



Reference under section 193 of the Communications Act 2003

Cable & Wireless UK v Office of Communications

Case 1112/3/3/09

Determination

30 June 2010

Excisions in this determination marked with [✂] relate to commercially confidential information: Schedule 4, paragraph 1, to the Enterprise Act 2002.

Members of the Competition Commission who conducted this appeal

Christopher Clarke (*Chairman of the Group*)

Stephen Oram

Jonathan Whiticar

Roger Witcomb

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Chief Executive and Secretary of the Competition Commission

David Saunders

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Section 1: Introduction to the Competition Commission's determination

Preamble

- 1.1 On 2 July 2009 the Office of Communications (Ofcom) published a Statement entitled *Leased Lines Charge Control—a new charge control framework for wholesale traditional interface and alternative interface products and services* (the LLCC Statement). The LLCC Statement contained decisions made pursuant to sections 45 and 87 of the Communications Act 2003 (the 2003 Act) to impose charge controls on British Telecommunications plc (BT) in relation to various services supplied by BT in a number of leased lines markets in the UK.
- 1.2 The charge controls within the LLCC Statement came into effect from 2 July 2009¹ and related to the following five markets:
- (a) low bandwidth TISBO² services up to and including 8 Mbit/s;
 - (b) high bandwidth TISBO services above 8 Mbit/s up to and including 34/45 Mbit/s (outside the Central and East London Area (CELA));
 - (c) very high bandwidth TISBO services above 34/45 Mbit/s up to and including 140/155 Mbit/s (outside the CELA);
 - (d) low bandwidth AISBO³ services up to and including 1 Gbit/s; and
 - (e) TISBO trunk segments at all bandwidths.
- 1.3 Ofcom implemented RPI–X charge controls for most of the services provided by BT in the wholesale markets in which it had been found to have Significant Market Power (SMP). The leased line charge controls were to apply for the period ending 30 September 2012.

The appeals and the appellate framework

- 1.4 Cable & Wireless UK (C&W) brought appeals against the LLCC Statement to the Competition Appeal Tribunal (the Tribunal) under section 192 of the 2003 Act. Verizon UK Limited (Verizon) and BT both intervened (the Interveners).
- 1.5 The 2003 Act provides for a specific appellate regime for appeals relating to price controls imposed by Ofcom. It provides, in relevant part:

192 Appeals against decisions by OFCOM, the Secretary of State etc.

...

- (2) A person affected by a decision to which this section applies may appeal against it to the Tribunal.

¹The charge control obligations on BT became effective on 2 July 2009. BT had the obligation to align all TI starting charges with those specified in the LLCC Statement from 1 October 2009. The first charge control year for the purposes of assessing compliance with the RPI–X price cap commenced on 1 October 2009.

²TISBO: Traditional Interface Symmetric Broadband Origination.

³AISBO: Alternative Interface Symmetric Broadband Origination.

...

- (5) The notice of appeal must set out—
 - (a) the provision under which the decision appealed against was taken; and
 - (b) the grounds of appeal.
- (6) The grounds of appeal must be set out in sufficient detail to indicate—
 - (a) to what extent (if any) the appellant contends that the decision appealed against was based on an error of fact or was wrong in law or both; and
 - (b) to what extent (if any) the appellant is appealing against the exercise of a discretion by OFCOM, by the Secretary of State or by another person.

...

193 Reference of price control matters to the Competition Commission

- (1) Tribunal rules must provide in relation to appeals made under section 192(2) relating to price control that the price control matters arising in that appeal, to the extent that they are matters of a description specified in the rules, must be referred by the Tribunal to the Competition Commission for determination.
- (2) Where a price control matter is referred in accordance with Tribunal rules to the Competition Commission for determination, the Commission is to determine that matter—
 - (a) in accordance with the provision made by the rules;
 - (b) in accordance with directions given to them by the Tribunal in exercise of powers conferred by the rules; and
 - (c) subject to the rules and any such directions, using such procedure as the Commission consider appropriate.
- (3) The provision that may be made by Tribunal rules about the determination of a price control matter referred to the Competition Commission in accordance with the rules includes provision about the period within which that matter is to be determined by that Commission.
- (4) Where the Competition Commission determines a price control matter in accordance with Tribunal rules, they must notify the Tribunal of the determination they have made.
- (5) The notification must be given as soon as practicable after the making of the notified determination.
- (6) Where a price control matter arising in an appeal is required to be referred to the Competition Commission under this section, the Tribunal, in deciding the appeal on the merits under section 195, must decide that matter in accordance with the determination of that Commission.
- (7) Subsection (6) does not apply to the extent that the Tribunal decides, applying the principles applicable on an application for judicial review, that the determin-

ation of the Competition Commission is a determination that would fall to be set aside on such an application.

...

(9) For the purposes of this section an appeal relates to price control if the matters to which the appeal relates are or include price control matters.

(10) In this section 'price control matter' means a matter relating to the imposition of any form of price control by an SMP condition the setting of which is authorized by—

(a) section 87(9);

(b) section 91; or

(c) section 93(3).

...

195 Decisions of the Tribunal

(1) The Tribunal shall dispose of an appeal under section 192(2) in accordance with this section.

(2) The Tribunal shall decide the appeal on the merits and by reference to the grounds of appeal set out in the notice of appeal.

(3) The Tribunal's decision must include a decision as to what (if any) is the appropriate action for the decision-maker to take in relation to the subject-matter of the decision under appeal.

(4) The Tribunal shall then remit the decision under appeal to the decision-maker with such directions (if any) as the Tribunal considers appropriate for giving effect to its decision.

(5) The Tribunal must not direct the decision-maker to take any action which he would not otherwise have power to take in relation to the decision under appeal.

(6) It shall be the duty of the decision-maker to comply with every direction given under subsection (4).

...

1.6 The Tribunal rules referred to in section 193 are the Competition Appeal Tribunal (Amendment and Communications Act Appeals) Rules 2004 (SI 2004 No 2068) (the 2004 Rules). The 2004 Rules provide, in relevant part:

Reference of price control matters to the Competition Commission

3.—(1) For the purposes of subsection (1) of section 193 of the Act, there is specified every price control matter falling within subsection (10) of that section which is disputed between the parties and which relates to—

(a) the principles applied in setting the condition which imposes the price control in question,

- (b) the methods applied or calculations used or data used in determining that price control, or
- (c) what the provisions imposing the price control which are contained in that condition should be (including at what level the price controls should be set).

...

(5) The Tribunal shall refer to the Commission for determination in accordance with section 193 of the Act and rule 5 every matter which ... it decides is a specified price control matter.

...

Determination by Competition Commission of price control matters

5.—(1) Subject to any directions given by the Tribunal (which may be given at any time before the Commission have made their determination), the Commission shall determine every price control matter within four months of receipt by them of the reference.

(2) The Tribunal may give directions as to the procedure in accordance with which the Commission are to make their determination.

(3) The Tribunal may give directions under this rule of its own motion or upon the application of the Commission or of any party.

- 1.7 The SMP conditions imposed by Ofcom in the LLCC Statement were imposed pursuant to section 87(9) of the 2003 Act. Accordingly, the price control matters in this appeal fell to be identified and referred to us for determination.

The Tribunal's reference

- 1.8 In the order entitled *Reference of Specified Price Control Matters to the Competition Commission* dated 16 December 2009 (the Reference), the Tribunal made reference to the Notice of Appeal (NoA) lodged by C&W which stated that the appeal relates exclusively to specified price control matters within the meaning of Rule 3(1) of the Competition Appeal Tribunal (Amendment and Communications Act Appeals) Rules 2004 (the 2004 Rules).

- 1.9 The Reference required us to determine five main questions. Those questions, broadly, asked us to determine whether Ofcom had erred for specific reasons given by the parties.

- 1.10 The Tribunal required us to determine the issues that had been referred to us by 30 June 2010. A copy of the Reference is at Appendix A.

The structure of our Determination

- 1.11 Following this introduction are four sections addressing the Reference Questions applicable to each of C&W's four grounds of appeal (A to D) as set out in its NoA. There is then a final section (Section 6) in which we address Reference Question 5 which requires us to determine the appropriate remedy for any errors we have identified in the previous sections.

- 1.12 Reference Questions 2 to 4 also include a number of specific aspects that we have been asked to determine. We address each of these specific aspects within the relevant section.
- 1.13 We set out the main arguments and evidence put to us by the parties and conclude with our assessment and conclusions in determining whether Ofcom has erred for any of the reasons put to us.
- 1.14 In the remainder of this introductory section, we address the following topics which are intended to provide the legal, technical and broader factual context for this determination:
- (a) the legal framework for the regulation of the telecommunications sector in Europe and the UK;
 - (b) our role, the standard of review we applied and the procedure we followed in preparing this determination;
 - (c) the technology used in the provision of leased lines and in particular of partial private circuits (PPCs);⁴
 - (d) a brief chronology of Ofcom's regulation of PPCs; and
 - (e) the steps taken by Ofcom in formulating the charge controls within the LLCC Statement and its rationale in adopting that approach.

The legal framework

- 1.15 Regulation of the telecommunications sector takes place across Europe under what is known as the European Common Regulatory Framework (CRF). The CRF consists of a number of Directives, the most relevant of which are Directive 2002/21/EC on the common regulatory framework for electronic communications networks and services (the Framework Directive) and Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities (the Access Directive). The CRF imposes on member states the obligation to designate independent national regulatory authorities (NRAs), sets out objectives and principles that the NRAs are to be guided by in carrying out their functions, obliges them to carry out market reviews, and empowers them to impose certain obligations on undertakings with SMP including price controls. Of particular relevance to this appeal are Articles 8 and 13 of the Access Directive, which provide, in relevant part:

Article 8

Imposition, amendment or withdrawal of obligations

1. Member States shall ensure that national regulatory authorities are empowered to impose the obligations identified in Articles 9 to 13.
2. Where an operator is designated as having significant market power on a specific market as a result of a market analysis carried out in accordance with Article 16 of Directive 2002/21/EC (Framework Directive), national regulatory authorities shall impose the obligations set out in Articles 9 to 13 of this Directive as appropriate.

⁴We describe PPCs in paragraph 1.60ff.

...

Article 13

Price control and cost accounting obligations

1. A national regulatory authority may, in accordance with the provisions of Article 8, impose obligations relating to cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of interconnection and/or access, in situations where a market analysis indicates that a lack of effective competition means that the operator concerned might sustain prices at an excessively high level, or apply a price squeeze, to the detriment of end-users. National regulatory authorities shall take into account the investment made by the operator and allow him a reasonable rate of return on adequate capital employed, taking into account the risks involved.

2. National regulatory authorities shall ensure that any cost recovery mechanism or pricing methodology that is mandated serves to promote efficiency and sustainable competition and maximise consumer benefits. In this regard national regulatory authorities may also take account of prices available in comparable competitive markets.

1.16 The UK's NRA is Ofcom and the CRF was implemented in the UK by the 2003 Act, in which the powers and duties set out in the Directives are reflected.

1.17 Section 45 of the 2003 Act provides Ofcom with the power to set binding conditions, including SMP conditions. An SMP condition can be applied to a communications provider (CP) that Ofcom has determined as having SMP in a specific market (sections 46(7)–(8)), but only if Ofcom is satisfied that the following tests (found in section 47) are met:

(a) that the condition is objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;

(b) that the condition is not such as to discriminate unduly against particular persons or against a particular description of persons;

(c) that the condition is proportionate to what it is intended to achieve; and

(d) that the condition is, in relation to what it is intended to achieve, transparent.

1.18 Section 87(9) gives Ofcom the specific power to set SMP conditions that impose price controls. The imposition of price controls is subject to section 88, which provides, in relevant part:

88 Conditions about network access pricing etc

(1) OFCOM are not to set an SMP condition falling within section 87(9) except where—

(a) it appears to them from the market analysis carried out for the purpose of setting that condition that there is a relevant risk of adverse effects arising from price distortion; and

(b) it appears to them that the setting of the condition is appropriate for the purposes of—

- (i) promoting efficiency;
 - (ii) promoting sustainable competition; and
 - (iii) conferring the greatest possible benefits on the end-users of public electronic communications services.
- (2) In setting an SMP condition falling within section 87(9), OFCOM must take account of the extent of the investment in the matters to which the condition relates of the person to whom it is to apply.
- 1.19 The 2003 Act, in line with the CRF, also imposes more general duties upon Ofcom. These include, in section 3, duties 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. Section 4 imposes certain duties on Ofcom for the purpose of fulfilling EC obligations, which, in so far as are relevant, include a requirement to promote competition in relation to the provision of electronic communications networks and services, and a requirement to take account of the desirability of it carrying out its functions in a manner which, so far as practicable, does not favour one form of electronic communications network, service or associated facility over another or one means of providing or making available such a network, service or facility over another.
- 1.20 Although the specific questions that have been referred to us for determination focus on particular aspects of the price controls, we have had regard, in relation to each of them as well as in relation to our overall conclusions, to the CRF and the domestic provisions implementing it. We consider our conclusions to be consistent with the legal framework.

Our role

- 1.21 In determining the nature of the investigation, we paid particular regard to the *Hutchison 3G UK Limited v Office of Communications* (Case 1083/3/3/07) and *British Telecommunications plc v Office of Communications* (Case 1085/3/3/07) cases, which concerned wholesale voice mobile call termination charges (Calls to Mobiles Appeal).
- 1.22 In the Calls to Mobiles Appeal, the Tribunal noted that the aim of the statutory provisions was that the disposal of the appeal should result in as high a degree of finality as possible, having regard to the grounds of appeal and the nature of the Competition Commission's (CC's) findings. It encouraged the CC to conduct its investigation in such a manner and to express its determination in such terms as to make clear what directions the Tribunal should give in respect of the specified price control matters when remitting the decision to Ofcom. The Tribunal considered it desirable that those directions and the disposal of the appeals should, in effect, settle the question of what the price control should be for the period covered by Ofcom's Statement on Mobile Call Termination,⁵ and stated that the CC should carry out its investigation with that goal firmly in mind.⁶ It added that the Reference Questions had been drafted in such a way as to acknowledge the possibility that it might not be possible for the CC to set an alternative price control, but so as to ensure as far as possible that the appeal resulted in a revised price control being finalized without

⁵Published 27 March 2007.

⁶[2008] CAT 5, §15.

delay and avoided a situation where there were issues which required substantial further work and the exercise of judgement by Ofcom.⁷

- 1.23 In the judgment disposing of the appeals, dated 2 April 2009,⁸ the Tribunal decided the price control matters in accordance with the CC's *Mobile phone wholesale voice termination charges determination*, notified to the Tribunal on 16 January 2009 (MCT Determination).⁹ We approached the conduct of the present determination with the wording of the Reference, and the approach taken in the Calls to Mobiles Appeal, firmly in mind.

The standard of review

- 1.24 We followed the same approach to standard of review as was taken in the Calls to Mobiles Appeal. The standard was set out in paragraphs 1.30 to 1.33 of the MCT Determination:

1.30 Section 195(2) of the 2003 Act provides for an appeal on the merits. Section 192(6) shows that appeals can be brought on the basis of errors of fact or law or against the exercise of a discretion. The Tribunal interpreted its role under a section 192 appeal as being one of a specialist court designed to be able to scrutinize the detail of regulatory decisions in a profound and rigorous manner. In our view, our role in determining the specified price control matters that have been referred to us is similar. We note that this is the role that appears to have been contemplated for us by the Tribunal in its Reference Ruling and in the wording of the Reference itself (reference question 8 in particular).

1.31 We also note that the wording of rule 3 of the 2004 Rules envisages a determination of disputes that relate to the principles or methods applied or the calculations or data used in determining a price control, as well as disputes that relate to what the provisions imposing the price control should be including at what level the price control should be set. That also suggests a rigorous and detailed examination of the price control matters subject to appeal.

1.32 We have carried out that examination... with the purpose of determining whether Ofcom erred for any of the specific reasons put forward by the parties. In determining whether it did so err, we have not held Ofcom to be wrong simply because we considered there to be some error in its reasoning on a particular point—the error in reasoning must have been of sufficient importance to vitiate Ofcom's decision on the point in whole or in part.

1.33 We have also kept in mind the point made by the Interveners that Ofcom is a specialist regulator whose judgement should not be readily dismissed. Where a ground of appeal relates to a claim that Ofcom has made a factual error or an error of calculation, it may be relatively straightforward to determine whether it is well founded. Where, on the other hand, a ground of appeal relates to the broader principles adopted or to an alleged error in the exercise of a discretion, the matter may not be so clear. In a case where there were a number of alternative

⁷ibid, §16.

⁸[2009] CAT 11 (Judgment: Disposal of the Appeals).

⁹The CC's Determination is available at:

www.competition-commission.org.uk/appeals/communications_act/mobile_phones_determination.pdf.

solutions to a regulatory problem with little to choose between them, we do not think it would be right for us to determine that Ofcom erred simply because it took a course other than the one that we would have taken. On the other hand, if, out of the alternative options, some clearly had more merit than others, it may more easily be said that Ofcom erred if it chose an inferior solution. Which category a particular choice falls within can necessarily only be decided on a case-by-case basis.

- 1.25 The parties have made various submissions in relation to the standard of review that should be adopted by us on price control references. While the parties accepted the principles set out in the MCT Determination above, there was some debate as to how these principles should be interpreted. Ofcom did not understand C&W to be arguing contrary to the analysis set out in the MCT Determination. C&W acknowledged that overall there was not much between itself and Ofcom as regards the appropriate standard of review and it sought only to address the issues of materiality and margin of discretion.
- 1.26 The parties agreed on the following in relation to the standard of review:
- (a) the appeal is a full appeal on the merits before a specialist tribunal;
 - (b) the CC plays an appellate role in respect of the price control matters referred to it under section 193(1) of the 2003 Act;
 - (c) Ofcom's decision must be subjected to profound and rigorous scrutiny; and
 - (d) the question for the Tribunal and the CC is not whether the decision to impose a price control was within the range of reasonable responses but whether the decision was the right one.
- 1.27 The parties disagreed on the following aspects of standard of review:
- (a) materiality; and
 - (b) the margin of discretion to be afforded to Ofcom.

Materiality

- 1.28 Ofcom raised the issue of materiality in its Defence¹⁰ where it submitted that C&W had mistaken our role in undertaking a review of price control matters. Ofcom submitted that we should proceed with caution in seeking to revisit detailed issues that required a fine weighing and balancing of evidence and that had been considered and consulted upon exhaustively by Ofcom. Ofcom submitted that we could not sensibly act as a substitute regulator, revising all aspects of Ofcom's decision making, even where there were several alternative solutions potentially available to any given regulatory problem. According to Ofcom, our task is, instead, to identify whether Ofcom was materially wrong. Ofcom submitted that C&W failed to show any such material error in relation to any of its grounds of appeal.

¹⁰Ofcom Defence, §14.2.

- 1.29 Ofcom stated that the errors in question must be of sufficient importance to merit intervention at the appellate level. It submitted that we should not concern ourselves with alleged flaws which were immaterial in nature.¹¹
- 1.30 C&W accepted that any errors identified must be of sufficient importance to merit intervention at the appellate level and that the CC should not concern itself with alleged flaws which were immaterial in nature but it did not accept that the CC was only required to address errors that had a material impact on final year costs and revenues at the TI basket level.¹²
- 1.31 C&W noted that this would appear to be the implication of Ofcom's comments about the new point of handover (PoH) charges and the allegation that they only represented 2 per cent of revenues for the TI basket as a whole in the final year of the charge control.¹³ C&W considered that even on Ofcom's approach, the impact could be considered material but, fundamentally, it disagreed with Ofcom's approach to materiality. On Ofcom's approach, no challenge to starting charges could ever be material unless it also had an impact on final year charges.¹⁴
- 1.32 C&W submitted that there was no fixed definition of materiality when assessing an error nor a particular point in time at which it must be assessed. No court or tribunal had ever identified by reference to what the error must be material and certainly no figure had been provided as to the minimum percentage threshold for materiality. C&W claimed that it was clear that the reference point for materiality was not simply the impact on the challenged decision as a whole. C&W referred to the MCT Determination where materiality was considered in terms of whether 'the error ... [is] of sufficient importance to vitiate Ofcom's decision *on the point* in whole or in part'¹⁵ (C&W's emphasis).¹⁶
- 1.33 C&W submitted that it was for us to decide on a case by case basis which points were sufficiently material to address. It referred to the Court of Appeal's recent indication that specialist tribunals enjoyed a considerable measure of discretion in how they approached appeals.¹⁷ It also referred to the MCT Determination where, in the context of circumstances where Community law¹⁸ guaranteed an appeal on the merits, the CC concluded that it should engage in 'rigorous and profound scrutiny' of Ofcom's decision.^{19,20}
- 1.34 C&W submitted that it could readily be concluded that the impact of the errors alleged was material. In the case of the new PoH charges, the scale of the apparent error was such as to make a similar difference to C&W's leased line charges for any one year as a doubling of the X factor for that year. Moreover, it was much more significant since it would affect C&W's charges but not the charges paid by its biggest competitor, BT's downstream business. Much the same could be said for the challenge to starting charges, where C&W was effectively pursuing a 6 per cent greater reduction in charges in the first year, albeit that it would also benefit BT's downstream business.²¹

¹¹Ofcom Defence, §60.2.

¹²C&W Legal Skeleton, §§7 & 8.

¹³As stated by Ofcom at §99, Annex D, Defence.

¹⁴C&W Legal Skeleton, §8.

¹⁵MCT Determination, §1.32.

¹⁶C&W Legal Skeleton, §9.

¹⁷National Grid plc v. Gas and Electricity Markets Authority and Ors [2010] EWCA Civ 114 at, for example, 40–42.

¹⁸Article 4 of the Framework Directive.

¹⁹MCT Determination, §1.30.

²⁰C&W Legal Skeleton, §10.

²¹C&W Legal Skeleton, §11.

- 1.35 C&W submitted that we should conclude as a matter of fact that the errors alleged by C&W were material.
- 1.36 Ofcom responded to these points in its legal skeleton where it noted that C&W had made two distinct points on materiality:²²
- (a) *Starting charges.* C&W asserted that ‘on Ofcom’s approach, no challenge to starting charges could ever be material unless it also had an impact on final year charges’.²³ Ofcom stated that this was not a correct characterization of Ofcom’s approach. Ofcom agreed with C&W that the issue of materiality would need to be assessed on a case by case basis.
- (b) *Expertise.* Ofcom was the NRA with responsibility for implementing the European Communications Framework of which the setting of SMP charge controls was an essential part. Ofcom had this role explicitly because of its expertise in telecommunications economic regulation which it used in carrying out its duties and obligations. Ofcom did not accept C&W’s characterization of Ofcom’s role in setting the specific charge control.

Margin of discretion

- 1.37 C&W submitted that many of its grounds of appeal related in whole or in part to errors of fact and errors with Ofcom’s calculations inasmuch as Ofcom had apparently missed or ignored critical information. In so far as Ofcom had discretion, C&W submitted that Ofcom clearly exceeded any margin of discretion properly afforded to it.²⁴
- 1.38 Ofcom submitted in its Defence that, on matters of regulatory judgement, we should accord Ofcom a margin of discretion in recognition of its status as specialist regulator with specific sectoral experience whose judgement should not be readily dismissed.²⁵
- 1.39 C&W agreed with Ofcom²⁶ that we were only required to be an appeal body and not ‘a fully equipped duplicate regulatory body waiting in the wings just for appeals’.²⁷ However, C&W did not agree that the same broad margin of discretion should be afforded to Ofcom in respect of all elements of every decision.²⁸
- 1.40 C&W stated that the courts had indicated on various occasions that the margin of discretion afforded by an appellate body to a first instance decision-maker would vary depending on the type of decision and the extent to which it depended on special advantages enjoyed by the first instance decision-maker. For example:

The review will engage the merits of the appeal. It will accord appropriate respect to the decision of the lower court. Appropriate respect will be tempered by the nature of the lower court and its decision making process. There will also be a spectrum of appropriate respect depending on the nature of the decision of the lower court which is challenged.²⁹

²²Ofcom Legal Skeleton, §9.

²³Stated at §8 of C&W’s Legal Skeleton.

²⁴C&W NoA Legal Schedule, §31.

²⁵Ofcom Defence, §60.4.

²⁶Ofcom Defence, §58.

²⁷*T-Mobile and O2 v Ofcom [2008] EWCA Civ 1373* at [31] per Jacob LJ.

²⁸C&W Legal Skeleton, §§13–16.

²⁹*E. I. Du Pont Nemours & Co v S. T. Du Pont [2003] EWCA Civ 1368* at 94.

- 1.41 C&W submitted that the key errors alleged did not relate to matters where the regulator had a particular advantage due to its expertise. Thus, for example:
- (a) In relation to PoHs, C&W alleged that Ofcom had erred because it had accepted a calculation that was unsupported by evidence and which subsequently emerged as having been based on wildly unrealistic estimates of the numbers of multiplexors in use. C&W submitted that we were as well-placed as Ofcom to determine whether the calculation used was supported by reliable evidence or depended on unsubstantiated estimates.
 - (b) In relation to starting charges, C&W alleged that Ofcom erred as to what was necessary to maintain the incentive effects of charge controls. It stated that this concerned an issue of economics not specific to telecommunications and which we had the expertise to address.
- 1.42 C&W concluded that price control matters were referred to us rather than remaining before the Tribunal alongside other appeals from Ofcom precisely because we had established expertise in considering such matters. The Courts had recognized that even where the challenge was restricted to the much narrower principles applicable on judicial review (not the case here where there was a right to merits review), it was appropriate for a specialist tribunal to use its specialist knowledge and expertise and not to defer unduly to the original decision-maker outside of, for example, issues of broad policy.³⁰

BT

- 1.43 Like Ofcom, BT considered that C&W's appeal was fundamentally misconceived. BT submitted that the thrust of C&W's appeal was not so much that Ofcom had erred, but rather that we should retake Ofcom's decision and reach a different view. It was submitted that this was not a proper basis for an appeal against Ofcom's decision.³¹

Verizon

- 1.44 Verizon did not make submissions as to standard of review.

Our view

- 1.45 In our view, there is not a great deal of ground between the parties on the question of the level of scrutiny we should apply in this appeal.
- 1.46 As stated above,³² we are following the standard of review set in the MCT Determination. In particular, we have considered whether Ofcom erred for any of the specific reasons put forward by the parties. We have assessed each Reference question on the basis of the facts and the specific exercise undertaken by Ofcom, and considered whether C&W, where relevant supported by Verizon, has demonstrated that Ofcom did err. As with the MCT Determination, we consider that the error must have been of sufficient importance to vitiate Ofcom's decision on the point in whole or in part. We recognize that certain areas require more discretion than others and we address these points throughout our determination.

³⁰*British Sky Broadcasting Group plc v Competition Commission & Anor* [2010] EWCA Civ 2 at 32–41.

³¹BT Sol, §3.

³²See paragraph 1.24.

Our procedure

- 1.47 For this reference we adopted a procedure which, in our view, was suited to the nature of our task.³³ We received financial models used by Ofcom in setting the price control. Ofcom provided an explanation of some of these models in a meeting with Ofcom (attended by all parties). We received written arguments and evidence from the parties, held both plenary and bilateral hearings, issued requests (copied to all parties) where we considered we needed further information, and issued provisional determinations for comment.
- 1.48 It would not be practicable to refer to or summarize in this determination all the submissions and evidence that we received from each party. Instead, in the sections that follow, we have attempted to refer to what we considered to be the key submissions and pieces of evidence in relation to each of the points we considered.
- 1.49 As regards the comments we received from the parties in relation to our provisional determination of certain reference questions, we have in a few instances addressed particular comments separately as part of our final determination. We have done so only where we considered that the comment or the context warranted a specific response. Generally, we considered carefully the parties' comments on our provisional determination and formulated our final determination of the Reference Questions accordingly.
- 1.50 However, we had concerns that some of the comments may have advanced arguments, or adduced evidence, which we had not heard or seen previously in these appeal proceedings. We therefore regard it as necessary to make some observations regarding the procedure that we apply in determining specified price control matters referred to us in the context of appeals under the 2003 Act.
- 1.51 We note that, where a price control matter is referred to us, it is for us to determine that matter subject to the Tribunal rules and any directions given to us by the Tribunal using such procedure as we consider appropriate.
- 1.52 In our view, parties should only provide submissions or evidence when required or permitted under the applicable Tribunal Rules or when solicited by us as part of our procedure or, exceptionally, when permitted by us following receipt of a reasoned request that submissions be made or evidence be admitted at some other time.
- 1.53 We consider this procedure appropriate because it is designed to ensure that we are able to determine the questions referred to us in the context of an appeal under sections 192 to 197 of the 2003 Act in an orderly manner and within the limited time-scales permitted to us under the relevant Tribunal rules and the directions of the Tribunal. It is therefore important for parties to pay due regard to this procedure throughout the appeal process.
- 1.54 In our view, there is nothing unusual about this procedure or the reasons for it: other courts and tribunals adopt a similar approach for similar reasons. It is a question of evaluating the importance and relevance of the arguments or evidence which a party wishes to advance or rely upon after the deadline for doing so has passed, and balancing those factors against any prejudice to the other parties and/or to the Tribunal's ability to fulfil its duties which could result from the late admission of such arguments or evidence.

³³We informed the parties of the main steps in the procedure that we envisaged in our First Day Letter of 18 December 2009.

- 1.55 Where the parties sought to rely on new arguments or evidence after the respective deadlines for doing so had passed, we have considered whether we should rely on those arguments or evidence in accordance with the approach outlined above. However, we have not considered it necessary to decide whether we should rely on the new arguments or evidence in circumstances where those arguments or evidence would not cause us to alter our provisional conclusions even if we had been minded to take them into account.
- 1.56 Finally, we note that a confidentiality ring had been established by the Tribunal in October 2009.³⁴ In our First Day Letter of 18 December 2009, we indicated that we would adopt the Tribunal's confidentiality ring.

Technical background

- 1.57 The following paragraphs provide background about the technology of leased lines and in particular PPCs which is relevant to this appeal.
- 1.58 Leased lines are fixed connections between two or more customer premises providing uncontended dedicated capacity between these sites. In its LLCC Statement, Ofcom identified three broad types of leased lines:³⁵
- (a) analogue leased lines;
 - (b) digital leased lines based on PDH or SDH³⁶ technology; and
 - (c) digital leased lines based on Ethernet³⁷ technology.
- 1.59 The subset of leased lines on which this appeal focuses comprises mainly the digital leased lines based on PDH or SDH transmission technology and these are collectively known as 'Traditional Interface' or 'TI' services. TI services are contrasted with Ethernet services which are referred to as 'Alternative Interface' or 'AI' services.
- 1.60 CPs other than BT (OCPs), including C&W, are able to compete with BT's retail divisions in the provision of leased lines services to end-users. To do this, an OCP rents wholesale leased lines inputs from BT Wholesale, which the OCP combines with its own network so as to offer an end-to-end service to end-users. For example, an OCP may provide a building society with dedicated links between its headquarters and its national network of ATM machines or its branches. Where the OCP rents wholesale inputs from BT based on TI services, the service is known as a Partial Private Circuit³⁸ (PPC).
- 1.61 The following sets out a brief background on PPC services. More detail is set out in Appendix B. The LLCC Statement also provides a technological background.³⁹

³⁴The confidentiality ring was established by an Order of the Tribunal of 1 October 2009, following discussion at a case management conference held on the same date.

³⁵LLCC Statement, §2.6.

³⁶PDH and SDH stand for plesiochronous digital hierarchy and synchronous digital hierarchy respectively. These terms refer to transmission protocols, the transmission characteristics of which can be predicted with a very high degree of accuracy.

³⁷Ethernet technology is the transmission technology of choice for 21st century networks (21CN) and is gradually displacing PDH and SDH. Ethernet circuits are popular, for example, for providing access into virtual private networks (VPNs).

³⁸A PPC involves a local end linking the customer premises to an LSE and then further transmission between the LSE (via either terminating segment alone or a combination of terminating segment and trunk) to the PoH delivering the circuit to the POC of the OCP. For more details, see Appendix B.

³⁹LLCC Statement, §§2.5–2.13.

- 1.62 For OCPs to provide PPC services, they need to assemble in each case a mixture of trunk capacity and ‘terminating segments’ to make up the dedicated network needed by the end-user:
- (a) Trunk circuits provide high-capacity transmission of data, often over large distances, through a central network such as BT’s, though many OCPs have their own trunk network. Trunk can also be considered as the ‘motorway’ of PPC services.
 - (b) The circuits making up terminating segments provide lower-capacity transmission between the trunk network and the end-user’s premises. Terminating segments may include backhaul (connecting the trunk network to a BT ‘Local Serving Exchange’ or ‘LSE’) and will include lower-capacity ‘local ends’ (which provide dedicated links from LSEs to an end-user’s premises such as an office or a cash machine). Local ends usually cover short distances, often referred to as ‘the last mile’. Usually BT owns this ‘last mile’ of the network, so OCPs have to connect to BT’s network to reach the end-user. Terminating segments can also be considered as the ‘A roads and B roads’ of PPC services.
- 1.63 OCPs connect their own network with the wholesale line leased from BT’s network at the PoH. The PoH is a high-capacity link between BT’s network and the OCP’s premises. PoHs may use either PDH or SDH technology.
- 1.64 There are two categories of TI services that are relevant to this appeal:
- (a) circuits that involve transmission with capacity of 2 Megabit per second (2 Mbit/s) or higher; and
 - (b) circuits that involve transmission with capacity below 2 Mbit/s, referred to as ‘64 Kbit/s’ or ‘sub-2 Mbit/s’.
- 1.65 Sub-2 Mbit/s circuits are provided by BT using its DPCN⁴⁰ network platform. This is a separate platform from other leased line services. DPCN technology came into service around 30 years ago and has lower capacity and resilience than later PPC technologies. The DPCN platform is expected to be phased out by around 2018.⁴¹
- 1.66 Under Grounds A and B of its Notice of Appeal, C&W appeals the one-off adjustments which Ofcom mandated in its LLCC Statement relating to charges for some DPCN services, for 2 Mbit/s local ends (and for 2 Mbit/s trunk services). Under Ground D, C&W appeals certain aspects of Ofcom’s LLCC Statement as it relates to the new charging structure for the costs of POHs.⁴² The structure of the pricing for these various elements is explained in Appendix B, which also gives fuller detail of the technology involved in PPC services generally.

Chronology of Ofcom’s regulation of PPCs

- 1.67 In the following paragraphs, we describe the recent history of Ofcom’s regulation of PPCs leading to the present LLCC Statement in order to situate the present decision in its proper chronology.

⁴⁰Digital private circuit network.

⁴¹Plenary hearing, 5 February 2010, transcript p35, line 11, to p36, line 3, and p87, line 25, to p88, line 6.

⁴²Ground C of the Notice of Appeal concerns inputs into the model used by Ofcom in setting the price controls: see further paragraph 1.90ff and Section 4 of this determination.

Ofcom's 2003/04 market analysis and subsequent 2004–2008 LLCC

- 1.68 In its 2003/04 review of the leased lines market, Ofcom identified BT as having SMP in certain leased line markets in the UK (excluding the Hull area).
- 1.69 Ofcom imposed charge controls in some of those markets, including TISBO markets for low bandwidth up to and including 8 Mbit/s and high bandwidth above 8 Mbit/s up to and including 155 Mbit/s. Those charge controls came into effect for the four years from 1 October 2004 to 30 September 2008.
- 1.70 However, Ofcom did not impose charge controls during that period in the wholesale market for trunk segments (at any bandwidths), even though Ofcom had also identified BT as having SMP in that market. This was because Ofcom had concluded that that market was prospectively competitive.

The restatement of BT's RFS

- 1.71 The 2003/04 charge control expired on 30 September 2008.
- 1.72 In June 2008, BT informed Ofcom of a number of amendments to its 2006/07 regulatory financial statements for leased line services, which were reflected in a restatement issued by BT in September 2008. These amendments had the effect of significantly reducing BT's revenues from TISBO services, while increasing the revenues attributed to AISBO services. This made it impossible for Ofcom to publish its 2008–12 charge control statement in time for a 1 October 2008 start.
- 1.73 In the interim period, between 1 October 2008 and 1 October 2009 (the start of the first year of the LLCC), Ofcom obtained voluntary commitments from both BT Wholesale (BTW) and Openreach to keep the price of wholesale leased lines constant in nominal terms.

Referral to Ofcom of the PPC disputes

- 1.74 In June 2008, five OCPs, including C&W, referred a dispute to Ofcom concerning BT's charges for PPCs. The OCPs claimed that BT's charges for PPCs had been too high since June 2004, because those charges were not cost-oriented. The OCPs further claimed that, as a result, they had overpaid BT for PPCs significantly and that BT should reimburse the amounts overcharged.
- 1.75 In April 2009, Ofcom published its draft determination on the PPC disputes provisionally finding that BT had overcharged OCPs for 2 Mbit/s trunk services.

Business connectivity market review and leased lines consultation

- 1.76 In December 2008, Ofcom published the results of its business connectivity market review (BCMR). The BCMR superseded Ofcom's 2003/04 leased lines market review.
- 1.77 The BCMR set out the conclusions of Ofcom's review of the retail and wholesale markets for leased lines in the UK and found BT to have SMP in a number of retail and wholesale leased lines markets. The BCMR Statement concluded that, in principle, BT should be subject to charge controls in the markets where BT had SMP.
- 1.78 In the BCMR, Ofcom concluded that BT had SMP in the UK market for wholesale trunk segments. Contrary to Ofcom's expectations at the time of the 2003/04 review,

that market had not become increasingly competitive over time. Ofcom considered that BT's SMP in that market was likely to persist for the period considered by the BCMR. In order to protect consumer interests and promote effective competition, Ofcom therefore decided to extend the scope of charge controls to include trunk segments.⁴³

- 1.79 Alongside the BCMR Statement, Ofcom published the leased lines charge control consultation document seeking stakeholders' views on the charge controls it proposed to implement in light of the conclusions reached in the BCMR. That consultation closed in March 2009.⁴⁴

The LLCC statement

- 1.80 In July 2009, Ofcom published its leased lines charge control statement ('the LLCC Statement'). The LLCC Statement included charge controls on wholesale TI terminating segments and trunk. We discuss the content of the present LLCC Statement further below in paragraphs 1.83 to 1.95.
- 1.81 In September 2009, C&W appealed to the Tribunal against the LLCC Statement and, in December 2009, the Tribunal referred the questions to the CC which we are now called upon to determine.

Determination of the PPC disputes

- 1.82 Meanwhile, in October 2009, Ofcom published its final determination of the PPC disputes. Ofcom found that BT had overcharged for the provision of trunk segments of 2 Mbit/s bandwidth during the period April 2005 to September 2008. Ofcom determined that BT should repay the amount overcharged to each OCP with interest.⁴⁵ In December 2009, BT appealed to the Tribunal against Ofcom's determination, with the OCPs intervening. The Tribunal has not yet heard BT's appeal.⁴⁶

Ofcom's approach to the present Leased Lines Charge Control

- 1.83 In this section, we briefly discuss the steps taken by Ofcom in formulating the charge controls within the 2009–2012 LLCC Statement and its rationale in adopting that approach.

Charge control design

- 1.84 Following its consultation, Ofcom decided that the LLCC was to be an RPI–X form control expiring at the end of September 2012.⁴⁷
- 1.85 Under this RPI–X form of control, BT's prices are regulated according to a price cap, in which the allowed annual increase in BT's weighted average prices is limited to the percentage increase in RPI plus or minus the value of 'X'. The value of 'X' is intended to reflect required changes in price over and above movements in RPI. Where X is a positive value, BT would be required to make real reductions in the price of its services.

⁴³BCMR Statement, Section 1: Summary. www.ofcom.org.uk/consult/condocs/bcmr08/statement/statement.pdf.

⁴⁴www.ofcom.org.uk/consult/condocs/lcc/leasedlines.pdf.

⁴⁵www.ofcom.org.uk/consult/condocs/draft_deter_ppc/PPC_final_determination.pdf.

⁴⁶www.catribunal.org.uk/237-5136/1146-3-3-09-British-Telecommunications-Plc-.html.

⁴⁷LLCC Statement, §§3.4–3.63.

- 1.86 In the LLCC charge control Ofcom set the overall value of X so that BT's revenues in the last year of the charge control are in line with forecast costs (including a return on its capital).
- 1.87 The RPI-X price control provides the regulated entity an incentive to outperform the charge control as the regulated entity keeps efficiency gains over and above those assumed in setting the charge control. In this way, the RPI-X form of control provides the regulated entity with incentives to increase its efficiency over time.
- 1.88 Ofcom further decided that it would adopt a 'technology-neutral' charge control in order to overcome concerns over forecast and cost uncertainties.⁴⁸ A particular forecast uncertainty faced in the period of the charge control was the possible rate of migration of BT's customers from existing legacy services to 21CN and new networked Ethernet services. Since the costs of providing services using legacy and 21CN technologies could be significantly different, if Ofcom had tried to set individual charge controls on legacy services and the new technologies, it would have had to model accurately the expected volumes and the costs of each. However, not all of these costs of the new technologies were fully known, because BT had only begun rolling out the technology. In addition, it was difficult to predict the way in which the new technologies would be utilized (relative to legacy services).
- 1.89 Under the 'technology-neutral' approach, Ofcom applied the charge control in the same way for a particular service irrespective of the platform over which the service is carried. Costs were forecast as if all volumes continued to be provided over a single 'continuing hypothetical network'. Therefore, if BT had migrated, for example, a circuit from its SDH platform to an 'equivalent' service over the 21CN, the charge control caps applied to the new service would not have changed.

