DSAC/DLRIC thresholds at the start of the charge control²⁸⁹.

Cost orientation

- 8.20 A cost orientation obligation on BT that would require relevant charges associated with AI services in the WECLA to be reasonably derived from the costs of provision (where costs included in the charges are based on an appropriate mark-up over long-run incremental costs)²⁹⁰.
- 8.21 We propose not to impose a cost orientation obligation on BT for AI services in the WECLA. We consider that the competition problems we are here seeking to address with regard to pricing i.e. excessive pricing can be addressed by the safeguard cap and, consequently, we consider that an additional cost orientation obligation would be unnecessary and disproportionate.

²⁸⁹ In absence of the WECLA specific DSAC and DLRICs information, we have assessed the level of starting charges based on national data. We have taken into account the assumed geographic unit cost differences between the WECLA and outside the WECLA as set out in Annex 5.

²⁰⁰ For example, in the 2007/8 BCMR, BT was required to ensure that each and every charge was set on a cost-oriented basis, where the costs included in the charges are: the forward-looking long run incremental costs incurred by the regulated firm to provide the service to which the charge refers; an appropriate mark-up to allow the recovery of common costs; and a reasonable return on the capital employed.

8.22 We consider the proposed safeguard cap gives a greater degree of certainty to stakeholders than cost orientation. Under the proposed safeguard cap, BT's customers and competitors know that prices will not increase in nominal terms. This provides provides stakeholders certainty over the limits of any change in charges. We consider that cost orientation gives stakeholders relatively less certainty, as the levels of DSACs and DLRICs are known only with a lag to BT's customers and competitors.

The proposed safeguard cap meets the relevant tests under the Act

Powers under sections 87 and 88 of the Act

- 8.23 We are proposing to apply a charge control in the form of a safeguard cap of RPI-RPI to BT as an SMP condition under section 87(9) of the Act with regard to AI services in the WECLA.
- 8.24 The draft SMP condition is set out at Annex 8 of this consultation document.
- 8.25 Section 88 of the Act states that Ofcom should not set an SMP condition falling within section 87(9) except where it appears from the market analysis that there is a relevant risk of adverse effects arising from price distortion and it also appears that the setting of the condition is appropriate for the purposes of:
 - promoting efficiency;
 - promoting sustainable competition; and
 - conferring the greatest possible benefits on the end-users of the public electronic communications services.
- 8.26 In proposing charge controls, section 88 also requires that we must take account of the extent of the investment in the matters to which the condition relates of the person to whom the condition it to apply i.e. BT.

There is a relevant risk of adverse effects arising from price distortion

8.27 As set out in the BCMR Consultation, and explained further above in this Section, we consider the relevant risk of adverse effects arising from price distortion is the risk that BT might so fix and maintain its prices for AI services in the WECLA at an excessively high level.

Promoting efficiency

- 8.28 We consider that the setting of the proposed SMP condition is appropriate for the purpose of promoting efficiency.
- 8.29 As set out above, the above proposals would ensure that BT's prices are not significantly in excess of its costs of provision of AI services in the WECLA. The safeguard cap also provides incentives for BT to seek further efficiency savings by allowing it to keep any returns associated with additional real terms reductions in unit costs. The benefits of lower costs can then be passed onto consumers.
- 8.30 Furthermore, in proposing a safeguard cap we have taken into account competition and investment incentives, which we consider would provide dynamic efficiency benefits to consumers (as discussed in paragraphs above).

Promoting sustainable competition and conferring the greatest possible benefits on end-users

- 8.31 We also consider that the setting of the proposed SMP condition is appropriate to promote sustainable competition and to confer the greatest possible benefits on end-users of public electronic communications services.
- 8.32 A safeguard-cap would help promote sustainable competition and benefits to consumers, for example in proposing a safeguard cap, having taken into account the possible impact of a full charge control as set out in paragraph 8.10-8.12. As the safeguard cap would apply to each and every charge, it would also protect customers of AI services in the WECLA which may face less competition (see discussion in paragraphs 8.13-8.18).

Investment matters

- 8.33 When proposing the safeguard cap of RPI-RPI we have also taken into account the need to ensure BT has the appropriate incentives to invest and innovate.
- 8.34 The requirement under the safeguard cap not to increase prices for AI services in the WECLA in nominal terms is consistent with the objective of providing BT with incentives to invest and innovate. We have checked that BT's starting charges for AI services in the WECLA are consistent with cost recovery (including a reasonable rate of return). The expected general trend for AI services in the WECLA is for continued growth resulting in expected lower unit costs. Therefore, the safeguard cap provides a fairly conservative path for required price reductions in real terms²⁹¹. The safeguard cap would also be fixed for the duration of the charge control period, so this would provide BT with incentives to invest and innovate to bring about additional efficiency savings.

We have considered the tests under section 47 of the Act

- 8.35 Any SMP condition must also satisfy the tests set out in section 47 of the Act, namely that it must be:
 - objectively justifiable in relation to the networks, services or facilities to which it relates;
 - not such as to discriminate unduly against particular persons or a particular description of persons;
 - proportionate as to what it is intended to achieve; and
 - in relation to what it is intended to achieve, transparent.
- 8.36 We consider these tests are satisfied.

The proposed SMP condition is objectively justifiable

8.37 We consider the SMP condition to be objectively justifiable. In the BCMR Consultation, we found BT to have SMP for AI services in the WECLA. On this basis,

²⁹¹ Given forecast positive price inflation over the charge control period, the RPI-RPI price cap would result in price reductions in real terms. If RPI were to exceed 5%, we propose that the price cap instead reverts to RPI-5%.

we considered it necessary to impose some form of charge control on BT's services. Nevertheless, given the prospects for competition are relatively better for AI services in the WECLA (relative to AI services in the rest of the UK (excluding Hull)), we have taken this into account by applying a safeguard cap.

The proposed SMP condition does not discriminate unduly

8.38 The charge controls will not discriminate unduly against a particular person or particular persons because any CP (including BT itself) can access the services based on charges set up to the maximum permitted by the safeguard cap. The charges are set to ensure a fair return and charges level for all customer groups and the safeguard caps apply to each and every AI service in the WECLA. In any event, Ofcom considers that the SMP condition relating the AI services in the WECLA do not discriminate unduly against BT as the controls address BT's market position, including its ability and incentive to set excessive charges for these services.

The proposed SMP condition is proportionate

- 8.39 We consider that the SMP condition is proportionate as it is likely to address concerns over BT pricing excessively, but it also takes into account the better prospects for competition for AI services in the WECLA relative to other AI and TI services where we have applied a full RPI-X% control.
- 8.40 For the reasons set out above, therefore, we consider the proposed SMP condition is:
 - appropriate to achieve the aim of addressing BT's ability and incentive to charge excessive prices for AI services in the WECLA;
 - necessary in that it does not, in our view, impose controls on the prices BT may charge for AI services in the WECLA that go beyond what is required to achieve the aim of addressing BT's ability and incentive to charge excessive prices for these services;
 - in our view, the least onerous of the options set out above whilst addressing BT's ability and incentive to charge excessive prices for AI services in the WECLA; and
 - such that is does not, in our view, produce adverse effects which are disproportionate to the aim pursued which is to address BT's ability and incentive to charge excessive prices for AI services in the WECLA.

The proposed SMP condition is transparent

8.41 Finally, for reasons discussed above, we consider the proposed SMP condition is transparent. Its aims and effect are clear and it has been drafted in the proposed SMP condition so as to secure maximum transparency. The proposed text of the SMP condition has been published with this consultation. Its intended operation is also aided by our explanation in this consultation. We have also set out the likely impact of the proposed safeguard cap of RPI-RPI on charges for the duration of the control.

We have considered sections 3 and 4 of the Act

- 8.42 We also consider that the proposed safeguard cap of RPI-RPI fits with our duties under sections 3 and 4 of the Act.
- 8.43 For the reasons set out above, we consider the proposed safeguard cap of RPI-RPI will promote competition in the relevant market²⁹² and will therefore further the interests of citizens in relation to communication matters and the interests of consumers in the downstream retail markets.
- 8.44 We consider the proposed safeguard cap will, together with our other charge control proposals set out in this consultation and those set out in the BCMR Consultation, secure the availability throughout the United Kingdom of a wide range of electronic communications services.
- 8.45 We have also had regard in proposing the safeguard cap to, in particular:
 - the desirability of promoting competition in the relevant market;
 - the desirability of encouraging investment and innovation in the relevant market; and
 - the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom.
- 8.46 Finally, in performing our duty to further the interests of consumers, we have also had regard in proposing the safeguard cap of RPI-RPI, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money.

Question 8: Do you agree with our proposal for charge controls for AI services in the WECLA? If not, please explain why and propose an alternative approach with supporting information.

Summary

8.47 In this Section we outlined our proposals for the charge controls to be applied to Al services in the WECLA. We propose that the competitive environment is such that a safeguard cap, not directly related to costs, is the most proportionate approach to regulation. We propose a cap of RPI-RPI on each charge.

²⁹² Wholesale market for low bandwidth alternative interface symmetric broadband origination in the WECLA, at bandwidths up to and including 1Gbit/s.

Section 9

Proposed controls for Retail Analogue Services

Introduction

- 9.1 In the BCMR Consultation we identified the retail low bandwidth TI leased lines market in the UK excluding the Hull area²⁹³ and we proposed that BT has SMP in this market. This market encompasses retail analogue leased lines and retail digital leased lines at bandwidths up to and including 8Mbit/s. An unusual feature of this market is that because of the legacy nature of analogue services BT does not supply upstream wholesale inputs of these services.
- 9.2 In relation to analogue services we proposed that BT's share of retail sales was very high and almost unchanged since the BCMR 2008 at 96%. We identified a risk of excessive pricing based on BT's position of entrenched SMP, the legacy nature of analogue services, and their impending withdrawal. To address this risk, we proposed a specific charging constraint in the form of a safeguard cap.
- 9.3 This section discusses the BCMR Consultation proposals for a safeguard cap on retail analogue services and then sets out our proposals for such a safeguard cap.

BCMR proposals for a safeguard cap

- 9.4 As explained in the BCMR Consultation²⁹⁴, safeguard caps are designed to protect end users from excessive price rises, generally by requiring that prices must not rise in real terms by more than a reasonable amount. Unlike traditional RPI-X controls, safeguard caps are not generally set to bring charges into line with the forecast level of costs at the end of the charge control period.
- 9.5 In the BCMR Consultation, having identified the risk of excessive pricing for analogue services in this market arising from, in our view, BT's entrenched SMP, we considered that a retail level safeguard cap was appropriate and that it should:
 - allow BT to recover a reasonable amount of its retail and network costs from retail analogue leased lines; and
 - allow changes in these costs to be reflected in retail prices in order to encourage efficient migration to newer services²⁹⁵.
- 9.6 In the BCMR Consultation we proposed that setting the retail price cap at the same level as the proposed basket cap on wholesale TISBO and trunk charges would be consistent with achieving the two objectives set out above.
- 9.7 In relation to seeking to achieve the first objective, we proposed that setting the safeguard cap to reflect the charge control we propose for digital wholesale TISBO

²⁹³ See paragraph 7 m) in Annex 14 of the BCMR Consultation.

²⁹⁴ See paragraphs 9.59 to 9.64 of the BCMR Consultation in which we set out our reasoning for considering the imposition of a safeguard cap on analogue service in this market would be appropriate to address the risk of BT pricing these services excessively.

²⁹⁵ See paragraph 9.60.

and trunk services would allow recovery of an appropriate amount of network costs since analogue services and sub-2Mbit/s wholesale digital services are supported by the same platform. We stated that the costs of providing sub-2Mbit/s wholesale digital services are included in the base year costs we use in our charge control model and the charges for these services would be subject to an RPI-X% wholesale basket cap²⁹⁶.

- 9.8 We explained that setting the cap to apply to analogue services in this market in this way would also allow BT to recover a reasonable amount of retail costs. Most retail costs are determined by the total level of BT retail activity, rather than the volume of an individual service, and BT allocates retail costs between services largely on the basis of revenues. We considered the amount of retail costs needed to be recovered from each retail leased line (the unit retail cost) would not rise more rapidly than the increase in unit network costs allowed for in the sub-cap on wholesale charges²⁹⁷. For these reasons, we considered it was not necessary to model BT's retail costs explicitly.
- 9.9 In relation to seeking to achieve the second objective, we explained in the BCMR Consultation that the wholesale TISBO and trunk charge control would be set taking into account the desirability of encouraging efficient migration to new services. Setting the retail safeguard cap at the same level would mean that price signals from the wholesale level can be transmitted to retail customers, who would then be given an appropriate incentive to switch to a newer alternative²⁹⁸.

We propose that the safeguard cap should apply to rental services

9.10 Given the legacy nature of these services there is likely to be relatively little demand for new connections. Therefore, in order to minimise the burden of regulation on BT we propose that the safeguard cap should apply only to rental charges for analogue services.