Approach to modelling costs

- 1.90 Ofcom explained that it followed these five steps in arriving at the values of X for the main charge control baskets:⁴⁹
- (a) Stage 1: decide on the appropriate number and scope of the charge control baskets;
 - (b) Stage 2: determine the base year costs for each basket;
 - (c) Stage 3: forecast costs forward to determine final year costs;
 - (d) Stage 4: consider the rate at which prices should converge to final year costs (ie via a glide path and/or one-off adjustments); and
 - (e) Stage 5: calculate the final values of X.
- 1.91 We introduce briefly in the paragraphs below certain of Ofcom's decisions in following those five steps. We also expand further on these points in our determination of the individual reference questions.

⁴⁸LLCC Statement, §§3.64–3.112.

⁴⁹LLCC Statement, §3.166.

Basket design and scope

- 1.92 Ofcom decided to impose a combined, single TI basket including TI terminating and trunk segments. In Ofcom's view, efficient pricing and cost allocation issues, as well as wider market considerations, all tended to point to a combined basket. Ofcom also imposed the following sub-caps to mitigate potential competition concerns: RPI-0 per cent on the sub-basket of TI terminating segments; RPI+5 per cent on each charge in the TI basket (excluding PoH charges); RPI-0 per cent on each new PoH rental charge.⁵⁰
- 1.93 Ofcom also added to the TI basket new, separate PoH charges by which to allow BT to recover the costs of PoHs ('the New PoH Charges'). These New PoH Charges replaced the previous system of applying an uplift to external local end rental charges.

Glide paths and one-off adjustments

- 1.94 Ofcom identified two main alternatives available to it in determining how BT's price should converge to its costs. One way is via one-off adjustments in prices, which could bring the firms' prices into line with costs in the first year of the new control. The main alternative is a 'glide path' approach, which would set the control so that the firm's prices are brought into line with costs by the end of the price control period. A combination of smaller one-off adjustments and glide paths would also be possible.⁵¹
- 1.95 We discuss Ofcom's rationale and methodology to determining the rate at which prices should converge to final year costs (ie using a glide path and/or one-off adjustments) in more detail below in paragraphs 3.66 to 3.75.

Ofcom's duties and policy objectives

- 1.96 In its LLCC Statement, Ofcom explained how it had taken into consideration and adhered to the applicable legal framework in formulating the LLCC.⁵²
- 1.97 In particular, Ofcom indicated that, in its opinion, the likely impact of implementing its LLCC proposals would be that the performance of its general and specific duties under sections 3 and 4 of the 2003 Act would be secured or furthered by its decision to adopt the charge controls.⁵³
- 1.98 Ofcom also explained that it had taken into account other relevant guidance, including the EU Leased Lines Recommendation. We discuss further below in Section 2 how Ofcom addressed the Recommendation.
- 1.99 Ofcom also explained how it had complied with the tests under sections 47 and 88 of the 2003 Act. We have set out above in paragraphs 1.17 and 1.18 the requirements of those tests.

⁵⁰LLCC Statement, §§4.14–4.26.

⁵¹LLCC Statement, §§3.216–3.217.

⁵²LLCC Statement, §§2.23–2.45, 4.271–4.297.

⁵³LLCC Statement, §§4.271–4.276.

Section 88 of the 2003 Act

- 1.100 In Ofcom's opinion, the LLCC satisfied the requirements of section 88 of the 2003 Act.⁵⁴
- 1.101 Without the LLCC there was a real risk of adverse effects arising from price distortion by BT as it might have fixed and maintained some or all of its prices at an excessively high level or engaged in margin squeeze. These concerns were identified by Ofcom in its SMP analysis in the BCMR Statement.
- 1.102 Ofcom considered that the charge controls were appropriate for the purpose of promoting efficiency for the following reasons:
- (a) In the absence of competitive pressures, Ofcom believed that BT would have had limited incentives to seek to reduce its costs of providing wholesale leased lines services. In setting the charge controls, Ofcom used an RPI-X formulation, so that BT was encouraged to achieve greater efficiency in the costs of providing these services by requiring it not to increase its charge by more than a fixed amount each year.
 - (b) The RPI-X control also provided incentives for BT to seek further efficiency savings by allowing it to keep any returns associated with efficiency gains over and above those forecast when the charge control is set. The benefits of lower costs could then be passed on to consumers.
 - (c) The broad baskets would allow BT to recover common costs in the most efficient manner.
- 1.103 Ofcom also considered that the charge controls were appropriate to ensure sustainable competition and conferring the greatest possible benefits on users of public electronic communication services. Ofcom explained that this view was based, in particular, on its experience in the evolution of the market as set out in the BCMR Statement. The market analysis conducted in the BCMR Statement suggested that there was sufficient risk that BT might fix or maintain some or all of its prices at an excessively high level. Preventing excessive pricing via an RPI-X type charge control would promote sustainable competition.

Section 47 of the 2003 Act

- 1.104 Ofcom was satisfied that the test under section 47 was met, for the following reasons.⁵⁵
- 1.105 As regards objective justification, Ofcom observed that BT's SMP in the relevant markets allowed it to set charges unilaterally and that, in the absence of any controls, this would have had adverse impacts on both the ability of companies to compete in the downstream provision of leased lines services and on consumer choice and value for money. Ofcom explained that it had structured its LLCC to deliver the lowest possible charges to competitors for wholesale services, while ensuring that BT was able to recover costs, including a reasonable return on investment.
- 1.106 In Ofcom's LLCC Consultation, in addition to discussing qualitatively the possible costs and benefits of a charge control, Ofcom modelled quantitatively the potential

⁵⁴LLCC Statement, §§4.277–4.285.

⁵⁵LLCC Statement, §§4.286–4.297.

welfare gains associated with a charge control relative to no control. This quantification suggested significant benefits of a charge control relative to no charge control. In the LLCC statement, Ofcom maintained its conclusion that there was likely to be a significant welfare benefit.

- 1.107 In Ofcom's view, the structure of the controls was such that BT had an incentive to continue to seek efficiency gains and was able to benefit from efficiency gains achieved which were in excess of that anticipated in the review.
- 1.108 Ofcom further considered that the controls were also objectively justifiable in that the benefits of RPI-X price controls were widely acknowledged as an effective mechanism to reduce prices in a situation where competition did not act to do so.
- 1.109 Secondly, Ofcom concluded that the charge controls would not discriminate unduly against a particular person or particular persons because any CP (including BT itself) could access the services at the charge levels fixed. The charges were set to ensure a fair return and price level for all customer groups. In any event, Ofcom considered that they did not discriminate unduly against BT as the controls address BT's market position, including its ability and incentive to set excessive charges for services falling within the controls.
- 1.110 Thirdly, Ofcom concluded that the charge controls were proportionate because BT's obligations applied to the minimum set of charges required for the delivery of bottleneck services. The charges were focused on ensuring that there were reasonable prices for those access services, which were critical to the development of a competitive market. BT was, however, allowed to recover a reasonable return on investment. BT would also have incentives to continue to invest and develop its access network. Moreover, the maximum charges BT was allowed to set over the period of the control had been formulated using information on BT's costs and a consideration of how these costs would change over time.
- 1.111 Ofcom therefore considered that the charge controls pursued its policy objectives and the means employed to achieve those terms were both necessary and the least burdensome to address effectively the concerns it had set out.
- 1.112 Finally, for the reasons set out above, Ofcom considered that the charge controls were transparent. Their aims and effect were clear and they had been drafted so as to secure maximum transparency. The texts of the LLCC conditions themselves had also been published with this Statement. Their intended operation was also aided by Ofcom's explanations in its LLCC Statement. Ofcom had also set out their likely impact on charges for the duration of the controls.

Section 2: Reference Question 1

In this section we address Reference Question 1. We set out below the paragraphs at which we (a) start our analysis of that question; (b) assessment of that question; and (c) conclude with our determination of that question.

Paragraph

Reference Question 1	2.1
Assessment	2.17
Determination.....	2.33

- 2.1. This section (paragraphs 2.1 to 2.33) sets out our conclusions as to whether the BT price controls imposed by Conditions G4, GG4, GH4 and H4 (TI Price Controls) have been set at a level which is inappropriate because Ofcom erred in failing to take the utmost account of the EC Leased Lines Recommendation (Recommendation) in setting starting prices for digital private circuit network (DPCN) services for the reasons set out in §§37–45 of the NoA.
- 2.2. For the reasons given below, our determination is that Ofcom did not err in its consideration of the Recommendation when setting starting prices for DPCN services for the reasons set out in §§37–45 of the NoA.

Summary of Ofcom’s rationale and methodology

- 2.3. As part of the LLCC, Ofcom amended the starting charges of some TI services. We discuss below in more detail Ofcom’s reasons for implementing BT’s suggested one-off adjustments to certain starting charges.
- 2.4. In §§4.178 and 4.179 of the LLCC Statement, Ofcom explained that, in considering whether one-off adjustments to starting charges were required, it had taken into account the Recommendation. We discuss the Recommendation below¹ as part of the assessment leading to our determination of this Reference Question.
- 2.5. In §4.178 of the LLCC Statement, Ofcom explained that it had ensured, as requested in the Recommendation, that the prices of wholesale TI terminating and trunk services reflected the costs of the underlying network elements including a reasonable rate of return.
- 2.6. In §4.179, Ofcom stated that, in addition, it had benchmarked BT’s costs against appropriate comparator companies, principally US Local Exchange Carriers, concluding that, in 2006/07, BT was more efficient than the top decile (ie the top 10 per cent of the US Local Exchange Carriers).² Ofcom had therefore concluded that it had taken into consideration an efficient level of costs when setting the charge controls for TI terminating and trunk services.

¹Paragraphs 2.17–2.31.

²LLCC Statement, Annex, §A7.65.

Summary of C&W's arguments

- 2.7. C&W contended in its first ground of appeal—Ground A of the NoA—that Ofcom erred in failing to take the utmost account of the Recommendation in setting starting prices for DPCN services.
- 2.8. C&W characterized this ground of appeal as a matter of law in that Ofcom failed to take the utmost account of the Recommendation and, alternatively, as an error of fact and/or assessment in that Ofcom concluded that it had taken sufficient account of the Recommendation when it had not.³
- 2.9. The basis upon which C&W advanced this ground of appeal was as follows:⁴
- (a) Ofcom failed to recognize that the Recommendation specified particular rates as price ceilings which Ofcom was required to ensure be respected unless reliable cost accounting evidence, of a kind approved by the national regulatory authority, indicated the recommended ceilings would result in a price level below the efficient costs of the underlying network elements and services being requested, including a reasonable rate of return. (We shall refer to this price level as 'the permitted price level' and to this argument as a whole as the 'obligatory' claim.)
 - (b) Ofcom in a number of instances substantially exceeded the price ceilings in the Recommendation and gave no explanation or no adequate explanation for doing so.
 - (c) Ofcom bore an onus to show the recommended price ceiling results in a price level below the permitted price level, and Ofcom had failed to discharge this onus.
 - (d) Ofcom had failed to make use of reliable cost accounting evidence.
 - (e) Ofcom had used an international comparator that was not the most suitable for the purpose of benchmarking BT's costs.

Summary of Verizon's intervention

- 2.10. In its Statement of Intervention (Sol), Verizon stated that it supported C&W's submissions.⁵ Verizon referred in particular to its response to Ofcom as part of the consultation process leading to the LLCC Statement. In that response, Verizon included a comparison of Ofcom's proposals with the Recommendation, suggesting that the price increases for 64 kbit/s circuits resulted in BT's prices exceeding the European Commission's recommended prices by up to 59 per cent.⁶

Summary of Ofcom's response

- 2.11. In its Defence, Ofcom gave its reasons for not having followed the price ceilings in the Recommendation.
- 2.12. Ofcom explained that it had had available to it reliable data that had been up to date, and it had been able to use comparators, all of which ensured that prices were set at

³NoA, §4.1.

⁴NoA, §§40–45.

⁵Verizon Sol, §6.

⁶Verizon Sol, §§7 & 9.

a level of the efficient costs of the underlying network elements and the services being requested.⁷

- 2.13. In addition, Ofcom noted that the price ceilings in the Recommendation were out of date, having been published in March 2005. Despite the Recommendation stating that the European Commission should consider the need to review the Recommendation no later than 31 July 2006 in order to take account of changing technologies and of markets, it had not been updated since 2005. The price ceilings therefore did not reflect market conditions.⁸
- 2.14. Furthermore, the method used to calculate the price ceilings in the Recommendation meant that they may not closely reflect costs. The European Commission had collected data on prices rather than costs and then based the ceilings on the third lowest price observed in member states. The ceilings therefore reflected historical price comparisons and not cost comparators.⁹

Summary of BT's intervention

- 2.15. In its Sol, BT supported Ofcom's reasoning in its Defence on this issue. BT regarded it as being of no consequence that the LLCC Statement allowed for prices which exceeded the price ceilings in the Recommendation.¹⁰
- 2.16. BT relied on similar reasons to those advanced by Ofcom, including that:
- (a) Ofcom had considered that there was reliable evidence from cost accounting analysis that the recommended ceilings would result in price levels below the efficient costs of the underlying network elements and the services being requested, including a reasonable rate of return.¹¹
 - (b) The price ceilings in the Recommendation were compiled from very limited data and were partially out of date.¹²
 - (c) The purpose of the Recommendation was to provide guidelines designed to inform pricing decisions where suitable financial information was not available, which was not the position when Ofcom was deciding the LLCC.¹³

Assessment

- 2.17. Central to this ground of appeal is the contention that Ofcom was bound to follow the price ceilings set out in Annex A of the Recommendation unless it had evidence of a required kind and quantum so as to allow a deviation from the stipulated price ceilings. Ofcom failed to discharge the onus resting upon it in respect of particular deviations from the price ceilings.

Interpretation of the Recommendation

- 2.18. We consider first whether C&W has correctly interpreted the Recommendation, in particular in attributing an obligatory content to the Recommendation.

⁷Defence, §143; Annex A, §§9(a) & 9(c).

⁸Defence, Annex A, §11(a).

⁹Defence, §142; Annex A, §11(b).

¹⁰BT Sol, §§5 & 6.

¹¹BT Sol, §§6 & 7.

¹²BT Sol, §8(a).

¹³BT Sol, §8(b).

- 2.19. The Recommendation must be interpreted in the light of the Framework Directive and Access Directive. Article 2 of the Recommendation commences with the following introductory words: 'When imposing or maintaining an obligation for cost orientation of prices under Article 13(1) of Directive 2002/19/EC ... with regard to operators providing leased line part circuits, national regulatory authorities should ... '.
- 2.20. Article 13(1) of the Access Directive is formulated to accord an NRA a power to impose obligations relating to cost recovery and price controls. The power is a discretionary one. Article 2 of the Recommendation does not derogate from the power granted to the NRA to determine whether to impose obligations and on what terms. Rather, Article 2 provides guidance as to how the power should be exercised. Article 2 of the Recommendation, read with Article 19(1) of the Framework Directive to which it refers, requires only that in exercising the power to impose obligations for the cost orientation of prices, the utmost regard will be had to the contents of Article 2(a) and 2(b). Put differently, the NRA must consider the Recommendation, and give significant weight to the Recommendation, in exercising its powers, so as to further the achievement of the objectives set out in Article 8, read with Article 19(1) of the Framework Directive.
- 2.21. However, the cumulative effect of these provisions does not oblige Ofcom to adhere to the price ceilings in Annex A to the Recommendation. The Recommendation, read with Article 13(1) of the Access Directive and Article 19 of the Framework Directive, obliges Ofcom to consider the provisions of Article 2 of the Recommendation and to accord it proper weight in deciding how to exercise its powers to impose obligations. That is not at all the same thing as obliging Ofcom to impose the price ceilings in the Recommendation unless it falls within the scope of a legal exemption permitting it to deviate from those ceilings. The Recommendation is just that: it is framed to incline the exercise of power, it does not legislate as to what obligations must be imposed by an NRA.
- 2.22. In our view, C&W has mischaracterized the Recommendation in two ways. First, the Recommendation does not compel Ofcom to impose the price ceilings. Secondly, and in consequence, Ofcom is not burdened with an onus that it must discharge in order to deviate from the price ceiling referred to in Article 2(b) of the Recommendation. As a result, the legal error contended for by C&W is predicated upon an incorrect interpretation of the Recommendation and falls to be rejected. What the Recommendation requires is that Ofcom has the utmost regard to its provisions. Thus, Ofcom may not disregard the Recommendation, nor treat it lightly, and it should have good reasons as to why some other way of exercising its powers has more salience. But none of this means that Ofcom was obliged to apply the price ceilings and that it was only absolved of its obligation to do so on meeting a threshold evidential burden.

Application of the Recommendation

- 2.23. We consider next whether Ofcom did have proper regard to the Recommendation, properly understood. We do so on the basis that a generous view of this ground of appeal still allows for the complaint that Ofcom failed to take utmost account of the Recommendation, even accepting that the Recommendation is not obligatory in the sense contended by C&W.
- 2.24. We note that, as stated above, Ofcom explained in §§4.178–4.179 of the LLCC Statement how it took into account the Recommendation. In §4.178, Ofcom reflected that it took account of Article 2(a) of the Recommendation. No challenge is made by C&W on this score, and no more need be said about this aspect of the LLCC Statement.

- 2.25. Ofcom then stated in §4.179 that ‘in addition’ it benchmarked BT’s costs against appropriate comparator companies and concluded that it had taken into consideration an efficient level of costs when setting the charge controls for TI terminating and trunk services.
- 2.26. This reasoning does not engage the exercise contemplated in Article 2(b) of the Recommendation because it does not compare the price ceilings with efficient levels of costs, nor does the reasoning explain why Ofcom had decided not to adhere to the price ceilings, having given careful consideration to Article 2(b) of the Recommendation. §4.179 simply explains that there was a proper basis for setting the charges for TI terminating and trunk services based upon an efficient level of costs.
- 2.27. In our view, Ofcom could have articulated more clearly its reasoning in the LLCC Statement in order fully to reflect the basis upon which Ofcom had accorded the Recommendation the utmost regard in setting the charges that it did. That Ofcom had reason to consider the charges that it imposed reflected efficient levels of costs does not explain why the price ceilings suggested in the Recommendation did not do so and should not be followed.
- 2.28. C&W challenged whether Ofcom had explained or explained sufficiently its decision not to follow the price ceilings in the Recommendation.¹⁴
- 2.29. Ofcom, in its Defence, read with Annex A, gave a full account as to why the price ceilings in the Recommendation were not followed. In sum, the price ceilings were out of date; they reflected historical price comparisons and not cost comparators; they did not reflect market conditions; Ofcom had available to it reliable data that was up to date, and it was able to use comparators, all of which ensured that prices were set at a level of the efficient costs of the underlying network elements and the services being requested.
- 2.30. Although there were challenges made by C&W in respect of the data relied upon by Ofcom in reaching its decision, and these are considered below, C&W’s arguments were not in our view sufficient to show that Ofcom was wrong in its analysis of the infirmities of the price ceilings identified by Ofcom in Annex A as the basis for utilizing the data and comparators available to it rather than adhering to the price ceilings.
- 2.31. We have reviewed the reasons given by Ofcom for deciding not to follow the price ceilings in the Recommendations. We consider those reasons to be substantial and sufficient to justify the decision by Ofcom not to follow the Recommendation. The reasoning of Ofcom did not show that it had any want of the utmost regard for the Recommendation. Rather, it determined that in the light of the data available to it, the analysis it was able to undertake of that data and the limitations of the price ceilings, Ofcom would be better able to render a decision reflective of costs, including a reasonable rate of return, by not following the price ceilings in the Recommendations.
- 2.32. We find no fault with that approach because the LLCC Statement sought to secure the ultimate objective of the Access Directive and the Framework Directive: the cost orientation of prices imposed under Article 13(1) of the Access Directive in circumstances where there were good reasons not to follow the price ceilings.

¹⁴NoA, §4.1.

Determination

- 2.33. For the reasons given above, our determination is that Ofcom did not err in its consideration of the Recommendation when setting starting prices for DPCN services for the reasons set out in §§37–45 of the NoA.

Section 3: Reference Question 2

In this section we address Reference Questions 2(a)(i), 2(a)(ii), 2(aa), 2(b), 2(c) and 2(d). We set out below, for each question, the paragraphs at which we (a) start our analysis of that question, (b) start our assessment of that question and (c) conclude with our determination of that question.

	<i>Paragraph</i>
Reference Question 2(a)(i)	3.1
Assessment	3.20
Determination.....	3.38
Reference Question 2(a)(ii)	3.39
Assessment	3.54
Determination.....	3.62
Reference Question 2(aa)	3.63
Assessment	3.112
Determination.....	3.203
Reference Question 2(b)	3.204
Assessment	3.245
Determination.....	3.269
Reference Question 2(c)	3.270
Assessment	3.286
Determination.....	3.297
Reference Question 2(d)	3.298
Assessment	3.344
Determination.....	3.362

Reference Question 2(a)(i)

- 3.1. This section (paragraphs 3.1 to 3.38) sets out our conclusions as to whether the BT price controls imposed by Conditions G4, GG4, GH4 and H4 (TI Price Controls) have been set at a level which is inappropriate because Ofcom erred in setting starting charges for DPCN services and 2 Mbit/s local ends in that the price increases go beyond what is necessary for individual services to be priced above Ofcom's view of distributed long-run incremental cost (DLRIC) for the reasons set out in §49 of the NoA.¹
- 3.2. §49 forms part of the first of the four allegations of error made under Ground B of the NoA.² Ground B addressed the alleged errors arising from Ofcom having allowed BT to increase starting charges at the start of the LLCC. The first of the four Ground B allegations was that Ofcom failed to achieve its objectives in permitting increases to starting charges.³ At §49, C&W set out one of three particular examples of Ofcom's alleged failure to achieve its objectives in permitting increases to starting charges. The other particular examples are dealt with in the context of our determination of Reference Questions 2(a)(ii) and 2(aa). We discuss further below the relationship between this Reference Question and Reference Questions 2(a)(ii) and 2(aa) and the nature of the allegation underlying all three of them.

¹Reference Question 2(a)(i).

²See §§47.1–47.4 of the NoA.

³NoA, §47.1.

- 3.3. For the reasons given below, our determination is that Ofcom did not err in setting starting charges for DPCN services and 2 Mbit/s local ends in that the price increases go beyond what is necessary for individual services to be priced above Ofcom's view of DLRIC for the reasons set out in §49 of the NoA.⁴

Summary of Ofcom's rationale and methodology

- 3.4. In the LLCC Statement Ofcom mandated one-off price adjustments for certain TISBO services. The decision to implement BT's suggested one-off adjustments to starting charges formed one of the steps taken by Ofcom in setting the charge controls for the TI basket. Those steps were set out in section 4 of the LLCC Statement. We highlight below the points which are pertinent to our determination of Reference Question 2(a)(i).

- 3.5. On 3 June 2009 BT notified the new prices for the TISBO services that were subject to one-off price adjustments.⁵ The new price for each of these services is listed in Table 3.1 below.⁶

TABLE 3.1 **Final TI terminating and trunk prices to be implemented**

<i>Services</i>	<i>Previous price £</i>	<i>Price as notified by BT on 3 June 2009</i>	<i>Final price £</i>
64 kbit/s link	62.81	125.62	125.62
64 kbit/s local end	289.67	579.34	479.34
64 kbit/s enhanced maintenance	40.31	80.62	80.62
2 Mbit/s local end	691.92	833.76	663.76
2 Mbit/s trunk	102.24	46.83	46.83

Source: BT.

- 3.6. Ofcom explained that by decreasing the price of 2 Mbit/s trunk to the 2007/08 distributed stand-alone cost (a stand-alone cost excluding a share of core common costs) (DSAC) values as per BT's regulatory financial statements (RFS), the prices were better aligned with the underlying costs of provision.⁷
- 3.7. Ofcom further explained that the price increases were up to the level of the 2007/08 DLRIC values as per BT's RFS and this better aligned prices for these services with the underlying costs of provision, and gave CPs the correct pricing and investment incentives.⁸
- 3.8. In paragraphs 4.271 to 4.297 of the LLCC Statement, Ofcom explained how it ensured that the charge controls for the TI basket satisfied the applicable statutory tests. Ofcom was satisfied that the charge controls were objectively justifiable because, among other general reasons, they had been structured to deliver the lowest possible charges to competitors for wholesale services, while ensuring that BT was able to recover costs, including a reasonable return on investment.⁹ Ofcom was further satisfied that the charge controls were proportionate because BT's obligations apply to the minimum set of charges required for the delivery of bottleneck

⁴Reference Question 2(a)(i).

⁵Which became effective on 1 September 2009.

⁶§§4.180 & 4.182 and Table 4.6 in the LLCC Statement. The difference between column 'Price as notified by BT on 3 June 2009' and the column 'Final price' is as a result of the introduction of separate PoH charges (which only affect the local ends). These are explained in more detail in Section 5.

⁷§4.180 in the LLCC Statement.

⁸§4.183 in the LLCC Statement.

⁹§§4.288–4.293 in the LLCC Statement.

services.¹⁰ Ofcom's comments regarding the applicable statutory tests referred to the charge controls for the TI basket generally. When setting out its thinking with respect to the justifiability and proportionality of the structure of those charge controls, Ofcom did not expressly discuss the detail of that structure and, in particular, did not refer to the one-off increases to starting charges.

Summary of C&W's arguments

- 3.9. As noted above, C&W's arguments under §49 form part of the first of the four allegations of error under Ground B of the NoA. Those four allegations were summarized in §47 of the NoA.¹¹ §47.1 introduced the first allegation, stating that the one-off increases to starting charges went beyond Ofcom's stated objectives and were unjustified and/or were disproportionate. §47.1(a) particularized this allegation, arguing that the adjustments went beyond what was necessary to accord with Ofcom's view of DLRIC (rather than BT's).
- 3.10. §49 of the NoA and its related subparagraphs then provided further details of and reasoning supporting this allegation. In those paragraphs, C&W argued that, had Ofcom relied on its own adjusted DLRIC figures, they would likely have shown that the price increases were to a level above DLRIC and that, for some services, prices were above DLRIC already without any adjustment at all.¹² Ofcom had therefore erred in its conclusion that the increases, or at least increases of the size permitted, were necessary for individual services to be priced above DLRIC.¹³

Summary of Ofcom's arguments

- 3.11. Ofcom argued that, in making this allegation, C&W had attributed objectives to Ofcom which it did not have when considering whether to accept BT's proposals for one-off price changes. Ofcom specifically denied that it was its objective to ensure that prices for individual services were brought up to DLRIC but no higher.¹⁴
- 3.12. Ofcom considered that DLRIC and DSAC were appropriate benchmarks for the purposes of deciding by how much to adjust charges at the start of the new control. These benchmarks informed Ofcom's decision but Ofcom did not apply them in a rigid way.¹⁵
- 3.13. Ofcom explained that its primary purpose in making the one-off price adjustments in the LLCC Statement was to address the risk of distortions caused by prices being too far above or below costs, whilst the task of bringing average charges into line with average costs was primarily that of the glide path. But this distinction was not rigid and the appropriate scale of one-off adjustments was primarily a matter of judgement rather than a precise calculation.¹⁶ Ofcom believed that it could adopt a less intrusive approach than specifying precisely by how much prices should be reduced (or increased). Therefore, it decided the broad parameters within which the adjustments would be made and asked BT to make proposals for one-off changes to starting charges consistent with those parameters.¹⁷

¹⁰§§4.295–4.296 in the LLCC Statement.

¹¹See also §4.2 of the NoA.

¹²NoA, §49.4.

¹³§49 in the NoA.

¹⁴Defence, §149.

¹⁵Defence, Annex B, §13.

¹⁶Defence, Annex B, §25.

¹⁷Defence, Annex B, §26.

- 3.14. The parameters which Ofcom required BT to apply when making the one-off price adjustments were:¹⁸
- (a) any price materially above stand-alone cost should be brought down to at least that level and prices outside the DLRIC floor and the DSAC ceiling should be brought within the range;¹⁹
 - (b) the price changes should reduce BT's revenues by at least 4 per cent; and
 - (c) the proposals should not discriminate unduly in favour of BT's downstream business.
- 3.15. Ofcom explained its reasons for accepting BT's proposals for the one-off price adjustments as follows. Ofcom put considerable weight on the one-off price adjustments in aggregate being revenue-neutral to BT's external customers. But it did not put great weight on the relationship of the charges for individual services (before or after the adjustment) to the fully allocated cost of those services. Rather than focusing on the precise level of individual charges, the key question for Ofcom was whether the package as a whole met its objectives, which themselves could be encapsulated in a small number of criteria.²⁰
- 3.16. Ofcom further argued that C&W was wrong in alleging that BT's charges could be held to be unreasonable by the mere fact that they are above DLRIC. Rather, Ofcom had assessed BT's proposed charges to ensure that they were in fact reasonable.²¹
- 3.17. Therefore, as the package, of which the revision to 2 Mbit/s local end prices was part, met Ofcom's requirements and the charges after the adjustment were not in themselves unreasonable (being between adjusted fully allocated cost (FAC) and DSAC), Ofcom's judgment was that they were acceptable in context, and when combined with a glide path approach.²²

Summary of BT intervention

- 3.18. BT's view was that the DLRIC floor and DSAC ceiling should be used only as initial indicators of whether the cost orientation principle had been complied with and should not be used as firm determinates of prices.²³
- 3.19. DLRIC and DSAC figures are based on historic figures and typically are volatile from year to year. They are at best inaccurate estimates for future cost levels. DLRIC and DSAC, in particular for the sub charge service components where BT changed its prices (ie 64 kbit/s main link, 64 kbit/s local end and 2 Mbit/s local end), have significantly shifted upwards and downwards from year to year.²⁴

¹⁸Defence, Annex B, §§27–32.

¹⁹Graph on p14 of Ofcom's response to the post-bilateral hearing questions.

²⁰Defence, Annex B, §27.

²¹Defence, Annex B, §§56–61, in particular §§58 & 60/61.

²²Defence Annex B, §37.

²³BT W/S I Morden, §19.

²⁴BT W/S I Morden, §20.

Assessment

- 3.20. As noted above, §49 of the NoA, to which Reference Question 2(a)(i) expressly refers, particularized the general allegation at §47.1 that the one-off price increases went beyond Ofcom's stated objectives and were unjustified and/or disproportionate.
- 3.21. C&W did not expressly refer in §49 (or the other paragraphs of the NoA identified above in paragraph 3.9 of this determination) to Ofcom's duties under the 2003 Act. Those duties are set out in the Legal Schedule to the NoA. They include the requirements under sections 47(2)(a) and 47(2)(c) that Ofcom must not set a condition unless it is satisfied, among other tests, that the condition is both objectively justifiable in relation to the networks, services, or other applicable matters to which it relates and proportionate to what it is intended to achieve.
- 3.22. We are mindful too of Ofcom's general duties under section 3 of the 2003 Act, including the obligation that Ofcom have regard to the principles of better regulation, including proportionality.²⁵
- 3.23. We infer from the language used in the particular allegations in §49 and the more general allegations in the introductory §47.1 and its subparagraphs that C&W was alleging that Ofcom had made an error of law and/or an error of assessment in failing to comply with certain of the requirements of section 47 of the 2003 Act.
- 3.24. In particular, we note C&W's allegation that Ofcom erred in its conclusion that the price increases were 'necessary'.²⁶ Necessity forms an integral part of the legal test of proportionality. In this regard, we note the leading judgment of *Daly*, in which the House of Lords discussed the test of proportionality. From that judgment, we understand that we need to consider (i) whether the legislative objective is sufficiently important to justify limiting others' rights, (ii) whether the measures designed to meet the legislative objective are rationally connected to it, and (iii) whether the means used are not more than is necessary to accomplish the objective.²⁷ We therefore infer from the references to necessity among other indications that C&W was alleging that Ofcom failed to comply with section 47(2)(c) of the 2003 Act.
- 3.25. We further note that C&W also argued that the increases were 'unjustified'. It is not clear whether C&W was also alleging that Ofcom had failed to comply with the requirement under section 47(2)(a) of the 2003 Act that the LLCC was objectively justifiable in relation to the networks, services or other applicable matters to which the LLCC related. However, we note that the focus of C&W's arguments under §49 was on the issue of necessity. Even if C&W had intended to advance a separate argument under section 47(2)(a), we find that C&W has not provided sufficient explanation (or evidence) to show how it differs from its argument under section 47(2)(c).
- 3.26. In our view, therefore, the relevant question for us under this ground is whether Ofcom erred in its conclusion that the LLCC including BT's proposed one-off increases to starting charges was proportionate to what the LLCC including BT's proposed one-off increases to starting charges was intended to achieve. The need to identify the relevant objective(s) to which a measure is directed is central to a consideration of proportionality.²⁸

²⁵Cf section 3(3)(a) of the 2003 Act.

²⁶NoA, §§47.1(a), 49 (cf also §47.1(b), 50) and the reference to 'need' and 'justification' in §51).

²⁷*R v Secretary of State for the Home Department, ex p. Daly* [2001] UKHL 26; [2001] 2 AC 532.

²⁸Cf *Daly* as cited in paragraph 3.24 above.

- 3.27. C&W's argument was that Ofcom erred in its conclusion that the starting charge increases (or at least increases of the size permitted) were necessary for individual services to be priced above DLRIC.
- 3.28. The question of whether the LLCC was necessary to achieve Ofcom's objectives would form part of the assessment of LLCC's proportionality. The need to consider its necessity as part of this inquiry was implicitly accepted both by C&W in its NoA, in which C&W made repeated reference to the necessity or otherwise of the one-off increases,²⁹ and by Ofcom in its LLCC Statement, where, in discussing the proportionality of the charge controls, Ofcom referred to the necessity of its policy objectives and the means employed to achieve those terms.³⁰
- 3.29. However, C&W's argument under §49 presupposed that it was Ofcom's objective to ensure that one-off price increases should only be to a maximum of DLRIC.³¹
- 3.30. In its Defence, Ofcom argued that C&W had attributed to Ofcom an objective it did not have when considering BT's proposal for the one-off price adjustments. Ofcom accepted that it had regard to DLRIC and DSAC, since as a rule of thumb the risk of distortions to competition is more likely to arise where prices are either above DSAC or below DLRIC.³² However, Ofcom explained that it was not its objective to ensure that prices for individual services were brought up to DLRIC but no higher. Indeed, Ofcom was not generally concerned with the precise level of individual charges. Rather, the key question for Ofcom was whether the package as a whole met its objectives, which did not include the objective identified by C&W in §49 of the NoA.
- 3.31. We accept Ofcom's account of its objectives as set out in its Defence. C&W has not persuaded us of the contrary. Nor do we believe that C&W has sought to do so, although we do not find C&W's position on this easy to follow.
- 3.32. We requested that C&W clarify whether it wished to maintain certain of its allegations in the light of Ofcom's Defence and subsequent developments during the proceedings, including the allegation relevant to this Reference Question (2(a)(i)). In its response, whilst maintaining that the level of DLRIC for the relevant services should be lower on the basis of its arguments under Ground C,³³ C&W accepted that its arguments in §§49.1–49.4 of the NoA were no longer relevant in relation to the services for which there were one-off adjustments other than 2 Mbit/s local ends. It is not clear whether, in making this concession, C&W also accepted that the main part of §49 was also no longer relevant. C&W further accepted that §49 was irrelevant in respect of 2 Mbit/s local ends, but referred to the arguments it had advanced in §§12–29 of the Reply. Again, it is not clear whether C&W's acceptance that §49 was no longer relevant included subparagraphs 49.1 to 49.4 as well.
- 3.33. However, what we do understand from C&W's response is that its arguments in relation to the proportionality of the one-off increases to starting charges are now focused on the allegations set out in §§12–29 of the Reply. Those arguments are the subject of our determination of Reference Question 2(aa).

²⁹Cf, for example, NoA, §§4.2(a), 47.1(a) & 49.

³⁰LLCC Statement, §4.296.

³¹§49 actually stated that Ofcom had erred in its conclusion that the increases, or at least increases of the size permitted, were necessary for individual services to be priced above DLRIC. C&W in further correspondence indicated that this should be interpreted as meaning that prices should not have risen above the level of DLRIC. §§13 & 14 of the Reply. C&W's position was that Ofcom should not have permitted step change increases to starting charges to a level beyond DLRIC.

³²Defence, §151.

³³p9 in C&W's response to the CC's questions of 24 February 2010. Received by the CC on 3 March 2010.

- 3.34. Since we are unable to state with certainty that the allegations in §49 of the NoA have been completely withdrawn, we set out our conclusions with regard to those allegations here for completeness. In this regard, we reiterate that we accept Ofcom's account of its objectives as set out in its Defence and that nothing in C&W's case has displaced our finding.
- 3.35. We therefore find that C&W has not demonstrated on the basis set out in §49 of the NoA that Ofcom erred in its conclusion that the LLCC including BT's proposed one-off increases to starting charges were proportionate to what the LLCC including the one-off increase to starting charges was intended to achieve.
- 3.36. However, we note that §49 formed only part of the particular examples cited by C&W in support of its general allegation that the one-off price increases went beyond Ofcom's stated objectives and were unjustified and/or disproportionate. We consider the other particular examples given by C&W under this head of its appeal separately in our determinations of Reference Questions 2(a)(ii) and 2(aa).
- 3.37. Our conclusion in respect of this Reference Question does not prejudice our determination of C&W's further arguments which call for determination under Reference Questions 2(a)(ii) and 2(aa) and which we address in the sections which immediately follow this (paragraphs 3.39 to 3.203), though we do cross-refer to those parts of our reasoning above which apply to those Reference Questions as well.

Determination

- 3.38. For the reasons given above, our determination is that Ofcom did not err in setting starting charges for DPCN services and 2 Mbit/s local ends in that the price increases go beyond what is necessary for individual services to be priced above Ofcom's view of DLRIC for the reasons set out in §49 of the NoA.³⁴

³⁴Reference Question 2(a)(i).

Reference Question 2(a)(ii)

- 3.39. This section (paragraphs 3.39 to 3.62) sets out our conclusions as to whether the TI Price Controls have been set at a level which is inappropriate because Ofcom erred in setting starting charges for DPCN services and 2 Mbit/s local ends in concluding that the price increases were necessary to avoid BT earning a return on capital employed (ROCE) on the TI basket below its weighted average cost of capital (WACC) for the reasons set out in §§49–51 of the NoA.³⁵
- 3.40. The NoA §§49–51 form part of the first of the four allegations of error made under Ground B.³⁶ Ground B addresses the alleged errors arising from Ofcom having allowed BT to increase starting charges at the start of the LLCC. The issues arising under this Reference Question 2(a)(ii) are similar to those we have just discussed in relation to Reference Question 2(a)(i). We discuss the nature of the particular allegations relevant to Reference Question 2(a)(ii) and consider the relationship of §§49–51 to that question further below.
- 3.41. For the reasons given below, we do not consider that Ofcom erred in setting starting charges for DPCN services and 2 Mbit/s local ends in concluding that the price increases were necessary to avoid BT earning a ROCE on the TI basket below its WACC for the reasons set out in §§49–51 of the NoA.³⁷

Summary of Ofcom's rationale and methodology

- 3.42. We have explained in paragraph 3.4 above Ofcom's rationale in mandating one-off price adjustments for certain TISBO services. We discuss this in more detail under Reference Question 2(aa).³⁸
- 3.43. With specific reference to the allegation we are considering here, we note that Ofcom decided that the one-off price increases should not be phased in. According to Ofcom, if price increases had been phased in over the charge control period, BT's ROCE on the TI basket would have been below its WACC (due to the one-off nature of the decreases in trunk prices). In addition, due to the sub-cap of RPI+5 per cent on each charge, BT's ability to phase in price increases over the charge control period would be severely restricted.³⁹

Summary of C&W's arguments

- 3.44. We refer here to our summary of C&W's arguments relevant to Reference Question 2(a)(i), since these two Reference Questions derive from the same general allegation at §47.1 of the NoA.
- 3.45. This Reference Question 2(a)(ii) is also concerned with C&W's allegation that Ofcom erred in concluding that the one-off increases to starting charges were necessary to avoid BT earning a ROCE on the TI basket below its WACC. This is the particular allegation which C&W introduced in §47.1(b) of its NoA and which it developed in §50.

³⁵Reference Question 2(a)(ii).

³⁶See §§47.1–47.4 of the NoA.

³⁷Reference Question 2(a)(ii).

³⁸See paragraphs 3.67–3.76.

³⁹§4.183 in the LLCC Statement.

- 3.46. However, Reference Question 2(a)(ii) cross-refers to §§49–51 of the NoA, rather than to §50 alone (and/or with 47.1(b)). We have already considered the substance of the allegation at §49 of the NoA, which had concerned Ofcom’s view of DLRIC, in our determination of Reference Question 2(a)(i). This Reference Question 2(a)(ii) concerns BT’s ROCE relative to its WACC. The allegation in §49 therefore does not appear to us relevant to the allegation addressed in Reference Question 2(a)(ii). Furthermore, we note that §51 concerned the profitability of the TI basket more generally. Therefore, the substance of the allegation in §51 does not appear to us directly relevant to the allegation addressed in Reference Question 2(a)(ii). We discuss §51 in our determination of Reference Question 2(aa) and do not consider it further here.
- 3.47. In our view, §50 of the NoA constitutes a further particular example of the general allegation introduced in §47.1, namely that the one-off increases to starting charges go beyond Ofcom’s stated objectives and are unjustified and/or are disproportionate.
- 3.48. In particular, C&W argued that one of the reasons why Ofcom allowed the price increases was to prevent BT’s leased lines business (and in particular the TI basket) earning a ROCE below its WACC, or in other words to prevent its ROCE from falling below 11 per cent.^{40,41}
- 3.49. In support of its argument that the one-off increases to starting charges were unnecessary to achieve this objective, C&W referred to expert evidence that, even without any price increases, the ROCE on the TI basket would still have been at the level of the WACC of 11 per cent.⁴²

Summary of Ofcom’s arguments

- 3.50. As it did in relation to the allegation at §49, Ofcom argued here too that C&W had attributed objectives to Ofcom which it had not had when approving the one-off adjustments to starting charges.⁴³
- 3.51. Ofcom explained that, at the start of the charge control, the ROCE for the TI basket was well above the WACC. As we have summarized in our determination of Reference Question 2(a)(i), Ofcom’s aim had been to bring the average level of prices into line with cost over the life of the control, using a combination of one-off price adjustments and a glide path. In this context, Ofcom argued that the question of avoiding a ROCE below the WACC did not arise: the pertinent issue had been to do with the speed with which average price levels should be brought down to cost.⁴⁴
- 3.52. Ofcom suggested that C&W might mistakenly have believed that Ofcom had pursued such an objective because of the way in which C&W had interpreted §4.183 of the LLCC Statement, which included the words⁴⁵ ‘If price increases were to be phased in over the control period, BT’s ROCE on the TI Basket will be below its WACC (due to the one-off nature of the decreases in trunk discussed above)’.

⁴⁰Ofcom determined the WACC for the leased lines business to be 11 per cent. §1.29 LLCC Statement.

⁴¹§105 NoA.

⁴²Kelly 1, §8.13.2 and Table 1.

⁴³Defence, §§149 & 158.

⁴⁴Defence, §158.

⁴⁵Defence, Annex B, §48.

- 3.53. However, Ofcom further explained that it did not have in mind a target ROCE⁴⁶ and that it did not place significant weight on BT's rate of return in assessing the need for one-off adjustments.⁴⁷

Assessment

- 3.54. We refer here to our assessment of the issues arising for our determination of Reference Question 2(a)(i). Much of what we set out in the introductory paragraphs to our assessment of that issue is relevant to our consideration of this Reference Question as well.
- 3.55. In particular, as with §49, we infer that the allegation at §50 is a further particular example in support of C&W's general allegation that Ofcom had erred in law and/or in assessment in failing to comply with certain of the requirements of section 47 of the 2003 Act. We note, for example, that C&W here questioned the necessity of the one-off price increases to meet the alleged objective of avoiding BT achieving a ROCE for the TI basket below its WACC.
- 3.56. In our view, therefore, the relevant question for us when considering this Reference Question is the same as applied in relation to the previous Reference Question (2(a)(i)), namely whether Ofcom erred in its conclusion that the LLCC including BT's proposed one-off increases to starting charges was objectively justifiable in relation to the services to which it related and proportionate to what the LLCC was intended to achieve. As noted above, in answering this question, we must first identify the relevant objective pursued by Ofcom.
- 3.57. We have noted above in relation to Reference Question 2(a)(i) Ofcom's account of its objectives as set out in its Defence. Ofcom asserted that C&W had attributed objectives to it which it did not have when allowing BT's starting price adjustments.
- 3.58. As we explained above in relation to Reference Question 2(a)(i), we requested that C&W clarify whether it wished to maintain certain of its allegations, including the allegation relevant to this Reference Question, in light of Ofcom's Defence and subsequent developments during the proceedings.
- 3.59. In its response, with respect to the arguments in §50 of the NoA, C&W stated that it would be sterile to debate C&W's arguments regarding the impact of one-off adjustments on ROCE in the form in which they were pleaded in the NoA, since that was not a basis on which Ofcom sought to support the LLCC Statement.⁴⁸ As Ofcom apparently no longer sought to defend the one-off increases on the basis of the profitability of the relevant services, in C&W's view we need not consider the profitability of individual services or how such profitability should have been or had in fact been calculated.⁴⁹ However, C&W commented that the underlying arguments in this section of the NoA remained relevant for the assessment of the points set out in §§12–29 of the Reply.⁵⁰
- 3.60. Taking account of Ofcom's explanation of its objectives in its Defence, we find that C&W has not demonstrated, on the basis set out in §50 of the NoA, that Ofcom erred in its conclusion that the LLCC including the one-off increases to starting charges

⁴⁶Defence, Annex B, §171.

⁴⁷Defence, Annex B, §§48 & 49.

⁴⁸p4 in C&W reply to the CC letter from 24 Feb 2010 regarding 'clarification on points that may be falling away'.

⁴⁹p5 in C&W reply to the CC letter from 24 Feb 2010 regarding 'clarification on points that may be falling away'.

⁵⁰p4 in C&W reply to the CC letter from 24 Feb 2010 regarding 'clarification on points that may be falling away'.

was objectively justifiable in relation to the services to which it relates and proportionate to what the LLCC was intended to achieve.

- 3.61. We note C&W's comments with respect to its arguments in §§12–29 of the Reply. Our conclusion in respect of this Reference Question 2(a)(ii) does not prejudice our determination of C&W's further arguments under those paragraphs of the Reply, which are the subject of our determination of Reference Question 2(aa).

Determination

- 3.62. For the reasons given above, our determination is that Ofcom did not err in setting starting charges for DPCN services and 2 Mbit/s local ends in that the price increases go beyond what is necessary to avoid BT earning a ROCE on the TI basket below its WACC for the reasons set out in §§49–51 of the NoA.⁵¹

⁵¹Reference Question 2(a)(ii).

Reference Question 2(aa)

- 3.63. This section (paragraphs 3.63 to 3.203) sets out our conclusions as to whether Ofcom erred in permitting increases to starting charges for the reasons set out in paragraphs 12 to 29 of the Reply.⁵²
- 3.64. §§12–29 of the Reply set out C&W’s position in relation to Ofcom’s arguments in defence of the allegations made in §§47.1 and 49–51 of the NoA. Those paragraphs provided examples to support C&W’s allegation that Ofcom had failed to achieve its objectives in permitting increases to starting charges. We refer above to our determination of Reference Questions 2(a)(i) and 2(a)(ii) and below to our assessment of this Reference Question for further explanation of the relationship between the three questions.
- 3.65. For the reasons given below, we conclude that Ofcom erred in permitting the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges for the reasons set out in §§12–29 of the Reply.

Summary of Ofcom’s rationale and methodology

- 3.66. We refer here to those parts of Ofcom’s rationale and methodology in deciding to allow the one-off price adjustments for certain TISBO services which are pertinent to the issues arising for consideration under §§12–29 of the Reply.
- 3.67. Ofcom stated that its primary objective in mandating the one-off adjustments was to prevent BT from setting excessive prices, whilst creating the right incentives for it to achieve efficiency gains, improved service quality and innovation.⁵³
- 3.68. Ofcom explained that it generally preferred RPI–X regulation using ‘glide paths’, under which charges were brought into line with costs over a number of years, to one-off adjustments to starting charges. This was because the use of glide paths led to greater stability and predictability (by avoiding sudden changes to charges), and also because it improved cost reduction incentives by allowing the regulated companies to keep unanticipated efficiency gains for a longer period.⁵⁴
- 3.69. Ofcom further explained that it expressed a general preference for glide paths as this mechanism approximated more closely than one-off reductions the workings of a competitive market in which excess profits were gradually eroded as rivals improved their efficiency. The glide path approach generally also led to greater incentives for efficiency, as it provided greater comfort to a regulated firm that, in seeking to make any cost savings, these savings would not be eroded immediately at the start of the next charge control.⁵⁵
- 3.70. However, Ofcom also recognized that in some cases one-off adjustments to starting charges might be required, if, for example, these charges were materially out of line with the underlying costs of provision. If prices were too high or too low, there would be additional risks of static and dynamic inefficiencies (for example, inefficient entry

⁵²Reference Question 2(aa).

⁵³§4.14 in the LLCC Statement.

⁵⁴§4.177 in the LLCC Statement.

⁵⁵§3.218 in the LLCC Statement.

or distortion of downstream competition). Under such circumstances Ofcom might prefer one-off adjustments.⁵⁶

- 3.71. Ofcom also thought, however, that there could be a stronger case for one-off adjustments where services had not previously been charge-controlled and the high profitability was reflective of market power, rather than past efficiency gains made under a price cap.⁵⁷
- 3.72. The LLCC Statement included trunk services in a charge control 2009–2012 for the first time. Trunk services were not included in the TI basket in the previous charge control period 2004–2008 as they were considered ‘prospectively competitive’ at that time.⁵⁸
- 3.73. On 3 June 2009, BT notified the new prices for the TISBO services that were subject to one-off price adjustments.⁵⁹ The new price for each of these services is listed in Table 3.2 below.⁶⁰

TABLE 3.2 One-off adjustments proposed by BT

<i>Services</i>	<i>Previous price £</i>	<i>Price as notified by BT on 3 June 2009</i>
64 kbit/s link	62.81	125.62
64 kbit/s local end	289.67	579.34
64 kbit/s enhanced maintenance	40.31	80.62
2 Mbit/s local end	691.92	833.76
2 Mbit/s trunk	102.24	46.83

Source: BT (with last column deleted because it is not relevant here).

- 3.74. Ofcom explained that by decreasing the price of 2 Mbit/s trunk to the 2007/08 DSAC values as per BT’s RFS, prices were better aligned with the underlying costs of provision.⁶¹ Ofcom also explained that the DPCN services and 2 Mbit/s local end price increases were up to the level of the 2007/08 DLRIC values as per BT’s RFS and this aligned prices for these services more closely to the underlying costs of provision, and gave CPs the correct pricing and investment incentives.⁶² However, Ofcom later explained that the 2 Mbit/s local end price increase in fact brought the price of this service above FAC based on Ofcom’s calculations of costs.⁶³
- 3.75. Ofcom decided that the price increases for DPCN services and 2 Mbit/s local end services should not be phased in. If price increases were phased in over the control period, BT’s ROCE on the TI basket would be below its WACC (due to the one-off nature of the decreases in trunk prices). In addition, due to the sub-cap of RPI+5 per cent on each charge, BT’s ability to phase in price increases over the charge control period would be severely restricted.⁶⁴

⁵⁶§4.177 in the LLCC Statement.

⁵⁷§3.219 in the LLCC Statement.

⁵⁸§§2.19–2.20 in the LLCC Statement.

⁵⁹Which became effective on 1 September 2009.

⁶⁰§§4.180 & 4.182 and Table 4.6 in the LLCC Statement.

⁶¹§4.180 in the LLCC Statement.

⁶²§4.183 in the LLCC Statement.

⁶³Defence Annex B, Tables B1 & B2.

⁶⁴§4.183 in the LLCC Statement.

Summary of C&W's arguments

- 3.76. In §§12–29 of the Reply, in regard to the position taken in Ofcom's Defence, C&W argued that Ofcom had erred in looking only at progress towards its final year objective and otherwise in viewing the one-off adjustments as simply a rebalancing exercise.
- 3.77. By way of introduction to these paragraphs, C&W asserted that it was only the alleged lack of cost orientation that was said to, or could, reasonably justify step changes (ie one-off adjustments) of the magnitude permitted. In C&W's view, Ofcom had accordingly erred in permitting any step change adjustment beyond that necessary to bring prices within the DLRIC floor and the DSAC ceiling. C&W noted that Ofcom admitted that 2 Mbit/s local end prices had already been within the DLRIC floor and DSAC ceiling without any adjustment.⁶⁵
- 3.78. In any event, C&W reasoned, even if Ofcom had been correct to assess the starting charges only in terms of the effect at a basket level, Ofcom had erred in allowing a 'rebalancing' between trunk and terminating segments. This allowed BT to continue earning excessive profits that it had only been able previously to achieve as a result of exercising its market power in pricing 2 Mbit/s trunk in breach of BT's cost orientation obligations (as had been decided by Ofcom in its determination of the PPC dispute⁶⁶).⁶⁷
- 3.79. C&W also observed that Ofcom complained that C&W had attributed to Ofcom objectives that Ofcom did not have in its assessment of BT's adjustments to starting charges. Specifically, C&W noted that Ofcom accepted C&W's allegation that not all the increases had been necessary to bring charges up to the DLRIC floor and that the increases had not been necessary to avoid BT earning a ROCE below its WACC, but that Ofcom said that these points had not been relevant to its decision in the LLCC Statement to mandate the one-off adjustments.⁶⁸
- 3.80. C&W went on to note that, instead, Ofcom contended that, for charges that were already between DLRIC and DSAC, its only objectives had been that total TI basket revenue should have been at least 4 per cent lower than before all adjustments and that the adjustments should not have unduly discriminated in favour of BT's downstream business. Ofcom chose to characterize the adjustments to starting charges as simply part of its glide path, bringing forecast aggregate TI basket charges into line with forecast aggregate TI basket costs by the end of the charge control period.⁶⁹
- 3.81. C&W said that Ofcom should not have permitted step change increases to starting charges that had already been above DLRIC (ie increases to charges for 2 Mbit/s local ends), or increases to a level beyond DLRIC, because step changes could only be justified for charges that had been markedly out of line with costs. Further, or alternatively, the implications for BT's ROCE were such that it had been inappropriate to allow increases in other charges to compensate for the reduction in 2 Mbit/s

⁶⁵Reply, §1.2.

⁶⁶On 25 June 2008 C&W, THUS, Global Crossing, Virgin and Verizon submitted disputes regarding BT's PPC charges. COLT submitted a similarly worded dispute on 20 October 2008. These operators alleged that BT had overcharged them approximately £180 million for PPC services. On 25 July 2008, Ofcom decided that it was appropriate for it to resolve this dispute on the basis of section 186(3) of the Communications Act 2003. On 14 October 2009, Ofcom concluded that BT had overcharged the operators concerned for 2Mbit/s PPC trunk services in the period April 2005 to September 2008. (See www.ofcom.org.uk/consult/condocs/draft_deter_ppc_final_determination.pdf.)

⁶⁷Reply, §1.3.

⁶⁸Reply, §12.

⁶⁹Reply, §12.

trunk charges required even absent any charge control. C&W then proceeded to develop these arguments in more detail.⁷⁰

- 3.82. C&W explained that it agreed with Ofcom that, while glide paths were generally preferable to step changes because of their incentives for efficiency improvement, step changes might be warranted where prices were markedly out of line with cost, to an extent which could distort competition.⁷¹
- 3.83. However, C&W argued that such a justification for step changes only extended to charges which were markedly out of line with costs and only to the extent that they were. Ofcom's own adjustments to BT's data had shown that charges for 2 Mbit/s local ends were already above DLRIC (and, indeed, FAC). Therefore, Ofcom could not justify allowing a step change increase at the start of the charge control since charges at or above DLRIC plainly were not markedly out of line with costs.⁷²
- 3.84. C&W further argued that Ofcom's position must be that if one single charge were to be markedly out of line with costs (ie 2 Mbit/s trunk), that could justify step changes for any charges, since this was the only credible explanation for allowing 2 Mbit/s local end prices to increase. In C&W's view, this approach was flawed because the justification for step changes where a charge was markedly out of line with costs was to avoid the risk that the charge would otherwise distort competition, but no such risk arose in relation to a charge which was already cost-oriented.⁷³
- 3.85. C&W accepted that corrections to charges which had not previously been cost-oriented would have implications for the profitability at a basket level, but denied that other step changes or 'rebalancing' was required in light of such corrections. Rather, consideration should have been given to why the charges were not cost-oriented and, more broadly, to the impact on incentives of making, or not making, other adjustments.⁷⁴
- 3.86. In C&W's view, the increases to starting charges were inappropriate given the ROCE which BT would earn on the TI basket from the start of the price control period in any event, and given that those profits arose (at least in part) only because BT had been exerting market power in the previous price control period.⁷⁵
- 3.87. C&W further argued that there had been no justification for a 'rebalancing' following reduction of 2 Mbit/s trunk charges. As a preliminary point, C&W took issue with Ofcom's position that reductions in BT's revenues under the charge control should have been measured by reference to what BT had been earning prior to the reduction in 2 Mbit/s trunk charges. The reduction in 2 Mbit/s trunk charges could not properly be considered part of the LLCC Statement. Ofcom had separately determined in the PPC Dispute Determination that 2 Mbit/s trunk had been priced excessively and effectively reduced the charges with retrospective effect. As such, 2 Mbit/s trunk charges should have been and had been reduced with effect from before the LLCC Statement. The correct baseline should therefore have been revenue after the 2 Mbit/s trunk charges had been reduced to a level that reflected cost.⁷⁶

⁷⁰Reply, §13.

⁷¹Reply, §14.

⁷²Reply, §§14 & 15.

⁷³Reply, §§16 & 17.

⁷⁴Reply, §§18 & 19.

⁷⁵Reply, §§20 & 21–23.

⁷⁶Reply, §24.

- 3.88. In any event, C&W argued that, even if the reduction in 2 Mbit/s trunk charges had been viewed in tandem with the increases in other charges under the LLCC Statement, there would still not have been any justification for the ‘rebalancing’ effected.⁷⁷
- 3.89. While C&W agreed with Ofcom that it was appropriate to seek to ensure that the one-off adjustments did not undermine the incentive properties of the glide path, C&W argued that Ofcom did not succeed in meeting this objective. Ofcom had not drawn the necessary distinction between the retention of profits above WACC which arose because price controls were working as intended, providing positive incentives, and those that did not arise for that reason. C&W argued that increases to the price of other services to compensate for reductions in 2 Mbit/s trunk were not consistent with any proper policy justification for allowing profits above WACC under an RPI-X price control.⁷⁸
- 3.90. C&W further argued that it could not be contended, as BT had done in its Sol, that the adjustments were necessary because Ofcom had failed to permit a rebalancing in the previous price control.⁷⁹ C&W gave several reasons for rejecting BT’s argument, including that ‘It had not been shown that the last price control failed to permit BT to recover its efficiently incurred costs and a reasonable rate of return across charge-controlled TI services (ie excluding trunk). It could not therefore be said that there was a “need” to rebalance.’⁸⁰
- 3.91. C&W also noted that Ofcom had given no explanation as to why it had been appropriate to specify a reduction of 4 per cent of total revenues (and no reduction in revenues earned from OCPs) rather than some larger number other than to say it had been a matter of judgement.⁸¹
- 3.92. C&W concluded by arguing that Ofcom should not have permitted the increase to starting charges or should only have done so to the extent that they had been reflected in decreases in charges for other TI services (excluding the reductions already required to end excessive pricing for 2 Mbit/s trunk). Specifically, Ofcom had erred by including revenues that had been inflated as a result of BT’s overcharge on 2 Mbit/s trunk when requiring the adjusted charges to be revenue neutral as to OCPs. Instead, when applying its ‘revenue-neutral’ test, Ofcom should first have removed the excess profits BT had gained from its excessive charges on 2 Mbit/s trunk.⁸²

Summary of Ofcom’s response

- 3.93. We have set out above, in our determination of Reference Questions 2(a)(i) and 2(a)(ii), Ofcom’s position in its Defence with respect to its reasons for allowing the proposed one-off adjustments to starting charges.
- 3.94. We note again here only the following statements in the Defence which we consider particularly relevant to our assessment of the present question, 2(aa):
- (a) Ofcom explained that it had a general preference for glide paths when setting charge controls, because of their incentives for efficiency improvement. However,

⁷⁷Reply, §25.

⁷⁸Reply, §26.

⁷⁹Reply, §27.

⁸⁰Reply, §27.1.

⁸¹Reply, §28.

⁸²Reply, §29.

Ofcom also recognized that one-off price adjustments may be warranted in some cases, particularly where prices were markedly out of line with cost, to an extent which could distort competition. As a rule of thumb, Ofcom found that the risk of such distortions occurring was likely to arise where prices were either above DSAC or below DLRIC, ie outside the range likely to be found in an effectively competitive market.⁸³

(b) In setting the LLCCs, Ofcom had struck a balance between static efficiency (avoiding distortions due to prices being out of line with costs) and dynamic efficiency considerations (giving incentives to make cost reductions) in considering possible one-off adjustments to BT's PPC charges. The primary purpose of the one-off adjustments had therefore been to address the risk of distortions caused by prices being too far above or below costs, whilst the task of bringing average charges into line with average costs had been primarily that of the glide path. This distinction had been intended to balance static and dynamic efficiency considerations but it was not rigid and the appropriate scale of one-off adjustments was primarily a matter of judgement rather than a precise calculation.⁸⁴

3.95. During the bilateral hearing, Ofcom commented on the arguments advanced by C&W in its Reply. We summarize below those points made by Ofcom during that bilateral hearing which we consider pertinent to our determination of this Reference Question.

3.96. From Ofcom's point of view, the minimum requirement in deciding the structure of starting charges had been to bring prices within the range of DLRIC and DSAC. The DSAC/DLRIC range is a first order test for cost orientation and whilst Ofcom had not assessed BT's compliance with cost orientation in the development of the LLCC Statement, it had set the one-off price adjustments consistent with this first order test.⁸⁵ If, however, Ofcom stopped at that, the profitability of the basket would have fallen sharply to the extent that it would have threatened to undermine the incentive properties of the price cap. The main benefit of price cap regulation was that it promoted efficiency and if those incentives were lost, Ofcom would effectively be applying rate of return regulation⁸⁶ leading to fewer efficiencies being generated by the regulated firm.⁸⁷

3.97. Ofcom had therefore also allowed an increase in the price of 2 Mbit/s local ends. That resulted in a package of changes that reduced overall revenues by 4 per cent and delivered about one-third of the required reduction in charges, leaving the remaining two-thirds to be delivered by the glide path. In deciding on that balance, Ofcom took into account the fact that over two-thirds of the TI basket revenues were covered by the previous charge control.⁸⁸

3.98. Ofcom also outlined its options when deciding whether to allow the one-off price adjustments:

(a) One option would have been to have relied entirely on the glide path and not to have required any one-off reductions in average prices at the start of the control. BT had argued for such a position consistently since 2004 when the previous

⁸³Defence, §151.

⁸⁴Defence, Annex B, §25.

⁸⁵Point 4 on p3 of '10 03 05 Ofcom to CC plenary hearing transcript review confid.pdf'.

⁸⁶p8 of the Ofcom hearing transcript (original form), line 32ff.

⁸⁷p50 of the Ofcom hearing transcript (original form), line 23ff.

⁸⁸p9 of the Ofcom hearing transcript (original form), line 10ff. Cf also point 3 on p3 of '10 03 05 Ofcom to CC plenary hearing transcript review confid.pdf'.

charge control had been set. BT had not objected to reductions in trunk charges per se but had thought that any such reductions should be offset by price increases on terminating segments. Ofcom said that it rejected that approach because it thought that problems in the price restructuring were sufficiently stark to justify some one-off adjustments and also because the overall return of the basket had been high enough that some reduction in average prices could have been made without undermining the incentive properties of the glide path.⁸⁹

- (b) At the other extreme, Ofcom could simply have reduced the 2 Mbit/s trunk charge and made no other changes. Such an approach would have reduced the returns immediately to a level approximately equal to the cost of capital, but would, in Ofcom's view, have undermined the incentive properties of the cap.⁹⁰
- (c) Ofcom therefore looked for a middle option.⁹¹ The approach it decided upon involved a 4 per cent revenue reduction which translated into a 3 per cent reduction in the ROCE at the start of the charge control and then a glide to 11 per cent over three years.⁹²
- (d) Ofcom had rejected an alternative option of adjusting everything apart from the charge for 2 Mbit/s local ends, because this 'would have gone too far'. This approach would have delivered over half of the required reduction in average price levels in one go and would, in Ofcom's view, have risked undermining the incentive properties of the glide path.⁹³

3.99. Ofcom observed that BT had performed relatively well against the efficiency improvements expected in the 2004 charge control. Ofcom therefore considered incentive effects to be highly relevant.⁹⁴ It further reasoned that the incentive properties in the longer term were vital. In Ofcom's view, one of the reasons why the UK had some of the lowest telecommunication charges in Europe and globally was because it had adopted an approach which had both incentivized BT to become much more efficient and promoted competitive pressure over an extended period.⁹⁵ Therefore, the big gain in the context of the LLCC was to achieve a regulatory arrangement where there was an incentive to reduce costs.⁹⁶

3.100. When asked whether the trunk services should have been adjusted before combining them with the 'TISBO ex trunk' basket as proposed by C&W, Ofcom argued that the PPC dispute was backward looking (covering the period up to 30 September 2008), whilst the charge control was forward looking (being effective from 2 October 2009).⁹⁷ Moreover, the PPC dispute had only been concluded three months after the publication of the LLCC statement.⁹⁸ Ofcom further explained that the PPC dispute related to cost orientation over a previous period and the LLCC statement was an entirely separate exercise. Ofcom therefore considered that it would be inappropriate simply to make an adjustment for 2 Mbit/s trunk services and take that as the starting point.⁹⁹

⁸⁹p9 of the Ofcom hearing transcript (original form), line 25ff.

⁹⁰p10 of the Ofcom hearing transcript (original form), line 9ff.

⁹¹p10 of the Ofcom hearing transcript (original form), line 16ff.

⁹²p10 of the Ofcom hearing transcript (original form), line 18ff.

⁹³p10 of the Ofcom hearing transcript (original form), line 28ff.

⁹⁴Point 3 on p3 of '10 03 05 Ofcom to CC plenary hearing transcript review confid.pdf'.

⁹⁵p42 of the Ofcom hearing transcript (original form), line 4ff.

⁹⁶p42 of the Ofcom hearing transcript (original form), line 4ff.

⁹⁷Point 4 on p3 of '10 03 05 Ofcom to CC plenary hearing transcript review confid.pdf'.

⁹⁸Point 4 on p3 of '10 03 05 Ofcom to CC plenary hearing transcript review confid.pdf'.

⁹⁹p46 of the Ofcom hearing transcript (original form), line 1ff.

- 3.101. When further questioned about whether it should have performed an analysis of the trunk services before combining them with the other TISBO services that were previously charge controlled, Ofcom stated that it would have been inappropriate to single out the 2 Mbit/s trunk prices and make some special allowance for those before carrying on with the rest of the analysis but did not elucidate its reasoning.¹⁰⁰
- 3.102. Ofcom explained that its default position would have been not to have made any one-off price increases but to have relied on the glide path. However, in these circumstances, Ofcom had considered that, because the prices of these services were so starkly out of line with costs, both being above DSAC and below DLRIC, there was a case for one-off changes. The question then had been whether the overall impact should have been revenue neutral and whether the average prices should have been left at the same level. Ofcom had considered that, because the 20 per cent ROCE on the TISBO basket before any adjustments (which had been the latest information at the time) was significantly above the cost of capital of 11 per cent, there had been some scope for bringing down the average level of prices. However, that approach had not been designed to serve as a penalty for anti-competitive or excessive pricing behaviour, because Ofcom had not, at that time, found BT to be engaging in such behaviour. Indeed, Ofcom had not carried out such an investigation at the time of the LLCC. Rather, Ofcom looked at it in the context of setting the charge control.¹⁰¹
- 3.103. When asked whether it would have mattered had Ofcom required a larger one-off price reduction, Ofcom stated that, if it had simply reduced the 2 Mbit/s trunk charge and increased the DPCN services charges which were below DLRIC but had not adjusted the 2 Mbit/s local end charge, it would have sent a signal to BT that, in situations where at the end of the charge control there were prices that were either above DSAC or below DLRIC, there would be a one-off adjustment to correct them. That would open the way for BT to reduce prices towards the end of the charge control period for some services to levels below DLRIC and make compensating adjustments to other prices but not to the point where they were above DSAC. As a consequence, BT would expect a one-off price increase at the start of the next charge control. Ofcom had believed that to adopt that sort of mechanistic approach would have been wrong and the right approach had been to consider more broadly the overall incentive effects of the price cap.¹⁰²
- 3.104. Ofcom then commented on the incentives it had set in the current price control. In Ofcom's view, the incentive properties of the charge control were absolutely critical. The whole point of having a price cap was that it provided an incentive to improve efficiency. If, for example, Ofcom had simply taken the 2 Mbit/s trunk price down to DSAC and done nothing else, it might have avoided potential excessive pricing but would have destroyed any incentive effect that could otherwise have been achieved, sending a strong signal to BT that in those circumstances Ofcom would make significant one-off changes and severely reducing the incentive for BT to improve its efficiency, particularly towards the end of the charge control.¹⁰³
- 3.105. Ofcom further explained that it did not analyse whether the starting ROCE for the current LLCC of 17 per cent at the start of the price control was justified on the basis of efficiency gains in the prior price control. The important point had been to consider how the changes that were made could affect future behaviour. It had not been a

¹⁰⁰p47 of the Ofcom hearing transcript (original form), line 2ff.

¹⁰¹p47 of the Ofcom hearing transcript (original form), line 21ff.

¹⁰²p48 of the Ofcom hearing transcript (original form), line 14ff.

¹⁰³p49 of the Ofcom hearing transcript (original form), line 21ff.

matter of detailed calculation because the profitability of the services would be affected by a wide range of factors.¹⁰⁴

3.106. Ofcom also stated that it had not investigated whether there were excessive profits in the trunk services because Ofcom had to look at profitability in the context of the charge control. Ofcom had not been approaching profitability on the basis of a rate of return-type regulation, which in some respects would have been the direction in which doing such an assessment would have led. In Ofcom's view, evidence from the industry over a number of years suggested that the incentive properties were very important.¹⁰⁵

3.107. Ofcom also added that the incentive would be effective only if the regulated firm acted on it and understood the signal.¹⁰⁶

Summary of Verizon's intervention

3.108. Verizon noted that one of the issues at stake in the current proceedings was the extent to which Ofcom had or should have taken into account the outcome of the PPC dispute in setting the starting point for the current control. In Verizon's view, Ofcom should have taken proper account of it but had not done so.¹⁰⁷

Summary of BT's intervention

3.109. BT stated¹⁰⁸ that there was a historic need to rebalance terminating and trunk prices and that an increase in prices at the start of the charge control was essential in order to correct for the fact that the level of prices for DPCN services and 2 Mbit/s local ends had been significantly under-recovering costs (to the benefit of C&W). BT claimed that before the new charge controls, there was a risk that unduly low prices for terminating segments could encourage competing providers to retain or purchase low bandwidth DPCN circuits rather than more efficient 2 Mbit/s links. In addition, BT claimed that prices for 2 Mbit/s trunk had been consistently above Ofcom's estimated price ceiling (DSAC).

3.110. BT continued¹⁰⁹ that whilst it had serious concerns about Ofcom's reliance on DLRIC and DSAC as the applicable floor and ceiling for determining prices of terminating segments and trunk services, it made no challenge to Ofcom's approach of bringing costs in line with this floor and ceiling in this appeal.

3.111. In addition to the parameters set by Ofcom, BT's objective¹¹⁰ was to change as few prices as possible, and to limit price increases to a maximum of a 100 per cent increase despite the fact that higher one-off starting price rises could have been justified in order to meet DLRIC.

Assessment

3.112. We set out below our assessment of the matters raised by Reference Question 2(aa), starting with the conclusions we reached on the basis of the arguments and

¹⁰⁴p50 of the Ofcom hearing transcript (original form), line 8ff.

¹⁰⁵p50 of the Ofcom hearing transcript (original form), line 23ff.

¹⁰⁶p51 of the Ofcom hearing transcript (original form), line 23ff.

¹⁰⁷p15, line 25, in the Verizon bilateral hearing transcript (original version).

¹⁰⁸BT's Sol, §11.

¹⁰⁹BT's Sol, §12.

¹¹⁰BT's Sol, §13.

evidence presented to us up to the end of the hearings we conducted with the parties. We then turn to address the comments we received from the parties on our provisional determination and we respond separately to certain of those comments, before summing up with our final determination of this Reference Question.

- 3.113. We note by way of introduction that §§12–29 of C&W’s Reply were responsive to Ofcom’s Defence to the arguments C&W had advanced under §§47.1 and 49–51 of the NoA. In its opening remarks under §2 of the Reply, C&W referred back to Ofcom’s argument that C&W had attributed to it objectives which it had not had in its assessment of BT’s adjustments to starting charges.
- 3.114. We therefore view the arguments under §§12–29 of the Reply (which we refer to in this assessment as ‘the Reply points’ for brevity) as a development of the allegation underlying §§49–51 of the NoA, namely (as set out in §47.1) that, even on its own analysis, the one-off increases to starting charges went beyond Ofcom’s stated objectives and are unjustified and/or are disproportionate.
- 3.115. In this regard, we note that, in its response to our request for clarification, C&W contended that aspects of the arguments advanced under §§49–51 of the NoA continued to be relevant in the context of the Reply points.¹¹¹ C&W specifically stated that those arguments in the NoA had ultimately resulted in the Reply points.¹¹²
- 3.116. In addressing that response from C&W, we note that C&W’s argument that §51 of the NoA related ‘directly to the arguments now pursued in the Reply’.¹¹³ We did not find it easy immediately to divine the substance of C&W’s allegation under §51. But, in the light of C&W’s contention that the arguments at §51 relate directly to the arguments in §§12–29 of the Reply, we do not consider it necessary to address the allegation in §51 separately. In our view, the allegation in §51 must stand or fall with our determination of this Reference Question 2(aa). We therefore do not address §51 specifically any further in this determination.
- 3.117. We also find support for our view regarding this linkage between the NoA and the Reply in the fact that, in §§12–29 of the Reply, C&W used language consonant with arguments based on a criticism of Ofcom’s actions as being inconsistent with the requirements of proportionality and/or objective justifiability. We note, for example, that: C&W’s argument in the Reply was that Ofcom had erred in permitting any step change adjustment ‘beyond that necessary’ to bring prices within the DLRIC floor and the DSAC ceiling;¹¹⁴ and that C&W repeatedly called into question whether Ofcom’s approach was justified by reference to the objectives identified in Ofcom’s Defence or necessary to the achievement of them.¹¹⁵
- 3.118. In the light of these considerations, we understand that C&W’s allegation in §§12–29 of the Reply was essentially that Ofcom erred in concluding that the proposed one-off starting charges satisfied the requirement that they were proportionate to what they were intended to achieve, ie Ofcom had failed to meet at least one limb of the statutory test under section 47(2).
- 3.119. In order to test the strength of this allegation, we must first identify the relevant objective or objectives. We note that both parties appear to agree that, while glide paths

¹¹¹See, for example, note entitled ‘Response of C&W to the Competition Commission’s questions sent under cover of a letter of 24 February 2010 regarding ‘clarification on points that may be falling way’, p4.

¹¹²Ibid, p4.

¹¹³Ibid, p7.

¹¹⁴Cf Reply, §1.2, and also §13.

¹¹⁵Cf in particular Reply, §§14–17, 25–26 and 27.

are to be preferred to one-off adjustments, the justification for (or the objective of) one-off adjustments is to avoid a situation where prices are markedly out of line with cost to an extent which could distort competition.¹¹⁶ We also note that both parties also appear to agree that it was appropriate for Ofcom to ensure that the proposed one-off adjustments did not undermine the objective of glide paths, which is to provide incentives to deliver greater efficiency.¹¹⁷ We further note that these objectives accord with the first two of the cumulative requirements under section 88(1)(b) of the 2003 Act, which Ofcom must satisfy before setting an SMP condition.

3.120. With these objectives in mind, we turn to assess the proportionality of the one-off adjustments to starting charges and, in particular, we consider: first, whether Ofcom was correct to conclude that the one-off adjustments to starting charges were necessary in order to achieve the objective of cost orientation; and, secondly, whether Ofcom was correct to conclude that the one-off adjustments were necessary in order to avoid undermining the incentives of the glide path.

3.121. In considering the correctness of Ofcom's approach, we also have in mind that section 47(2) accords Ofcom a certain measure of discretion in determining whether the limbs of the test set out in that section are met: it is for Ofcom to be satisfied that the condition in question satisfies each of those limbs. We refer to our remarks above in the introduction to this determination as to how we would approach the matter were we to consider there to be a credible allegation that Ofcom had erred in the exercise of its discretion.

3.122. However, in our view, this Reference Question does not give rise to such considerations because the error alleged is not that Ofcom erred in the exercise of its discretion so much as that Ofcom had erred because it had failed to meet the relevant statutory test. Our reasons for arriving at this conclusion will become apparent from our analysis of the question in the paragraphs that follow.

Justification in the context of the objective of cost orientation

3.123. We note that there is no dispute between Ofcom and C&W that the price of 2 Mbit/s trunk was above DSAC, that the price of DPCN services was below DLRIC and that the price of 2 Mbit/s local ends was within the DLRIC-DSAC range.

3.124. The adjustments to the price of 2 Mbit/s trunk and the price of DPCN services were therefore justified as being necessary in order to meet the objective of cost orientation, ie ensuring that those services were not priced at levels which posed a risk of distortion of competition. However, the one-off adjustments together could not be justified if considered solely by reference to the cost-orientation objective, since 2 Mbit/s local ends were already priced within the DLRIC and DSAC boundaries and therefore the adjustment to the price of that service goes beyond what is necessary for cost-orientation reasons.

3.125. We note that Ofcom argued that if it had stopped at reducing the 2 Mbit/s trunk charge and increasing the charges for DPCN services which were above DSAC and below DLRIC respectively and had not adjusted the 2 Mbit/s local end charge, it would have sent a signal to BT that, in situations where at the end of the charge control there were prices that were either above DSAC or below DLRIC, there would be a one-off adjustment to correct them. Such a mechanistic approach to one-off

¹¹⁶Cf Defence, §151, with which C&W 'does not quarrel': see Reply, §14.

¹¹⁷Cf Defence, §156, with which C&W 'agrees': see Reply, §26.

adjustments that would always bring prices outside the DLRIC and DSAC range to DLRIC and DSAC would have created opportunities for BT to game the system. For instance, BT might have increased some prices to DSAC and decreased other prices below DLRIC at the end of a price control expecting Ofcom to keep those prices that were at DSAC while increasing those prices that were below DLRIC to DLRIC.¹¹⁸ This would effectively have increased BT's ROCE and inflated the glide path.

- 3.126. For the following reasons, we are unconvinced by Ofcom's arguments in relation to the risk of gaming. First, we note that Ofcom told us that BT was under an obligation to ensure cost orientation. Ofcom therefore implied that BT would have breached its SMP condition if it had priced tactically below DLRIC. Secondly, since BT's prices were transparent to Ofcom, nothing would have prevented Ofcom from reversing these price changes once it had identified them. Thirdly, Ofcom's argument implies that Ofcom should have replaced a transparent regulatory approach with an approach that lacked transparency to ensure that BT could not game the system. Whilst there might have been a tension between regulatory transparency and BT's incentives to game the regulatory system, in this case, a system that did not allow BT to understand Ofcom's regulatory approach and its implications for BT's behaviour would have been unlikely to promote efficiency.

Justification in the context of the objective of promoting efficiency

- 3.127. We now consider whether the one-off adjustments, including the adjustment to 2 Mbit/s local ends, were justified as being necessary in order to avoid undermining the promotion of dynamic efficiency through the use of glide paths, as suggested by Ofcom, or whether Ofcom erred in concluding that this one-off adjustment was proportionate to what it was intended to achieve.
- 3.128. We consider it helpful first to explain how we understand that the incentive properties of glide paths operate to deliver greater efficiency in the case of Ofcom's regulatory approach. Those incentives derive from the fact that the regulated entity knows that if it outperforms the reduction in costs projected during the charge control, it will be rewarded for those efficiency gains by keeping the additional profits through the current charge control and into the next. This is because the additional profits will only be removed gradually through a glide path in the next charge control rather than being removed immediately at the start of the next charge control through one-off adjustments. Similarly, if the regulated entity under-performs during the charge control, the under-performance will only be eliminated over time. For brevity, we refer to this process, by which the regulated entity's future choices are influenced by its experience of previous regulatory action and which is intended to encourage greater dynamic efficiency, as the 'regulatory understanding'.
- 3.129. Ofcom stated that, having made one-off adjustments necessary to meet the objective of cost-orientation, the question for Ofcom had been whether the overall impact should have been revenue neutral and whether the average prices should have been left at the same level.¹¹⁹
- 3.130. We understand that Ofcom's reason for framing the question in the terms of 'revenue neutrality' was that it led to an appropriate starting ROCE. We arrive at this understanding for the following reasons. First, in the bilateral hearing, Ofcom stated that its preferred regulatory approach (ie one-off adjustments on DPCN services, 2 Mbit/s

¹¹⁸Bilateral hearing, p48, lines 14–32.