We propose to apply a safeguard cap of RPI+3.25%

- 9.11 In Section 5, for the proposed wholesale TISBO and trunk charge control, we propose a basket control with a cap of RPI+0% to RPI+6.5%, with our base case of RPI+3.25%.
- 9.12 We therefore propose a safeguard cap for retail analogue rental services of RPI+3.25%.
- 9.13 This cap is set at the same level as the overall TI basket cap. The costs of the analogue platform are included in the base year cost stack for our model. This means that the value of X for the TI basket takes recovery of these costs into account, and so in our view, also gives an appropriate control for retail analogue prices.
- 9.14 In addition, within the wholesale controls, we set a cap on each rental charge at RPI+ 10%, to protect against sharp price rises for particular customers or groups of

²⁹⁶ See paragraph 9.62 of the BCMR Consultation.

²⁹⁷ We explained the way that BT's retail costs are determined in our consultation on the NTS retail uplift. See http://stakeholders.ofcom.org.uk/binaries/consultations/nts-retail-uplift/summary/nts-retailuplift.pdf, in particular paragraph 5.123 onwards. We set a cap of RPI+1.25% to allow recovery of a reasonable amount of retail costs through the uplift. ²⁹⁸ See paragraph 9.64 of the BCMR Consultation.

customers. We propose to apply a comparable cap on each and every charge as part of the safeguard cap for retail analogue services.

The proposed safeguard cap meets the relevant tests under the Act

Powers under sections 87 and 88 of the Act

- 9.15 We are proposing to apply a charge control in the form of a safeguard cap to BT as an SMP condition under section 87(9) of the Act.
- 9.16 The proposed safeguard cap applies to retail analogue services in the retail market for low bandwidth traditional interface leased lines in the UK excluding the Hull Area, at bandwidths up to and including 8Mbit/s²⁹⁹.
- 9.17 The specific services, and the market to which the proposed safeguard cap applies, are set out in the draft SMP condition at Annex 8 of this consultation document.
- 9.18 Section 88 of the Act states that Ofcom should not set an SMP condition falling within section 87(9) except where it appears from the market analysis that there is a relevant risk of adverse effects arising from price distortion and it also appears that the setting of the condition is appropriate for the purposes of:
 - promoting efficiency;
 - promoting sustainable competition; and
 - conferring the greatest possible benefits on the end-users of the public electronic communications services.
- 9.19 In proposing charge controls, section 88 also requires that we must take account of the extent of the investment in the matters to which the condition relates of the person to whom the condition is to apply i.e. BT.

There is a relevant risk of adverse effects from price distortion

9.20 As set out in the BCMR Consultation, and explained further above in this Section, we consider the relevant risk of adverse effects arising from price distortion is the risk that BT might so fix and maintain its prices for analogue services in this retail market at an excessively high level.

Promoting efficiency

9.21 We consider that the setting of the proposed SMP condition is appropriate for the purpose of promoting efficiency. It would allow BT to recover an appropriate level of network and retail costs. It would also allow changes in these costs to be reflected in retail prices thereby giving end-users an appropriate incentive to switch to newer alternatives.

Promoting sustainable competition and conferring the greatest possible benefits on end-users

9.22 As set out in the BCMR Consultation, amongst other things our market analysis has shown:

²⁹⁹ As identified in the BCMR Consultation.

- BT has a 96% share of retail sales of analogue services, almost unchanged since the BCMR 2008, and volumes are in steady decline as end-users migrate to more modern services; and
- there are currently no upstream wholesale analogue services available to CPs and given the legacy nature of analogue services and their impending withdrawal, there is little prospect that retail competition would increase even if we were to require BT to offer wholesale services to CPs³⁰⁰.
- 9.23 As a result of this we stated that "given the very poor prospects for retail competition we consider it appropriate to give less weight to measures designed to promote competition entry"³⁰¹.
- 9.24 Our proposal then for a safeguard cap on retail analogue services should be seen in the context of this market analysis. As such we consider that the setting of the proposed SMP condition is appropriate to promote sustainable competition in this market as a whole insofar as its scope is limited to retail analogue services where there is a virtual absence of competition, and it does not apply to other services in this market where, in light of our market analysis, we consider reliance on wholesale competition through the regulated provision of upstream wholesale inputs should be sufficient to address the risk of excessive pricing³⁰².
- 9.25 We consider that the setting of the proposed SMP condition is also appropriate to confer the greatest possible benefits on end-users of public electronic communications services since it addresses the risk we have identified of end-users having to pay excessive prices for BT's retail analogue services where otherwise the virtual absence of competition for these services would fail to do so.

Investment matters

- 9.26 When proposing the safeguard cap on BT's retail analogue services we have also taken into account the need to ensure BT has the correct incentives to invest and innovate.
- 9.27 The costs of the retail analogue platform are included in our TI basket. We have set the value of the TI basket to bring prices into line with costs, including a return on capital by the end of the charge control period. This is consistent with appropriate incentives for investment. We also note that the values of X for the retail analogue services, are consistent with encouraging customer migration to more modern services.

We have considered the tests under section 47 of the Act

- 9.28 Any SMP condition must also satisfy the tests set out in section 47 of the Act, namely that it must be:
 - objectively justifiable in relation to the networks, services or facilities to which it relates;
 - not such as to discriminate unduly against particular persons or a particular description of persons;

³⁰⁰ See, in particular, paragraphs 9.48 and 9.50 of the BCMR Consultation.

³⁰¹ See paragraph 9.53 of the BCMR Consultation.

³⁰² See, in this respect, paragraphs 9.134 to 9.142 of the BCMR Consultation.

- proportionate as to what it is intended to achieve; and
- in relation to what it is intended to achieve, transparent.
- 9.29 We consider these tests are satisfied.

The proposed SMP condition is objectively justified

9.30 Our rationale for proposing the safeguard cap is that, on the basis of our market analysis, in the absence of such a control there is a risk BT would price its retail analogue services excessively. In our view the proposed safeguard cap addresses this risk and, based on the reasoning set out above in this Section, we consider the proposed SMP condition is objectively justifiable.

The proposed SMP condition does not discriminate unduly

9.31 The proposed SMP condition will not discriminate unduly against a particular person or particular persons. It applies only to BT to address the risk of BT engaging in excessive pricing for its retail analogue services arising from the position of SMP which, on the basis of our market analysis, we propose to find in this market.

The proposed SMP condition is proportionate

- 9.32 For the reasons set out above, therefore, we consider the proposed SMP condition is:
 - appropriate to achieve the aim of addressing BT's ability and incentive to charge excessive prices for its retail analogue services in this market;
 - necessary in that it does not, in our view, impose controls on the prices BT may charge for its retail analogue services that go beyond what is required to achieve the aim of addressing BT's ability and incentive to charge excessive prices for these services; and
 - such that is does not, in our view, produce adverse effects which are disproportionate to the aim pursued which is to address BT's ability and incentive to charge excessive prices for its retail analogue services in this market.