¹¹⁹Bilateral hearing, p47, lines 22–30.

trunk and 2 Mbit/s local ends) led to a reduction in revenues of 4 per cent and a reduction in ROCE of 3 per cent. Ofcom also stated that a regulatory approach whereby it would only adjust prices of DPCN services and 2 Mbit/s trunk (ie only those prices that were significantly out of line with costs) was not chosen as 'Ofcom felt it went too far' and would have delivered over half of the required reductions in average price levels in one go which would undermine the incentive properties of the glide path.¹²⁰

- 3.131. Secondly, we note that when asked whether it had carried out any analysis to demonstrate that the 17 per cent starting ROCE that Ofcom chose was achieved due to BT's improved efficiency over the previous charge period, Ofcom replied that it had not carried out detailed analysis of this kind. Ofcom further explained that although it was aware that BT had improved its relative efficiency, the important point was how the changes Ofcom implemented might influence future behaviour.¹²¹
- 3.132. C&W objected to Ofcom's approach. In C&W's view, there was no justification for what was, in its view, 'rebalancing' following reduction of 2 Mbit/s trunk charges.¹²² Among the reasons C&W gave, C&W asserted that it had not been shown that the last price control had failed to permit BT to recover its efficiently incurred costs and a reasonable rate of return across the TI services that had been subject to a price control (ie excluding trunk). It could therefore not be said that there had been a 'need' to rebalance.¹²³
- 3.133. We agree with C&W: Ofcom has not demonstrated that the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges was necessary for promoting efficiency.
- 3.134. We understand that Ofcom took the decision to allow the increase in the price of 2 Mbit/s local ends because it believed that without that 'rebalancing' the reduction in the price of 2 Mbit/s trunk would have signalled to BT that it could not be confident of retaining future efficiency gains, which would have reduced its incentive to pursue them in other similar situations. Ofcom's argument therefore required us to consider whether the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges was necessary in order to maintain dynamic efficiency incentives when the 2 Mbit/s local end adjustment was considered in the context of the new TI basket, ie with trunk combined after having been reduced to DSAC.
- 3.135. We do not accept this argument. Had Ofcom refused to allow a compensating one-off adjustment to 2 Mbit/s local end prices following the reduction of 2 Mbit/s trunk prices to DSAC, this behaviour would still have been consistent with Ofcom's 'regulatory understanding' with BT, for the following reasons:
- (a) Ofcom has made clear that a one-off adjustment is a regulatory option Ofcom will consider where necessary for cost orientation reasons, and this would include reducing prices to DSAC as it did with 2 Mbit/s trunk pricing. In our view, such an adjustment would or should not have been unexpected by BT.¹²⁴
- (b) Conversely, Ofcom would generally only make one-off adjustments when prices were materially out of line with costs (as in the case of 2 Mbit/s trunk and DPCN services). We therefore do not accept that BT could or should have had an

¹²⁰Bilateral hearing, p10, lines 17–32.

¹²¹Bilateral hearing, p50, lines 3–13.

¹²²Heading introducing §§24–29 of the Reply.

¹²³Reply §27.1

¹²⁴§§3.219 & 4.177 in the LLCC Statement.

expectation that Ofcom would automatically make a compensating adjustment to other prices.¹²⁵

(c) Absent an assessment of the extent to which BT had improved the efficiency of production of 2 Mbit/s trunk in the past, which it had not done, Ofcom was not in a position to conclude whether a rebalancing one-off adjustment to 2 Mbit/s local end prices was necessary in order to maintain the efficiency incentives on BT in relation to the TI basket going forward. (In the light of the comments received from the parties on our provisional determination, we have expanded further in paragraphs 3.168 to 3.178 below on the basis for our reasoning here.)

3.136. As to paragraph 3.135(c), at the time we drafted our provisional determination, we inferred from the parties' references to the PPC Disputes that Ofcom might have had concerns that it would be inappropriate to conduct an analysis of 2 Mbit/s trunk because of the risk of prejudicing the outcome of the PPC Disputes.¹²⁶ We explained in our provisional determination that we did not accept that such concerns should or could displace the requirement under section 47 of the 2003 Act that Ofcom must not set a condition unless it is satisfied that the four limbs of the test under section 47(2) are met, including the requirement that the condition is proportionate to what it is intended to achieve (in this case, the promotion of dynamic efficiency).

3.137. Furthermore, we did not accept that it would have undermined efficiency incentives had Ofcom refused to allow a compensating adjustment to 2 Mbit/s local end prices because it first had to analyse 2 Mbit/s trunk after resolution of the PPC Disputes. In our view, this rationale for postponing the required analysis of 2 Mbit/s trunk would or should not have been unexpected to BT. Consequently, we found that this approach would still have been consistent with Ofcom's 'regulatory understanding' with BT.

3.138. The parties did not provide substantive comments on this issue having reviewed our provisional determination. BT subsequently argued for quite different reasons that the PPC Disputes could not operate as a bar to Ofcom conducting an efficiency analysis.¹²⁷ We note that this discussion did not alter our conclusion in relation to this Reference Question.

3.139. Therefore, in our view Ofcom did not have any proper basis for concluding that the increase to the price of 2 Mbit/s local ends was necessary to 'rebalance' for the reduction to the price of 2 Mbit/s trunk or otherwise to preserve the regulatory understanding, ie in order to maintain the dynamic efficiency incentives of the TI basket going forward.

3.140. We therefore find that Ofcom was wrong to conclude that the increase to 2 Mbit/s local end prices, as part of the one-off adjustments to starting charges, was justified by reference to, or proportionate to, the need to maintain the incentive properties of the charge control applicable to the TI basket.

C&W's further or alternative rebalancing argument

3.141. Finally, we note C&W's further or alternative argument that Ofcom's one-off increases, including those to DPCN local ends and DPCN link, would only have been

¹²⁵ §§3.219 & §4.177 in the LLCC Statement.

¹²⁶ Which had not been decided when the LLCC Statement was published.

¹²⁷ BT advanced these arguments in the context of its submission as the appropriate remedy for the error identified in this Reference Question: see BT's letter of 15 June 2010, paragraph 25.

justified to the extent that the increases were reflected in decreases for other services within the TI basket.¹²⁸

- 3.142. We did not find it easy to understand the basis on which C&W advanced this additional argument. We note that it was introduced in tentative language—C&W suggested that ‘... it may be that Ofcom should ...’—in a footnote to one of the introductory paragraphs to its main arguments,¹²⁹ which we have discussed in paragraphs 3.112 to 3.140 above. This point was then referred to again in C&W’s concluding remarks.¹³⁰
- 3.143. In our view, C&W did not develop this argument sufficiently in its pleadings or provide sufficient evidence to support its contention to make out its claim on this basis. Since this argument also appeared in the context of §§12–29 and given the language used, we infer, broadly speaking, that this was intended to be a further allegation that Ofcom erred as a matter of law or assessment in its understanding or application of the requirements of the 2003 Act. C&W’s comments on this point during the bilateral hearing are consistent with this broad understanding,¹³¹ but we found that they were insufficiently specific as to the legal basis for the claim or the reasoning and evidence supporting it for us meaningfully to engage with this claim.
- 3.144. Therefore, even taking into account C&W’s additional remarks during the hearings, we find that C&W did not sufficiently explain the legal basis for its claim or why it would be necessary to carry out the adjustments to the TI basket following the increases to DPCN prices for Ofcom to satisfy the requirements of the 2003 Act.

Parties’ comments on our provisional determination

- 3.145. As noted in paragraphs 1.47 and 1.48, we issued our provisional determination of the Reference Questions to the parties for comment.
- 3.146. On reading the parties’ comments, we noted that much of the commentary focused on our assessment of Reference Question 2(aa) and the parties adopted widely divergent interpretations of that assessment.
- 3.147. In preparing this final determination, we first considered the parties’ comments, some in more detail (as to which see paragraphs 3.160 to 3.202 below), to see whether they raised any issues which would cause us to alter our provisional conclusion. For the reasons we set out below, we decided that the comments did not cause us to do so. However, we also decided to clarify, where necessary, the drafting of our assessment of this question to remove the scope for any misunderstanding as to what we had determined.
- 3.148. Before turning to consider those comments on Question 2(aa), we should note that we had concerns that some of the comments advanced new arguments or relied on new evidence. Accordingly, we sought submissions in reply from the other parties, and considered all the parties’ contributions carefully in considering whether we should take the new arguments or evidence into account in arriving at our final determination in accordance with the approach outlined in our introduction in paragraphs 1.49 to 1.56. In relation to certain of the arguments and/or evidence included among their comments, the parties argued that they were not new or, if new, of such

¹²⁸Reply, §§13 (fn 11) & 29.

¹²⁹C&W Reply, §13, fn 11.

¹³⁰C&W Reply, §29: ‘... or should only have done so to the extent that they were reflected in decreases for other TI services ...’.

¹³¹C&W bilateral hearing transcript, p33, line 12, to p35, line 1.

importance to the determination of this question that we should take them into account in any event. For reasons on which we elaborate below, we do not consider it necessary to decide these questions because, even if we took those arguments and/or evidence into account in our assessment, they would not alter the conclusions we had reached without them.

Ofcom's comments on our provisional determination

3.149. We note the following three criticisms made by Ofcom of our provisional determination.

3.150. First, referring to the version of paragraph 3.135(c) as it appeared in the provisional determination, Ofcom argued that it *did* have evidence demonstrating that the increase in the price of 2 Mbit/s local ends was proportionate to its objectives (Ofcom's 'first critique').¹³² In particular, Ofcom referred to two examples of evidence going to the question of BT's efficiency:

(a) Ofcom referred first to a number of studies of BT's comparative efficiency which it had commissioned NERA to carry out and which showed that BT had improved its efficiency considerably between 2003/04 and 2006/07 relative to the upper decile of comparator companies ('the NERA studies').¹³³ In Ofcom's view, this evidence was sufficient to demonstrate that the 2 Mbit/s local end price increase was justified and proportionate to the relevant objectives. Ofcom believed that no further efficiency evidence was required.¹³⁴

(b) Ofcom also referred to a note it had prepared and submitted on 7 April 2010 following the bilateral hearing we had had with Ofcom on 19 March 2010 ('the April note'). Based on the results of this analysis which Ofcom conducted following the bilateral hearing, Ofcom concluded that BT had outperformed the 2004 PPC charge control and this outperformance suggested that the package of one-off price adjustments it had implemented, which had been designed to reduce BT's ROCE to 17 per cent, had been reasonable. Ofcom therefore argued that this additional evidence reinforced its argument that its decision was proportionate to its regulatory objectives. We note that the April note was also in part based on the NERA studies.¹³⁵

3.151. Secondly, Ofcom questioned what it understood to be the 'thrust' of our argument, namely that Ofcom had failed to show that the package of one-off adjustments was better with the 2 Mbit/s price increase than it would have been without it, on the basis that such an argument was not open to us in the light of the standard of review we had outlined in paragraphs 1.24 and 1.46 above (Ofcom's 'second critique'). Applying this standard of review, Ofcom maintained that we could only have found that it had erred if we could demonstrate that the package of one-off adjustments, including the 2 Mbit/s local end price increase, was clearly inferior to other available options. Ofcom argued that we had not put forward any reasons why the package of one-off price adjustments would have been better without the 2 Mbit/s local end price increase.¹³⁶

¹³²Ofcom comments on our provisional determination dated 28 May 2010 ('Ofcom's PD comments'), §§4–15.

¹³³Ofcom referred to the NERA studies at §4.179 of the LLCC Statement and in its Defence (Annex A, §§45–46) in the context of C&W's allegations under Ground A. We briefly address those arguments in paragraph 2.25.

¹³⁴Ofcom's PD comments, §8. We note that Ofcom referred to the '1Mb price increase', but we understood that this to be a typographical error, given that the issue under discussion was the price increase to 2 Mbit/s local ends.

¹³⁵Ofcom's PD comments, §§9–11 and the annexed 7 April 2010 note.

¹³⁶Ofcom's PD comments, §§16–19.

3.152. Thirdly, Ofcom argued that the relevant statutory tests should not be applied to an individual element of the package of one-off price adjustments, but to the package as a whole (Ofcom's 'third critique'). Ofcom explained that: its objectives in considering one-off price changes had been to improve the alignment between prices and costs and to reduce the overall level of profitability of TI services, whilst preserving the incentive properties of the price cap; these objectives had been reflected in the three criteria specified which BT's proposals had been required to meet; and the package put forward by BT had satisfied the three criteria. Ofcom noted that we had not challenged Ofcom's objectives or said that Ofcom had erred in setting the three criteria, but we had concluded that one element of BT's proposed package of one-off adjustments was not proportionate.¹³⁷

BT's comments on our provisional determination

3.153. We refer here briefly to certain of the comments received from BT relating to our provisional determination.

3.154. Referring to the version of paragraph 3.135(c) as it appeared in our provisional determination, BT argued that it followed from our conclusion in that subparagraph that we considered that a rebalancing one-off adjustment to 2 Mbit/s local end prices had been capable of being justified, if a properly conducted assessment had been carried out by Ofcom of the extent to which BT had made appropriate efficiency gains in the past. BT stated that it agreed with this conclusion, subject to one caveat.¹³⁸

3.155. That caveat was that it would not have been possible for Ofcom to assess the efficiency of production of 2 Mbit/s trunk in isolation. This was because studies into comparative efficiency levels (such as used by Ofcom) were based on publicly available information which was generally only available at the aggregate level, ie at a higher level of service aggregation than that of a specific service such as 2 Mbit/s trunk. BT submitted that the analysis of BT's network efficiency, conducted by Ofcom in 2004 and 2009 and applied to the price control baskets, could have been used as an estimate of the efficiency of provision of individual services.¹³⁹ We note that the analysis to which BT referred is in part based on the NERA studies.

C&W's comments on our provisional determination

3.156. Finally, we note the following comments from among those received from C&W relating to our provisional determination.

3.157. While broadly agreeing with our conclusions as set out in what is now paragraph 3.135 above, C&W submitted that we had not gone far enough. In C&W's opinion, even if Ofcom had conducted the assessment to which we referred in what is now subparagraph 3.135(c) above, it could not have justified compensatory increases in other charges. C&W argued that to do so would not have been consistent with the regulatory understanding, because 2 Mbit/s trunk had not been subject to a charge control before the charge control now under appeal. Therefore, no costs had been projected for 2 Mbit/s trunk and in no sense had BT outperformed projections for that service.¹⁴⁰

¹³⁷Ofcom's PD comments, §§20–21.

¹³⁸BT's comments on our provisional determination dated 28 May 2010 ('BT's PD comments'), §§7–8.

¹³⁹BT's PD comments, §11.

¹⁴⁰C&W's comments on our provisional determination dated 28 May 2010 ('C&W's PD comments'), pp2–3.

- 3.158. With respect to our analysis in paragraphs 3.141 to 3.144 above, C&W contended that this argument, namely that increases in DPCN charges should have been reflected in decreases in other charges, was part and parcel of the argument raised in paragraphs 12 to 29 of C&W's Reply. C&W believed that its line of argument was adequately raised in its Reply, and confirmed that the legal basis for its argument had been the same as in relation to its argument against the increase to 2 Mbit/s local ends.¹⁴¹
- 3.159. C&W argued that it followed from the 'regulatory understanding' that the regulated entity should not immediately have been relieved of the consequences of under-performance. For the regulator to increase some charges previously subject to control without decreasing others would have the effect of increasing the overall profitability of the totality of the services previously subject to control beyond what was being achieved at the end of the previous control. In so doing, the regulator would have undermined the dynamic efficiency incentives by relieving the regulated entity of (some of) the consequences of under-performing the requirements of the previous price control.¹⁴²

Our response to the parties' comments

- 3.160. We first consider certain of Ofcom's comments, which in our view appear to have been based largely on misconceptions regarding our provisional determination. We seek to correct these misconceptions below and to demonstrate why Ofcom's criticisms are unfounded. We then turn to consider Ofcom's three critiques, referring where appropriate to the particular comments raised by the other parties as well.

- *Misconceptions underlying Ofcom's comments*

- 3.161. In introducing its first critique, Ofcom observed that neither C&W nor we had provided any analysis to show that the price increase to 2 Mbit/s local ends was not necessary to maintain the incentive properties of the charge control. Ofcom noted that our conclusion was instead based on the contention that Ofcom had not done enough to show that the 2 Mbit/s local end price increase was required to meet its objectives.
- 3.162. This betrays what we regard as Ofcom's first misconception, namely that it was for C&W positively to show that the price increase was not necessary to maintain the incentive properties of the charge control. It is true that the burden of proving its case fell on C&W as the appellant. But, as we had explained in our provisional determination (in terms similar to those in paragraph 3.118 above), C&W's allegation was that Ofcom had erred in concluding that the proposed one-off starting charges satisfied the requirement that they were proportionate to what they were intended to achieve, ie Ofcom had failed to meet at least one limb of the statutory test under section 47(2).
- 3.163. C&W therefore had to show Ofcom had failed to meet the relevant statutory test.¹⁴³ It is clear from the statutory wording of that test that Ofcom can only set an SMP condition if it is satisfied that, among other requirements, the condition is proportionate to what it is intended to achieve. It is also clear from leading case authority that the test of necessity forms part of the proportionality assessment.¹⁴⁴ The statutory wording

¹⁴¹C&W's PD comments, pp3–4.

¹⁴²C&W's PD comments, p3.

¹⁴³We set out the test in the introduction in paragraph 1.17 above.

¹⁴⁴See *Daly* cited above in paragraph 3.24.

therefore denies Ofcom the power to set a condition unless it is necessary for it do so.

- 3.164. It was therefore for C&W to show that Ofcom had no basis for deciding that it was necessary to make the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges; it was not for C&W to show that the one-off adjustments *were not* necessary, as Ofcom suggested.
- 3.165. Thus, we held in our provisional determination that Ofcom had erred because we were satisfied that C&W had demonstrated that Ofcom had failed to meet the statutory test. In our view, as we had stated in our provisional determination (in terms similar to paragraphs 3.139 and 3.140 above), Ofcom had no proper basis for deciding that the increase to the price of 2 Mbit/s local ends was necessary to preserve the regulatory understanding, ie to maintain the dynamic efficiency incentives of the TI basket going forward. We therefore determined that Ofcom had been wrong to conclude that the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges was justified by reference to, or proportionate to, the need to maintain the incentive properties of the charge control applicable to the TI basket.
- 3.166. In our view, the central premise of Ofcom's first critique was also unsound, being based on further misconceptions regarding our provisional determination. Referring to the version of paragraph 3.135(c) above as it appeared in our provisional determination, Ofcom asserted that this subparagraph represented our 'key point'.¹⁴⁵ Ofcom further stated that it proceeded on the assumption that we had meant to refer to the efficiency of the services covered by the TI basket rather than solely to 2 Mbit/s trunk.¹⁴⁶
- 3.167. Ofcom's assertions and its assumption are incorrect. We did not suggest in our provisional determination that the observation we made in what is now paragraph 3.135(c) formed the crux of our reasoning in determining this Reference Question, and we do not do so now. We regard it as potentially misleading to refer only to one part of our assessment of this question in isolation in this way.
- 3.168. We consider it particularly important to explain why, contrary to Ofcom's assumption, we had quite deliberately referred to the efficiency of 2 Mbit/s trunk in the specific context of paragraph 3.135(c). The *primary* question we sought to answer in this part of our assessment was whether the increase to 2 Mbit/s local end prices, as part of the one-off adjustments to starting charges, was justified as being necessary in order to avoid undermining the promotion of dynamic efficiency through the use of glide paths, as now set out in paragraph 3.127 above.
- 3.169. In our bilateral hearing with Ofcom, Ofcom's answer to this primary question, ie that relating to justification, was to argue that it chose to endorse a package of one-off adjustments which included not only a reduction to 2 Mbit/s trunk charges but also a partial off-setting increase to 2 Mbit/s local end charges because Ofcom was concerned that to have simply reduced the 2 Mbit/s trunk charge and made no other changes would have undermined the incentive properties of the glide path.¹⁴⁷ Ofcom's reasoning amounted to an argument that the adjustment to the price of 2 Mbit/s local ends was justified as being necessary in order partially to offset or to 'rebalance' for the reduction in 2 Mbit/s trunk charges.

¹⁴⁵Ofcom's PD comments, §6.

¹⁴⁶Ofcom's PD comments, §7.

¹⁴⁷See the hearing transcript, p10, lines 9–32, to which we referred in our provisional determination in terms similar to what is now paragraph 3.98 above.

- 3.170. In our assessment, we therefore sought to test the strength of such a rebalancing argument as an answer to the primary question of how the one-off adjustments were justified. Framed in the light of this rebalancing justification advanced by Ofcom, the primary question became one of whether, had Ofcom refused to allow a compensating one-off adjustment to 2 Mbit/s local end prices following the reduction of 2 Mbit/s trunk prices to DSAC, this behaviour by Ofcom would still have been consistent with Ofcom's 'regulatory understanding' with BT: see what is now paragraph 3.135.
- 3.171. It is this element of our reasoning which appears to have given rise to Ofcom's misunderstanding regarding our reasoning in the provisional determination of this question and which we therefore seek to elucidate here.
- 3.172. We note that, for Ofcom's rebalancing or compensating argument to work as a justification for the increase to 2 Mbit/s local end prices, it would be necessary to show (a) that there was something for which Ofcom had to compensate, ie that the decrease to the price of 2 Mbit/s trunk had deprived BT of an unanticipated efficiency gain,¹⁴⁸ and (b) that the necessary method by which to provide such compensation (ie to produce the desired incentive effects) was to increase the price of 2 Mbit/s local ends.
- 3.173. To be clear, we are not suggesting that it is 'solely' the efficiency of trunk which is relevant in considering the first limb (a) of this two-part test, as Ofcom seemed to have understood us to say.¹⁴⁹ To meet limb (a), it would be necessary to analyse the efficiency of the whole of the new TI basket, ie including the previous unregulated 2 Mbit/s trunk service.¹⁵⁰ Thus, it was because Ofcom had sought to justify the adjustment to the 2 Mbit/s local end price as being necessary partially to offset the adjustment to 2 Mbit/s trunk pricing, that in our view it became necessary for Ofcom to assess the efficiency of 2 Mbit/s trunk before Ofcom could claim to satisfy limb (a) of this test. To put it another way, in order to meet the first limb (a) of this two-part test in the circumstances arising in the LLCC Statement, it would be necessary (albeit not necessarily sufficient) to ask, as a *secondary* question, to what extent if at all the 2 Mbit/s trunk price had been significantly above DSAC as a result of past improvements by BT to the efficiency of provision of 2 Mbit/s trunk.
- 3.174. Accordingly, one of the reasons we gave (in what is now subparagraph 3.135(c)) for rejecting the rebalancing argument advanced by Ofcom was that Ofcom lacked any evidence to show that the decrease to the price of 2 Mbit/s trunk had deprived BT of an unanticipated efficiency gain (ie a necessary step towards meeting limb (a) of the two-part test set out in the preceding paragraph). As we noted in subparagraph 3.135(c), Ofcom had not conducted any assessment of the extent to which BT had improved in the past the efficiency of 2 Mbit/s trunk (ie as a necessary step in assessing the efficiency of the whole of the TI basket). We further note that Ofcom accepted during the bilateral hearing with it that it had not conducted any detailed efficiency analysis to demonstrate that the 17 per cent starting ROCE it had chosen for the new charge control was achieved due to BT's improved efficiency over the previous charge period: see paragraphs 3.105 and 3.131 above. Ofcom had therefore not been in a position to conclude whether a rebalancing one-off adjustment to

¹⁴⁸We note that Ofcom has a general preference for glide paths as opposed to one-off adjustments because, among other things, they allow the regulated companies to keep unanticipated efficiency gains for a longer period. See paragraph 3.68 above for a summary of Ofcom's regulatory approach.

¹⁴⁹Ofcom's PD comments, §7.

¹⁵⁰However, we note in passing here that, because it was a previously unregulated service, there are difficult questions to address about how efficiency should be assessed and how it is used to preserve incentives. See also our discussion in paragraph 3.187 below.

2 Mbit/s local end prices was necessary in order to maintain the efficiency incentives on BT in relation to the TI basket going forward.

- 3.175. It was therefore in the specific context of assessing the particular rebalancing argument advanced by Ofcom that we had referred to the efficiency of 2 Mbit/s trunk. Thus, contrary to Ofcom's assumption in its comments on our provisional determination, we had indeed meant to refer to the efficiency of 2 Mbit/s trunk in this particular part of our analysis.
- 3.176. In making this observation, we were not making any determination as to whether, even if Ofcom did have such evidence, we would consequently accept that the increase to the price of 2 Mbit/s local ends was justified as necessary to maintain the regulatory understanding with BT. Such evidence would only go part of the way to meeting limb (a) of the test set out in paragraph 3.172 above, but it would not alone be sufficient to meet limb (a). It would then further be necessary to meet limb (b). Indeed, we had made clear in the immediately preceding subparagraph of our assessment (what is now subparagraph 3.135(b)) that, in our view, there could not and should not be any expectation that Ofcom would automatically make a compensating or rebalancing adjustment to one price when it decided (on an exceptional basis) to make a one-off adjustment to another price because that other price was materially out of line with costs. Rather, we were emphasizing that Ofcom could hardly expect to rely on an argument that a 'compensating' adjustment was necessary when it did not have any evidence in support of its basic premise (ie that there was any efficiency gain for which to compensate BT).
- 3.177. This point is highly significant because all three parties have commented on the scope of what we had meant in what is now subparagraph 3.135(c), and because it shows why the evidence now adduced by Ofcom and BT regarding BT's efficiency would not affect our conclusion that Ofcom had erred, even if we were minded to take that evidence into account in arriving at our final determination of this question. We consider that evidence further below in paragraph 3.180ff.
- 3.178. In addition, in considering and rejecting Ofcom's 'rebalancing' answer to the primary question of whether the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges was justified, we should also emphasize that the key question in our view remains whether the increase to 2 Mbit/s local end prices, as part of the one-off adjustments to starting charges, was justified as being necessary in order to avoid undermining the promotion of dynamic efficiency through the use of glide paths. The reason why we considered only the rebalancing argument as an answer to this primary question was because this was the only answer which had been suggested to us by Ofcom and to which the parties' arguments had therefore been directed.
- 3.179. We therefore consider (for the reasons we have set out in the foregoing paragraphs 3.168 to 3.178) that Ofcom's first critique was fundamentally undermined by the fact that it proceeded on a false premise. That premise arose from the mistaken assumption Ofcom made in introducing its critique.
- *Ofcom's first critique—evidence of efficiency*
- 3.180. With these observations in mind, we turn now to consider the evidence to which Ofcom referred in its first critique, ie both the NERA studies and Ofcom's own analysis in the April note. In doing so, we refer again to our earlier observations in paragraph 3.148 as to why we are in principle opposed to the admission of further arguments and evidence at such a late stage in the proceedings.

- 3.181. However, we are of the view that neither the NERA studies nor the April note (together, 'Ofcom's further evidence') alter our determination that Ofcom was wrong to conclude that the increase to 2 Mbit/s local end prices, as part of the one-off adjustments to starting charges, was justified as being necessary in order to avoid undermining the promotion of dynamic efficiency through the use of glide paths. Our reasons for maintaining this position, even if we took Ofcom's further evidence into account, are as follows.
- 3.182. As a preliminary point, we note that we did not find it easy to understand whether Ofcom's further evidence was intended to serve (a) as a proxy demonstrating the efficiency of 2 Mbit/s trunk (ie in support of Ofcom's original 'rebalancing' argument) or (b) as evidence going to the primary question (ie whether the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges was justified as being necessary in order to avoid undermining the promotion of dynamic efficiency through the use of glide paths). However, on either analysis, the further evidence does not alter our conclusion that Ofcom had erred.
- 3.183. As regards the former alternative (a), Ofcom's further evidence does not directly address the efficiency of 2 Mbit/s trunk and cannot, in our view, serve as an effective proxy in assessing the efficiency of that service. However, we infer from the fact that Ofcom had thought we were mistaken in referring to the efficiency of 2 Mbit/s trunk that Ofcom intended its further evidence to serve the latter purpose (ie alternative (b) in the foregoing paragraph). We further note that BT in its comments specifically stated that it would not be possible for Ofcom to assess the efficiency of production of 2 Mbit/s trunk in isolation.¹⁵¹ We therefore do not anticipate that our view on this point will come as any surprise to Ofcom or to BT (notwithstanding BT's assertion that Ofcom's further evidence should stand as an estimate for the efficiency of provision of individual services).¹⁵²
- 3.184. As regards the latter alternative (b), we have the following three observations each of which taken alone would support our view that this evidence would or should not alter our conclusion that Ofcom had erred in the manner identified in our assessment of this question. Taken together, they serve to reinforce that viewpoint.
- 3.185. First, we note that C&W has raised a number of questions regarding the robustness of Ofcom's methodology underlying parts of Ofcom's further evidence.¹⁵³ We are not in a position to assess the strength of those substantive objections to Ofcom's further evidence, but we consider it apparent from C&W's criticisms that Ofcom's conclusions are not beyond doubt.
- 3.186. Before turning to our second observation, we note in passing here that the fact that C&W has raised such questions also tends to support our view that we could not properly admit this further evidence, and particularly the April note, without requiring extensive further examination by us and a fuller opportunity for C&W (and BT) to comment on that evidence and for Ofcom to respond. Given the tight timetable to which we have worked in producing this determination, we do not consider that we could have engaged in this further enquiry without rendering it impracticable for us to meet the deadline set by the Tribunal for us to determine the questions referred to us.

¹⁵¹For the record, we should state that studies into comparative efficiency levels, to which BT refers, are not the only means of assessing efficiency. We would therefore hesitate to accept BT's conclusion that 'it would not be possible ... to assess the efficiency of production of 2 Mbit/s trunk in isolation' (cf BT's PD comments, §11). But, since we have not heard any argument on this point and it does not affect our conclusions, we do not consider the point further.

¹⁵²BT's PD comments, §11.

¹⁵³C&W's submissions dated 15 June 2010, submitted at our request following receipt of Ofcom's PD comments, §§25–29.

3.187. Secondly, and in any event, we do not consider there to be a sufficient nexus between Ofcom's further evidence and the increase to 2 Mbit/s local end prices to demonstrate why the increase was necessary to achieve the objective of promoting efficiency, ie how Ofcom had satisfied limb (b) of the two-limbed test identified in paragraph 3.172 above. To put it another way: even if Ofcom's further evidence were to show that BT had improved its efficiency at some general level in the past, it does not show that Ofcom had been right to conclude that BT's proposed increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges was necessary in order to avoid undermining the promotion of dynamic efficiency through the use of glide paths in the future.

3.188. Thirdly, we are concerned that Ofcom now appears to be moving away from its original 'rebalancing' argument in favour of alternative arguments without demonstrating that these alternatives were in its mind when it decided to allow BT's one-off adjustments. This is a merits appeal; it is not an appeal *de novo*. As such, the question of whether Ofcom erred in its decision falls to be assessed on the basis of the information available to Ofcom at the time of its LLCC Statement and the considerations it had in mind at the time of its original decision, rather than as if the decision were taken anew on the basis of the information now available to us.

3.189. In this regard, we note that Ofcom's arguments in its Statement, its Defence and during the bilateral hearing were focused on the 'rebalancing' argument, and the alternative reasoning now adduced appears to have been formulated after the time relevant to our assessment. Indeed, our understanding is that Ofcom only prepared the April note after the bilateral hearing in March 2010 and that the analysis was new and responsive to our criticism that Ofcom had not previously conducted any analysis of the efficiency of production of 2 Mbit/s trunk in the past.¹⁵⁴ As such, Ofcom has given us strong grounds for believing that this alternative argument was one developed after the event. Indeed, as noted above in paragraphs 3.105 and 3.131, Ofcom admitted during the bilateral hearing that it had not carried out any detailed efficiency analysis of this kind prior to making the LLCC Statement.

- *Ofcom's second critique—standard of review*

3.190. In our view, Ofcom's second critique is also undermined by a fundamental misconception regarding the question we were required to answer in this part of our assessment and how we addressed that question in our provisional determination. Contrary to Ofcom's understanding, the 'thrust' of our reasoning was not that Ofcom had failed to show that the package of one-off price adjustments was better with the 2 Mbit/s price increase than it would have been without it. Rather, our reasoning was as clearly stated above, including in what is now paragraphs 3.133 to 3.135: in our view, Ofcom had been wrong to conclude that the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges was necessary in order to maintain dynamic efficiency incentives.

3.191. The question was one of whether Ofcom had erred because it had failed to meet the relevant statutory test, rather than whether Ofcom had erred in the exercise of any discretion: see paragraphs 3.118 to 3.120, 3.124 and 3.127 above. Thus, the question (which we considered in the Introduction from paragraph 1.24ff) of our having to determine whether Ofcom erred in choosing a clearly inferior option from among different options available to it does not arise in this context. Ofcom's second critique is accordingly unfounded.

¹⁵⁴Ofcom's PD comments, §§9–12.

- *Ofcom's third critique—broad versus narrow application of statutory tests*

- 3.192. We consider that Ofcom's third critique is based on a false dichotomy between a broad versus a narrow application of the statutory test under section 47 of the 2003 Act (and, for that matter, section 88).
- 3.193. Ofcom stated its view that the relevant statutory tests should not be applied to an individual element of the package of one-off adjustments, but to the package as a whole.¹⁵⁵ C&W took the contrary view, arguing that the requirements of section 47(2) of the 2003 Act could only sensibly be read to apply to each individual element of the charge control.¹⁵⁶ Neither party provided any detailed textual analysis of the statute to support its view. But C&W did also advance the alternative view that the 2 Mbit/s local end price increase had rendered the whole package of one-off changes disproportionate.¹⁵⁷
- 3.194. We note that the statutory tests under sections 47(2) and 88(1)(b) are expressed as applying to the setting of 'a condition' or 'an SMP condition' respectively. In our view, therefore, the statutory regime requires that Ofcom applied the relevant statutory tests when setting each and every condition in the context of the LLCC Statement.
- 3.195. Section 45 of the 2003 Act describes the various conditions which Ofcom has the power to set, and section 87 relates to conditions about network access including SMP conditions including, in section 87(9)(a), price controls. The specific conditions subject to this part of C&W's appeal (G4, GG4, GH4 and H4) are set out in Annex 9 to the LLCC Statement.¹⁵⁸ The starting charge adjustment values (ie including the one-off adjustments to starting charges under consideration in Reference Question 2(aa)) are set out in Annex D to each of those conditions and form part of each of those conditions.¹⁵⁹
- 3.196. In our view, therefore, the primary question is whether the setting of each of conditions G4, GG4, GH4 and H4 was proportionate to (and therefore necessary for) what it was intended to achieve. But this does not preclude consideration of the particular one-off adjustments which form the basis of the alleged error in this Reference Question.
- 3.197. On the contrary, we do not consider that Ofcom could properly conclude that the setting of each condition was proportionate to and necessary for the objectives it was intended to achieve without being satisfied that the one-off adjustments, being key components of each condition, were themselves necessary for and therefore proportionate to those objectives.
- 3.198. We regard it as misguided to argue, as Ofcom did, that it should or could have satisfied its statutory obligations in setting each condition by considering the package of one-off adjustments without having had regard to the constituent parts of that package. We note that, on Ofcom's own analysis, the statutory tests 'should' be applied to the package of one-off adjustments (which itself forms only part of each condition)¹⁶⁰ and, thus, not merely to the condition as a whole. Such an approach appears to be consistent with our view as stated in the previous paragraph, and contrary to Ofcom's position that it is impermissible or improper to have regard to

¹⁵⁵Ofcom's PD comments, §20.

¹⁵⁶C&W's 15 June 2010 submission, §11.

¹⁵⁷C&W's 15 June 2010 submission, §11.

¹⁵⁸www.ofcom.org.uk/consult/condocs/llcc/llccstatement/llccannex.pdf.

¹⁵⁹See, for example, Annex D to Condition G4 on pp121ff of the Annexes to the LLCC Statement.

¹⁶⁰Ofcom's provisional determination comments, §20.

constituent elements when considering the application of the statutory tests to the whole.

- 3.199. We therefore regard our analysis of the issue arising under this Reference Question as consistent with the statutory regime under the 2003 Act. In setting each of the conditions G4, GG4, GH4 and H4, Ofcom was under an obligation to apply the relevant statutory tests, in particular those under sections 47 and 88 of the 2003 Act. In meeting that obligation, we see it as a mistake to suggest that there had been a binary choice between whether the statutory tests should apply to an individual component of the package of one-off adjustments or, as Ofcom suggested in its comments, to the package of one-off adjustments taken as a whole. Rather, in our view, it was an integral part of that obligation for Ofcom to have had regard to the key components of that condition. In other words, in order to form a view on whether the condition as a whole in this case satisfied the statutory tests, it was necessary to form a view on the proportionality of the one-off adjustment to 2 Mbit/s local ends as a key component of that condition.
- 3.200. In our view, then, Ofcom's third critique is based on a false dichotomy which does not displace our conclusion that it had erred in its application of the statutory test in this instance.

Our response to C&W's comments on the adjustments to DPCN charges

- 3.201. We maintain our conclusion in our provisional determination that C&W was insufficiently specific both as to the legal basis for the claim in relation to the one-off increase to DPCN services, and as to the reasoning and evidence supporting it for us meaningfully to engage with that claim. We consider it telling that C&W was required to 'confirm' that the legal basis for this argument was the same as its argument in relation to 2 Mbit/s local end charges. Had C&W more clearly articulated the legal basis for its claim in its NoA or its Reply, such confirmation would not have been necessary.
- 3.202. However, even if we were to accept C&W's contention that the same legal basis for this argument applied in principle, we are not persuaded that C&W's argument in relation to DPCN charges had been developed sufficiently to show how the legal analysis we have discussed above would operate in practice in relation to the DPCN one-off adjustments; nor are we persuaded that C&W had provided sufficient evidence to demonstrate that Ofcom had erred in concluding that the increases to the prices of DPCN services as part of the one-off adjustments to starting charges were necessary to meet Ofcom's objectives as discussed above.

Determination

- 3.203. For the reasons set out above, we conclude that Ofcom erred in permitting the increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges for the reasons set out in §§12–29 of the Reply.

Reference Question 2(b)

- 3.204. This section (paragraphs 3.204 to 3.269) sets out our conclusions as to whether the TI Price Controls have been set at a level which is inappropriate because Ofcom erred in setting charges for DPCN services and 2 Mbit/s local ends and, in particular, in adjusting some prices and not others within the TI basket for the reasons set out in §§52–56 of the NoA.
- 3.205. §§52–56 set out the second of the four allegations of error made under Ground B of the NoA. Ground B addresses the alleged errors arising from Ofcom having allowed BT to increase certain charges at the start of the LLCC. These particular paragraphs appear under the heading ‘inefficient structure of charges’. In §52, C&W alleged that the structure of charges which resulted from allowing BT to increase charges in this way was inefficient, discriminatory and anti-competitive. We discuss further below the nature of C&W’s allegation on this ground.
- 3.206. For the reasons set out below, our determination is that C&W failed to demonstrate that Ofcom erred in adjusting some prices and not others within the TI basket for the reasons set out in §§52–56 of the NoA.

Summary of Ofcom’s rationale and methodology

- 3.207. We have discussed in general terms, in paragraphs 3.67 to 3.76 above,¹⁶¹ Ofcom’s rationale for deciding to amend the starting charges of some TI services. We elaborate here on those elements of that rationale which are pertinent to our determination of this Reference Question (2(b)).
- 3.208. When regulating baskets of services, Ofcom has a general preference for RPI–X regulation using ‘glide paths’ (whereby charges are aligned with costs over a number of years) to one-off adjustments of charges (whereby charges are adjusted immediately at the beginning of a charge control). This is for two main reasons: (a) glide paths lead to greater stability and predictability as they avoid sudden changes to charges; and (b) glide paths allow BT to keep efficiency gains for longer and thus create an incentive for cost reduction. However, Ofcom does allow one-off price adjustments in cases when charges are materially out of line with costs.¹⁶²
- 3.209. However, in its LLCC Statement, Ofcom allowed a one-off adjustment to the price of 2 Mbit/s trunk decreasing its price to the level of its DSAC.¹⁶³ Ofcom also allowed a one-off adjustment to some DPCN services and 2 Mbit/s local ends¹⁶⁴ increasing their price approximately to the level of their DLRIC for DPCN services and above fully allocated cost (FAC) for 2 Mbit/s local ends based on Ofcom’s calculation of DLRIC and FAC.¹⁶⁵
- 3.210. Ofcom did not carry out any further adjustments to the charging structure. Ofcom did not consider that it would be appropriate to impose a rigid structure on charges. It stated that given a total pot of costs, and subject to appropriate safeguards to prevent anti-competitive or excessive charges, it was up to BT to structure prices to recover costs efficiently.¹⁶⁶

¹⁶¹Concerning Reference Question 2(aa).

¹⁶²LLCC Statement, §4.177.

¹⁶³LLCC Statement, §4.180.

¹⁶⁴LLCC Statement, §§4.182–4.183.

¹⁶⁵Defencem, Annex B, Tables B1 & B2.

¹⁶⁶LLCC Statement, §4.187.