The proposed SMP condition is transparent

9.33 Finally, for reasons discussed above, we consider the proposed SMP condition is transparent. Its aims and effect are clear and it has been drafted in the proposed SMP condition so as to secure maximum transparency. The proposed text of the SMP condition has been published with this consultation. Its intended operation is also aided by our explanation in this consultation.

We have considered sections 3 and 4 of the Act

- 9.34 We also consider that the proposed safeguard cap on BT's retail analogue services fits with our duties under sections 3 and 4 of the Act.
- 9.35 For the reasons set out above, we consider the proposed safeguard cap, together with the other SMP conditions we propose to impose³⁰³, will promote competition in

³⁰³ As set out in the BCMR Consultation (see paragraphs 9.48 to 9.142).

this market and will therefore further the interests of citizens in relation to communication matters and the interests of consumers in this market.

- 9.36 We consider the proposed safeguard cap will, together with our other charge control proposals set out in this consultation and those set out in the BCMR Consultation, secure the availability throughout the United Kingdom of a wide range of electronic communications services.
- 9.37 We have also had regard in proposing the safeguard cap to the desirability of encouraging the availability and use of high speed data transfer services throughout the United Kingdom.
- 9.38 Finally, in performing our duty to further the interests of consumers, we have also had regard in proposing the TI basket control of RPI+3.25%, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money by ensuring that the prices reflect the underlying costs.

Question 9: Do you agree with our proposal for charge controls for retail analogue TI services in the UK excluding the Hull area? If not, please explain why and propose an alternative approach with supporting information.

Summary

- 9.39 In this Section we outlined our proposals for the charge controls to be applied to rental charges for retail analogue services. We propose that a safeguard cap should be applied to these services, based on our proposals within the BCMR consultation.
- 9.40 Our proposal for the level of the safeguard cap is that it should be set at the same level as the controls applied to TI services. Based on the mid-point of the range proposed within Section 5 above, we propose:
 - A cap of RPI+3.25% on services within the retail analogue basket; and
 - A cap of RPI+10% on each charge within the retail analogue basket.

Section 10

Implementation of the new charge control

Introduction

- 10.1 If we decide to impose a charge control remedy following the end of the domestic and EU consultation processes, we would need to give regulatory effect to our decisions by imposing obligations on BT under so-called SMP conditions. The text of the draft SMP conditions are contained in the statutory notification published at Annex 8 to this consultation document.
- 10.2 This Section summarises how we propose to implement our proposals through the draft SMP conditions, including:
 - the structure and formula of the draft SMP conditions to give effect to our proposals;
 - the flexibility within the charge controls that we propose in response to new services;
 - how we propose to measure compliance with the proposed charge control; and
 - our proposals to deal with any future 'material changes' by BT to the services we propose should be covered by the charge control.
- 10.3 In addition, we also draw attention to some aspects of anticipated interaction between the proposed charge control and other remedies we have proposed in the BCMR Consultation. Finally, we discuss the alternative approaches we might take in reflecting the impact of a deferred start to the charge control period.

Structure of the draft SMP conditions for the charge control

10.4 We propose to set the SMP conditions that are specified in the statutory notification, published at Annex 8 to this consultation document. We have already set out the main effect of those conditions in the preceding Sections of this consultation, as supplemented by further explanations in this Section. We turn firstly to our proposed structure of the draft SMP conditions in the manner and form set out below.

Main structure

- 10.5 We propose to follow a 'market-by-market' structure in imposing the charge control on BT by means of the SMP conditions³⁰⁴. Specifically, we propose that:
 - Draft SMP condition 5.1 should cover relevant products/services falling within the three wholesale TI markets in which we propose in the BCMR Consultation to find that BT has SMP, and relevant products/services falling within the wholesale market for regional trunk segments (we refer to them collectively as the 'TI services').

³⁰⁴ Please see Table 1 of Part 1 to the Schedule to the statutory notification at Annex 8.

- Draft SMP condition 5.2 should cover relevant products/services falling within the wholesale market for AI in the WECLA at bandwidths up to and including 1Gbit/s (we refer to them collectively as the 'AI WECLA services').
- Draft SMP condition 5.3 should cover relevant products/services falling within the wholesale markets for AI outside the WECLA at bandwidths up to and including 1Gbit/s, and for MI across the UK (we refer to them collectively as the 'Ethernet services').
- Draft SMP condition 5.4 should cover relevant products/services falling within the retail market for low bandwidth TI ('Retail analogue services').
- Draft SMP condition 5.5 should cover Accommodation services in all the relevant wholesale markets in which we propose in the BCMR Consultation to find that BT has SMP ('Accommodation services').
- Draft SMP condition 5.6 should cover relevant Excess Construction Charges ('ECC') in all the relevant wholesale markets in which we propose in the BCMR Consultation to find that BT has SMP.
- 10.6 In short, we propose to implement the price controls through formulae within SMP conditions which would constrain how BT sets its prices for individual services ('price points') and for groups of services ('baskets'). We further discuss below formulae mechanics that we propose for this charge control.
- 10.7 Our proposals include price point controls (safeguard caps and sub-caps) within each of the groups of services listed above and basket controls under the draft SMP conditions 5.1, 5.3 and 5.6. These controls are summarised in Table 10.1 below, with indicative values for the caps based on the mid-point of our ranges for TI and Ethernet basket controls:

Basket or group of services	Overall cap	Additional sub-caps and sub-baskets
		Point of handover services (RPI-0%) – a sub- basket control
		RBS, Netstream 16 Longline and Siteconnect (RPI+3.25%) – a sub-basket control
TI basket	RPI+3.25%	Ancillary services, equipment and infrastructure (sub-cap of RPI+3.25% on each charge)
		Sub-cap on all other charges not already charge controlled by other sub-caps (RPI+10%)
	RPI-RPI on	
AI WECLA services	each charge	None
		Interconnection services (RPI-12%)
Ethernet basket	RPI-12%	Each and every charge (RPI-RPI) (excluding interconnection services)

Table 10.1: Summar	y of the	proposed	form an	d level of	f controls
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Retail analogue services basket	As TI RPI+3.25%	Same as TI sub-cap on each charge (RPI+10%)
Accommodation services	RPI-0% on each charge	None
ECC basket	GBCI-0% on each charge	None

Approach to services falling within the scope of the control

10.8 Table 10.2 below identifies in which draft SMP condition we intend to capture the groups of specific services that we propose should be subject to each respective control. We propose to define the specific services by reference to BT's price lists, and the table indicates where within the SMP conditions each of the lists of services is defined.

Draft SMP condition	Groups of services included within the condition	Page Reference for full list of services
TI services (draft SMP condition 5.1)	 Wholesale low bandwidth TISBO (≤ 8 Mbit/s) – connection and rental; Wholesale medium bandwidth TISBO (> 8 Mbit/s and ≤ 34/45 Mbit/s) outside the WECLA – connection and rental; Wholesale high bandwidth TISBO (> 34/45 Mbit/s and ≤ 140/155 Mbit/s) outside the WECLA – connection and rental; Regional trunk (all bandwidths) – rental Equipment and infrastructure services; Ancillary services; and RBS backhaul, NetStream 16 Longline and SiteConnect 	Annex to draft condition 5.1
AI WECLA (draft SMP condition 5.2)	Wholesale low bandwidth AISBO services (≤ 1 Gbit/s) inside the WECLA	Annex to draft condition 5.2
Ethernet Services (draft SMP condition 5.3)	Wholesale low bandwidth AISBO services (≤ 1 Gbit/s) – outside the WECLA – connection and rental; Wholesale above 1 Gbit/s Ethernet services	Annex to draft condition 5.3

Table 10.2: Services within the scope of the charge control

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	outside the WECLA – connection and rental; Ethernet ancillary services (excluding ECCs)	
Retail analogue services (draft SMP condition 5.4)	All retail analogue services	Annex to draft condition 5.4
Accommodation services (draft SMP condition 5.5)	Access Locate Accommodation Administration Fee Cablelink	Annex to draft condition 5.5
ECCs (draft SMP condition 5.6)	All excess construction charges	Annex A to draft condition 5.6

We propose to mandate new starting charges for some services

- 10.9 We are only proposing starting charge adjustments to apply to the ECC basket. As a result, we propose in draft SMP condition 5.6 to require such adjustments, which would mean that BT would need to reduce its ECC charges. We list at Annex B to SMP condition 5.6. the list of charges ('Starting Charge Adjustment Values') which we propose should apply to ECC services in the first year of the charge control.
- 10.10 Should we decide, following the consultation process that it would be appropriate to mandate starting charge adjustments for additional BT services, we propose to insert the following wording in the SMP conditions:

"Save for the First Relevant Year of the control, $p_{0,i}$ is the published charge made by the Dominant Provider for the specific product or service i at the beginning of the Relevant Year excluding any discounts offered by the Dominant Provider.

In the First Relevant Year of the charge control $p_{0,i}$ for a specific product or service i shall be the "Starting Charge Adjustment Value" as specified in Annex B to this condition. If a "Starting Charge Adjustment Value" for specific product or service i is not listed in Annex B to this condition then p0,i is the published charge made by the Dominant Provider for the specific product or service i at the beginning of the First Relevant Year excluding any discounts offered by the Dominant Provider. "

The charge control formulae

The basket control

- 10.11 As noted above, we propose three controls on groups of services which we are proposing to implement as baskets:
 - a basket covering all TI services within the scope of draft SMP condition 5.1 with a controlling percentage of 3.25% (i.e. RPI+3.25%);
 - a basket covering all Ethernet services within the scope of draft SMP condition 5.3 with a controlling percentage of -12% (i.e. RPI-12%); and

- a basket covering all Retail analogue services within the scope of draft SMP condition 5.4 with a controlling percentage of 3.25% (i.e. RPI+3.25%).
- 10.12 We propose to use the following formula in implementing the controls for those baskets:

$$\sum_{i=1}^{n} \left[W_1 R_i \frac{(p_{1,i} - p_{0,i})}{p_{0,i}} + W_t R_i \frac{(p_{t,i} - p_{0,i})}{p_{0,i}} \right] \le TRC$$

where:

n is the number of products and services in the specified category (i.e. the basket in question);

p0,i is, save for the First Relevant Year of the control, the published charge made by the Dominant Provider³⁰⁵ for the specific product or service, i, at the beginning of the Relevant Year excluding any discounts offered by the Dominant Provider;

p1,i is the published charge after the first change in charge made by the Dominant Provider for the specific product or service, i, in the Relevant Year excluding any discounts offered by the Dominant Provider;

pt,i is the published charge made by the Dominant Provider for the specific product or service, i, at time, t, during the Relevant Year excluding any discounts offered by the Dominant Provider;

Ri is the sum of the revenue accrued during the Relevant Financial Year in respect of the specific product or service, i, and the revenue accrued during the Relevant Financial Year in respect of equivalent products or services provided by the Dominant Provider to itself, calculated to exclude any discounts offered by the Dominant Provider;

W1 is the proportion of the Relevant Year that the first charge change applies, calculated by the number of days that the charge was in effect and dividing by 365 (366 in a leap year);

Wt is the proportion of the Relevant Year that each subsequent charge, pt, is in effect, calculated by the number of days that the charge is in effect and dividing by 365 (366 in a leap year); and

TRC is the target revenue change required in the Relevant Year to achieve compliance with [the charge control formula above], calculated by the Controlling Percentage multiplied by the revenue accrued during the Relevant Financial Year.

The Percentage Change for the purpose of the TI Basket and Ethernet basket shall be calculated by employing the following formula:

$$C_{t} = \frac{\sum_{i=1}^{n} \left[R_{i} \frac{(p_{t,i} - p_{0,i})}{p_{0,i}} \right]}{\sum_{i=1}^{n} R_{i}}$$

³⁰⁵ Dominant Provider is defined as BT.

where:

 C_t is the Percentage Change in the aggregate of charges for the products and/or services in the specified category (i.e. the basket in question) at a particular time, t, during the Relevant Year;

n is as defined above;

Ri is as defined above;

po,i is as defined above and

pt,i is as defined above.

10.13 In each basket, the Controlling Percentage is proposed to be defined in accordance with paragraph 10.11 above.

Sub-basket controls

- 10.14 As set out in the table above, we propose three sub-basket controls covering:
 - TI POH services within the scope of SMP condition 5.1, with a controlling percentage of 0% (i.e. RPI-0%);
 - TI RBS, Netstream 16 Longline and Siteconnect services within the scope of SMP condition 5.1, with a controlling percentage of 3.25% (i.e. RPI+3.25%);
 - Ethernet Interconnection services within the scope of SMP condition 5.3, with a controlling percentage of -12% (i.e. RPI-12%);
- 10.15 We propose to use the same controlling formulae as described above for these subbasket controls.