- 3.211. Ofcom proposed the following safeguards: (a) a sub-cap of RPI-0 per cent on the sub-basket of terminating segments; (b) a sub-cap of RPI+5 per cent on each charge; and (c) a sub-cap of RPI-0 per cent on the new PoH charges. These sub-caps were intended to limit the extent of restructuring of individual charges during the period of charge control.¹⁶⁷
- 3.212. Ofcom structured the LLCC to ensure that by the end of the charge control period, the charges BT levied for its leased line services would be broadly in line with what it would expect if BT were to operate in an effectively competitive wholesale market.¹⁶⁸
- 3.213. We note, in the context of alleged inefficiency, that Ofcom decided to combine services into wider baskets rather than regulating individual services. Ofcom explained that applying a charge cap on individual services would result in a very complex set of charge control arrangements and might constrain unduly BT's scope to price efficiently. Ofcom further explained that if it applied separate controls, it would have to decide on the efficient allocation of common costs between the various services which would require detailed modelling of costs and information on the demand for individual services in order to arrive at an 'efficient' allocation of those costs. Ofcom decided against this approach as it would have high information and modelling requirements; it also argued that a combined basket would allow BT to choose its prices to reflect better demand elasticities and respond to demand changes.¹⁶⁹
- 3.214. In setting the TI Price Controls, Ofcom was satisfied that the charge controls were appropriate for the purpose of promoting efficiency for general reasons relating to the incentive properties of an RPI-X price cap and the use of broad baskets.¹⁷⁰ Ofcom was further satisfied that the charge controls were appropriate to ensure sustainable competition, based on its experience of the evolution of the market, as set out in the Business Connectivity Market Review Statement published on 17 January 2008 (BCMR Statement).¹⁷¹ Finally, Ofcom was satisfied that the charge controls did not discriminate unduly against a particular person or particular persons because any CP can access the services at a fixed level of charges.¹⁷² Ofcom did not expressly confirm that it was satisfied that allowing BT's proposed one-off starting price adjustments met these conditions.

Summary of C&W's arguments

- 3.215. As noted above, C&W argued that Ofcom had erred in its conclusion that it was appropriate to allow the increases proposed by BT because the resulting structure of charges is inefficient, discriminatory and anti-competitive.¹⁷³
- 3.216. C&W also argued, in the alternative, that Ofcom had erred in, and/or had not adequately justified, its conclusion that it would not be appropriate, as part of setting charge controls, to assess the efficiency of the structure of charges and adjust them accordingly but rather that it should leave this to BT.¹⁷⁴
- 3.217. C&W particularized its allegations under these heads as follows.

¹⁶⁷ LLCC Statement, §4.188.

¹⁶⁸ LLCC Statement, §4.193.

¹⁶⁹ LLCC Statement, §§4.15–4.16 and LLCC Consultation Document, §§3.79–3.82.

¹⁷⁰ LLCC Statement, §4.281.

¹⁷¹ LLCC Statement, §4.282.

¹⁷² LLCC Statement, §4.294.

¹⁷³ NoA, §52.

¹⁷⁴ NoA, §53.

Efficiency

3.218. C&W provided a number of examples demonstrating that the charge structure was 'so evidently inefficient' that it should have signalled to Ofcom that its analysis was erroneous:

- (a) It was more expensive to use some DPCN circuits than 2 Mbit/s circuits.¹⁷⁵ This would have the following negative consequences for the leased line market. First, new customers would purchase 2 Mbit/s circuits even if they did not need this capacity,¹⁷⁶ leading to overconsumption of 2 Mbit/s circuits and a loss of efficiency.¹⁷⁷ To the extent that C&W would not be able to pass the increases on to its customers, this would also lead to a decrease in downstream competition as C&W would be put at competitive disadvantage.¹⁷⁸ Secondly, existing customers would be penalized for their previous purchasing decision and would not trust price signals in the future.¹⁷⁹
- (b) It was more than three times more expensive for CPs to use each kilometre of DPCN trunk than the same length of DPCN terminating segment. This was illogical because (i) there was little difference between trunk and terminating segments from an engineering perspective, and (ii) if there were a difference, it should be the other way round as the existence of economies of scale should make trunk cheaper than terminating segments.¹⁸⁰
- (c) The per kilometre price of some DPCN trunk products was higher than the per kilometre price of 2 Mbit/s trunk. C&W could not think of a good reason why this should be the case.¹⁸¹
- (d) 2 Mbit/s trunk was just 3.3 per cent more expensive than 2 Mbit/s terminating segments. 2 Mbit/s trunk had been brought down to the DSAC level (ie the highest possible price that was still considered cost-oriented) and 2 Mbit/s terminating segments were below the DSAC level (ie they could be further increased and still be cost-oriented). This strongly indicated that terminating segments were likely to be more expensive than the trunk.¹⁸² Furthermore, there should be no difference between the relative prices of DPCN trunk and terminating segments and non-DPCN trunk and terminating segments.¹⁸³
- (e) The price of 45 Mbit/s trunk was over twice the price of 155 Mbit/s trunk. From a technical perspective, there was no reason why 45 Mbit/s circuit could not be routed over a 155 Mbit/s circuit and therefore no reason why the price of a 45 Mbit/s circuit should be higher than a 155 Mbit/s circuit.¹⁸⁴

3.219. In a letter of 22 March 2010, C&W explained that it did not believe it was necessary for us to reach a determination on any of those apparent anomalies. C&W raised

¹⁷⁵NoA, §54.1.

¹⁷⁶NoA, §54.1(a).

¹⁷⁷C&W W/S Ridyard I §35.

¹⁷⁸C&W W/S Ridyard I §34.

¹⁷⁹NoA, §54.1(b).

¹⁸⁰NoA, §§54.2 & 54.2(a) & (b).

¹⁸¹NoA, §54.2 (c) and C&W W/S Harding I §191.

¹⁸²NoA, §54.2 (d)(i)–(iii) and W/S Harding, §190.

¹⁸³NoA, §54.2 (d)(iv).

¹⁸⁴NoA, §54.3 and C&W W/S Harding I, §192.

them only as issues that should have caused Ofcom to question the price changes being proposed.¹⁸⁵

Discrimination

- 3.220. C&W claimed that there was a risk of discrimination because BT might route its internal DPCN circuits differently using less DPCN trunk.¹⁸⁶ This point is discussed in §55.1 of the NoA and reference is made to §100 of the NoA. With respect to §100, C&W explained that this claim concerned the way circuit charges were calculated and not actual physical circuits. C&W also explained that given the information provided by BT and Ofcom, this point did not have much impact on the appeal.¹⁸⁷
- 3.221. C&W also claimed that since trunk pricing had not been previously subject to formal price control but only cost-orientation obligations, BT had considerably more freedom in its pricing which resulted in a risk of discrimination.¹⁸⁸ C&W further provided the example of 155 Mbit/s trunk of which 90 per cent was consumed by BT.¹⁸⁹

Anti-competitiveness

- 3.222. C&W stated that Ofcom's decision to include trunk in the price control, despite the fact that the European Commission removed trunk from the list of markets presumptively susceptible to ex ante regulation, was a strong indication that BT had not been pricing trunk competitively.¹⁹⁰

Subsequent pleadings, submissions and evidence

- 3.223. In its Reply, C&W explained that it did not suggest that Ofcom should have imposed some hypothetically optimal structure of charges. C&W's point was simply that the apparent illogicality of the structure of charges should have signalled to Ofcom that there were issues with the charges as adjusted, ie that there were likely errors or anomalies.¹⁹¹
- 3.224. During its bilateral hearing, C&W further elaborated on the nature of its arguments with respect to efficiency under this ground of appeal. In particular, C&W clarified the following points:
- (a) C&W agreed that when the prices of services were outside the DLRIC-DSAC range, it was right to bring them back in. However, C&W was concerned about whether something needed to be done to balance the effect of bringing prices within the DLRIC-DSAC range on charges that had been within the scope of the previous charge control.¹⁹²
 - (b) C&W stated that, given that there had been a very significant increase in overall revenues in the previous charge control basket and given that one-off price

¹⁸⁵C&W response to query raised in bilateral meeting on charging anomalies, Letter of 22 March 2010, p2.

¹⁸⁶NoA, §55.1 and reference is made to NoA, §100.

¹⁸⁷Bilateral hearing, p44, lines 8–15.

¹⁸⁸NoA, §55.

¹⁸⁹NoA, §55.2.

¹⁹⁰NoA, §56.

¹⁹¹Reply, §30, which cross-refers to NoA, §54.

¹⁹²Bilateral hearing, p33, lines 17–24.

adjustments took place in the context of a basket, it was not justified to carry out price increases to DLRIC without compensating reductions.¹⁹³

- (c) C&W clarified that it did not claim that, for this charge control, Ofcom was wrong to use one-off adjustments to bring the DPCN prices up to DLRIC. C&W accepted that there were circumstances where Ofcom could decide that a step change was appropriate. Equally, C&W accepted that the glide path could also be appropriate as it was necessary to balance efficiency gains against the effect on end-users.¹⁹⁴
- (d) C&W explained that it did not suggest that Ofcom should micro-manage BT's prices, but that the apparent anomalies in the charging structure should have alerted Ofcom to the possibility that the resulting structure of charges was inefficient when considering whether to accept BT's proposals to increase charges.¹⁹⁵
- (e) When asked what outcome C&W was seeking in terms of the structure of charges, C&W responded that it did not seek a particular structure of charges and did not seek a remedy simply on the basis of that argument. It stated: 'The argument is simply one in support of the other points about starting charges.'¹⁹⁶

Verizon's intervention

- 3.225. Verizon stated that the new charges, following the one-off changes to starting charges, reflected a more efficient structure than the old charges.¹⁹⁷
- 3.226. Verizon also stated that the price reduction for 2 Mbit/s trunk was necessary to bring these charges closer into line with a reasonable measure of efficiently incurred costs. This would bring significant benefits to industry and ultimately consumers. However, this reduction was unrelated to the determination of an efficiently incurred cost for the DPCN services.¹⁹⁸

Ofcom's Defence

- 3.227. Ofcom submitted that it was possible to identify a number of different aspects to efficiency. The two broad categories were 'static' efficiency and 'dynamic' efficiency. Static efficiency included 'allocative' and 'productive' efficiency. Allocative efficiency required that prices were close to marginal costs. Productive efficiency required that the costs of production of given goods were minimized. Dynamic efficiency referred to encouraging entry, innovation and reduction of costs over time.¹⁹⁹
- 3.228. Ofcom noted that marginal cost pricing did not allow a firm to recover its fixed or common costs. Since BT had large common costs, pricing at marginal costs would not allow it to recover all its costs. BT therefore had to price above marginal costs which in turn meant that some allocative inefficiency was unavoidable.²⁰⁰

¹⁹³Bilateral hearing, p33, line 25, to p34, line 10.

¹⁹⁴Bilateral hearing, p34, lines 18–25.

¹⁹⁵Bilateral hearing, p31, line 26, to p32, line 4.

¹⁹⁶Bilateral hearing, p37, lines 2–9.

¹⁹⁷Verizon Sol, §12.

¹⁹⁸Verizon Sol, §§14–15.

¹⁹⁹Defence, Annex B, §§20(a), 97, 100.

²⁰⁰Defence, Annex B, §101.

- 3.229. Ofcom explained that in industries with a very large proportion of common costs which were not incremental to a particular service, the key question regarding efficiency was how those common costs were recovered. It was theoretically possible to recover these costs by spreading them across all units of output, but this result could be improved upon by creating tariff structures which brought the price that consumers faced closer to the marginal cost, in particular two-part tariffs or Ramsey pricing.²⁰¹
- 3.230. Ofcom further explained that it was hardly surprising that there were inefficiencies in the tariff structure, not least because terminating segment prices had been subject to charge controls for a number of years, whereas trunk prices had not.²⁰²
- 3.231. The key question therefore was not whether there were some inefficiencies in the pricing structure but whether Ofcom could and should require that it be immediately changed to a supposedly more efficient structure.²⁰³
- 3.232. In an effectively competitive market, one would expect efficient price levels to lie between the LRIC floor and the SAC ceiling. In the present case, DLRIC and DSAC could be used as proxies for those floors and ceilings.²⁰⁴ As Ofcom's evidence shows, some TI prices were markedly outside the DLRIC-DSAC boundary.²⁰⁵ If prices are outside the DLRIC-DSAC boundary, the risk of static and dynamic inefficiency increases. In such cases, Ofcom may consider implementing one-off adjustments.²⁰⁶
- 3.233. Ofcom stated that C&W attributed to Ofcom a responsibility that Ofcom did not have. C&W seemed to suggest that Ofcom had a duty to ensure that each and every charge within the scope of the charge control was set at an efficient level. This would amount to overly intrusive regulation. It would also be impracticable and disproportionate. It would be impracticable because Ofcom did not have access to the information that would be required to set prices in a fully efficient manner. It would be disproportionate because the interests of consumers could be furthered and Ofcom's statutory duties fulfilled without the need for Ofcom to set prices for all services subject to regulation.²⁰⁷
- 3.234. Ofcom said that, in general, it did not believe in second-guessing detailed pricing decisions of BT. It should rather apply a principle of light touch regulation.²⁰⁸
- 3.235. Ofcom explained that BT was likely to have much better knowledge of the way demand responded to price than Ofcom, and was able to respond to changes in demand and costs far more quickly. Broad baskets gave BT the freedom and the incentive to set service prices efficiently, as BT had greater scope to 'discover' a pricing structure that increased demand for its services (within the constraints of the charge control cap). Although BT might have an incentive to price in a manner that favoured its downstream operations, it was better to prevent BT from setting charges which could harm competition by means of sub-caps and appropriate SMP conditions.²⁰⁹

²⁰¹Bilateral hearing, p24, line 17, to p25, line 5.

²⁰²Defence, §179.

²⁰³Defence, Annex B, §92.

²⁰⁴Defence, §176.

²⁰⁵Defence, Annex B, Table B1 & §30.

²⁰⁶Defence, Annex B, §43.

²⁰⁷Defence, §§174–176.

²⁰⁸Defence, Annex B, §§122–127.

²⁰⁹Defence, Annex B, §128 (b), (c) & (e).

- 3.236. As regarded the specific alleged anomalies cited by C&W, Ofcom accepted that, at first sight, it could be seen as difficult to argue that a single circuit of low bandwidth should be charged at more than an equivalent higher bandwidth circuit on static efficiency grounds, although in certain cases there may be a dynamic efficiency argument. In any case, Ofcom did not believe that it was necessary for it to require BT to change the prices of circuits for some bandwidths purely in order to effect a change in the price relative to circuits of different bandwidths at the start of the control period. This was particularly so when trunk circuits were being made subject to a charge control for the first time and given Ofcom's strong belief that efficiency incentives should be given a chance to work before more intrusive options were considered.²¹⁰
- 3.237. However, Ofcom clarified that the available cost information regarding DPCN circuits and 2 Mbit/s circuits indicated that the cost of providing DPCN circuits was higher than the cost of providing a 2 Mbit/s local end.²¹¹ Ofcom further suggested that it was possible that the costs of 45 Mbit/s trunk circuits were above those of 155 Mbit/s circuits.²¹²
- 3.238. Ofcom argued that C&W's claim that the structure of charges was discriminatory and its contention that the structure distorted competition depended on its argument in relation to efficiency.²¹³ As to the risk of undue discrimination occurring, Ofcom noted that BT was subject to an obligation not to price its PPC services in a way that discriminated unduly against other operators. It argued that this meant that C&W faced the same prices for a given trunk or TISBO circuit as BT's downstream operations and other providers.²¹⁴

BT's Sol

- 3.239. BT focused on the specific examples of alleged anomalous pricing cited by C&W.
- 3.240. BT submitted that C&W relied on the contention that there should be a simple relationship between the cost of a circuit and its bandwidth. According to BT, this indicated a superficial understanding of the technology used to provide leased lines.²¹⁵ For instance, the difference in technology indicated that it made perfect sense that DPCN circuits at 512 kbits/s were more expensive than 2 Mbit/s links.²¹⁶
- 3.241. BT also submitted that C&W's comparison between the prices of DPCN trunk and DPCN terminating segments was inappropriate. The DPCN technology did not utilize trunk. Direct comparison of transmission costs using different technologies was simply not possible.²¹⁷
- 3.242. BT agreed with C&W that the differential in prices between trunk and terminating segments might not reflect an equal recovery of fixed and common costs. However, BT had not been free to adjust prices as it would wish due to the imposition of a charge control that required reductions in prices of terminating segments which had been significantly under-priced. The new pricing structure rebalanced the charges

²¹⁰Defence, Annex B, §111.

²¹¹Defence, §177 & Annex B, §116.

²¹²Defence, Annex B, fn 23 (cf §111).

²¹³Defence, §180.

²¹⁴Defence, Annex B, §135.

²¹⁵BT W/S Morden I, §44.

²¹⁶BT W/S Morden I, §71.

²¹⁷BT Sol, §15(b).

between trunk and terminating segments and aligned prices more closely with costs.²¹⁸

3.243. BT submitted that there was no correlation between cost ratios of trunk to terminating at different bandwidths.²¹⁹

3.244. BT stated that C&W's comparison between the prices of 34/45 Mbit/s trunk and 155 Mbit/s trunk failed to take into account the difference in technology behind the provision of those networks.²²⁰

Assessment

3.245. C&W's primary argument under this head of its appeal was that Ofcom had erred in its conclusion that it was appropriate to allow the increases proposed by BT because the resulting structure of charges was inefficient, discriminatory and anti-competitive.²²¹

3.246. C&W did not expressly refer in §§52–56 of its NoA to Ofcom's duties under the 2003 Act. Those duties are set out in the Legal Schedule to the NoA. They include the requirement, under section 88(1)(b) of the 2003 Act, that Ofcom is not to set an SMP condition except where, among other circumstances, it appears to Ofcom that the setting of the condition is appropriate for the purposes of promoting efficiency and promoting sustainable competition. The duties also include the requirement, under section 47(2)(b) of the 2003 Act, that Ofcom is not to set a condition unless it is satisfied that, among other considerations, the condition is not such as to discriminate unduly against particular persons or a particular description of persons.

3.247. We therefore understand from the language used in §52 of its NoA that C&W was alleging that Ofcom had made an error of law and/or an error of assessment in arriving at the conclusion that the LLCC was appropriate in light of the requirements of sections 47 and 88 of the 2003 Act. In this regard, we note that C&W alleged that Ofcom erred in concluding that it was appropriate to allow BT's proposed increases to starting charges given that they resulted in a structure of charges which was not efficient, which did not promote competition, and which was discriminatory.

Efficiency

3.248. In our view, the relevant question for us under this ground is whether C&W has demonstrated that Ofcom erred in its conclusion that the setting of the LLCC including BT's proposed one-off increases to starting charges was appropriate for the purposes of promoting efficiency.

3.249. We found that both C&W and Ofcom agreed on a number of key points with respect to the efficiency (or otherwise) of the structure of charges resulting from Ofcom having allowed BT to make changes to certain charges at the start of the LLCC:

(a) There were some inefficiencies in the charge structure.

(b) One-off adjustments to charges could in principle be made to bring charges between DLRIC and DSAC.

²¹⁸BT W/S Morden I, §§79–81.

²¹⁹BT W/S Morden I, §83.

²²⁰BT Sol, §15(c) & BT W/S Morden I, §85.

²²¹NoA, §52.

(c) Ofcom should not 'micro-manage' the charge structure.

3.250. The parties diverge mainly on whether Ofcom should have carried out further re-balancing of the charge structure following its one-off adjustments in order to satisfy itself that the resulting structure of charges was appropriate for the promotion of efficiency.

3.251. In our view, there are several deficiencies in C&W's case on this ground.

3.252. First, C&W did not specify what it meant by efficiency. As Ofcom submitted, economic theory recognizes different types of efficiency by which the LLCC could be assessed. As Ofcom explained, these were static efficiency (which could be further divided into allocative and productive efficiency) and dynamic efficiency. C&W did not specify which of these possible inefficiencies it had in mind. This is important, since, as Ofcom explained, in an industry with large common cost, marginal cost pricing was not possible and therefore some allocative inefficiency could not be avoided. Notwithstanding this lack of clarity, we understood from our reading of C&W's pleadings and evidence, and in particular the explanation provided by Mr Ridyard,²²² that C&W's claim in fact related to the relative cost-reflectiveness of charges, ie a claim that a service that is more costly to provide should be priced at a higher level than a service that is less costly to provide. A lack of such relative cost-reflectiveness might have a negative impact on efficiency. It could encourage inefficient consumption and thus lead to a loss of allocative efficiency in the short run and distort future investment and thus lead to a loss of dynamic efficiency in the long run.

3.253. However, we are not persuaded by such an argument for the following reasons:

(a) Crucially, C&W's allegation on this ground depends on inference: C&W sought to demonstrate that Ofcom was wrong to conclude that the structure of starting charges in the LLCC was appropriate for promoting efficiency on the basis that it should have been evident to Ofcom that such a conclusion was erroneous in light of a series of apparent anomalies in the resulting structure of those charges.

(b) C&W's argument relies on an assumption that the 'correct' cost for every TISBO service is either known or knowable. The apparent anomalies arise when a service with a lower 'correct' cost has a higher price than a product with a higher 'correct' cost. However, in an industry with large common costs, the 'correct' cost of each product is very difficult to know. It is therefore difficult to demonstrate that Ofcom's conclusion regarding the appropriateness of the structure of starting charges to the promotion of efficiency was incorrect solely on the basis that certain charges appeared anomalous. We note that C&W did not advance any alternative to Ofcom's approach of ensuring that prices are within the DLRIC/DSAC boundaries to remain cost-oriented and that the prices are regulated through broad baskets.

(c) Moreover, and subject to our reservation about the ease of establishing the 'correct' cost of any TISBO product, it was not clear that some of the apparent anomalies in the charge structure that C&W highlighted were indeed anomalies. In particular, it is possible that at least some higher bandwidth services are less costly to provide than lower bandwidth services. For example, it might be more expensive for BT to provide DPCN terminating segments than 2 Mbit/s terminating segments.²²³ Similarly, it would appear difficult to make comparisons between

²²²C&W W/S Ridyard I, §§34–35.

²²³Defence, Annex B, §177, §116, and BT W/S Morden I, §71.

DPCN and non-DPCN services as they are underpinned by different technologies. C&W did not adequately address this issue.

(d) Furthermore, C&W did not provide any other evidence to support its allegation that Ofcom erred in its conclusion that the resulting structure of starting charges was appropriate for promoting efficiency. Besides the alleged anomalous pricing examples, C&W did not explain what was inappropriate about the structure of charges from the perspective of the promotion of efficiency or, indeed, what a more appropriate structure would have been.

3.254. We therefore reject the arguments advanced by C&W in §§52–56 of the NoA with respect to the alleged inefficiency of the structure of starting charges. We further note the following factors which reinforce our conclusion in that regard:

(a) C&W expressly stated that it did not want Ofcom to micro-manage the charge structure. However, it is clear that in order to achieve a charge structure that would eliminate all the supposed anomalies that C&W identified, such detailed charge structure would be necessary.

(b) C&W argued that it was not necessary for us to reach a determination on any of the apparent anomalies in the appeal.

(c) C&W did not seek a particular structure of charges or a remedy on the basis of the arguments set out in §§52–56 of the NoA and said that the argument was simply one in support of the other points about starting charges.

3.255. For these reasons, we find that C&W has not demonstrated that Ofcom erred in its conclusion that the setting of the LLCC including BT's proposed one-off starting charges was appropriate for the purposes of promoting efficiency.

Discrimination

3.256. C&W's argument with respect to the alleged discrimination put forward in §55.1 of the NoA referred to a point made in §100 of the NoA and will be addressed under Reference Question 3(b).

3.257. C&W put forward another argument with respect to discrimination in §§55 and 55.2 of the NoA. In §55 of the NoA, C&W put forward a general proposition that since trunk pricing had not been previously subject to formal price control but only cost-orientation obligations, BT had considerably more freedom in its pricing which resulted in a risk of discrimination. In §55.2 of the NoA, C&W gave as an example of such risk of discrimination the fact that 90 per cent of 155 Mbit/s trunk was consumed by BT.

3.258. In relation to Reference Question 2(b), C&W did not particularize a claim that Ofcom had taken a decision that was unduly discriminatory in contravention of section 47(2)(b) of the 2003 Act. Rather the C&W arguments go to BT's incentives to discriminate. We note that it is unclear from the wording of §§55 and 55.2 of the NoA how exactly the risk of discrimination can materialize or more simply what C&W's claim with respect to discrimination is, nor do these paragraphs address the adequacy or otherwise of BT's obligations of non-discrimination in addressing this risk.

3.259. However, when §§55 and 55.2 of the NoA are read in conjunction with §54.3 of the NoA, the following argument seems to emerge: the price of 45 Mbit/s trunk is over

twice the price of 155 Mbit/s trunk even though there does not appear to be any reason why it should be so.²²⁴ Since BT uses the 155 Mbit/s trunk more than any OCP, it has priced it at a lower level than products that it does not use so heavily and thus it has discriminated against its rivals.

3.260. We note that this is our interpretation and that C&W has not specified its claim. However, even if C&W had argued this case clearly, we would still not be convinced by this argument. First, it relies on a presumption that the 'correct' level of cost underpinning each TISBO product is known or knowable. As we discussed in paragraph 3.253, we are not convinced that this is the case and C&W did not present any evidence that it is. Second, this argument also relies on the fact that BT consumes 155 Mbit/s trunk disproportionately more than other CPs. We note that this is the case for all trunk products, including 45 Mbit/s trunk. Therefore the comparison between the use of 155 Mbit/s trunk and 45 Mbit/s trunk does not provide any evidence to support C&W's claim regarding discrimination.

Anti-competitiveness

3.261. As noted above, in support of its allegation that the structure of charges resulting from Ofcom's decision to allow BT's proposed price increases was anti-competitive, C&W referred to Ofcom's determination that trunk markets remained uncompetitive and that price controls were now required, despite Ofcom having previously deemed such markets prospectively competitive and despite the European Commission removing trunk from the list of markets presumptively susceptible to ex ante regulation. C&W relied on this determination on the basis that it allegedly constituted 'a strong indication' that BT had not been pricing trunk competitively. C&W did not rely on any other evidence to support this allegation.

3.262. In our view, a statement that it was likely that the trunk had been priced anti-competitively prior to Ofcom's decision to place it in the TI basket is not sufficient evidence to support the allegation that the structure of charges following Ofcom's acceptance of BT's price increases is anti-competitive or that Ofcom could be said to have erred in its conclusion that the resulting structure of charges was appropriate for the promotion of sustainable competition.

Delegation to BT

3.263. As noted above, C&W argued in the alternative that Ofcom had erred in, and/or had not adequately justified, its conclusion that it would not be appropriate, as part of the process of setting charge controls, to assess the efficiency of the structure on charges and adjust them accordingly but rather that it should leave this to BT.²²⁵

3.264. In our determination of Question 4(b)(i) below, we explain the principles we considered important in determining whether Ofcom had properly delegated decision-making powers to BT. We explain there that the nature of the decision, its consequences, the relevance of policy choices, and the scope for BT to engage in strategic decision-making to the disadvantage of its competitors are all matters that should be considered in deciding the issue.

3.265. In the LLCC Statement in §4.181, Ofcom explained that it was not appropriate for the charge controls to impose a rigid structure on the relative prices of different PPC

²²⁴NoA, §54.3.

²²⁵NoA, §53.

services because BT was better placed to make the appropriate pricing decisions to recover common costs efficiently within the complementary constraints of the overall TI charge controls and BT's cost orientation obligations.

- 3.266. It is plain from this explanation that Ofcom not only considered that BT was better placed to make the relevant decision, but that it would do so under constraints. Ofcom had given careful thought to the ability of BT to set prices within a single basket and thereby engage in strategic behaviour to the disadvantage of its competitors. In consequence, Ofcom had imposed sub-caps to mitigate those competition concerns, as it explained in the LLCC Statement in §§4.21–4.24.
- 3.267. Thus, although Ofcom had permitted BT to make pricing decisions to recover common costs, it had done so in circumstances where it judged that BT would be most likely to do so efficiently and subject to significant constraints that would mitigate the risks of BT using this pricing power to bring about anti-competitive outcomes. Here Ofcom was willing to allow BT to make certain pricing decisions not because Ofcom had failed to secure the required information to do so, but because BT was better placed to make the decision. Ofcom was alive to the risks of competitive detriment to BT's competitors but had determined that the constraints it had imposed upon BT, which were there to mitigate competition concerns, would be effective.
- 3.268. In these circumstances, we see no basis to fault Ofcom. It had permitted the delegation to BT on the basis that pricing would be efficient and that the risks to competition would be mitigated by the constraints under which BT must act, which constraints had been carefully constructed by Ofcom for this purpose. The delegation by Ofcom would seem to us to be a sensible division of powers that did not offend against the requirements of the 2003 Act, but rather reflected a considered judgment by Ofcom consonant with the purposes of the 2003 Act.

Determination

- 3.269. For the reasons set out above, our determination is that C&W failed to demonstrate that Ofcom erred in adjusting some prices and not others within the TI basket for the reasons set out in §§52–56 of the NoA.

Reference Question 2(c)

- 3.270. This section (paragraphs 3.270 to 3.297) sets out our conclusions as to whether Ofcom erred in its assessment of the DLRIC for the DPCN services and 2 Mbit/s local ends because it should have made further and/or different adjustments to the figures used in its costs model for the reasons set out in §§57–60 of the NoA.²²⁶
- 3.271. For the reasons set out below and for the further reasons set out in our determination of Reference Questions 2(a)(i), 2(a)(ii), 2(aa) and 3(c), we do not consider that Ofcom erred in its assessment of the DLRIC for the DPCN services and 2 Mbit/s local ends because it should have made further and/or different adjustments to the figures used in its costs model for the reasons set out in §§57–60 of the NoA.

Summary of Ofcom's rationale and methodology

- 3.272. In Annex 6 to the LLCC Statement, Ofcom explained that its adjusted 2007/08 costs, revenues and volumes for each of the TISBO services falling within the scope of the LLCC provided the financial evidence on which it had assessed the case for one-off price adjustments at the outset of the control.²²⁷
- 3.273. The starting point for Ofcom's calculation of its adjustments to the TISBO services was the financial information included in BT's RFS and additional financial statements (AFS).²²⁸ Ofcom used the 2007/08 RFS as the basis for the LLCC Statement.²²⁹
- 3.274. Ofcom then made adjustments to the data compiled from the RFS and AFS at the TISBO service level in order to reflect a more reliable and consistent accounting view and to reflect Ofcom's policy position on, for example, technological neutrality.²³⁰
- 3.275. Table 3.3 below²³¹ provides an overview of the adjustments Ofcom made at the TI basket level, which were also made at the TISBO services level. The result of the adjustments to the TISBO services level was, however, not published.

²²⁶Reference Question 2(c).

²²⁷LLCC Statement, Annex, §§A6.4 & A6.5.

²²⁸LLCC Statement, Annex, §§A6.29 & A6.30.

²²⁹Defence, Annex C, §13.

²³⁰LLCC Statement, Annex, §§A6.2–A6.3.

²³¹LLCC Statement, Annex, Table A6.3.

TABLE 3.3 T1 basket: 2007/08 aggregate adjustments step by step

	Order	T1 basket services (£m)		2007/08		ROCE
		Revenues	Costs	MCE	Costs Incl ROCE	
As reported		816	649	1,571	822	11%
Adjustments						
Third party customer local end (LE) equipment	1	-	(38)	(167)	(56)	
Point of handover (PoH) link costs	2	-	(12)	-	(12)	
Current cost normalisation	3	-	41	-	41	
Regulatory asset value (RAV)	4	-	(4)	(19)	(6)	
Technological neutrality (21CN)	5	-	(12)	(157)	(29)	
Payment terms	6	-	-	(34)	(4)	
Ancillary services	7	-	(21)	-	(21)	
Site Connect	8	(45)	(23)	(37)	(27)	
Resilient circuit costs	9	-	(29)	-	(29)	
Third party customer LE equipment selling costs	10	-	(6)	-	(6)	
Internal revenues	11	8	-	-	-	
Reduction in price of (external) local ends	12	(12)	-	-	-	
PoH circuit rental costs & charges	13	12	12	-	12	
After adjustments		779	558	1,157	685	19%
CLZ local ends repriced as non-CLZ (net of PoH)	14	6	-	-	-	
BT wholesale price changes: net change	14	(10)	-	-	-	
After proposed BT wholesale price changes		774	558	1,157	685	

Source: Ofcom.

3.276. The adjustments in Table 3.3 relevant to this appeal are adjustments 3 (the current cost normalization (the CCA adjustment)), 5 (the 21CN (21st century network) adjustment) and 8 (the SiteConnect adjustment).²³² (We note that C&W made further allegations of error with respect to these adjustments, which we address below in our determination of Reference Question 3(c).)²³³

3.277. Ofcom made no adjustments for the allocation of corporate overheads to overseas operations, the allocation of copper costs and RBS backhaul.

3.278. Where Ofcom made adjustments, it did so to the FAC, the DSAC and the DLRIC for each TISBO service. As a first step, Ofcom calculated its own view of the FAC for each service. Ofcom then calculated the related DSAC and DLRIC using the same ratio of DSAC and DLRIC to FAC as used in the RFS.²³⁴

3.279. Ofcom used the adjusted FAC, DSAC and DLRIC information for individual TI services in its assessment of the reasonableness of the one-off price adjustments.

Summary of C&W's arguments

3.280. C&W argued that Ofcom should have made further adjustments to the figures used in its LLCC model or adjustments different from those it actually chose to make. C&W noted that Ofcom's choice of adjustments affected not only the setting of the glide path (which is addressed in Reference Question 3(c)) but also the assessment of the price increases adopted at the start of the charge control.²³⁵

²³²See Table A6.2 in the LLCC Statement, Annex.

²³³See paragraph 4.55ff.

²³⁴p41 in Ofcom modelling transcript, lines 11–15.

²³⁵NoA, §§57–58.

- 3.281. In particular, C&W argued that Ofcom's errors led to an overstatement of DLRIC for relevant services and an understatement of the profitability of those services on the basis of the ROCE.²³⁶
- 3.282. C&W claimed that Ofcom should have made the following five adjustments to the FAC, DSAC and DLRIC of the services in the TI basket:²³⁷
- (a) Ofcom should have removed from the TI basket corporate overheads relating to BT's overseas operations;²³⁸
 - (b) Ofcom should have removed more cost relating to 21CN;²³⁹
 - (c) Ofcom should have allocated less copper cost to the PPC services;²⁴⁰
 - (d) Ofcom should not have made the current cost accounting adjustment (CCA adjustment);²⁴¹ and
 - (e) Ofcom should have allocated more costs to Site Connect and RBS backhaul.²⁴²
- 3.283. Making these downward adjustments would have resulted in a lower DLRIC for the TISBO services. They would therefore have further diminished the extent to which it could have been said that the one-off increases to starting charges were necessary to achieve cost orientation or avoid the recovery of a ROCE for the TI basket below BT's WACC.²⁴³

Summary of Ofcom's arguments

- 3.284. Ofcom addressed C&W's arguments with respect to Ofcom's adjustments to the 2007/08 RFS data in Annex C of the Defence. We summarize and assess the relative merit of those arguments at the TI basket level in our determination of Reference Question 3(c) below.²⁴⁴
- 3.285. In relation to C&W's arguments in §§57–60 of the NoA as to the impact of these adjustments on Ofcom's objectives in setting the one-off increases to starting charges, Ofcom made the following particular points:
- (a) Ofcom emphasized again that C&W was incorrect in its assumption that, when deciding whether to allow the price increases, Ofcom's only objectives were (i) to ensure that the resulting charges were cost-oriented and (ii) that the ROCE for the TI basket did not fall below the cost of capital.²⁴⁵ Rather, Ofcom had identified a number of specific requirements which BT should meet in putting forward its proposals for one-off increases to starting charges.²⁴⁶ (We have discussed those requirements above in our determination of Reference Question 2(a)(i).)²⁴⁷

²³⁶NoA, §58.

²³⁷NoA, §104. Each of these adjustments is discussed in more detail in our determination of Reference Question 3(c).

²³⁸NoA, §104.1.

²³⁹NoA, §§104.2 & 104.3.

²⁴⁰NoA, §104.4.

²⁴¹NoA, §104.5. See also NoA §60: C&W claimed that the CCA normalization adjustment was inappropriate when considering the level of starting charges.

²⁴²NoA, §104.6.

²⁴³NoA, §§4.2(c), 47.3.

²⁴⁴See paragraph 4.55ff.

²⁴⁵Defence, Annex B, §143 (cf also §154).

²⁴⁶Defence, Annex B, §147 (cross-referring to §32, as to which see our provisional determination of Reference Question 2(a)(i)).

²⁴⁷See paragraph 3.14.

- (b) Ofcom explained that in its view, BT's proposed one-off increases to starting charges were reasonable in the light of those requirements. The price increase proposed for 2 Mbit/s local ends remained broadly in the middle of the range between adjusted DLRIC and adjusted DSAC. The price increases proposed for 64 kbit/s link and local ends were still below BT's estimated DLRIC floor for those services, but this was because BT had chosen to cap the price increase at 100 per cent because it had concerns about how customers would react to increases to prices by any greater increment.²⁴⁸
- (c) Similarly, Ofcom argued that the allegation that it had erred in making a CCA normalization adjustment was also based on an erroneous assumption as to Ofcom's objectives when deciding whether to accept BT's proposed price increases as even without making the adjustment Ofcom would not have deemed the price increases unreasonable and that in any case the CCA normalization adjustment was appropriate (as the price adjustments were a result of an assessment whether prices going forward were more closely aligned with costs²⁴⁹).²⁵⁰

Assessment

- 3.286. We note that §§57–60 of the NoA allege errors not only in respect of Ofcom's assessment of the DLRIC for DPCN services and 2 Mbit/s local ends, but also the profitability of those services on the basis of their return on mean capital employed.²⁵¹ There is therefore a disparity between the wording of Reference Question 2(c), which refers only to the allegation of error in the assessment of the DLRIC, and the paragraphs to which the Reference Question refers, ie §§57–60.
- 3.287. We regard this infelicity in the drafting of the Reference Question as an oversight and propose to address in this section of our determination of the questions referred to us the substance of the allegations in §§57–60, including the allegations with respect to the profitability of those services on the basis of return on mean capital employed (ROCE).
- 3.288. With this in mind, we note further that the allegations set out in §§57–60 of the NoA operate in two ways.

Alleged errors in making adjustments to figures used in the model

- 3.289. First, C&W alleged that Ofcom erred in making the adjustments it did to the figures used in its model. In making this allegation, C&W cross-referred to §104 of the NoA.²⁵² §104 forms part of C&W's challenge, under Ground C of its NoA, to the inputs used by Ofcom in its model. This challenge forms the basis of a separate Reference Question, 3(c). As noted above, we address that challenge in our determination of Reference Question 3(c) and do not discuss it further here.
- 3.290. Reference Question 3(c) does not address the particular additional contention in §60 of the NoA regarding the CCA normalization adjustment. However, for the reasons given in paragraph 3.295, we do not need to make a decision on what the exact level of DLRIC is and we therefore do not need to consider in the context of Reference

²⁴⁸Defence, Annex B, §§149–151.

²⁴⁹Defence, Annex B §154.

²⁵⁰Defence, Annex B §153.

²⁵¹Cf NoA, §58.

²⁵²Cf NoA, §§57, 59.

Question 2(c) C&W's proposed adjustments to the individual TISBO service DLRIC levels, including an assessment of the CCA normalization adjustment.

Alleged consequences had Ofcom made different adjustments

- 3.291. Secondly, C&W alleged that, had Ofcom made the 'correct' adjustments, those adjustments would have further diminished the extent to which it could have been said that the one-off increases to starting charges were necessary to achieve cost orientation or to avoid the recovery of a ROCE for the TI basket below BT's WACC.²⁵³ This allegation was therefore made by way of further support for C&W's allegation that the one-off increases to starting charges went beyond Ofcom's stated objectives and were unjustified and/or disproportionate in that the adjustments were not (or had not been shown to have been) necessary to achieve those objectives.²⁵⁴ C&W's allegation regarding the necessity of the one-off increases to starting charges is the subject of Reference Questions 2(a)(i), 2(a)(ii) and 2(aa), which we have assessed above.²⁵⁵
- 3.292. This aspect of C&W's allegation in §§57–60 was also based on the presumption that it was Ofcom's policy or should have been Ofcom's policy only to allow one-off price increases up to a maximum level of DLRIC and/or to ensure that the ROCE for the TI basket did not fall below the WACC. As we explained in our assessment of Reference Questions 2(a)(i) and 2(a)(ii), we do not agree that these objectives either were or should have been Ofcom's policy.
- 3.293. As to the allegation regarding the DLRIC, the exact level of DLRIC is irrelevant. Only the level of DSAC would form a limit on the price increases. No claim was made that the price increases went above the level of DSAC.
- 3.294. C&W's claim in Reference Question 2(c), if successful, would reduce the level of DLRIC. However, as this would simply broaden the range of DLRIC and DSAC, on the evidence available to us, we do not believe that this would have changed Ofcom's decision to allow price increases towards or within the range of DLRIC and DSAC.
- 3.295. We therefore do not need to make a decision on what the exact level of DLRIC is and we therefore do not need to consider in the context of this Reference Question (2(c)) C&W's proposed adjustments to the individual TISBO service DLRIC levels.
- 3.296. For the avoidance of doubt, we make the following further observation in relation to the allegations in §§57–60 of the NoA. As noted above,²⁵⁶ we requested that C&W clarify whether it wished to maintain certain of its allegations in the light of Ofcom's Defence and subsequent developments during the proceedings, including the allegations in §§47.3 and 58, which are relevant to this aspect of Reference Question 2(c). In its response, C&W argued that the allegations in relation to the ROCE remained relevant to its complaint in the Reply regarding the overall level of returns in the TI basket and that BT had been permitted to earn an inappropriately high ROCE on the

²⁵³NoA, §§47.3, 58. The allegations at NoA §§57–60 elaborate on the allegation at NoA §47.3. In turn, the allegation at NoA §47.3 is made in support of the allegation at NoA §47.1, which we consider in our provisional determination of Reference Questions 2(a)(i), 2(a)(ii) and 2(aa).

²⁵⁴NoA, §§47.1, 47.1(a) (particularized at §49) & 47.1(b) (particularized at §50).

²⁵⁵See our assessment of Question 2(a)(i) in paragraphs 3.20–3.38, Question 2(a)(ii) in paragraphs 3.54–3.63 and Question 2(aa) in paragraphs 3.113–3.144.

²⁵⁶See our assessments of Question 2(a)(i) in paragraphs 3.32 & 3.33 and Question 2(a)(ii) in paragraphs 3.59 & 3.60.

TI basket.²⁵⁷ We address the allegations in that part of C&W's Reply in our determination of Reference Question 2(aa) above.

Determination

3.297. For the reasons set out above and for the further reasons set out in our determination of Reference Questions 2(a)(i), 2(a)(ii), 2(aa) and 3(c), we do not consider that Ofcom erred in its assessment of the DLRIC for the DPCN services and 2 Mbit/s local ends because it should have made further and/or different adjustments to the figures used in its costs model for the reasons set out in §§57–60 of the NoA.

²⁵⁷C&W note 'Response of C&W to the Competition Commission's questions' sent under cover of a letter of 24 February 2010 regarding 'clarification on points that may be falling away', pp4 & 6.

Reference Question 2(d)

- 3.298. This section (paragraphs 3.298 to 3.363) sets out our conclusions as to whether the TI Price Controls have been set at a level which is inappropriate because Ofcom erred in setting charges for DPCN services and 2 Mbit/s local ends and, in particular, in setting the price increases to starting charges for the reasons set out in §§61–66 of the NoA.
- 3.299. §§61–66 set out the fourth of the four allegations of error made under Ground B of the NoA. Ground B addresses the alleged errors arising from Ofcom having allowed BT to increase certain charges at the start of the LLCC. These particular paragraphs appear under the heading ‘increases are discriminatory and disproportionate’. In §§61–62, C&W alleged that Ofcom’s decision to adopt the starting charges discriminated against C&W. In §§63–66, C&W alleged that the result of Ofcom’s decision was disproportionate.
- 3.300. For the reasons given below, our determination is that Ofcom did not err in setting the price increases to starting charges for the reasons set out in §§61–66 of the NoA.

Summary of Ofcom’s rationale and methodology

- 3.301. As set out in paragraph 3.4, the LLCC Statement mandated one-off price adjustments for certain TISBO services. Ofcom explained that as any with other SMP condition, the charge control had to satisfy the test set out in section 47(2) of the 2003 Act, which we set out in paragraph 1.17. For the reasons set out in paragraphs 1.104 to 1.112, Ofcom further stated that it was satisfied that this test was met.²⁵⁸ For ease of reference, we summarize Ofcom’s reasons again below.
- 3.302. Ofcom set out that it considered there to be objective justification for the charge control, which, it stated, had been structured to deliver the lowest possible charges to competitors for the wholesale services, while ensuring that BT was able to recover costs, including a reasonable return on investment.²⁵⁹
- 3.303. Ofcom modelled quantitatively the potential welfare gains associated with a charge control relative to no control. It based its modelling on the mid-points of its proposed ranges for the value of X of RPI–0 per cent to RPI–7 per cent for the TI basket. This analysis showed a potential welfare benefit of the charge control of £643 million for the TI basket over the duration of the charge control. A similar calculation of the indicative net welfare benefits of a safeguard cap RPI–0 per cent showed a benefit of \$592 million for the TI basket.²⁶⁰
- 3.304. Ofcom concluded that the charge controls would not discriminate unduly against a particular person or particular persons ‘because any CP (including BT itself) can access the services at the charge levels fixed. The charges are set to ensure a fair return and price level for all customer groups.’²⁶¹
- 3.305. Ofcom also concluded that the charge controls were proportionate because BT’s obligations applied to the minimum set of charges required for the delivery of bottle-neck services:

²⁵⁸ LLCC Statement, §§4.286–4.287.

²⁵⁹ LLCC Statement, §4.288.

²⁶⁰ LLCC Statement, §4.290.

²⁶¹ LLCC Statement, §4.294.

They are focused on ensuring that there are reasonable prices for those access services, which are critical to the development of a competitive market. BT is, however, allowed to recover a reasonable return on its investment. BT will also have incentives to continue to invest and develop its access network. Moreover, the maximum charges BT is allowed to set over the period of the control has been formulated using information on BT's costs and a consideration of how these costs will change over time.²⁶²

Summary of C&W's arguments

Discrimination

- 3.306. C&W claimed that Ofcom's decision to adopt the starting charges adversely affected C&W much more than either BT's downstream operations or C&W's competitors among the OCPs.²⁶³
- 3.307. It argued that the increase in charges would cost C&W approximately £[§] million a year. BT's downstream operations would pay only approximately £1.2 million more. C&W was also worse affected than OCPs. This was in part because C&W had approximately [§] per cent of all DPCN external (ie non-BT) circuits.²⁶⁴
- 3.308. Mr Ridyard, for C&W, argued that where customers of a regulated firm were themselves suppliers of a good or service that competed with the regulated firm, prices in excess of competitive levels created scope for distortions of competition. Such distortions were greatest where there was an asymmetry between the position of OCPs and the part of BT with which the OCPs competed. Such asymmetry could arise where OCPs were more dependent on the input in question than was BT's downstream competing service.²⁶⁵
- 3.309. Mr Harding, for C&W, explained that its business relied heavily on leased lines. Out of C&W's 2008/9 worldwide turnover of £2.2 billion, £[§] came from data connectivity that relied heavily on PPCs, £[§] came from voice services that sometimes relied on PPCs, and £[§] came from voice, other data, hosting and various value added services that did not directly rely on PPCs although some of these services were sold as a result of C&W's ability to sell PPCs.²⁶⁶
- 3.310. C&W further explained that substitutes for PPCs were limited and it was difficult, expensive and time consuming to switch away from DPCN and more generally TI products.²⁶⁷ A customer of C&W, [§], confirmed that it was not a realistic option to migrate to a different technology following the increases in DPCN prices.²⁶⁸
- 3.311. In subsequent pleadings, C&W accepted that the adjusted prices applied to all operators, but maintained that the adjustments were still discriminatory.²⁶⁹ This was for the following reasons:

²⁶² LLCC Statement, §4.295.

²⁶³ NoA, §61.

²⁶⁴ NoA, §62.

²⁶⁵ C&W W/S Ridyard, §23.

²⁶⁶ C&W W/S Harding, §61.

²⁶⁷ C&W W/S Harding, §§62 & 82.

²⁶⁸ [§].

²⁶⁹ Reply, §36.

- (a) Discrimination extended to any difference in treatment that was not objectively justified.²⁷⁰
- (b) Operators could not readily change the circuits that they had in operation. It was possible to design adjustments to favour or disadvantage particular operators even though all operators theoretically faced the same charges.²⁷¹
- (c) BT did in fact design its adjustments to starting charges to benefit its downstream operation.²⁷²
- (d) BT did so because Ofcom explicitly discriminated between BT and OCPs in its requirement for adjustments in only requiring revenue neutrality for charges to OCPs where it simultaneously required at least 4 per cent reduction in overall revenues.²⁷³

3.312. In the bilateral hearing, C&W further clarified that the main thrust of its argument on discrimination was that even though every CP paid the same price for the same services, prices could still be discriminatory because the purchasing patterns could not change instantly. There were sunk investments, it was difficult to reroute circuits and the price must take into account the existing position of the parties.²⁷⁴

3.313. C&W also argued that Ofcom's decision to carry out one-off adjustments was 'inherently discriminatory' because as a result of those adjustments, BT's downstream operation saw its costs reduce by 4 per cent while C&W saw its costs increase by [~~3~~] per cent. C&W argued that if Ofcom had considered some one-off adjustments were necessary, it should have devised adjustments that would have had the same impact on every competitor.²⁷⁵

Proportionality

3.314. C&W advanced two arguments with respect to proportionality.

3.315. First, C&W argued that the result of the one-off adjustments to starting charges—a result which alleged left C&W worse off than other OCPs—was disproportionate to the extent that Ofcom's objectives were not achieved or could be achieved with less harm to C&W/the competitive position.²⁷⁶

3.316. C&W particularized this first head of challenge on proportionality grounds as follows. It was disproportionate because cost orientation and ROCE equal to or greater than WACC could have been achieved with much lower price increases.²⁷⁷ Further, it was disproportionate because, on one measure, Ofcom had not achieved its objectives anyway. Ofcom had said that it had told BT Wholesale (BTW) that it had to reduce its revenues by 4 per cent as a result of its adjustments to charges. However, it appeared that BTW's revenues had increased as a result of the adjustments.²⁷⁸

3.317. Secondly, C&W argued that the result was also disproportionate in that Ofcom had not taken into account the extent to which BT could have reasonably made changes

²⁷⁰Reply, §37.1.

²⁷¹Reply, §37.2.

²⁷²Reply, §37.3.

²⁷³Reply, §37.4.

²⁷⁴Bilateral hearing, p40, lines 7–14.

²⁷⁵Bilateral hearing, p41, line 6, to p42, line 3.

²⁷⁶NoA, §63.

²⁷⁷NoA, §63.1.

²⁷⁸NoA, §63.2.

to its prices during the period of the previous charge control. If BT had made more appropriate price changes over the past four years, then the requirement for any rebalancing would have been reduced.²⁷⁹

- 3.318. C&W particularized this second head of challenge on proportionality grounds as follows. The previous TI charge control had allowed for BT to increase or decrease individual charges as long as it met the overall requirements of the control. Therefore, BT could have reduced other components rather than, for example, the DPCN local ends that it had reduced in January 2005 and October 2005, which resulted in them becoming even further out of line with cost. To a limited extent BT could even have made small increases to prices that were below DLRIC.²⁸⁰
- 3.319. Furthermore, since 2004, BT had only made one reduction in the price of 2 MBit/s trunk (from £107 to £102 per km in April 2005) and therefore notwithstanding any perceived requirement by BT for rebalancing, the price changes BT had made had not even kept pace with the reductions in cost from 2004 to 2008 as reported in its own RFS (the reported FAC cost had fallen by 14 per cent between 2005/06 when it had first been reported and 2008/09).²⁸¹
- 3.320. In its Reply, C&W noted that Ofcom had contended in its Defence that any assessment of the proportionality of the starting charge adjustments needed to be framed in the context of the overarching objectives of Ofcom's charge control proposals. C&W observed that, by definition, proportionality was assessed by reference to the legitimate objectives (if any) pursued by the relevant action. C&W asserted that the relevant action had not been the setting of the price control as a whole but the specific step changes. C&W accepted that making individual service charges more cost-oriented could have been considered a legitimate objective. The adjustment to 2 Mbit/s local end prices had not been necessary to pursue that objective nor to achieve at least a 4 per cent reduction in BT revenues. C&W did not accept that it had been a legitimate objective to limit the reduction in BT revenues to 4 per cent nor to limit the impact on OCPs as a whole to a neutral effect. It appeared to C&W that this had been the only reason for the increase in prices for 2 Mbit/s local ends.²⁸²

Verizon's intervention

- 3.321. Verizon argued that it was a consequence of the charging structure for PPC services and individual purchasing patterns of CPs that the LLCC decisions and any remedies ordered as a result of the appeal may have had a different impact on different CPs. The financial impact on an OCP of changes in price levels would depend upon several factors: the network and interconnection architecture of the OCP, the geographic location of its customers, and the distribution of bandwidth of the customer connections.²⁸³
- 3.322. Verizon was relatively more reliant on PPC trunk segments than C&W and had therefore benefited to a greater extent from price reductions. Verizon had only a small proportion of customers who required DPCN and believed that this was a smaller proportion relative to C&W.²⁸⁴

²⁷⁹NoA, §64.

²⁸⁰NoA, §65.

²⁸¹NoA, §66.

²⁸²Reply, §39.

²⁸³Verizon Sol, §10.

²⁸⁴Verizon Sol, §11.

3.323. Verizon stated that Ofcom's one-off changes to starting charges had been revenue neutral in aggregate for OCPs. Therefore if Verizon had saved £[X], as a result of the price changes, other OCPs would have had to pay in aggregate £[X] more.²⁸⁵

Ofcom's Defence

Discrimination

General policy approach

3.324. Ofcom stated that the one-off price adjustments clearly resulted in a more efficient price structure, and not a less efficient one, as they brought prices more into line with cost.²⁸⁶ It stated that it had established that the one-off adjustments would leave external customers no worse off. Whilst it recognized that, inevitably, the price changes would have a differential impact on different customers, depending on the pattern of usage, it argued that it did not follow that they were discriminatory.²⁸⁷ Ofcom further stated that it was entirely consistent with general pricing principles for the incidence of charges to be related to the relative proportions of different services consumed.²⁸⁸

3.325. Ofcom further explained that the key point was that the proposals for one-off adjustments brought forward by BT met Ofcom's objective of bringing prices more into line with costs while ensuring that external parties in aggregate were not worse off.²⁸⁹

3.326. Ofcom argued that it was also clear that the one-off price adjustments would have reduced the risk of distortions to competition and not increased it. They brought prices more into line with cost. The price reduction would have reduced the risk of inefficient entry and expansion in the provision of trunk services; the price increases would have reduced the risk of anti-competitive effects in the provision of DPCN services.²⁹⁰

3.327. Ofcom explained that it would see prices being within the relevant DLRIC and DSAC as an important first order test to assess cost orientation.²⁹¹

Impact of adjustments on individual operators

3.328. Ofcom stated that it did, however, consider the impact of the price changes on individual operators. Information provided by C&W indicated that, after taking account of the acquisition of Thus,²⁹² the changes would increase its costs by less than [X] per cent, reflecting the fact that it was a relatively light user of 2 Mbit/s trunk services. The impact on other major CPs was more positive.²⁹³ Ofcom expanded this point stating that the impact on C&W was likely to reflect the mix of its PPCs purchases which, of itself, did not amount to undue discrimination.²⁹⁴

²⁸⁵Verizon Sol, §12.

²⁸⁶Defence, §163.

²⁸⁷Defence, §164.

²⁸⁸Defence, Annex B, §180.

²⁸⁹Defence, Annex B, §173.

²⁹⁰Defence, §170.

²⁹¹Bilateral hearing, p36, lines 16–21.

²⁹²Thus' is a telecommunications operator that C&W took over in October 2008 (see www.cw.com).

²⁹³Defence, §166.

²⁹⁴Defence, Annex B, §179.

- 3.329. Ofcom noted that C&W recognized the need to increase the price of DPCN services as their prices appeared to be below costs, and concluded that C&W merely contested the size and timing of those increases. Ofcom further referred to the evidence of C&W's witness, Mr Harding,²⁹⁵ to suggest that C&W agreed that it was necessary to adjust some PPC prices to bring them in line with its costs, but disagreed with the methodology underpinning these adjustments and the impact of these adjustments on C&W's ability to compete.²⁹⁶
- 3.330. Ofcom accepted that the percentage impact of the start charge adjustments on C&W's overall bill could be higher than for BT and other OCPs given the higher proportion of external local ends it used.²⁹⁷ Ofcom also accepted that the price changes were more advantageous to BT's downstream operations than to C&W because BT's downstream operation was by far the biggest user of 2 Mbit/s trunk.²⁹⁸ However, Ofcom argued that the impact on C&W reflected the mix of its PPC purchases and of itself did not amount to undue discrimination.²⁹⁹
- 3.331. Ofcom also accepted that since BT was a vertically integrated firm, there was a possibility that the starting charge adjustments it put forward were structured in a manner that would discriminate in favour of its downstream operation. However, Ofcom explained that it assessed the starting charge adjustments to ensure that overall they were revenue neutral to external customers. It also stated that, factoring in C&W's acquisition of Thus, the impact of the one-off adjustments on C&W's cost base was estimated to be just under [X] per cent. Those most affected by the changes (including C&W) were also those which had benefited most from prices being out of line with cost in the past.³⁰⁰
- 3.332. Ofcom further clarified that when it was considering whether or not to permit an increase in the 2 Mbit/s local end price, Ofcom checked whether that service was used more by BT's competitors than by its own downstream business. In fact, both BT and OCPs used this service in almost exactly the same proportions. Ofcom felt that in those circumstances there was less likely to be a risk of anti-competitive behaviour.³⁰¹
- 3.333. Finally, Ofcom accepted that the evidence to date suggested that switching from leased lines to alternative technologies would be limited.³⁰²

Proportionality

- 3.334. In order to respond to the arguments advanced by C&W in the NoA, §§63–66, Ofcom recalled that the relevant test of proportionality under section 47 of the 2003 Act was that any regulation was proportionate as to what it was intended to achieve. Therefore, any assessment of the proportionality of the starting charge adjustments had to be framed in the context of the overarching objectives of Ofcom's charge control proposals.³⁰³

²⁹⁵C&W W/S Harding, §163.

²⁹⁶Defence, Annex B, §158.

²⁹⁷Defence, Annex B, §163.

²⁹⁸Defence, Annex B, §§163 & 181.

²⁹⁹Defence, Annex B, §179.

³⁰⁰Defence, Annex B, §§181–182.

³⁰¹Bilateral hearing, p27, lines 4–13.

³⁰²Defence, Annex B, §195.

³⁰³Defence, Annex B, §165.

- 3.335. Ofcom explained that the objective for the charge control had been to ensure that it appropriately constrained BT's ability to set excessive prices and at the same time allowed relative prices to be set in a broadly efficient way. This could have been achieved gradually, whereby prices had been aligned to cost via a glide path over the charge control period or, where necessary, part of the adjustment could have occurred more quickly via starting charge adjustments. This had been a matter of regulatory judgement that had had to balance a number of objectives.³⁰⁴
- 3.336. Ofcom further explained that it had not been assessing (as part of the charge control exercise) whether each individual service had been cost orientated; whether the associated pricing structure had been in some way the most optimal; and whether prices had been precisely at specific DLRIC measures.³⁰⁵
- 3.337. As regards the arguments advanced under C&W's second head (in the NoA, §63 and its subparagraphs), Ofcom observed that C&W seemed to argue that Ofcom had had as an objective a specific level of ROCE equal to or greater than WACC and that Ofcom could have achieved this objective with much lower increases. However, Ofcom said that it had not had in mind a target ROCE. It had not been, for example, the intention that BT's returns should have been no more than its cost of capital at the outset of the charge control. However, Ofcom had wanted to ensure that the price changes had been revenue-neutral to external customers. As noted above, the net effect had been to reduce TI basket revenues to some extent and, in so doing, the charge changes had reduced the gap between revenues and costs at the start of the control by about a third.³⁰⁶
- 3.338. Ofcom further observed that C&W had expressed the view that other approaches could have been adopted with less harm to C&W and competition in the market. Cross-referring to the NoA §50 (which we discussed above in our assessment of Reference Question 2(a)(ii)), Ofcom noted that C&W also argued that the specific price increases that had been made could have been phased in rather than taking the form of start charge adjustments. Ofcom reiterated that phasing in the increases would not have met Ofcom's objectives. In particular, the phasing in of charge increases would have kept DPCN prices below costs for longer and conflicted with the RPI+5 per cent sub-caps.³⁰⁷
- 3.339. Therefore, in Ofcom's view, the proposals brought forward by BT had met Ofcom's objective of bringing prices more into line with costs while ensuring that external parties in aggregate had been made no worse off. Ofcom therefore considered that the approach it had adopted had been proportionate to what it intended to achieve.³⁰⁸
- 3.340. As regards the arguments advanced under C&W's second head (in the NoA, §§64–66), to the extent that C&W's complaint related to a failure of BT to comply with its wider cost orientation obligations, Ofcom believed that any such review of past pricing behaviour would have been dealt with under Ofcom's dispute resolution powers or its powers to assess compliance with an SMP condition. Ofcom was, for example, at that time considering in the PPC Disputes the historic pricing of its 2 Mbit/s trunk circuits.³⁰⁹

³⁰⁴Defence, Annex B, §166.

³⁰⁵Defence, Annex B, §170.

³⁰⁶Defence, Annex B, §171.

³⁰⁷Defence, Annex B, §172.

³⁰⁸Defence, Annex B, §173.

³⁰⁹Defence, Annex B, §177.

3.341. However, without prejudice to any adjustments Ofcom might have required under the PPC Disputes, Ofcom did not consider that it would have been appropriate to look at BT's past alleged failure to alter certain prices in the way suggested by C&W. For the LLCC, the position Ofcom had been faced with had been, given BT's costs and prices, to determine an appropriate balance between starting charge adjustments and reductions in prices via a glide path. The one-off adjustments had been justified because charges had been significantly out of line with underlying costs and Ofcom wanted to remove the risk of distortions in future. That is to say, Ofcom had been concerned with forward-looking, not backward-looking, charges. In addition, Ofcom had required the one-off charge changes to be in aggregate revenue neutral to OCPs, so BT would not have gained from the one-off adjustments.³¹⁰

BT's Sol and evidence

3.342. BT agreed with C&W that it was the largest user of 155 Mbit/s trunk. The price of 155 Mbit/s trunk was cost-orientated and had not been changed in the starting price proposals adopted by Ofcom.³¹¹

3.343. When leased lines were long enough to have a trunk element, purchasers of PPC had a choice as to how they provided this element. They could build and use their own infrastructure, or they could buy trunk from BT or other providers. Downstream BT had no alternative but to purchase all of its trunk from upstream BT. Price reductions in trunk would therefore benefit all purchasers of trunk but would have less impact on C&W as it was able to bypass BT with its own network.³¹²

Assessment

Discrimination

3.344. As set out in paragraph 3.301 above, in taking a decision to set conditions under section 45 of the 2003 Act, Ofcom must satisfy the test in section 47(2). This is a four-limbed test and must be considered in the round; however, it requires that conditions do not discriminate unduly against particular persons or a particular description of persons. This condition imports the general principle of non-discrimination from EU law which requires that similar situations are not to be treated differently unless differentiation is objectively justified³¹³ equally, different situations should not be treated in the same way unless such treatment is objectively justified.^{314,315} We also note Ofcom's duty to take account of the desirability of carrying out its functions in a manner which, so far as practicable, does not favour one form of electronic communications network over another.³¹⁶

3.345. In considering C&W's arguments in relation to whether Ofcom erred in mandating price increases to starting charges, we have had particular regard to the need for Ofcom to satisfy the condition that this increase does not discriminate unduly, rather

³¹⁰Defence, Annex B, §178.

³¹¹BT W/S Morden 1, §88.

³¹²BT W/S Morden 1, §93.

³¹³See, for example, *Wuidart and Others v Laiterie Coopérative Eupenoise, a cooperative society, and Others* [1990] ECR I-435; *Klensch* ((1986)) ECR 3477, *Case 84/87 Erpelding* ((1988)) ECR 2647.

³¹⁴Case 106/83 *Sermide v Cassa Conguaglio Zucchero* [1984] ECR 420. C&W cited the Court of First Instance case of T-162/94 *NMB France SARL v Commission* [1996] ECR II-427 at 116.

³¹⁵In light of the equivalence of the test in the 2003 Act and principle of non-discrimination in EU law, we interpret 'undue' as meaning 'without objective justification'.

³¹⁶Section 4(6) of the 2003 Act.

than the question as to whether the decision provides BT with the ability to discriminate.

3.346. Ofcom and C&W agree on a number of key points:

- (a) The one-off adjustments had different impacts on different CPs. This was because different CPs purchased different proportions of leased line products.
- (b) The adjustments had a positive impact on BT's downstream operation and a negative impact on C&W.
- (c) Switching to alternative technologies would be limited.

3.347. We agree with Ofcom that BT has an incentive to put forward a system of one-off adjustments that will benefit its own downstream operation and disadvantage its competitors. This is because PPC products sold by BT upstream are inputs for both BT downstream and OCPs when providing leased lines to their customers. BT has therefore an incentive to raise its rivals' costs. This could be done, among other ways, by setting discriminatory charges.

3.348. Ofcom argued that the charges could not be discriminatory because all CPs paid the same prices for the same products. We disagree. We note that the pattern of consumption of PPC services is not the same for all CPs with BT consuming disproportionately more some services and OCPs others. We also note that altering consumption may be difficult and migrating to a different technology is unlikely. BT could therefore propose a set of one-off adjustments that would benefit its downstream operation and raise costs for OCPs while charging the same prices for the same products.

3.349. We therefore assessed whether each of the four one-off adjustments could have had a detrimental impact on C&W with respect to BT. The following table presents some key data regarding the one-off adjustments.³¹⁷

³¹⁷We note that it was difficult to select one set of price data for terminating segment services to assess Ofcom's one-off adjustments. We were presented with two main sets of price figures: (i) the price data for terminating segments provided to the CC by Ofcom as background information in autumn 2009 (spreadsheet '05 TI Basket base year profitability - PPC principal workbook 20 06 09 TU2906.xls') and (ii) the price data provided by Ofcom in Annex B to its Defence (Tables B1 and B2). The two sets of price data do not correspond. We note that on 3 March 2010, Ofcom submitted further evidence attempting to explain these differences (spreadsheet 'Annex III - Comprehensive old and new prices (Confidential).xls'). We remain unclear as to why exactly the differences arise but believe that main reason for the differences is the application of the enhanced maintenance uplift. While the first set of prices (spreadsheet '05 TI Basket base year profitability - PPC principal workbook 20 06 09 TU2906.xls') provides prices for BT's internal sales and therefore uses BT's internal enhanced maintenance uplift, the second set of data (Tables B1 and B2 of Annex B to the Defence) provides external prices and therefore applies BT's external enhanced maintenance uplift which is higher. We remain unclear as to why OCPs attract a higher enhanced maintenance uplift than BT's internal sales in particular now that the local end uplift recovering PoH costs has been removed from terminating segments. However, we did not pursue this issue as it did not affect our assessment of the arguments of the parties. We decided to use the first set of data (as presented in spreadsheet '05 TI Basket base year profitability - PPC principal workbook 20 06 09 TU2906.xls'). This is because we understood its underlying methodology better.

TABLE 3.4 One-off adjustments to starting charges accepted by Ofcom

PPC service	£				
	Old price	New price	DLRIC (Ofcom)	FAC (Ofcom)	DSAC (Ofcom)
64 kbit/s local end	248	496	540	611	860
64 kbit/s links	70	140	146	158	236
2 Mbit/s local end	596	705	501	567	911
2 Mbit/s trunk	102	48	23	28	48

Source: Ofcom.

Increase in DPCN terminating segments

- 3.350. We note that it is agreed that C&W consumes DPCN services more than any OCP and that it was therefore hit by the one-off adjustments to DPCN services (64 kbit/s local end and 64 kbit/s link) more than any OCP.
- 3.351. However, we also note that the one-off adjustment approved by Ofcom only increased the price of DPCN service to just below DLRIC based on Ofcom's calculation. Given that Ofcom generally considered DLRIC as a floor for cost orientation of charges and charges below DLRIC as potentially anti-competitive, the increase of prices to approximately DLRIC would seem to be in line with Ofcom's objective. Ofcom also limited the impact of these increases on C&W to a minimum since DLRIC was the minimum cost-oriented level of prices. We note that prices below DLRIC would not be sustainable in the long run and C&W could not expect that DPCN services would remain at that level.

Decrease in trunk segments

- 3.352. We note that it is agreed that BT consumes more 2 Mbit/s trunk than any OCP and therefore benefited from the one-off adjustments to 2 Mbit/s trunk more than any OCP. However, we note that the one-off adjustment carried out only reduced the price of 2 Mbit/s trunk to DSAC. Given that Ofcom generally considered DSAC as a ceiling for cost orientation of charges and charges above DSAC as potentially anti-competitive, the decrease in price to DSAC would seem in line with Ofcom's objective. Ofcom also limited the impact of these reductions on BT to a minimum since DSAC was the maximum cost-oriented level of prices.

Increase in 2 Mbit/s local end

- 3.353. Ofcom told us it had verified that 2 Mbit/s local end services were consumed in equal proportions by OCPs and BT. In this case, the incidence of a one-off adjustment was the same on both OCPs and BT and therefore could not alter their relative competitive position or raise BT's rivals costs by more than BT's own costs.
- 3.354. In sum, it would therefore appear that before the current one-off adjustments had been made, C&W had benefited from a key input price that was very low while BT's downstream operation had competed with OCPs using a very expensive key input. The current one-off adjustments changed this competitive dynamic only to a limited degree since, based on Ofcom's figures, they increased C&W's key input (DPCN terminating segments) to just below the minimum cost-oriented level, ie DLRIC, and reduced BT's downstream operation's key input (the trunk) to the maximum cost-oriented level, ie DSAC.

- 3.355. We note that two further issues discussed under Reference Questions 2(a)(i) and 2(c) are worth discussing under this Reference Question in order to ensure clarity and consistency:
- (a) C&W doubted that Ofcom established the right level of DLRIC. According to C&W's calculations, the DLRIC was lower than Ofcom's (Reference Question 2(c)).
 - (b) C&W claimed that Ofcom should have increased prices to DLRIC and no more (Reference Question 2(a)(i)).
- 3.356. Neither of these two issues is in conflict with our findings under this Reference Question 2(d). Even if we were to accept C&W's figures to be the correct ones and consider that Ofcom's adjustments brought DPCN prices above DLRIC rather than just below, our finding would not change. While we recognize that it is in theory possible that BT might have chosen prices within this range that are relatively more advantageous to its downstream operation and relatively less advantageous to its competitors, assessing whether such relative pricing distorts competition is difficult. Given that any price point in the DLRIC-DSAC range is potentially competitive, C&W would have to provide evidence why the choice of such a price point is discriminating against its business. C&W has not provided any such evidence.
- 3.357. Ofcom argued that the aggregate revenue neutrality of the one-off adjustments on the OCPs was a key consideration when accepting BT's proposal for one-off adjustments. However, we do not see why this should be the case. Since Ofcom found that the prices of some services were markedly below costs, it was appropriate for it to consider increasing the prices of these services either through one-off adjustments, or via a glide path or a combination of both. As Ofcom recognized, prices below cost create a potential for predation by the incumbent or (as would have been the case here) give CPs and final consumers the wrong price signal and therefore lead to inefficient consumption. We note that C&W did not dispute that such increases may have been necessary in some form. Moreover, in practice, Ofcom's adjustments meant that some OCPs, such as C&W, have seen their costs increase, while others, such as Verizon, have seen their costs decrease. The aggregate impact on OCPs would therefore seem to be a meaningless measure.
- 3.358. However, we conclude that C&W did not demonstrate that the one-off adjustments to starting charges had a discriminatory effect on C&W.

Proportionality

- 3.359. We note that, for the reasons explained in our assessment of Reference Questions 2(a)(i), 2(a)(ii) and 2(aa), we have already considered in some detail whether Ofcom's decision to allow the proposed one-off increases to starting charges satisfied the test of proportionality under section 47(2)(c) of the 2003 Act, namely, that that decision had been proportionate to what it had intended to achieve.
- 3.360. We do not consider there to be material difference between the arguments advanced in the paragraphs of the NoA and Reply relevant to Reference Questions 2(a)(i), 2(a)(ii) and 2(aa) and those relevant to this Reference Question.
- 3.361. We do not rehearse again here our assessment of those questions, but confirm that our conclusions with respect to Reference Questions 2(a)(i), 2(a)(ii) and 2(aa) apply equally to the same arguments raised here.

Determination

- 3.362. As set out in paragraphs 3.344 to 3.358, we do not consider that C&W has provided convincing evidence that the changes to the starting charges actually had a discriminatory effect. However, to the extent that these one-off adjustments to the starting charges had a different impact on C&W, we consider that impact to be proportionate to Ofcom's objective of maintaining cost-oriented pricing.
- 3.363. We found that C&W did not make a case that Ofcom erred in setting the price increases to starting charges for the reasons set out in §§61–66 of the NoA.

Section 4: Reference Question 3

In this section we address Reference Questions 3(a), 3(b), 3(c) and 3(d). We set out below, for each question, the paragraphs at which we (a) start our analysis of that question, (b) start our assessment of that question and (c) conclude with our determination of that question.

	<i>Paragraph</i>
Reference Question 3(a)	4.1
Assessment	4.15
Reference Question 3(b)	4.17
Assessment	4.52
Determination.....	4.54
Reference Question 3(c)	4.55
Assessment of association of corporate overheads to BT's overseas operations	4.87
Assessment of the 21CN adjustment	4.127
Assessment of allocation of copper costs.....	4.143
Assessment of the CCA adjustment	4.169
Assessment of allocation of costs to SiteConnect and other mobile network operator services.....	4.210
Determination.....	4.229
Reference Question 3(d)	4.238
Assessment	4.308
Determination.....	4.333

Reference Question 3(a)

- 4.1. This section (paragraphs 4.1 to 4.16) sets out our conclusions as to whether the Price Control Conditions imposed on BT¹ have been set at an inappropriate level because Ofcom erred in estimating BT's efficient costs and associated revenues for leased line services, specifically that Ofcom erred in its use of BT's RFS for the reasons set out in §§72–77 of the NoA.
- 4.2. §§72–77 set out the first of four allegations of error made under Ground C of the NoA. Ground C addresses the alleged errors arising in Ofcom estimating BT's efficient costs and revenues for leased lines services.
- 4.3. For the reasons given below, our determination is that Ofcom did not err in its use of BT's RFS for the reasons set out in §§52–77 of the NoA.

The use of the RFS in the LLCC Statement

- 4.4. The underlying data used to calculate the charge control in Ofcom's LLCC Statement was extracted from BT's RFS. The 2006/07 RFS were restated in 2007/08 (in the prior year comparators) to reflect errors in the leased lines revenues reported. The effect of the restatement was to reduce TI basket revenues by £269 million, with a resultant effect on the profitability of the basket.

¹Price Control Conditions include the TI Price Controls together with Condition HH4 which applies to the AI basket.

- 4.5. As part of the LLCC Statement, Ofcom commissioned Analysys Mason to review the restatement and to highlight any further improvements needed. Analysys Mason produced a number of recommendations for further work and according to Ofcom concluded that the approach taken by BT was reasonable² (although C&W believed that Analysys Mason's conclusions were more ambivalent than Ofcom's portrayal suggested).
- 4.6. In the LLCC Statement, Ofcom's overall conclusion³ was that it had used the best information available in setting the charge control.

C&W's challenge to Ofcom's use of the RFS

- 4.7. In its NoA, C&W argued that the data derived from the RFS was unreliable,⁴ that the 2006/07 restatement was insufficient⁵ and that errors remained in the data. C&W had specific concerns⁶ that the restatement of the 2006/07 data extended to revenues but not to costs. C&W was not reassured⁷ by the audit opinion as the auditors had previously signed off on the 2006/07 data that subsequently demonstrated to be incorrect. In addition, C&W expressed concern⁸ that not all of Analysys Mason's recommendations had been implemented.
- 4.8. In its Reply,⁹ C&W accepted that the RFS had to form the starting point in Ofcom's analysis. However, it stated that it did not believe that the RFS were necessarily accurate and that it had reservations over the use of data extracted from the RFS.
- 4.9. However, in response to further questions,¹⁰ C&W informed us that it no longer asked that we 'make any findings specifically in relation to Reference Question 3(a)', and that the 'relevant paragraphs of the NoA were provided by way of introduction to the more specific challenges mounted in the remainder of Ground C'.

Ofcom's Defence

- 4.10. In its Defence, Ofcom noted¹¹ that it believed that the RFS data provided the best available data for the charge control and was sufficiently reliable for these purposes.
- 4.11. Ofcom drew our attention¹² to the fact that the RFS are audited (with an unqualified audit opinion) by PricewaterhouseCoopers (PwC) and that¹³ Analysys Mason had tested these restated RFS.
- 4.12. In reply to C&W's specific issues, Ofcom stated that BT had found an immaterial impact on costs at a market level,¹⁴ and less than a 1 per cent reduction in costs at a TI basket level¹⁵ (the level at which Ofcom's LLCC model forecast costs).

²Defence, §103.

³LLCC Statement, §4.71.

⁴NoA, §74.

⁵NoA, §75.1.

⁶NoA, §75.6(b).

⁷NoA, §75.

⁸C&W W/S Kelly, section 5.

⁹Reply, §42.1.

¹⁰C&W's reply to further questions dated 3 March.

¹¹Defence, §105.

¹²Defence, Annex C, §9.

¹³Defence, Annex C, §11.

¹⁴Defence, Annex C, §78.

- 4.13. Regarding the Analysys Mason report, Ofcom stated¹⁶ that it had addressed all of the issues raised by Analysys Mason.

BT's Sol and evidence

- 4.14. BT noted¹⁷ that it took several steps to ensure the reliability of the restated RFS, including the use of Ernst & Young and the scrutiny of Ofcom and Analysys Mason: BT told us that it had engaged Ernst & Young to assist in the restatement of the RFS and that Ofcom then appointed Analysys Mason to conduct an independent review of the restatement.¹⁸

Assessment

- 4.15. During the course of our determination, C&W accepted that it was reasonable for Ofcom to have used the RFS as the starting point of the analysis and therefore withdrew its appeal on this point as described more fully in paragraph 4.9.
- 4.16. As C&W has withdrawn its appeal on this Reference Question 3(a), we have not made a determination on whether Ofcom erred in its use of BT's RFS for the reasons set out in §§72–77 of the NoA.

¹⁵Defence, Annex C, §79.

¹⁶Defence, Annex C, §§86 & 87.

¹⁷BT W/S Coulson II, §8.

¹⁸BT W/S Coulson I, §15–17.

Reference Question 3(b)

- 4.17. This section (paragraphs 4.17 to 4.54) sets out our conclusions as to whether Ofcom erred in its adjustments to BT's reported costs and revenues for DPCN services for the reasons set out in §§83–103 of the NoA.¹⁹
- 4.18. For the reasons given below, we do not consider that Ofcom erred in its adjustments to BT's reported costs and revenues for DPCN services for the reasons set out in §§83–103 of the NoA.²⁰

Summary of Ofcom's rationale and methodology

- 4.19. In the LLCC Statement, Ofcom made adjustments to the TISBO services, as reported in the RFS, in two broad categories:
- (a) First, Ofcom made certain adjustments to the FAC, DLRIC and DSAC for each of the services in the TI basket as reported in the RFS. The result of this analysis was, among other things, used by Ofcom to assess BT's proposal for the one-off price adjustments.
 - (b) Secondly, Ofcom made adjustments to the TISBO services at the basket level (ie to the bundle of services that make up the TI basket). The result of this analysis was, among other things,²¹ used by Ofcom in the calculation of the level of X in the RPI-X price cap.
- 4.20. Table A6.3 in the appendix to the LLCC Statement provides an overview of the adjustments Ofcom made at the TI basket level. This is reproduced below as Table 4.1.

¹⁹Reference Question 3(b).

²⁰Reference Question 3(b).

²¹For example, it was also used by Ofcom when setting the parameters for the one-off price adjustments.

TABLE 4.1 TI basket: 2007/08 aggregate adjustments step by step

	Order	TI basket services (£ million)		2007/08		ROCE %
		Revenues	Costs	MCE	Costs incl ROCE	
As reported		816	649	1,571	822	11
<i>Adjustments</i>						
Third party customer local end (LE) equipment	1	-	(38)	(167)	(56)	
Point of handover (PoH) link costs	2	-	(12)	-	(12)	
Current cost normalization	3	-	41	-	41	
Regulatory asset value (RAV)	4	-	(4)	(19)	(6)	
Technological neutrality (21CN)	5	-	(12)	(157)	(29)	
Payment terms	6	-	-	(34)	(4)	
Ancillary services	7	-	(21)	-	(21)	
Site Connect	8	(45)	(23)	(37)	(27)	
Resilient circuit costs	9	-	(29)	-	(29)	
Third party customer LE equipment selling costs	10	-	(6)	-	(6)	
Internal revenues	11	8	-	-	-	
Reduction in price of (external) local ends	12	(12)	-	-	-	
PoH circuit rental costs & charges	13	12	12	-	12	
<i>After adjustments</i>		779	558	1,157	685	19
CLZ local ends repriced as non-CLZ (net of PoH)	14	6	-	-	-	
BT wholesale price changes: net change	14	(10)	-	-	-	
After proposed BT wholesale price changes		774	558	1,157	685	

Source: Ofcom.

- 4.21. Ofcom's explanation of the adjustment for internal revenues is summarized below based on Adjustment 11 in Table 4.1 above. Internal revenues are those generated from within BT, external revenues are generated from OCPs.
- 4.22. In 2007/08, BT accounted for sub 2 Mbit/s local end services that are transported on 2 Mbit/s bearers within 2 Mbit/s services to align the accounting of these revenues with their costs. This approach resulted in BT recognizing too much revenue against 2 Mbit/s local ends for each and every sub 2 Mbit/s local end affected.
- 4.23. BT adjusted (approximately) for this extra revenue by pricing all sub 2 Mbit/s transmission (ie distribution and trunk) revenues as though they were priced at the cheaper distribution rates.
- 4.24. Ofcom's focus was primarily at the basket level and so it did not adjust external revenues as, according to BT, aggregate external revenues reconciled to the external revenues in its general ledger.
- 4.25. Ofcom adjusted internal revenues as follows:
- The first part of Ofcom's adjustment of these revenues consisted in repricing sub 2 Mbit/s internal transmission volumes as though they were a combination of distribution and trunk by multiplying 2007/08 volumes by £3.83 per km, the 2006/07 weighted average charge across the two. This increased internal transmission revenues by £14 million.
 - Ofcom then recalculated its estimate of the volumes of internal sub 2 Mbit/s local ends carried over 2 Mbit/s bearers and multiplied it with the lower sub 2 Mbit/s prices. Ofcom estimated these volumes by assuming that the same proportion of internal total sub 2 Mbit/s local ends was affected as external local ends (11 per cent). This reduced internal revenues by £6 million.
 - The net effect of these adjustments was to increase internal TI basket revenues by £8 million.