The price point control

- 10.16 As noted above, we propose to impose price point controls for the following specific groups of services:
 - TI ancillary services and equipment and infrastructure services within the scope of draft SMP condition 5.1, with a controlling percentage of 3.25% (i.e. RPI+3.25%);
 - All TI services not covered by the RBS, Netstream 16 Longline and Siteconnect and POH sub-baskets within the scope of draft SMP condition 5.1, with a controlling percentage of 10% (i.e. RPI+10%);
 - AI WECLA services within the scope of draft SMP condition 5.2, with a controlling percentage of 0% in nominal term, i.e. RPI-RPI³⁰⁶;

³⁰⁶ Given forecast positive price inflation over the charge control period, the RPI-RPI price cap would result price reductions in real terms. If RPI were to exceed 5%, we propose that the price cap instead reverts to RPI-5%.

- All Ethernet services not covered by the interconnection sub-basket services within the scope of draft SMP condition 5.3, with a controlling percentage of 0% in nominal terms (i.e. RPI-RPI)³⁰⁷;
- Accommodation services within the scope of draft SMP condition 5.5, with a controlling percentage of 0% (i.e. RPI-0%);
- ECCs within the scope of draft SMP condition 5.6, with a controlling percentage of 0% relative to a define Building and Construction Index (i.e. GBCI-0%)
- 10.17 We propose to use the following formula in implementing the controls for those price point controls:

$$C_t = \frac{(p_t - p_0)}{p_0}$$

here:

 C_t is the Percentage Change in charges for the products and services in the subbasket in question at a particular time *t* during the Relevant Year;

 P_i is the published charge made by the Dominant Provider for the specific product or service prevailing at the end of the Relevant Year, excluding any discounts offered by the Dominant Provider; p_0 save for the First Relevant Year of the control, p_0 is the published charge made by the Dominant Provider for the specific product or service *i* at the beginning of the Relevant Year excluding any discounts offered by the Dominant Provider.

Flexibility to deal with any changes in the services offered by BT

- 10.18 As discussed above, we propose to set controls by reference to a particular set of products currently offered by BT. However, BT may wish to amend or remove services, or to bring in new services within the duration of the proposed charge controls. We discuss below how we addressed in the draft SMP conditions the possibility of BT making such variations to its service offering and our proposed way of dealing with this matter within the charge control.
- 10.19 We also explain below how we propose to deal with a specific new category of service, namely Synchronous Ethernet services, which we expect Openreach to launch very shortly, and which we expect to become material over the coming charge control period.

Variations, and new services which wholly or substantially replace existing services, are within the scope of the proposed charge controls

10.20 We have explained above our approach to services falling within the scope of the control, including that we propose to define the specific services by reference to BT's price lists. Those lists only include BT's services that we expect to exist when the charge control commences. We have therefore had to consider how to deal with potential new services that are not currently on those lists, which services BT may subsequently launch as replacements or variants of the services specified in the draft SMP conditions.

³⁰⁷ Similarly to AI WECLA services, if RPI were to exceed 5%, we propose that the price cap instead reverts to RPI-5%.

- 10.21 Telecoms markets are subject to ongoing product development and innovation. We therefore anticipate that BT may wish to develop products/services that wholly or substantially replace the products/services defined in the Annexes to each draft SMP Condition.
- 10.22 To reflect that consideration, we have included a provision in the draft SMP conditions to deal with this matter. That provision would ensure in its effect that, if BT would introduce a new service that wholly or substantially replaces an existing service (using for example a new more efficient technology), the replacement service would fall within the scope of the proposed charge control. It provides that:

Where the Dominant Provider makes a material change (other than to a charge) to any product or service which is subject to this Condition [xx] or to the date on which its financial year ends or there is a material change in the basis of the Retail Prices Index, paragraphs [charge control paragraphs] shall have effect subject to such reasonable adjustment to take account of the change as Ofcom may direct to be appropriate in the circumstances.

For the purposes of this paragraph, a material change to any product or service which is subject to this Condition [xx] includes the introduction of a new product or service wholly or substantially in substitution for that existing product or service.

10.23 This would also apply to new services that replace an existing service. For example, new services that fall within scope of relevant Ethernet or TI basket caps should remain subject to that same overall basket cap for the duration of the charge control period, irrespective of the underlying technology that BT uses to provide those services. We consider that this provision ensures that BT is incentivised to introduce new more efficient services.

We intend to apply the charge control to Synchronous Ethernet services

- 10.24 In the BCMR Consultation, we identified a specific variant of BT's EAD services known as Synchronous Ethernet ('SyncE') services. In addition to providing the standard features of an EAD service, SyncE services allow the distribution and monitoring of accurate network timing over Ethernet. Such services are likely to be used in the first instance by mobile operators for mobile backhaul³⁰⁸.
- 10.25 Reflecting the additional costs of providing such a service, we understand BT is intending imminently to introduce additional charge(s) for SyncE (relative to an existing EAD service). However, while EAD is currently charge controlled, if we did not also include any additional charges for SyncE variants in the charge control, there is a risk that BT could price these services excessively. In addition, if SyncE were to become material in the context of the Ethernet basket, not to include it may impact the effectiveness of the basket. We want to ensure that we have *ex ante* regulatory measures in place to prevent this happening.
- 10.26 Therefore, based on our initial understanding of the proposed SyncE service, we consider it is likely to be appropriate that SyncE falls within the scope of the Ethernet basket, and therefore our current intention is to include the services associated with

³⁰⁸Accurate synchronisation of base stations is critical to minimise service disruptions and for the accurate setting of the operating radio frequencies. Without accurate synchronisation, the mobile technologies will not work to specifications, resulting in failed call setups, releases, handovers, and interference between adjacent cells.

SyncE in the Ethernet basket. This should help to ensure that BT does not increase its charges for SyncE services on an ongoing basis.

- 10.27 We also want to ensure that BT's starting charges for SyncE are set at a reasonable level. BT's plan is to introduce SyncE in the summer of 2012, prior to publication of our LLCC statement. We are not currently in a position to assess SyncE charges relative to costs. In particular, BT has yet to publish its charges and as such we do not currently have information on the additional cost of a providing SyncE relative to an existing Ethernet service such as EAD.
- 10.28 We will consider the need for a formal consultation on the introduction of SyncE into the charge control in a way which addresses these concerns when we have further data around pricing and costs for the service.