Summary of C&W's arguments

- 4.26. The points raised by C&W in relation to this Reference Question focused both on the adjustments to individual service FAC, DLRIC and DSAC²² which were relevant to the assessment of the one-off price adjustments²³ and to the assessment of the adjustments at the TI basket level.²⁴
- 4.27. In particular, C&W argued that:
- (a) Revenues for DPCN bearers were not included in the TI basket.²⁵
 - (b) Ofcom should have made different adjustments to revenues in relation to DPCN local ends that were carried on 2 Mbit/s Access Bearers.²⁶
 - (c) Volumes for 64 kbit/s local ends were incorrectly stated in the RFS.²⁷

(a) DPCN bearers

Introduction

- 4.28. DPCN bearers are used to connect the nearest DPCN node and the PoH.²⁸

Summary of C&W arguments

- 4.29. C&W stated that Ofcom had erred in adopting the revenue data from BT's RFS for 2007/08 (including the restated revenues for 2006/07) because the RFS excluded revenues from DPCN bearers that should properly be included.²⁹
- 4.30. C&W later stated that in relation to the DPCN bearers it no longer maintained that there was any impact on the value of X,³⁰ as Ofcom's model indicated that external DPCN volumes (and, hence, DPCN bearer volumes) assumed for the final year of the charge control were so low that Ofcom/BT's incorrect treatment of DPCN bearer costs and revenues could not have a material impact on final year costs or revenues.³¹
- 4.31. C&W clarified that the only remaining relevance of the proposed adjustments to the calculation of DLRIC was that if the costs for DPCN bearers were removed from the costs of 64 kbit/s Distribution, as C&W contended should have happened, it would have meant that the DLRIC floor for 64 kbit/s Distribution would have been lower. However, 64 kbit/s Distribution was not itself the subject of an increase in starting charges.

²²NoA, §83.

²³NoA, §§92.2,98 & 103.

²⁴NoA, §§82, 92.1 & 103.

²⁵NoA, §89.

²⁶NoA, §93–101.

²⁷NoA, §102.

²⁸NoA, §87.

²⁹NoA, §89.

³⁰C&W's letter to the CC on 'Questions sent before the hearings—questions to C&W', p4.

³¹C&W's letter to the CC on 'Questions sent before the hearings—questions to C&W', p4.

Summary of Ofcom's defence

- 4.32. Ofcom stated that it had received an assurance from BT that the revenues from DPCN bearers were included in the RFS data.³²
- 4.33. In particular, Ofcom relied on a statement from BT that '... the costs and revenues of these circuits are included as part of the "64k Distribution"'. In the absence of other evidence to the contrary at the time, Ofcom did not make any further adjustments to the revenue figures in its analysis.

BT's intervention

- 4.34. BT stated that the DPCN bearer revenues were included within the RFS in the Technical Areas (Point of Handover or PoH) market within the Customer Sited Handover services.
- 4.35. C&W responded to this stating that:³³
- (a) it understood that the Technical Areas (PoH) market fell outside the TI basket;³⁴ and
 - (b) BT did not say where the costs of PoH were included.³⁵
- 4.36. BT later explained that DPCN bearer costs were almost certainly absorbed in the RFS within the 'TISBO (up to and including 8Mbit/s)' services. Within this market their costs will have been allocated to either the 64 kbit link & distribution services or in the 2 Mbit link & distribution services.³⁶ BT added that these costs were not material and at a level of around £3 million.^{37,38}

(b) 2 Mbit/s access bearers

Introduction

- 4.37. Local ends connect the local serving exchange (LSE) to the third-party customer. Some DPCN local end circuits are conveyed over 2 Mbit/s access bearers.³⁹

Summary of C&W arguments

- 4.38. C&W explained that this part of the appeal related to an issue identified by Ofcom labelled as adjustment 11 of Table 4.1 above.⁴⁰ Ofcom's adjustment is summarized in paragraphs 4.22 to 4.25 above.
- 4.39. C&W made two separate claims in respect of the 2 Mbit/s access bearers:

³²Defence, §196.

³³Reply, §46.

³⁴Reply, §46.4.

³⁵Reply, §46.2.

³⁶p1 of BT's letter to the CC on 'Questions sent before the hearings—questions to BT'.

³⁷BT W/S Coulson II, §15.

³⁸p1 of BT's letter to the CC on 'Questions sent before the hearings—questions to BT'.

³⁹NoA, §86.

⁴⁰NoA, §93.

- (a) First, C&W claimed that the extent of Ofcom's adjustments to revenues⁴¹ did not go far enough (in particular that the adjustment did not extend to external revenues).
- (b) Secondly, C&W claimed that Ofcom's calculation of the adjustment (for internal revenues) was based on data that was unreliable.⁴²

We deal with these two claims in the following paragraphs.

4.40. In respect of the extent of the adjustment (as set out in paragraph 4.39(a) above), C&W stated that 'Ofcom's adjustment only extended to revenues and only to internal revenues and that Ofcom was mistaken in both respects':⁴³

(a) C&W stated, in relation to making an adjustment for internal revenues only:

Ofcom's adjustment for internal revenues suggested that BT's two adjustments did not even approximately cancel each other out, at least for internal use. Ofcom had found that the net effect was to understate total TI Basket revenues by some £6m per annum for internal use alone⁴⁴ and that BT's explanation in relation to external revenues should not therefore have been accepted without more investigation, particularly since BT had the opportunity and incentives to distort revenues to favour its own interests.⁴⁵

(b) In relation to making an adjustment for revenues only:

C&W claimed that Ofcom should have made an adjustment for the allocation of costs for internal and external local ends for the purpose of calculating the DLRIC.⁴⁶

4.41. In respect of Ofcom's calculation of the adjustment (as set out in paragraph 4.39(b) above), C&W claimed that Ofcom used an inappropriate weighted average charge for the adjustment to BT's internal 64 kbit/s distribution given that it appeared likely that BT used much more distribution chargeable at the trunk rate than external providers.^{47,48}

4.42. C&W later accepted Ofcom's Defence on 2 Mbit/s access bearers and did not ask us to make any findings on this issue.⁴⁹ In particular, it said that:

(a) There was no material impact on the value of X because the volume of DPCN Services assumed in the final year of the charge control in Ofcom's model was so low that the error alleged could not make a material difference at a basket level.⁵⁰

⁴¹NoA, §98.

⁴²NoA, §99.

⁴³NoA, §96.

⁴⁴NoA, §97.1.

⁴⁵NoA, §97.2.

⁴⁶NoA, §98.

⁴⁷ie OCPs.

⁴⁸p5 of C&W's letter to the CC on 'Questions sent before the hearings—questions to C&W' (response to question 17).

⁴⁹p5 of C&W's letter to the CC on 'Questions sent before the hearings—questions to C&W' (response to question 16).

⁵⁰p5 of C&W's letter to the CC on 'Questions sent before the hearings—questions to C&W' (answer to question 17(i)).

- (b) In terms of starting charges, any adjustment would affect service revenue rather than unit prices and C&W understood from Ofcom's defence that service revenue was not used to justify increases in starting charges.

Summary of Ofcom's defence

- 4.43. In relation to the extent of the adjustment (as set out in paragraph 4.39(a)), Ofcom stated:
- (a) Ofcom's primary concern was to ensure that the cost and revenue data were reliable at the basket level, and the correction it made was designed to achieve that outcome. Any remaining errors in the allocation of costs and revenues between DPCN local ends and 2 Mbit/s local ends would not have affected costs and revenues at the basket level and would not have had a material effect on the price cap for the TI basket.⁵¹
- (b) Ofcom agreed that the adjustments for internal revenues did not cancel each other out. However, this did not indicate that equivalent adjustments for external revenues would result in similar differentials. Ofcom accepted BT's data that overall across the TI basket external revenues were fairly stated. It was not, therefore, necessary for Ofcom to carry out further analysis and adjustments to service level profitability, as this would not have changed the results of the LLCC model at the TI basket level.⁵²
- 4.44. In relation to the calculation of the adjustment (as set out in paragraph 4.39(b)), Ofcom stated that it relied on the volumes which were provided to it under Ofcom's formal powers and which were published in the RFS rather than on any other information source. These RFS volumes, prepared to calculate regulatory transfer charges and unit cost calculations, would be subject to BT management and audit scrutiny.⁵³

BT's intervention

- 4.45. BT made a number of points in its Sol but these are not critical to our assessment.

(c) 64 kbit/s local end volumes

Summary of C&W arguments

- 4.46. C&W claimed that Ofcom had erred in relying on BT's volumes for DPCN circuits reported in its RFS,⁵⁴ in particular 'BT's volumes in the RFS are materially less than it simultaneously reported in its quality of service statistics'.⁵⁵
- 4.47. C&W then presented one specific example of this error in the witness statement of Mr Kelly which stated that:

⁵¹Defence, §196.

⁵²Defence, Annex C §106(a).

⁵³Defence, Annex C §106(d).

⁵⁴NoA, §102.

⁵⁵NoA, §102.

(a) BT's quality of service (QoS) statistics showed that in 2007/08 there were about 29,000 circuits on the DPCN falling to 25,000 by the end of the year but the published statements only showed 17,606.⁵⁶

(b) Part of this difference was accounted for by the 64 kbit/s local ends carried on 2 Mbit/s access bearers (see above), but even taking this into account, the correct number of external 64 kbit/s local ends to include in the RFS was 24,030⁵⁷ (rather than 17,606).⁵⁸

4.48. C&W later stated that it did not maintain that QoS statistics should be used instead of RFS volumes in the light of the explanation provided by Mr Morden, including that both the RFS and QoS ultimately take data from the same systems.⁵⁹

Summary of Ofcom's Defence

4.49. Ofcom stated that it had relied on the volume information which was provided to it under Ofcom's formal powers and which was published in the RFS rather than on any other information source. These RFS volumes, prepared to calculate regulatory transfer charges and unit cost calculations, would be subject to BT management and audit scrutiny, whereas the QoS information, in contrast, is not audited. In Ofcom's view, therefore, the RFS volume data was likely to be both relevant and more reliable for LLCC model purposes than the quality of service statistics.⁶⁰

BT's intervention

4.50. BT stated in the Sol that QoS data should not be used as a basis for assessing revenues: it was neither designed nor suitable for that purpose. Nonetheless, the data is consistent with the volume of circuits shown within the RFS, once account is taken of circuits delivered over 2 Mbit/s infrastructure, the impact of timing differences and the impact of ceased circuits.⁶¹

4.51. Mr Morden explained in more detail the reconciliation between the QoS data and the RFS. The main reasons for the difference between the 64 kbit/s (DPCN) local ends were:⁶²

(a) Circuits in construction and circuits in deconstruction were included for a period of time in the QoS, when they were not revenue generating, whereas those circuits would not be included in the RFS.⁶³

(b) The RFS used 30 September data for the number of active circuits, whilst the quarterly QoS used the average for each month.⁶⁴

⁵⁶BT Sol, §29 b.

⁵⁷C&W W/S Kelly, §8.5.8: 'the correct total volume of sub-2Mbits local ends is the average indicated by BT's QoS statistics—27,000. Of this, I assume 11 per cent are transported on 2Mbit/s bearers, leaving 24,030 which should have been included as DPCN circuits in the accounts.'

⁵⁸C&W W/S Kelly, §8.5.8.

⁵⁹p7 of C&W's letter to the CC on 'Questions sent before the hearings—questions to C&W'.

⁶⁰Defence, Annex C, §106(d).

⁶¹BT Sol, §29d.

⁶²BT W/S Morden, §102–11.

⁶³BT W/S Morden, §103–105.

⁶⁴BT W/S Morden, §106–107.

- (c) The DPCN RFS excluded 6,000 DPCN circuits that were carried on 2 Mbit/s access bearers (and in the RFS were recorded as 2 Mbit/s local ends), but the QoS included them as DPCN local ends.⁶⁵
- (d) The QoS also included 1,419 DPCN bearers.⁶⁶

Assessment

- 4.52. The basis for C&W's arguments in relation to the adjustments to FAC, DLRIC and DSAC of individual TISBO services, which were subject to the one-off price adjustments, are in substance the same as those advanced in relation to Reference Question 2(a)(i) (that Ofcom should have allowed one-off price increases only to a level of DLRIC):
- (a) For the reasons given in our assessment of Reference Question 2(a)(i), we do not accept C&W's argument that it was Ofcom's objective that one-off price increases should be made only up a level of DLRIC.
- (b) For the reasons given in our assessment of Reference Question 2(c), we find that:
- (i) As to the allegation regarding the DLRIC, the exact level of DLRIC is irrelevant.
- (ii) C&W's claim in Reference Question 3(b), if successful, would reduce the level of DLRIC (in Ofcom's adjustments to DLRIC). However, as this would simply broaden the range of DLRIC and DSAC, on the evidence available to us, we do not believe that this would have changed Ofcom's decision to allow price increases towards or within the range of DLRIC and DSAC.
- (iii) We therefore do not need to make a decision on what the exact level of DLRIC is and we therefore do not need to consider in the context of the present Reference Question C&W's proposed adjustments to the individual TISBO service DLRIC levels.
- 4.53. C&W has withdrawn all of its arguments raised in this Reference Question 3(b) in relation to adjustments at the TI basket level. In particular, C&W stated that:
- (a) In relation to the DPCN bearers, C&W did not now 'maintain that there is any impact on the value of X'.⁶⁷
- (b) C&W now accepted Ofcom's Defence on 2 Mbit/s access bearers and did not ask us to make any findings on this issue.⁶⁸
- (c) In relation to the 64 kbit/s local end volumes, C&W 'does not maintain that QoS statistics should be used instead of RFS volumes'.⁶⁹

⁶⁵BT W/S Morden, §108.

⁶⁶BT W/S Morden, §109.

⁶⁷p4 of C&W's letter to the CC (in reply to question 12—and the general reading of the reply to question 5) on 'Questions sent before the hearings—questions to C&W'.

⁶⁸p5 of C&W's letter to the CC on 'Questions sent before the hearings—questions to C&W'.

⁶⁹p7 of C&W's letter to the CC on 'Questions sent before the hearings—questions to C&W'.

Determination

- 4.54. For the reasons set out above, our determination is that Ofcom did not err in its adjustments to BT's reported costs and revenues for DPCN services for the reasons set out in §§83–103 of the NoA.⁷⁰

⁷⁰Reference Question 3(b).

Reference Question 3(c)

- 4.55. This section (paragraphs 4.55 to 4.237) sets out our conclusions as to whether Ofcom erred in the allocation of costs to the services subject to the conditions for the reasons set out in §104 of the NoA.⁷¹
- 4.56. §104 of the NoA states that Ofcom erred in allocating excessive costs to the TI basket:
- (a) Ofcom erred in adopting a methodology that did not allocate corporate overheads to any of BT's overseas operations, or in not adequately justifying its decision to do so.⁷²
 - (b) Ofcom underestimated the adjustment of BT's RFS required to eliminate costs attributable to BT's 21CN (21st century network) investment because it only eliminated what it termed 'avoidable' costs.⁷³
 - (c) Ofcom allocated excessive copper costs to PPCs given that the majority of 2 Mbit/s local ends are provided on fibre.⁷⁴
 - (d) Ofcom carried out a current cost accounting normalization adjustment which was inconsistent with the principles set out by Ofcom in section 3 of the LLCC Statement and which increased the difference between costs and prices.⁷⁵
 - (e) Ofcom did not remove sufficient costs from the TI basket associated with the provision of RBS backhaul and SiteConnect services to mobile network operators (MNOs).⁷⁶
- 4.57. For the reasons given below, we conclude that Ofcom erred in the allocation of costs in relation to the 21CN cost adjustment and the allocation of costs to SiteConnect but that it did not err in the allocation of corporate overheads to BT's overseas operations, the allocation of copper costs, the CCA adjustment and the allocation of costs to RBS backhaul.

Ofcom's rationale and methodology

- 4.58. In the LLCC Statement, Ofcom made adjustments to the TISBO services at the basket level (ie to the bundle of services that make up the TI basket as a whole). The resulting adjusted TI basket was, among others, used by Ofcom in the calculation of the level of X in the RPI-X price cap.
- 4.59. The starting point for Ofcom's calculation of the adjustments to the TI basket was the financial information included in BT's RFS⁷⁷ and additional financial statements (AFS).⁷⁸ Ofcom used the 2007/08 RFS as the basis for the LLCC Statement.⁷⁹

⁷¹Reference Question 3(c).

⁷²NoA, §104.1.

⁷³NoA, §§104.2 and 104.3.

⁷⁴NoA, §104.4.

⁷⁵NoA, §104.5.

⁷⁶NoA, §104.6.

⁷⁷Current Cost Financial Statements for 2008.

⁷⁸LLCC Statement, Annex, A6.29 & A6.30.

⁷⁹Defence, Annex C, §13.

4.60. Ofcom then made adjustments to the data compiled from the RFS and AFS at the TI basket level in order to reflect a more reliable and consistent accounting view and to reflect Ofcom's policy position on, for example, technological neutrality.⁸⁰ Table A6.3 in Annex 6 to the LLCC Statement (set out below in Table 4.2) provides an overview of the adjustments Ofcom made at the TI basket level.

TABLE 4.2 T1 basket: 2007/08 aggregate adjustments step by step

	Order	TI basket services (£ million)		2007/08		ROCE %
		Revenues	Costs	MCE	Costs incl ROCE	
As reported		816	649	1,571	822	11
<i>Adjustments</i>						
Third party customer local end (LE) equipment	1	-	(38)	(167)	(56)	
Point of handover (PoH) link costs	2	-	(12)	-	(12)	
Current cost normalisation	3	-	41	-	41	
Regulatory asset value (RAV)	4	-	(4)	(19)	(6)	
Technological neutrality (21CN)	5	-	(12)	(157)	(29)	
Payment terms	6	-	-	(34)	(4)	
Ancillary services	7	-	(21)	-	(21)	
Site Connect	8	(45)	(23)	(37)	(27)	
Resilient circuit costs	9	-	(29)	-	(29)	
Third party customer LE equipment selling costs	10	-	(6)	-	(6)	
Internal revenues	11	8	-	-	-	
Reduction in price of (external) local ends	12	(12)	-	-	-	
PoH circuit rental costs & charges	13	12	12	-	12	
<i>After adjustments</i>		779	558	1,157	685	19
CLZ local ends repriced as non-CLZ (net of PoH)	14	6	-	-	-	
BT wholesale price changes: net change	14	(10)	-	-	-	
After proposed BT wholesale price changes		774	558	1,157	685	

Source: Ofcom.

4.61. The adjustments relevant to this Reference Question 3(c) are the technological neutrality (21 CN) adjustment, the current cost normalization (CCA) adjustment and the SiteConnect adjustment (respectively 5, 3 and 8 in Table 4.2 above).⁸¹

4.62. Ofcom made no adjustments for the allocation of corporate overheads to overseas operations, the allocation of copper costs and RBS backhaul.

C&W's main arguments

4.63. C&W claimed that Ofcom should have made five adjustments to the TI basket as described in paragraph 4.56.^{82,83} These were either claims that Ofcom should increase the size of the adjustments or claims for additional adjustments over and above the adjustments Ofcom made. Each of the proposed adjustments is discussed in turn in the remainder of this section:

- A. The allocation of corporate overheads to overseas operations is discussed in paragraphs 4.64 to 4.95.
- B. The removal of 21CN cost is discussed in paragraphs 4.96 to 4.134.
- C. The allocation of copper cost is discussed in paragraphs 4.137 to 4.144.

⁸⁰LLCC Statement, Annex 6, §§A6.2–A6.3.

⁸¹LLCC Statement, Annex, Table A6.2.

⁸²NoA, §104.

⁸³Making the downward adjustments would mean lower prices for the TISBO services.

- D. The CCA adjustment is discussed in paragraphs 4.145 to 4.172.
- E. The adjustment to SiteConnect and RBS backhaul is discussed in paragraphs 4.173 to 4.228.

A. Allocation of corporate overheads to BT's overseas operations

Introduction

- 4.64. Ofcom made various adjustments to the TI basket in the LLCC Statement, as explained in paragraph 4.60. Ofcom did not make an adjustment for the allocation of corporate overheads for BT's overseas operation in the LLCC statement.
- 4.65. Corporate overheads relate to head office related expenses, eg the Chairman's office and the Group secretariat.⁸⁴

C&W's arguments

- 4.66. C&W claimed that corporate overheads were not allocated to BT's overseas operations and that this resulted in too much cost being allocated to the TI basket.⁸⁵
- 4.67. In his witness statement, Mr Kelly stated that it was not clear why overseas operations should not have any corporate overheads allocated to them. Inclusion of overseas activities would decrease the amount of corporate overheads allocated to 'core' activities in the UK by 19 per cent.⁸⁶
- 4.68. C&W argued that Ofcom therefore should have made an adjustment to the TI basket in the LLCC Statement to allocate an appropriate amount of corporate overheads to BT's overseas operations.⁸⁷
- 4.69. Mr Kelly estimated that the relevant adjustment should have been a reduction in operating costs of £4 million.⁸⁸
- 4.70. C&W also stated that 'The allocation of overhead costs was raised in the consultation to the LLCC Statement, but Ofcom did not address this point'.⁸⁹

Ofcom's response

- 4.71. Ofcom argued that the 'attribution base' for corporate overheads used by BT was reasonable.⁹⁰
- 4.72. Ofcom explained that BT carried out two types of overseas activity: overseas operations that supported UK operations and overseas subsidiaries (eg overseas profit centres).

⁸⁴BT's Detailed Attribution Methods (DAM) 2008 p327/8 as quoted in §8.4.2 in BT W/S Kelly.

⁸⁵NoA, §104.1.

⁸⁶C&W did not provide a percentage figure specific to the TI basket but did provide an amount of £4 million for the TI basket—see paragraph 4.69.

⁸⁷C&W W/S Kelly Table 12 and tab 'Table 11 potential adjustments' in Exhibit HK1 (ie the excel spreadsheet underpinning the calculations).

⁸⁸BT W/S Kelly, Table 12 (p50).

⁸⁹C&W W/S Kelly, §8.4.7.

⁹⁰§48 in Ofcom's comments on their bilateral hearing transcript.

- 4.73. Ofcom stated in its defence that some overseas operations, such as call centres, supported UK operations. Including such overseas operations in the cost allocation would require a reallocation of costs back to the UK operations as these operations were effectively part of the UK operations. This approach would not necessarily be better and doing this would not provide a significantly different answer.⁹¹ Ofcom later added that attributing corporate costs directly to overseas activities and then re-incorporating those costs back into the BT Global business was an unnecessary step and indeed would add further complexity to an already complex costing process.⁹²
- 4.74. Ofcom also argued that the other type of overseas operations (overseas subsidiaries, which may be profit centres) were not allocated any share of corporate overheads as they 'probably derive only minimal benefits from functions performed at the UK Group head office level' as 'these overseas subsidiaries maintain independent accounting records as self-accounting units'.⁹³ Ofcom subsequently developed this point, stating that the overseas subsidiaries were largely stand-alone businesses, having, for example, their own legal support and HR functions; making their own technology choices; and running their own estate management functions.⁹⁴
- 4.75. Ofcom also noted that the documents containing the cost attribution methods were reviewed and opined on by PwC in the RFS audit opinion. Ofcom stated that the auditor's opinion provides reasonable but not absolute assurance that the attribution bases in the Detailed Attribution Methodology (DAM) were in principle cost causal and objective.⁹⁵ Ofcom subsequently developed this point, stating that the allocation of corporate overheads to overseas subsidiaries was not an issue that was raised in the audit; it was not one that was raised in KPMG's review of how corporate overheads were allocated. KPMG concluded that BT's approach was reasonable.⁹⁶ Ofcom's view was that BT's allocation of corporate overheads was reasonable, particularly as the reasonableness had been confirmed by PwC and KPMG. Ofcom did not feel that it would have been justified in making adjustments to the allocation of corporate overheads based on the evidence.
- 4.76. Ofcom also argued that:
- (a) identifying cost drivers and causal links in itself was not always possible for some types of corporate overheads;⁹⁷
 - (b) acceptance of those attribution bases as appropriate across all charge control decisions by Ofcom also had the attraction of regulatory consistency;⁹⁸
 - (c) the net effect of any change to the approach would be very small;⁹⁹
 - (d) the allocation of corporate overheads to overseas subsidiaries was not highlighted in the LLCC consultation or in the regular annual review;¹⁰⁰ and

⁹¹Defence, Annex C, §111(a).

⁹²Ofcom response to the post plenary hearing questions from 3 March 2010, §14.

⁹³Defence, Annex C, §111(b).

⁹⁴Ofcom bilateral hearing transcript (original transcript) p59, line 4ff.

⁹⁵Defence, Annex C, §112.

⁹⁶Ofcom bilateral hearing transcript (original transcript) p59, line 18ff.

⁹⁷Defence, Annex C, §111(a).

⁹⁸Defence, Annex C, §112.

⁹⁹Ofcom bilateral hearing transcript (original transcript) p59, line 18ff.

- (e) C&W had not shown a clear cost causal link between the corporate overhead costs and BT's overseas businesses.¹⁰¹

C&W's Reply

4.77. In its Reply, C&W commented on Ofcom's arguments, arguing that:

- (a) It was not sufficient for Ofcom simply to say, without any substantiation, that these overseas subsidiaries 'probably' derived only 'minimal' benefits from functions performed at the UK Group head office level. C&W raised the issue in the consultation on the charge control and Ofcom should have investigated so as to quantify the impact to some degree.¹⁰²
- (b) PwC's audit opinion¹⁰³ could not be given much weight given the comments Ofcom had made elsewhere on the audit opinions¹⁰⁴ and the limited assurance they provided in relation to any particular figures.¹⁰⁵
- (c) It was insufficient to say that the same approach had been used in setting other charge controls (§112, Defence Annex C). That a consistent approach had been used meant only that Ofcom had been consistently wrong in its approach.¹⁰⁶

BT's comments

- 4.78. BT stated that it was not correct to say that corporate overheads were not allocated to overseas operations, as they were in some cases. There were two aspects to corporate overheads in the RFS: first, the cost of UK Group headquarters units (eg Corporate Finance, Group HR etc), and secondly, corporate adjustments and provisions (ie accounting adjustments made by Group and then allocated across the business).¹⁰⁷
- 4.79. BT explained that the corporate adjustments were allocated according to the nature of the adjustment (eg a specific provision in respect of Openreach would be allocated across Openreach services only). The nature and level of these adjustments and provisions would vary from year to year. Where these related to the BT group as a whole, they would be allocated to overseas operations as well as the UK (eg pension

¹⁰⁰Ofcom bilateral hearing transcript (original transcript) p60, line 30ff. We recognize that the parties disagree on the question of whether allocation of corporate overheads to overseas subsidiaries had been highlighted. However, we do not consider this to be an issue relevant to our determination.

¹⁰¹Ofcom's response to questions sent before the bilateral hearing, p6.

¹⁰²Reply, §47.

¹⁰³Defence, Annex C, §112, states: 'Moreover, these detailed cost attribution methods are set out in published documentation (the "Secondary Accounting Documents"). These documents are reviewed and opined on by PwC in the RFS audit opinion. PwC's audit opinion for 2007/08 (RFS page 113 §18(f)) includes the following statement: "the secondary Accounting Documents dated 16 September 2008 are appropriate to implement the principles contained in the Primary Accounting Documents dated 16 September 2008". This opinion provides reasonable but not absolute assurance that the attribution bases in the Detailed Attribution Methodology ("DAM") are in principle cost causal and objective'

¹⁰⁴Defence, Annex C, §90, states: '... C&W view that PwC's unqualified audit opinion does not provide "adequate assurance of accuracy" misunderstands the scope of an audit opinion. A "fairly present in accordance with" audit opinion provides reasonable but not absolute assurance over the financial statements as a whole. It does not, in the same way as the audit of a set of statutory accounts, provide specific and absolute assurance on each reported number.'

¹⁰⁵Reply, §47.

¹⁰⁶Reply, §48.

¹⁰⁷BT's response to pre bilateral hearing questions, p2.

provisions would normally be allocated (on the basis of pension costs) across all activities including overseas operations).¹⁰⁸

- 4.80. BT told us that its headquarters costs were allocated across UK activities only, specifically excluding overseas operations. This was because the Group headquarters unit's functions supported the UK operations, whereas the corresponding functions for the overseas operations were performed locally.¹⁰⁹
- 4.81. BT told us that its in-country operations (overseas businesses) had their own HR and finance staff with skills specific to dealing with local issues such as tax, pay settlements and such like. In the UK, these issues were handled at a corporate level and therefore it was correct that these costs should not be allocated to overseas activities.¹¹⁰
- 4.82. BT stated that not all UK-based corporate overheads were allocated to parts of the business that provided regulated services. The line of business that was responsible for BT's overseas operations, BT Global Services, was allocated a significant proportion of the corporate overheads and, as such, these costs were not recovered through regulated charges such as PPCs.¹¹¹
- 4.83. According to BT, the case for allocating corporate overheads to overseas entities was not a strong one, given that these entities were deriving only minimal benefit from these headquarters services. Furthermore, where there were teams working offshore for the UK business (such as call centres), the cost of these operations which were not included in the UK cost base was certainly larger than the UK headquarters costs that they would attract.¹¹²
- 4.84. BT stated that there was no significant amount of support given by the group functions to the overseas operations. They were largely self-sufficient with regard to the type of BT group function, for example HR and finance. BT's established mechanism, which was not to recover any group overheads against those entities, was sound, particularly when set against the fact that there were some activities in those overseas entities which supported the UK and for which there was no reciprocal recharge of costs back to the UK. In practice, there was a balance of trade going backwards and forwards which was a level of sophistication that was not modelled in the allocation of corporate overheads. For example, some call centres in India exclusively supported UK customers. There was no recharge of those costs back to the UK. Therefore, in principle, Ofcom was correct in choosing not to add another level of sophistication to the allocation of corporate overheads.¹¹³
- 4.85. With regard to the cost allocation methodology, BT commented that for several years it had been using a consistent, established methodology as reflected in the regulatory accounts.¹¹⁴
- 4.86. BT estimated that there would be a reduction to costs in the TI basket of between £2 million and £3 million, if the current methodology for allocating Group HQ costs was extended to cover overseas activities. However, this would not take into account

¹⁰⁸BT's response to pre bilateral hearing questions, p2.

¹⁰⁹BT's response to pre bilateral hearing questions, p2.

¹¹⁰BT W/S Coulson II, §16 .

¹¹¹BT W/S Coulson II, §17 .

¹¹²BT's response to pre bilateral hearing questions, p6.

¹¹³BT bilateral hearing transcript (original version), p15, line 31ff.

¹¹⁴BT bilateral hearing transcript (original version), p15, line 16ff.

the impact of reallocating the offshore costs supporting the UK back to the UK business which could conceivably make this reduction in cost lower than this estimate. BT stated that even looking at the overseas resource in isolation from their support of the UK would not produce a materially different answer from the one Ofcom had reached.¹¹⁵

Assessment

- 4.87. C&W, Ofcom and BT agreed that, in the RFS, certain corporate overheads were not allocated to overseas operations.
- 4.88. We note Mr Kelly's statement that it was not clear why overseas operations should not have any corporate overheads allocated to them. It appears that C&W considered it self-evident that corporate overheads should be allocated to overseas operations, and did not produce any arguments in support of this assertion.
- 4.89. We noted that Ofcom and BT made the following points against allocating corporate overheads to overseas operations:
- (a) many overheads were related to services replicated by the overseas operations;
 - (b) BT Global Services (the line of business that is responsible for BT's overseas operations) was allocated a significant portion of the overheads; and
 - (c) there were reciprocal costs which would offset some of the unallocated overheads.
- 4.90. Although C&W argued that Ofcom's position was not substantiated (see paragraph 4.77(a)), and indeed we agree that certain statements in Ofcom's Defence were somewhat tentative, we do not consider that C&W has put forward sufficient explanation or justification in support of its arguments or any other evidence to refute Ofcom's position.
- 4.91. Furthermore we agree with Ofcom that identifying cost drivers and causal links is not always possible and we recognize that cost allocation necessitates an exercise of judgement. We note from BT's submission that the causal links are complex and that not all aspects are captured in the model. C&W has not put forward a superior cost allocation methodology taking into account the arguments advanced by Ofcom and BT, including those set out in paragraph 4.89.
- 4.92. We note that BT had used an established process for allocating corporate overheads which had been reviewed as part of the audit of the RFS by PwC, acting for Ofcom.¹¹⁶ The allocation of overheads was further reviewed by KPMG when providing advice to Ofcom in relation to the Openreach statement,¹¹⁷ where the same overhead allocation methodology was used. C&W had argued that this evidence (see paragraph 4.77(b)) should not be given much weight; however, we find that it tends

¹¹⁵BT's response to pre bilateral hearing questions, p6.

¹¹⁶The RFS stated on p113, §17, that in forming its opinions on the Market Financial Statements, and each of the Market Group Statements PwC also reviewed the Company's Secondary Accounting Documents which describe how the principles contained in the Primary Accounting Documents are implemented. PwC's review consisted of reading the Secondary Accounting Documents and considering whether each of the significant attribution and valuation methodologies described in these documents are consistent with the principles described on pp1-4 of the Primary Accounting Documents.

¹¹⁷§45 in Ofcom's comments on its bilateral hearing transcript.

to support Ofcom's position even though we do not regard it as an absolute guarantee of accuracy.

- 4.93. Ofcom stated that the net effect of any change in approach to the allocation of corporate overheads to overseas operations would be small. Both C&W and BT provided estimates showing that the financial effect of allocating corporate overheads to overseas operations would be in the range of £2–£4 million (in the context of the total costs of the TI basket of around £600 million).¹¹⁸ However, BT noted that if certain costs incurred overseas in support of business in the UK, its estimate of £2–£3 million would be reduced.
- 4.94. Considering C&W's lack of evidence in support of its claim and taking account of the evidence provided by Ofcom and BT, including, in particular, the explanation that not all corporate overheads are consumed by the overseas subsidiaries and the limited financial effect of such an adjustment, we do not find that C&W has demonstrated that the allocation of corporate overheads to overseas operations would produce a more appropriate result.
- 4.95. For the reasons set out above, our view is that C&W has not demonstrated that Ofcom should have made an adjustment to the TI basket for the allocation of corporate overheads to overseas operations.

B. The 21CN adjustment

Introduction

- 4.96. 21CN costs are a cost category related to the introduction of new technologies which support existing services, rather than new services.
- 4.97. Ofcom, in its charge control, adopted what it termed a 'technology-neutral' approach, whereby it set the charge control as if the existing technology would be used for the entirety of the control period. Any costs related to the new technologies were therefore excluded, and any cost savings related to these new technologies were also excluded. Revenues were calculated using the unit price for legacy services.¹¹⁹
- 4.98. Ofcom's explanation of the 21CN adjustment is summarized below based on Adjustment 5 in Table A6.2 in the LLCC Statement Annex.
- 4.99. TI basket services include an element of the cost BT is investing in its 21CN network. Ofcom concluded that these costs should be recovered against services delivered over the 21CN network, and not against current services which did not use this network. Ofcom therefore eliminated an estimate of 21CN costs reflected in the TI services.
- 4.100. In its adjustment for 2007/08, Ofcom used the information in the 2007/08 RFS to identify the level of 21CN costs (including ROCE) which BT had attributed to TI services at the unit level.
- 4.101. Ofcom asked BT to provide an analysis for 2007/08 of the 21CN costs which identified which costs were truly specific to 21CN (eg equipment and software).

¹¹⁸Total revenues in the TI basket are around £800 million.

¹¹⁹See LLCC Statement, §§3.64–3.112 and in particular Annex A7.9.

Based on this 2007/08 analysis, Ofcom eliminated 22 per cent of profit and loss costs and 93 per cent of mean capital employed (MCE) to reflect Ofcom's objective of eliminating only avoidable 21CN costs.

Summary of C&W's arguments

- 4.102. C&W told us that Ofcom adjusted the data from BT's RFS to eliminate costs attributable to BT's 21CN investment since it adopted what it called a 'technologically neutral' approach in the LLCC Statement.¹²⁰ C&W went on to state that Ofcom had therefore excluded from the costs of TI basket services a proportion of the costs associated with BT's 21CN network.
- 4.103. C&W explained that Ofcom's adjustment removed BT's estimate of the costs of the 21CN network which in BT's view were 'avoidable'. The rationale for only removing a proportion of the costs was that if BT had not embarked on its 21CN project, a large proportion of the operating costs (78 per cent) allocated to 21CN would still have been incurred, as would a small proportion of the capital expenditure (8 per cent).¹²¹
- 4.104. C&W accepted that BT should be permitted to recover costs that were truly overheads and not incremental as a result of 21CN.¹²² However, C&W claimed that Ofcom had erred in only eliminating what it termed 'avoidable' and not 'unavoidable' 21CN costs. It appeared likely that the costs still included some of the overheads of managing the 21CN project given the limited amount of operating costs excluded and the descriptions of those items that were relevant.¹²³
- 4.105. C&W later summarized the reasons why it doubted that all relevant costs for 21CN had been removed:
- (a) Only a relatively low proportion of operating costs allocated to 21CN components had been removed as a result of Ofcom's adjustment.¹²⁴
 - (b) The description of the components in respect of which adjustments were made ('Access Cards (other services), MSAN-Metro connectivity (dense), MSAN-Metro connectivity (non-dense)') did not appear apposite to describe all the work that had been done by BT in rolling out its 21CN.¹²⁵
- 4.106. In its Reply, C&W provided a specific example of 21CN project overheads (ie 'unavoidable costs') that it said should have been attributed to the 21CN project and should therefore have been removed from the TI basket:¹²⁶
- (a) Specifically C&W argued that Ofcom and BT might have allocated too great a proportion of BT's general 'true' overheads to the TI basket, when taking into account the downward adjustment of the MCE of the TI basket as a result of the 21CN adjustment.¹²⁷

¹²⁰NoA §104.2; see also LLCC Statement, §§4.125–4.132.

¹²¹C&W W/S Kelly, §8.3.1.

¹²²Reply, §49.

¹²³NoA, §104.2.

¹²⁴C&W response to CC questions sent before the bilateral hearing, p8.

¹²⁵C&W response to CC questions sent before the bilateral hearing, p8.

¹²⁶Reply, §49 and in particular §50.

¹²⁷Reply, §§49–50.

(b) As a result of the lower MCE of the TI basket after the removal of 21CN costs, some of the 'true' overheads should have been allocated to other businesses and not the TI basket in instances where overheads were allocated based on MCE.¹²⁸

(c) C&W argued that this was so because in BT's regulatory accounts, overheads were allocated on a number of bases including capital employed. Had BT's regulatory accounts not included the 21CN components at all, the accounting methodologies in the DAM would have allocated the overheads across a much wider range of services than just the services to which the 21CN components had been allocated. For example, group overheads would have been allocated across all services, not just to the services to which the component costs were allocated.¹²⁹

4.107. C&W then provided information on the financial impact of the misallocation of MCE related overheads, stating that:

(a) The allocation of overheads (including indirect operating costs) to the TI basket appeared to be higher as a result of the allocation via 21CN components than if the 21CN project had never occurred. Only 22 per cent of direct profit and loss costs were removed as being truly specific to 21CN. The remaining 78 per cent was retained in the TI basket on the basis that they were not specific to 21CN. The logic appeared to be that this 78 per cent represented an allocation of common costs that would have existed even without the 21CN project. However, this 78 per cent in turn appeared to represent between 52 and 100 per cent of the total common operating costs allocated to the relevant 21CN components.¹³⁰

(b) C&W's estimate of the reduction that should be made in the allocation of costs to the TI basket was £33.4 million.¹³¹

4.108. C&W also provided a further example of costs that were not removed from the TI basket as part of the 21CN adjustment, stating that there was no explicit reference to the removal of 21CN costs inefficiently incurred in seeking to emulate PPCs on 21CN.¹³² It noted in particular:

(a) At the outset of its 21CN project, BT repeatedly stated that there would be no impact on PPC costs. BT sought to emulate PPCs in 21CN despite the protests of C&W and others. BT did not achieve any or any adequate solution in this regard. The costs of BT attempting to do so had therefore been inefficiently incurred and should not be recovered from third parties such as C&W by way of a price control. To do so would distort BT's incentives in future investment projects.¹³³

(b) Originally, BT had planned to emulate PPC products on 21CN. However, it became apparent that the emulation on 21CN was not of a high enough standard to satisfy the requirements of a number of existing TI customers. Therefore, in 2008, BT had announced that instead it would develop Native Time Division Multiplexing (TDM) products using next generation technology. It also extended the planned closure date for existing TDM and DPCN networks to the end of

¹²⁸Reply, §§49–50.

¹²⁹Reply, §50.

¹³⁰C&W response to CC questions sent before the bilateral hearing, pp8–9.

¹³¹C&W response to CC questions sent before the bilateral hearing, p10.

¹³²NoA, §104.3.

¹³³NoA, §104.3(a–d).