Measuring compliance with the charge controls

Compliance would be monitored by calculating a weighted average change in the charges for each basket

- 10.29 We are proposing that BT's freedom to set charges for the services controlled by the main charge control baskets (and the sub baskets) should be constrained, so that the average charge in each basket at the start of the control year cannot be increased by more than RPI adjusted by the relevant value of X set out in the draft SMP conditions. RPI (i.e. the controlling value of RPI) is the term used to represent the percentage change in the Retail Prices Index in the 12 months up to May preceding the start of the relevant charge control year (the relevant year). As set out in Section 7, ECCs are the exception to this, as we are proposing to use a construction index (GBCI) and not a general inflation index.
- 10.30 In order to calculate the average change in the prices proposed by BT and to assess BT's compliance with the controls, we need to determine the appropriate basket weights. Regulators applying this form of control have generally used one of two main methods of calculating these weights 'prior year revenue weights' or 'current year revenue weights'.
- 10.31 We are proposing to use the prior year revenues of services in a basket to determine the appropriate weights as discussed in Section 4.
- 10.32 We have proposed the imposition of a different charge control within the WECLA to the rest of the UK. There are a very limited number of leased lines where one end is in the WECLA and one is outside. BT treats such lines as being within the comparable London area (the CELA³⁰⁹) for the purposes of compliance with the current TI wholesale charge controls, and we expect that this would continue on a consistent basis in the future.

Certain discounts would not contribute towards BT meeting its charge control obligations

10.33 As discussed in detail in Section 4, we are proposing that none of the volume, term and geographic discounts offered by BT would count towards meeting its charge control obligations. Specifically, within the charge control formulas above, the prices which BT needs to include when assessing compliance are prices excluding any discounts, reflecting the published price list.

³⁰⁹ The Central and East London Area.

BT would be allowed to carry over differences in the average charge for a basket to the next charge control year

- 10.34 For the charge control baskets, namely the TI, Ethernet and Retail Analogue baskets, we are proposing that BT would be able to carry over any price reductions it makes in excess of the requirements of the charge control for that year. That is, if BT's average charge for these baskets at the end of the Relevant Year is lower than required by the associated RPI-'X' constraint, it would be able to carry over the difference into the next charge control year. If so, this would mean that the benchmark for assessing BT's compliance with the control in the following year would be the level of charges BT was required to achieve, rather than the level it actually achieved. Conversely, if its average charge is higher than the required level, it would have to take the excess into account in the following year.
- 10.35 The use of a mechanism to correct for prices higher than those assumed by the charge control formula does not imply that BT should set prices which is expects will be above those assumed by the charge control. This mechanism does protect both BT and the customers of the charges controlled from the impact of fluctuations in the factors included in the charge control formula resulting in a difference between forecast and actual compliance with the control.
- 10.36 We are, however, not proposing to apply those 'carry over' provisions for the subbaskets within the main baskets.

BT would be able to change charges at any time, but the formula takes into account the timing of those changes

- 10.37 We have designed the charge control formula, so that it takes into account the timing of any changes BT makes. As set out above, the charge control conditions would require BT not to increase charges for a basket of services by more than the RPI-X in each year. This means that BT would have a degree of flexibility within the basket (subject to any sub-caps) over the changes it applies to individual services. The proposed basket requires that prices on average do not increase by more than the basket control. BT can also change charges for services at any time during a particular year. However, the charge control formula explicitly takes into account *when* changes to charges occur.
- 10.38 If BT were to introduce a charge reduction on the last day of a particular Relevant Year, it would be better off (in revenue terms) relative to a charge reduction on the first day of the formula year³¹⁰. Therefore, the compliance formula outlined above and used within SMP conditions 5.1, 5.3 and 5.6 takes the timing of charge changes into account³¹¹. If BT were to delay a decrease (relative to making any charge

³¹⁰ For example, assume that BT changes its charges for two services, say by 10%, on the first day of the Formula Year and kept them at that level for the whole year. Other things being equal, then these charge reductions should result in its revenues declining by 10% (relative to the prior year). However, if BT delayed a reduction in the charges by six months and introduced the reduction in the second part of the year, then BT could be better off in revenue terms as it would have a six month period where charges were unchanged and only a six month period where charges were 10% lower. Other things being equal, this would result in BT's overall revenues would be 5% lower relative to the prior year.

³¹¹The formula calculates the percentage reduction for that service as a weighted average of the changes in charges (relative to the start charge for the Formula Year). The weights applied would be based on the duration of the Formula Year a particular charge was applicable. For example, a charge that applied for half a year (182 days) would have a 50% weight (182/364). So, if the basket requirement were to decrease charges by, say, 10% and BT kept charges unchanged for six months, then it would need to decrease charges by 20% in the final part of the year to achieve the required reduction in charges for that Formula Year. In this instance, the calculated charge reduction would be: $50\% \times (0\%$ price change) + $50\% \times (20\%$ price change) = 10%.
adjustments on of the anniversary of the control coming into force in each subsequent year), it would need to reduce charges by a larger amount later in the Relevant Year to achieve compliance with the basket control.

Interaction of timing of changes with carry forward provisions

- 10.39 As stated above, we have designed the draft SMP conditions so that, on average, charges do not increase by more than RPI-X each year. For a charge control on a single service, compliance is fairly straight forward if BT would introduce any charge changes precisely on the anniversary of the control coming into force.
- 10.40 Where BT delays any reduction, the charge control formula takes this into account. But as noted above, one issue associated with BT delaying changes is that it might require larger absolute reduction in charges later in the year to ensure compliance. This could result in charges in the second year of the control starting at a lower level than if BT had made the charge change in the first year on date of the control coming into force.
- 10.41 In both of the above scenarios (i.e. a charge change on the precise date of the control coming into force or a deeper reduction in charges later in the year), BT would be compliant with the overall basket requirement. However, BT's charges for individual services under the two scenarios could be different. There could then be a risk of applying the same value of X to the charge control basket in the second year of the charge control. For this reason, the carry forward provisions within the charge control would adjust the value of X to take into account any such issues. The carry forward provisions would also help ensure that BT cannot 'game' the control (i.e. it cannot introduce a large increase on the last day of the charge control year in order for this charge to be the starting charge to apply in the next year of the control).
- 10.42 We therefore propose that these carry forward provisions should ensure that BT does not benefit (or is not penalised) as a result of the timing of changes to its charges occurring at a point other than on the first day of each Relevant Year.

Provision of compliance data

10.43 We propose that BT should be required to record, maintain and supply to Ofcom in an electronic format, no later than three months after the end of each Relevant Year, the data necessary for Ofcom to monitor compliance with the charge control (as described in more detail within the 'General Provisions and interpretation' section of each of the SMP conditions).

The control works alongside other remedies

Non-discrimination

10.44 We propose in the BCMR consultation to impose an ex-ante obligation on BT not to discriminate unduly in the provision of wholesale services for which it has been found to have SMP.

10.45 Therefore, in meeting its charge control obligations, BT would still be required to ensure that each and every charge does not discriminate unduly in favour of particular companies or parties³¹².

Accounting separation and cost accounting

- 10.46 Ofcom proposes to amend the current ex-ante financial obligations on BT requiring it to prepare and publish financial information in respect of the relevant wholesale AISBO and TISBO and trunk services in the markets in which Ofcom proposes to find BT has SMP³¹³, in order for it to demonstrate its compliance with its non-discrimination obligations. The financial information also helps to enable Ofcom to make determinations on specific charges or to assess whether BT has breached competition rules. The basis of preparation of this financial information is set out within BT's Accounting Documents and as expanded within its secondary accounting documents available on BT's website³¹⁴.
- 10.47 BT has the freedom within each individual basket to set charges as explained above.
- 10.48 Given the above charge control obligation, we require regulatory reporting to be capable of providing reliable preliminary data in respect of each wholesale service within the leased line markets in which BT has been found to have SMP.

BT needs to follow the required Notice period for changes to charges

- 10.49 We are also proposing in the BCMR Consultation to impose requirements on BT relating to the notification period for changes to any charges (for services provided by BT within the markets in which it has been found to have SMP), such that there should be:
 - 28 day notice for prices, terms and conditions relating to new service introductions;
 - 28 days notice for price reductions and associated conditions (for example conditions applied to special offers); and
 - 90 days notice for all other changes to prices terms and conditions.
- 10.50 Given the current charge controls expire in October 2012, we have considered whether a shorter than 90 days notice period is appropriate for implementing the new controls.
- 10.51 In assessing this issue, we have balanced the need for there to be sufficient time for industry to adapt to new prices (e.g. for business planning and implementing new charges in downstream contracts), with the need to ensure that the efficient charge changes can be made as quickly as possible, especially given that the first period of the control will be shorter than a year.
- 10.52 Our proposal is to allow the first charge changes made under the new controls to be reduced to 28 days notice. This timing would enable charges to be adjusted more

 ³¹² Specifically, BT "shall not unduly discriminate against particular persons or against a particular description of persons, in relation to matters concerned with Network Access."
³¹³ See paragraph 15.7 of the BCMR Consultation

³¹⁴http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/index.htm

quickly. We recognise that this is significantly shorter than the 90 day period. In reaching this view, we have taken into account that the industry will be able to anticipate possible new charges through the consultation process.

We include provisions concerning 'material changes' to charge controlled services

- 10.53 As part of our charge control conditions, we propose to include general provisions related to material changes that could impact on the effectiveness of the charge control. These provisions, which are included in each of the SMP conditions, covers any material changes (other than to a charge) including to:
 - a material change to any product or service (which can include the introduction of a new product or service wholly or substantially in substitution for that existing product or service);
 - the date on which BT's financial year ends; and
 - the basis of the Retail Price Index.
- 10.54 We would give regulatory effect to such changes by giving a direction under these conditions, following any consultation under the relevant procedures under the Act.

Our proposed approach to reflect the impact of a deferred start of the proposed charge control

Approach to deal with a short deferral

- 10.55 The current charge control is due to expire on 30 September 2012. Therefore, to allow continuity of regulation, we had initially planned for any new three year control to apply from 1 October 2012 to 30 September 2015.
- 10.56 Whilst we will be working to reach decisions on our proposals as soon as possible following the end of the consultation process, we currently acknowledge that we may not be able to make our decisions and publish our statement, together with the final SMP conditions until the first quarter of 2013. It therefore looks likely that, absent any other action we might take, there will be an interim period between the end of the current control and the start of any new charge control.
- 10.57 To give stability to the market during the interim period both BTW and Openreach have provided commitments as to their pricing intentions during the interim period (i.e. during the period from 1 October 2012 until the start of the new charge control). Specifically, both BTW and Openreach have written to Ofcom to confirm that they expect to make price changes from the end of September and not to make further changes unless the interim period were to extend beyond March 2013.
- 10.58 We welcome these commitments and have published copies of the letters provided by BTW and Openreach alongside this consultation. BTW and Openreach have now published the details of the price changes which they intend to apply from October³¹⁵.

³¹⁵ <u>https://www.btwholesale.com/shared/document/CPL/ACCN_2011_july/accn_1150.rtf</u> and

- 10.59 Our analysis of the BTW and Openreach price changes indicates that, by comparison to the current charge controls and our proposed range for the new charge controls, the proposed charges for the interim period are likely to have limited impact on any CP or customer, and that therefore no further regulatory action should be required in respect of this period.
- 10.60 Once the new charge control would be in place, our view is that the charges should revert immediately to the levels assumed within the proposed charge control. This is because the aim of the control is to ensure a smooth path between current charges and those allowed at the end of the period. This is illustrated by Figure 10.1 below, which assumes that prices in the interim period (the dotted line) diverge from those which we would eventually impose in our decision later on.

Figure 10.1: Correcting prices to reflect the difference during an interim period



- 10.61 In practice, the illustration in Figure 10.1 above is not an accurate reflection of how prices change over time. BTW and Openreach tend to change prices irregularly most commonly once a year. Therefore, the best correction would be to ensure that prices match the above path at the end of the first year and during each year thereafter.
- 10.62 If the first period is a 'short period'(i.e. less than a year), we propose to address this through making no change to the price control formula for the first year or the following years, other than to reflect that the first period starts late and therefore covers a shorter period. Therefore, should the price charged in the interim period differ from that implied by our charge control, BTW and Openreach would need to make a further change to prices at the start of the new charge control period in order

http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=bj1iagV2r mVhUxhJRV2ItZ6l6oCf3ew2ZeuZm4VRqG0IMnGHsqdC0vzO163bJmh34D91D7M0q8u%2F%0AIISgt IFAKw%3D%3D

to revert to the trajectory implied by charge control and so comply with the new charge control formula.

Approach to deal with a longer deferral

- 10.63 If there is a lengthy interim period, or if the charges implemented by BTW and Openreach in this period materially differ from our expectations, we would consider whether further action is appropriate, including the possibility of extending the period of the charge control beyond September 2015 to reflect a three-year duration of the running of the charge control, commencing from the date of our decision.
- 10.64 Should the charge control period be three years from the publication of our decision, we would then also need to consider the implication for our modelling on the level of the appropriate value of X, and whether any adjustment to it would be appropriate. Our model is based on forecasts until the end of 2015/16, and the analysis provided throughout this document would continue to apply as long as the charge control were not to extend beyond this date. We take into account the impact of a later end of the charge control period when coming to a decision on the appropriate X to choose from our range.
- 10.65 In reaching our decision on the appropriate end date of the charge control period, we intend to take into account in particular:
 - the length of the interim period;
 - the difference between the prices charged by BTW and Openreach and our final conclusions on the level of X within the charge control; and
 - the impact on stakeholders of the different options.

Question 10: Do you agree with our proposals for the implementation of the new charge controls? If not, please explain why and propose alternative approaches with supporting information.