March 2014. As a result, BT had accumulated wasted costs in relation to the attempted emulation. Ofcom adjusted the data from BT's RFS in an attempt to apply its view of a technology neutral approach. Ofcom removed some 21CN costs but the descriptions given did not appear to describe the costs of the attempted emulation. It was not obvious that such costs would fall within any of '21CN MSAN', '21CNMetroNode', '21CNI-Node' or '21CN Backhaul' (see Table A8.7 of the LLCC Consultation).¹³⁴

- 4.109. C&W did not provide an estimate of the PPC emulation costs as C&W did not have access to the figures quantifying the inefficiently incurred costs.¹³⁵
- 4.110. C&W later told us that it did not necessarily seek a determination in relation to the unsuccessful emulation costs specifically, as it accepted that they might not be material in amount.¹³⁶

Summary of Ofcom's response

- 4.111. Ofcom told us that it had taken a balanced judgement about the level of costs attributed to PPC services consistent with its 'technology neutral' approach.¹³⁷
- 4.112. Ofcom further stated that this issue was considered fully during the consultation process. Ofcom took the view that it would be inappropriate to remove unavoidable 21CN costs because, in the absence of 21CN, these costs would still have been incurred by BT and a portion of them would have reasonably have been attributed to PPCs. Leaving the unavoidable costs in the cost base was therefore consistent with the technology neutral approach used by Ofcom to analyse and forecast the TISBO cost base.
- 4.113. Ofcom explained that in determining the 21CN cost adjustment it proposed only to exclude costs which were directly attributable to 21CN,¹³⁸ and that it was not unreasonable to allow BT to recover the indirect costs in its charges for PPC services.¹³⁹
- 4.114. With regard to the costs of PPC emulation, Ofcom said that it had not explicitly examined this issue. However, by excluding direct 21CN costs, any direct costs incurred by the PPC emulation would also have been excluded.¹⁴⁰ Ofcom later added that it had a list of the costs that were deemed to be not avoidable and that there was no reference to emulation costs in that list. Therefore, it had no reason to think that to the extent costs were incurred in developing emulation-type services those had been inappropriately left in the cost base.¹⁴¹
- 4.115. Ofcom added that it was confident that all the 21CN related costs included in the TI basket were identified since it was confident that BT had followed the cost attribution methods set out in its documentation and the requirements to disclose this data as directed by Ofcom. The service cost stack data used in Ofcom's calculations could be followed back to the total component cost schedule disclosed in the RFS. All this

¹³⁴C&W W/S Harding, §197(c).

¹³⁵C&W's response to CC questions on 2 March 2010, p5.

¹³⁶C&W response to CC questions sent before the bilateral hearing, p8.

¹³⁷Defence, Annex C, §115.

¹³⁸LLCC Statement, §4.129.

¹³⁹Defence, Annex C, §113.

¹⁴⁰Defence, Annex C, §116.

¹⁴¹Ofcom bilateral hearing transcript (original transcript), p61, line 21ff.

data is covered by the audit and must follow the published attribution methods. Also, Ofcom requested BT to explain the basis of attributing 21CN costs in advance of implementation and this topic was also discussed in Ofcom's tripartite (duty of care) sessions with PwC.¹⁴²

- 4.116. Ofcom stated that all 21CN costs were within the scope of the audit and the audit coverage included the component cost schedule.¹⁴³

Summary of BT's intervention

4.117. BT stated that in making its adjustment for 21CN, Ofcom had removed the capitalized costs which included equipment, labour and directly attributable overheads. Those overheads included direct accommodation, desktop computing, BT fleet, communications and travel and subsistence costs that specifically related to the 21CN project. The remaining overhead costs were non-directly attributable (ie indirect, such as Group level accommodation or security, which did not specifically relate to 21CN). They would have been incurred by BT regardless of the 21CN investment. In a fully allocated costing system (FAC), all costs must be allocated, even those for which direct causality cannot be readily established. Inevitably, therefore, some overhead costs were allocated to the 21CN PGs¹⁴⁴ even though the 21CN investment had not itself caused those overheads to have been incurred. Where costs were truly overheads and not incremental as a result of 21CN, it would be wholly unjustified to prevent BT from recovering them.¹⁴⁵

4.118. BT also stated that any costs associated with the emulation of PPC would have been captured within those costs which Ofcom excluded.¹⁴⁶

4.119. BT later added in relation to the PPC emulation costs that:

- (a) During the development of 21CN BT investigated the possibility of emulating the technology used in the delivery of PPC services (TDM—Time Division Multiplexing) on the 21CN. As part of this evaluation, BT sought the views of its customers. Initial feasibility work carried out demonstrated that emulated TDM over Ethernet could not meet the performance and customer experience provided by native TDM and required by customers. Therefore, no further development work was undertaken.¹⁴⁷
- (b) Costs incurred in the development of PPC emulation would have been mostly capitalized and since Ofcom excluded the depreciation and MCE of 21CN from the TI basket, these costs would have been removed.¹⁴⁸
- (c) As the expenditure on this feasibility work was not material, the costs were not identifiable in BT's RFS or management accounts, which did not contain sufficient

¹⁴²Ofcom's response to pre bilateral hearing questions, p8.

¹⁴³Ofcom's response to pre bilateral hearing questions, p7.

¹⁴⁴Plant Groups (PGs) are intermediate cost pools used to collect costs relating to the BT Wholesale Markets (see 2008 DAM, §3.3.5.

¹⁴⁵BT W/S Coulson, §71.

¹⁴⁶BT W/S Coulson, §71.

¹⁴⁷BT response to CC questions on 2 March 2010, pp8–9.

¹⁴⁸BT's response to the pre bilateral hearing questions, p7.

granularity to track spend of individual projects of this size. Total cost of the feasibility work was no more than £50,000.¹⁴⁹

- 4.120. BT was confident that the cost allocation methodology used for 21CN was sufficiently robust to enable BT to identify and ring-fence the 21CN costs in the RFS, including those that existed in the TI basket.¹⁵⁰
- 4.121. BT stated that the audit opinion in the RFS covered the attribution of the full range of BT costs, hence this included the 21CN elements both inside and outside of the TI basket.¹⁵¹
- 4.122. BT also stated that the impact of a 10 per cent reduction in MCE on the overheads assigned to the TI basket would result in a reduction of around 5 per cent in its share of Group headquarters costs in 2006/07. However, these Group headquarters overheads are only one element of the indirect costs assigned to 21CN, and as the apportionment of other elements is unaffected by MCE, the overall impact on TI of the MCE reduction would be less.¹⁵²

Parties' responses to the provisional determination

- 4.123. C&W claimed that it made a broader point in paragraphs 49 and 50 of its Reply than just an adjustment for MCE as it was not clear that this was the only respect in which overheads allocated to the TI basket were increased beyond what they would have been had there been no 21CN project.¹⁵³
- 4.124. Ofcom claimed that it was not necessarily appropriate to remove indirect costs pro rata to 21CN costs.¹⁵⁴ It further submitted that identifying cost drivers and causal links was not always possible; that cost allocation necessitated an exercise of judgement; that the causal links were complex; and that not all aspects were captured in the model.¹⁵⁵
- 4.125. Ofcom also commented that there was a lack of detailed evidence clearly showing how the use of MCE as attribution base impacted on the indirect costs attributed to the TI basket services and that as a result any calculation of the potential impact of using MCE as a basis of attribution would lack analytical rigour.¹⁵⁶ For example, the use of MCE as a basis of attribution in BT's DAM was only part of the attribution base relating to 'corporate costs'.¹⁵⁷
- 4.126. BT and Verizon made no submissions on this point.

Assessment

- 4.127. C&W argued that too little cost had been excluded in the 21CN adjustment. C&W provided two examples where this was the case. The first example was the PPC

¹⁴⁹BT response to CC questions on 2 March 2010, pp8–9.

¹⁵⁰BT's response to the pre bilateral hearing questions, p7.

¹⁵¹BT's response to the pre bilateral hearing questions, p7.

¹⁵²BT's response to the pre bilateral hearing questions, p7.

¹⁵³C&W comments on PF, paragraph 4.123.

¹⁵⁴Paragraph 23 in Ofcom's comments on PF.

¹⁵⁵Paragraph 24 in Ofcom's comments on PF.

¹⁵⁶Paragraph 24ii in Ofcom's comments on PF.

¹⁵⁷Paragraph 28 in Ofcom's comments on PF.

emulation costs and the second was the secondary effect of the removal of the 21CN cost for the allocation of overheads on the basis of MCE.

- 4.128. From the evidence provided, it appears that the PPC emulation adjustment is small (around £50,000).¹⁵⁸
- 4.129. C&W is now not asking us to make any finding on this point.¹⁵⁹
- 4.130. We are, however, persuaded by C&W's second example as set out in paragraph 4.106, that the TI basket received an excessive allocation of overheads that were allocated on the basis of MCE as the 21CN adjustment reduced the MCE of the TI basket. We thought that a reduction in MCE as a result of the 21 CN adjustment should have been followed by an adjustment to the overheads that were allocated on the basis of MCE.
- 4.131. Neither BT nor Ofcom submitted any argument or evidence as to why such an adjustment should not be made.
- 4.132. It is therefore our opinion that Ofcom should have made an adjustment for the allocation of overheads that are allocated on the basis of MCE as a result of the 21CN adjustment.¹⁶⁰
- 4.133. C&W also made a more general point that insufficient costs were excluded from the TI basket in the 21CN adjustment, stating that it appeared likely that the costs still included extend to some of the overheads of managing the 21CN project given the limited amount of operating costs excluded and the descriptions of those items that were relevant.¹⁶¹ However, C&W did not provide any support for this broader contention so we have not considered it further.
- 4.134. Whilst it can be argued that C&W's statement in paragraphs 49 and 50 in the Reply should be interpreted as relating to other attribution bases apart from MCE, we consider that only the explanations regarding MCE were sufficiently particularized to support the finding of an error.
- 4.135. Ofcom's comments in response to our provisional determination summarized in paragraphs 4.124 and 4.125 were new points which had not been raised during the appeal. Ofcom has not explained to us why we should take these points into account after the period for submitting new information has passed. However, even if we were to take these points into account, we do not consider Ofcom's comments to be sufficiently particularized to support a change to our finding of an error. In addition, we note that some of Ofcom's comments appear to have been based on an erroneous assumption that we had in our decision relied on C&W's model; for the avoidance of doubt, we emphasize here that we did not use C&W's model.
- 4.136. For the reasons set out above, we find that Ofcom erred in its adjustment of 21CN related costs.

¹⁵⁸See paragraph 4.119(c).

¹⁵⁹See paragraph 4.110.

¹⁶⁰We note that similar considerations appear to apply for other adjustments to the TI basket. However, this point has not been appealed.

¹⁶¹§104.2 NoA.

C. Allocation of copper costs

C&W's main arguments

- 4.137. C&W explained that the majority of 2 Mbit/s local ends were provided using fibre rather than copper connections and yet the average amount of copper included in the unit cost of every local end appeared to be roughly equivalent to two Metallic Path Facilities (MPFs). This, it said, was an excessive allocation of copper costs; this value of copper should only be applied to the minority of local ends that were provisioned on copper.¹⁶²
- 4.138. C&W subsequently accepted Ofcom's defence that the error did not affect the setting of the LLCC¹⁶³ and stated that no further correction was required.¹⁶⁴

Summary of Ofcom's response

- 4.139. In its defence, Ofcom quoted BT's description of the cost allocation methodology for copper in the DAM.
- 4.140. Ofcom also noted that only 1.5 per cent of copper costs had been allocated to the TI basket.¹⁶⁵

Summary of BT's intervention

- 4.141. BT stated that there was no over-allocation of copper costs to the TI basket, but that the FAC unit costs were incorrectly stated in the RFS.¹⁶⁶
- 4.142. BT explained that the RFS contained a unit cost for 2 Mbit/s local ends which was misleading. It contained an allocation of copper as if all local ends were delivered using copper when in fact the majority of local ends were delivered by fibre. However, this issue was entirely isolated to the presentation of the unit cost in the RFS and was not an error in the underlying cost or volume data. The underlying total cost data in the PPC markets along with the AFS that Ofcom relied upon to populate its charge control model contained the correct information and would not require any adjustments. Under no circumstances would the correction of the presentation of this unit cost result in an adjustment to the amount of cost allocated to the 2 Mbit/s local end service either in 2006/07 or 2007/08.¹⁶⁷

Assessment

- 4.143. C&W accepted Ofcom's defence that the error did not affect the setting of the LLCC.
- 4.144. For the reasons set out above, we do not consider that C&W has demonstrated that Ofcom erred in the allocation of copper costs.

¹⁶²NoA, §104.4.

¹⁶³C&W letter in response to 19 February 2010 CC questions, p4.

¹⁶⁴Reply, §53.

¹⁶⁵Defence, Annex C, §§117 & 118.

¹⁶⁶BT SOI §30b and BT W/S Coulson I, §72.

¹⁶⁷BT W/S Coulson I, §72.

D. The CCA adjustment

Note on C&W's pleadings

- 4.145. C&W pleaded that the CCA adjustment both in relation to the TI basket (ie in relation to the glide path) and in relation to the one-off price adjustments (ie in the calculation of the DLRIC for individual TISBO services for the purpose of assessing the one-off price adjustments) should be removed. The adjustment at the TI basket level was pleaded in Reference Question 3(c) and the adjustments for the calculation of DLRIC of individual TISBO services was pleaded in Reference Question 2(c) in Section 3.
- 4.146. We summarize the submissions of the parties in relation to the CCA adjustment for both the impact on the TI basket and the impact on the calculation of DLRIC for individual TISBO services (for the purpose of assessing the one-off price adjustments) in this section. However, we present our assessment and conclusions on the adjustments to the DLRIC of individual TISBO services (for the purpose of assessing the one-off price adjustments) in our assessment of Reference Question 2(c) in Section 3.

Introduction

- 4.147. Ofcom's explanation of the CCA adjustment is summarized below based on Adjustment 3 in Table A6.2 in the LLCC Statement Annex.
- 4.148. Ofcom explained that BT prepared its RFS under current cost accounting (CCA) principles. This accounting method reflected the actual level of asset price changes experienced during the year. BT also included in the CCA adjustment the impact of any changes to the methodologies used to value the assets. Therefore, one period's CCA adjustments were unlikely to provide a robust forecast for future years.
- 4.149. Ofcom therefore substituted its own estimate of future asset price changes and eliminated the impact of any methodology changes.

Summary of C&W's arguments

- 4.150. C&W explained that the CCA adjustment had the effect of increasing costs in 2007/08 and reducing costs in 2006/07.¹⁶⁸

The effect on the TI basket

- 4.151. C&W accepted that 'In terms of the overall basket revenues and the position in the final year of the charge control, it was appropriate to look at the CCA normalisation adjustment (which smoothes out revenues), not least because it was not possible to forecast exactly what will happen in that period'.¹⁶⁹

¹⁶⁸NoA, §104.5.

¹⁶⁹C&W bilateral hearing transcript, p51, line 23ff.

The effect on the calculation of DLRIC for individual TISBO services for the purpose of assessing one-off price adjustments

- 4.152. C&W stated that the CCA smoothing adjustment was not appropriate for assessing changes to starting charges¹⁷⁰ and that Ofcom should not have made the CCA normalization adjustment when assessing one-off adjustments to starting charges.¹⁷¹
- 4.153. This was because the effect of the adjustment was to increase the costs for 2007/08 beyond those actually incurred in that year such that the DLRIC for that year was artificially increased.¹⁷²
- 4.154. C&W further claimed that using 2007/08 costs calculated with the smoothing adjustment for the purpose of assessing one-off changes in starting charges was inconsistent with the principles set out by Ofcom in section 3 of the LLCC Statement. In particular, one of the stated reasons for a one-off adjustment was if prices were 'markedly out of line with costs'. However, the greater this smoothing adjustment, the greater the deviation from 'actual' costs.¹⁷³
- 4.155. C&W claimed that when looking at current starting charges, an assessment similar to a cost orientation assessment should be used and in those circumstances actual figures should be used, not smoothed figures.¹⁷⁴

Summary of Ofcom's response

- 4.156. In Ofcom's view, C&W's rationale for opposing the normalization adjustment appeared to be based solely on the fact that, in 2007/08 (the base year for the LLCC analysis), the adjustment led to an increase in the cost base. This was in contrast to the previous year, when the adjustment reduced the cost base.¹⁷⁵
- 4.157. Ofcom explained that it used the CCA adjustment to eliminate unusual one-off effects of history that had no relevance in the future.¹⁷⁶
- 4.158. Ofcom further explained that the purpose of the smoothing adjustment was to remove the volatility associated with holding gains and losses which depended on asset price changes in the year in question, and replace actual holding gains or losses with a more appropriate measure of underlying forward-looking costs.¹⁷⁷

The effect on the TI basket

- 4.159. Ofcom said that the application of CCA methods could lead to significant short-term asset valuation movements. These adjustments (gains or losses), when reflected in the profit and loss account, affected reported profitability. These movements could significantly distort medium-term cost modelling if left unadjusted and Ofcom's normalization adjustments smoothed this impact. Therefore, for assessing charge

¹⁷⁰NoA, §104.5.

¹⁷¹C&W bilateral hearing transcript, p49, line 26ff.

¹⁷²NoA, §60.

¹⁷³NoA, §104.5.

¹⁷⁴C&W bilateral hearing transcript, p51, line 23ff.

¹⁷⁵Defence, §203.

¹⁷⁶Ofcom bilateral hearing transcript (original transcript), p55, line 7ff.

¹⁷⁷Defence, Annex B, §153.

levels for a medium-term control, it was consistent and preferable to use the adjusted cost base.¹⁷⁸

The effect on the calculation of DLRIC for individual TISBO services for the purpose of assessing one-off price adjustments

- 4.160. Ofcom contended that the smoothing adjustment was equally appropriate for the purposes of assessing one-off adjustments to charges at the start of the charge control period.¹⁷⁹
- 4.161. When considering the appropriate level of costs against which to assess one-off changes in starting charges, Ofcom noted that exceptional in-year CCA holding gains/losses would distort this assessment. These CCA holding gains/losses reduced costs in 2007/08 and increased them in 2006/07, illustrating how taking the unadjusted costs for one year could imply extreme movements in charges which, for a relatively capital-intensive and stable service, seemed an implausible result.¹⁸⁰
- 4.162. Ofcom's assessment of one-off changes to starting charges was in the context of an ongoing charge control using the glide-path approach. Ofcom's assessment concerned the starting level of charges from 1 October 2009 using historic (2007/08) accounting data. Again, in this situation, the exceptional holding gains/losses, if left unadjusted, could imply significant and random changes in charges based on historic data—a situation Ofcom believed would undermine its key objectives such as promoting efficient and sustainable competition.
- 4.163. In using 2007/08 costs as a basis for determining forward-looking prices, it was therefore appropriate to make the normalization adjustment, for the same reason as this was done for the purpose of setting the glide path.¹⁸¹

Summary of BT's intervention

The effect on the TI basket

- 4.164. BT stated that Ofcom made it clear that the purpose of the CCA adjustment was to ensure that one-off changes in asset prices did not distort the CCA costs used to model future costs. If an adjustment were not made, there would be the risk that any one-off asset holding losses would be recovered in each and every year of the charge control. This would lead to the multiple recovery of cost. (Conversely, if there were a one-off holding gain, then prices would fail to recover the total incurred costs.)¹⁸²
- 4.165. Consequently, Ofcom had substituted the holding gains and losses BT reported in its RFS. The holding gain/loss was replaced with a 'smoothed' or 'normalized' gain/loss based on average asset price changes over the past five years. The removal of one-off adjustments ensured a robust basis for modelling future costs. To do otherwise would 'bake-in' the one-off adjustments into the forecast cost base.¹⁸³

¹⁷⁸Defence, Annex C, §121.

¹⁷⁹Defence, Annex B, §153.

¹⁸⁰Defence, Annex C, §122.

¹⁸¹Defence, Annex B, §155.

¹⁸²BT W/S Coulson I, §75.

¹⁸³BT W/S Coulson I, §76.

4.166. Whilst a historical assessment of prices should use actual costs, future costs should be forecast using long-run trends in asset prices to avoid distortion. Consequently the CCA smoothing adjustment should be used.¹⁸⁴

The effect on the calculation of DLRIC for individual TISBO services for the purpose of assessing one-off price adjustments

4.167. The starting prices applied from September 2009 onwards, consequently the corresponding cost base would be BT's 2009/10 RFS. These would not be available until summer 2010. The one-off price changes that lowered CCA costs in the 2007/08 financial year might not recur in 2009/10. Consequently the 'actual' costs in 2007/08 are unreliable for assessing the starting charges.¹⁸⁵

4.168. In suggesting that the CCA smoothing adjustment be removed, Mr Kelly was taking the opportunity to seek a low cost base for evaluating the starting price proposals. As explained above, the CCA smoothing adjustment was needed to ensure that prices were not out of line with costs in future years. This meant that it was wholly reasonable to adopt a reduction in costs when using 2006/07 data and an increase when using the 2007/08 RFS costs.¹⁸⁶

Assessment

The effect on the calculation of DLRIC for individual TISBO services for the purpose of assessing one-off price adjustments

4.169. We have presented our findings in relation to the CCA normalization adjustment for the calculation of DLRIC for individual TISBO services for the purpose of assessing the one-off price adjustments under Reference Question 2(c) in paragraphs 3.293 to 3.295, where we found that:

- (a) As to the allegation regarding the DLRIC, the exact level of DLRIC is irrelevant.
- (b) C&W's claim in Reference Question 2(c), if successful, would reduce the level of DLRIC (in Ofcom's adjustments to DLRIC). However, as this would simply broaden the range of DLRIC and DSAC, on the evidence available to us, we do not believe that this would have changed Ofcom's decision to allow price increases towards or within the range of DLRIC and DSAC.
- (c) We therefore do not need to make a decision on what the exact level of DLRIC is and we therefore do not need to consider in the context of the present Reference Question 3(c) C&W's proposed adjustments to the individual TISBO service DLRIC levels.

The effect on the TI basket

4.170. C&W accepted that the CCA normalization adjustment should be made for the purpose of setting the glide path (ie at the TI basket level).

¹⁸⁴BT W/S Coulson I, §77.

¹⁸⁵BT W/S Coulson I, §78.

¹⁸⁶BT W/S Coulson I, §79.

- 4.171. We therefore find that C&W has not demonstrated that Ofcom erred in applying the normalization adjustment to the TI basket in relation to Reference Question 3(c).
- 4.172. For the reasons set out above, it is our view that Ofcom did not err in applying the CCA normalization adjustment.

E. Allocation of costs to SiteConnect and other mobile network operator services

Introduction

- 4.173. Ofcom made the following statement on RBS and SiteConnect in the LLCC Statement:
- (a) Ofcom excluded mobile services (eg RBS and SiteConnect) from the TI basket, given the requirement to supply these services on equivalent terms to PPC terminating segments.¹⁸⁷
 - (b) Ofcom also showed that although inclusion of mobile services could affect the weights ascribed to other services in the basket, the effect of this on the value of X calculated for the TI basket was marginal. This was further supported by the analysis submitted by UCKTA showing the marginal effect including mobile services had on the TI basket ROCE (an increase of 1.2 percentage points in 2006/07 and a decrease of 0.7 percentage points in 2007/08).¹⁸⁸
- 4.174. There was no requirement for Ofcom to adjust the TI basket for RBS backhaul, as RBS backhaul revenues and costs were not included in the PPC services that make up the TI basket.¹⁸⁹
- 4.175. Ofcom's explanation of its adjustment for SiteConnect is summarized below based on Adjustment 8 in Table A6.2 in the LLCC Statement Annex.
- 4.176. In 2007/08, BT included the revenues, costs and volumes for SiteConnect, a mobile connectivity service, within the PPC services that make up the TI basket.
- 4.177. Ofcom therefore excluded these revenues, costs and volumes from the TI basket.
- 4.178. Ofcom used an analysis which identified the relevant revenues, costs and volumes for 2007/08, submitted to it by BT in the context of the PPC Dispute to make this adjustment.

Summary of C&W's arguments

- 4.179. C&W claimed that Ofcom had erred in not fully eliminating the costs properly to be allocated to RBS backhaul and SiteConnect and that Ofcom should have removed more costs from the TI basket.¹⁹⁰

¹⁸⁷LLCC Statement, §4.88.

¹⁸⁸LLCC Statement, §4.89.

¹⁸⁹Paragraph 125 in Annex C to Ofcom's Defence.

¹⁹⁰NoA, §104.6.

- 4.180. C&W further explained that C&W and OCPs have been largely unsuccessful in competing for mobile backhaul business, suggesting that BT was at least pricing competitively if not aggressively in those markets.¹⁹¹
- 4.181. C&W concluded that if returns were higher than for equivalent TI products when prices were not, this suggests that the costs allocated to these products must be artificially low.¹⁹²
- 4.182. C&W later added that ‘the returns on SiteConnect and RBS are both very high and much higher than on PPCs even though the services are essentially the same’¹⁹³ and ‘that if SiteConnect and RBS are more profitable than the TI basket then either Ofcom should take this into account in setting the glide path or should closely examine the costs and the way they are attributed because the high profitability of SiteConnect and RBS indicate a potential error’.¹⁹⁴

SiteConnect

- 4.183. In support of its claim, C&W explained that the ROCE on SiteConnect was persistently high and much higher than for the TI basket.¹⁹⁵
- 4.184. In his witness statement, Mr Kelly added that SiteConnect costs and revenues as shown in Ofcom’s LLCC Statement were not plausible, as from 2006/07 to 2007/08 revenues grew by 15 per cent, but costs stayed flat and MCE fell by 20 per cent. This, in Mr Kelly’s view, indicated that there may be errors in the allocation of costs.¹⁹⁶ Mr Kelly illustrated this with the table below.

TABLE 4.3 **SiteConnect revenues and costs***

	<i>£ million</i>	
	2006/07	2007/08
Revenues	39	45
Costs	23	23
Op profit	16	22
MCE	47	37
ROCE (%)	34	59

Source: Mr Kelly witness statement.

*W/S Kelly, Table 11, which in turn is derived from Ofcom LLCC Statement Annex, Table A6.4.

- 4.185. Mr Kelly further explained that costs for SiteConnect as estimated by BT appeared low compared with revenues. In particular, the implied ROCE on SiteConnect services was very high at 59 per cent compared with 11 per cent for the TI basket as a whole.

¹⁹¹NoA, §104.6.

¹⁹²NoA, §104.6.

¹⁹³p53, line 24ff, in C&W bilateral hearing transcript.

¹⁹⁴p54, line 9ff, in C&W bilateral hearing transcript.

¹⁹⁵NoA, §104.6.

¹⁹⁶C&W W/S Kelly, §8.10.5.

RBS backhaul

4.186. Mr Kelly suggested that RBS backhaul was similarly more profitable than other products in the TI basket and this may, again, suggest that costs had not been properly allocated.

Summary of Ofcom's response

4.187. Ofcom stated that there was no need to carry out any profitability adjustments to RBS backhaul and SiteConnect as they were not regulated services and that it was possible that exceptional accounting transactions, such as current cost holding gains/losses, could affect the reported profitability measures,¹⁹⁷ specifically:

(a) Ofcom did not include RBS backhaul in the TI basket and/or assess its profitability because all of the component PPCs which were inputs to RBS were regulated via the charge control.¹⁹⁸

(b) SiteConnect was not included in the basket as this was a product downstream of RBS and belonged in a separate market. It used RBS and other non-PPC services as inputs. Ofcom did not assess its profitability, as this would have required Ofcom to investigate components which were outside the business connectivity market.¹⁹⁹

4.188. Ofcom also noted that even for regulated markets, the ROCEs could vary significantly for a variety of reasons. For example, in 2007/08 the reported SMP market ROCEs varied from -1.7 to 64.5 per cent.²⁰⁰

RBS backhaul

4.189. Ofcom clarified that the cost data did not include costs of RBS backhaul services and therefore no adjustment was necessary.²⁰¹

4.190. Ofcom also stated that as the cost of RBS services were not in the TI basket,²⁰² 'the question as to whether the returns are higher or lower on RBS is not relevant in terms of the calculation of the charge control itself'.²⁰³

4.191. Ofcom added that for 2006/07 and 2007/08 the ROCE for RBS backhaul reported in BT's AFS data was around [X] per cent in both years²⁰⁴ and although not directly comparable, this was very similar to the overall adjusted profitability of the TI basket of 19 per cent.²⁰⁵

4.192. Ofcom explained that the impact of including RBS in the TI basket was to increase the value of X by around [X] percentage points, which was immaterial taking

¹⁹⁷ p10 of Ofcom's response to the pre bilateral hearing questions.

¹⁹⁸ p9 of Ofcom's response to the pre bilateral hearing questions.

¹⁹⁹ pp9-10 of Ofcom's response to the pre bilateral hearing questions.

²⁰⁰ p10 of Ofcom's response to the pre bilateral hearing questions.

²⁰¹ Defence, Annex C, §125.

²⁰² p64, line 4ff, in the Ofcom bilateral hearing transcript (original transcript).

²⁰³ p64, line 7ff, in the Ofcom bilateral hearing transcript (original transcript).

²⁰⁴ p8 of Ofcom's response to the pre bilateral hearing questions.

²⁰⁵ p9 of Ofcom's response to the pre bilateral hearing questions.

into account the fact that the value of X was rounded to its nearest quarter percentage.²⁰⁶

SiteConnect

- 4.193. Ofcom explained that it had excluded costs relating to SiteConnect from the source financial data for the TISBO market. SiteConnect was out of the scope of the charge control and C&W agreed that this adjustment was reasonable.²⁰⁷
- 4.194. Ofcom stated that it did not understate the exclusion of costs for SiteConnect and that it had no reason to think that there was any understatement of the costs taken out of the TI basket.²⁰⁸
- 4.195. Ofcom stated that the conclusions drawn by C&W in respect of SiteConnect were incorrect as the costs and revenues of SiteConnect excluded from the TI basket were only part of the total SiteConnect costs and revenues and the reported profitability therefore misstated the profitability of these services.²⁰⁹
- 4.196. C&W replied to this stating that the SiteConnect costs outside the TI basket amounted to only £3.3 million and therefore did not change materially the profitability of SiteConnect as the implied ROCE for SiteConnect services was still much higher than for other TISBO services at approximately 48 per cent. C&W maintained that it could be surmised from this that not enough costs had been allocated to SiteConnect services and that it was likely that they had been allocated to the TI basket instead.²¹⁰
- 4.197. Ofcom replied to this stating that the £3.3 million referred only to operating costs. To understand the end-to-end profitability of SiteConnect services, the mean capital employed outside the TI basket would also need to be included. In addition, similar adjustments that we made to the TI basket might need to be made in order to assess underlying profitability. The £3.3 million simply provided evidence that there were costs outside the basket.²¹¹
- 4.198. Ofcom conceded that even after the inclusion of all costs, SiteConnect ROCE may still be relatively high, but stated that the nature of these services was that they were provided to mobile operators and were quite similar to those based on radio station services. However, they were downstream services, which meant that they also included some value-added service elements. They were in a market separate from the TISBO market, so Ofcom believed that in those circumstances it was not particularly surprising that BT might have been able to earn somewhat higher returns on SiteConnect services than the returns earned on some of the regulated services. Ofcom believed the most important point was that costs were excluded on the right basis.²¹²

²⁰⁶p8 in Ofcom's reply to the questions sent after the bilateral hearing.

²⁰⁷Defence, Annex C, §125.

²⁰⁸p62, line 12ff, in the Ofcom bilateral hearing transcript (original transcript).

²⁰⁹Defence, Annex C, §126.

²¹⁰Reply, §57.

²¹¹pp8–9 of Ofcom's response to the pre bilateral hearing questions.

²¹²p62, line 12ff, in the Ofcom bilateral hearing transcript (original transcript).

Summary of BT's intervention

4.199. BT explained that the apparent high returns in RBS backhaul and SiteConnect were primarily due to the pricing mechanisms and the way that revenue was reported in the RFS for these services.²¹³

RBS backhaul

4.200. BT stated that there was no under-allocation of cost to RBS.

4.201. BT explained the high returns in RBS as being due to RBS pricing using end-to-end circuit prices for the rental revenue, which included all PPC circuit elements including trunk. The reason for this was that RBS pricing was not split out by the same individual service elements as PPCs, hence a separate price for each could not be generated. As a result of this, the rental margin would be shown to be higher than the PPC average due to the higher returns that the trunk element generated as, unlike RBS, trunk revenue for PPCs was reported in the separate Wholesale Trunk market, not in the TISBO markets. The cost of the trunk elements for RBS was not reported in the RFS.

4.202. BT further explained that RBS was sold as part of managed contracts which gave discounts to the customer. However, in the RFS, BT used the pre-discount price so as to represent the wholesale input on an equivalent basis. Therefore, the revenue/margin shown in the RFS was higher than the actual revenue/margin generated by this product. An analysis of RBS revenue, reconciling the RFS revenue to the management accounts, was provided to Ofcom as separate non-published Additional Financial Information. For 2008/09, this showed a difference between the RFS and the BT Wholesale management account of £[redacted].²¹⁴

SiteConnect

4.203. BT stated that in 2007/08 SiteConnect was allocated too little Sales, General and Admin (SG&A) costs²¹⁵ as a result of measures to improve the reporting visibility of SiteConnect. This resulted in an understatement of SiteConnect costs (in total around £5 million operating costs) in that year.²¹⁶

4.204. This error resulted in an over-allocation of operating costs to the TI basket of around £[redacted].²¹⁷

4.205. BT also further clarified that there were no errors in the 2006/07 allocations to SiteConnect. The SG&A error only affected 2007/08. SG&A was primarily a current account activity and hence the misallocation affected operating costs but had minimal effect on the allocation of MCE (a total under-allocation of £[redacted] to SiteConnect). There was no error in service revenues, which were not dependent on cost allocations.²¹⁸

²¹³pp8–9 in BT's response to the pre-bilateral hearing questions.

²¹⁴Ofcom provided us with an analysis showing that RBS backhaul revenue is approximately £[redacted] million (although it was not clear if this was before or after discounts) (file: 'Reconciliation AFS to RFS 26 02 09 (confidential).xls').

²¹⁵p8 in BT's response to the bilateral hearing questions.

²¹⁶p8 in BT's response to the bilateral hearing questions.

²¹⁷p6 in BT's response to the post bilateral hearing questions (8 April 2010) in response to question 5.

²¹⁸BT's reply to question 4 in 'BT responses to CC questions 9 April Conf Vers final.pdf'.

4.206. BT explained that the primary reason for the seemingly high returns on SiteConnect was a mismatch in the revenues and costs that Ofcom removed from the TI basket. Ofcom correctly explained in its Defence that there were additional costs incurred by BT to provide these services. The most significant example of this related to the ATM network platform. Unlike PPCs, SiteConnect services made use of BT's ATM network (a high-speed data transport network), the cost of which was not allocated to the TI basket. There was not a separate charge to customers for the ATM platform, rather the prices were inclusive of all the costs of delivery. The amount of revenues excluded from the TI basket was the total revenue for SiteConnect services. Below is a comparison of the return implied by the revenue and costs removed by Ofcom and a view more reflective of the overall cost to provide the service by including the ATM costs.²¹⁹

TABLE 4.4 **SiteConnect profitability before and after adjustment for ATM costs**

£ million, 2006/07

	<i>Removed from TI basket</i>	<i>Including ATM costs</i>
Revenues	39	39
TI Costs	23	23
ATM		3
Total cost	23	26
Op profit	16	13
MCE—TI	47	47
MCE—ATM		6
Total MCE	47	53
ROCE (%)	34	24

Source: p9 in BT's response to the pre-bilateral hearing questions.

4.207. BT commented that it was possible that there were other costs (such as downstream activity) that would reduce this return further but these were not identifiable in the RFS and would require further investigation to provide an accurate view.²²⁰

Parties' responses to the provisional determination

4.208. C&W pointed out that BT's comments on the discounts given to customers for RBS services should not be taken into account in our decision as Ofcom based the LLCC decision on pre-discount revenues. The comparison C&W made between the profitability of RBS and PPC was between undiscounted RBS and undiscounted PPC, ie they were compared on a consistent basis.

4.209. Ofcom commented that it had performed reasonable scrutiny in regards to SiteConnect costs and provided several submissions on the scrutiny it did perform.

Assessment

4.210. We first assess RBS backhaul and then SiteConnect.

²¹⁹p9 in BT's response to the pre-bilateral hearing questions.

²²⁰p9 in BT's response to the pre-bilateral hearing questions.

RBS backhaul

- 4.211. C&W claimed that because profitability for RBS backhaul was high, insufficient costs had been allocated to RBS leaving too much cost in the TI basket.²²¹ C&W did not provide any additional evidence supporting its claim that insufficient costs had been allocated to RBS.
- 4.212. Ofcom stated that the RBS ROCE was 20 per cent, which is at the level of the TI basket (although we recognize that this would need to be adjusted in the same way as Ofcom adjusted the TI basket to be truly comparable).
- 4.213. Whilst we initially considered that the reporting of pre-discount revenues in the RFS for RBS backhaul, as explained by BT in paragraph 4.202, provided a plausible explanation as to why profitability in RBS backhaul looked higher in the RFS than it actually is, we do accept C&W's reservations as to the comparability of pre- and post-discount profitability.
- 4.214. The parties agree that the profitability of RBS appears to be quite high. However, further analysis would be required in the light of BT's and Ofcom's submissions to ascertain the true level of profitability. The mere statement by C&W that returns appeared high, on its own, is not sufficient evidence of an error and C&W has not particularized this allegation any further. For example, C&W did not produce any analysis of the profitability of RBS backhaul in 2006/07 or 2007/08 to support its argument.
- 4.215. We do not consider, therefore, that Ofcom erred in the allocation of costs to RBS backhaul.

SiteConnect

- 4.216. We note that C&W's allegations of error with respect to the allocation of costs to SiteConnect are twofold. First, C&W alleged that the movements in revenues, costs and MCE between 2006/07 and 2007/08 for SiteConnect were implausible. Secondly, C&W made a more general point that because profitability for SiteConnect was high (both in 2006/07 and 2007/08) compared with the TI basket, insufficient costs had been allocated to SiteConnect leaving too much cost in the TI basket. We address each in turn below.
- 4.217. We consider here the first allegation. C&W's evidence for this claim, ie the under-allocation of costs to SiteConnect, was based on the comparison of SiteConnect profitability between 2006/07 and 2007/08 and the very high profitability of SiteConnect in 2007/08.
- 4.218. BT has now confirmed that there is an error of £5 million in 2007/08 in the allocation of SG&A to SiteConnect (of which £3 million relates to the TI basket).
- 4.219. No other errors have been identified (other than an error of £0.3 million in the MCE in 2007/08—which we considered immaterial).
- 4.220. In assessing this question, we also considered whether the relevant financial data for SiteConnect was in fact reasonable in light of the evidence which was or would have

²²¹As RBS is not part of the TI basket.

been available to Ofcom at the time, ie whether the SiteConnect revenues, costs and MCE were such as should have given Ofcom cause to doubt their reasonableness.

- 4.221. In our view, the criticisms of the financial data for SiteConnect which C&W made in its NoA are observations which Ofcom would (or should) have been able to make for itself at the time of the LLCC Statement. We note, in particular, the movements in revenues, costs and MCE between 2006/07 and 2007/08 for SiteConnect and the very high ROCE for SiteConnect in 2007/08.
- 4.222. Ofcom's comments in response to our provisional determination in respect of SiteConnect were to some extent new points which had not been raised during the appeal. Ofcom has not explained to us why we should take these additional points into account after the period for submitting new information has passed. However, even taking these additional points into account, Ofcom has not provided us with sufficient evidence that it investigated the movement in revenues, costs and MCE between 2006/07 and 2007/08 for SiteConnect or the very high ROCE in SiteConnect in 2007/08 (particularly when compared with 2006/07). We note in this context that Ofcom stated in paragraph 4.187(b) that it did not perform a profitability assessment of SiteConnect.
- 4.223. In relation to the first allegation, we therefore find that Ofcom erred in the allocation of costs to SiteConnect.
- 4.224. We turn now to consider the second allegation, ie a more general point that because profitability for SiteConnect was high (both in 2006/07 and 2007/08) compared with the TI basket, insufficient costs had been allocated to SiteConnect leaving too much cost in the TI basket.²²² However, we note that C&W did not provide any additional evidence supporting this more general claim.
- 4.225. Ofcom and BT stated that the SiteConnect ROCE was relatively high as there were additional costs incurred by BT to provide these services that were not included in the amounts removed from the TI basket for SiteConnect.
- 4.226. We consider this a plausible explanation as to why profitability in SiteConnect looks higher in the RFS than it actually is.
- 4.227. Accordingly, in relation to the second allegation, we find that Ofcom did not err.
- 4.228. For the reasons set out above, we find that Ofcom did not err in the allocation of costs to RBS backhaul. For the reasons set out in paragraphs 4.216 to 4.223 above, we find that Ofcom erred in relation to the first allegation regarding the allocation of costs to SiteConnect, but did not err in relation to the second allegation regarding the allocation of costs to SiteConnect, ie in relation to the more general points raised by C&W, as discussed in paragraphs 4.224 to 4.226.

Determination

- 4.229. For the reasons given above, we determine that Ofcom erred in the allocation of costs in relation to the 21CN cost adjustment and the allocation of costs to SiteConnect but that C&W has not demonstrated that Ofcom erred in the allocation of costs in relation to the allocation of corporate overheads to BT's overseas operations,

²²²As SiteConnect was removed from the TI basket.

the allocation of copper costs, the CCA adjustment and the allocation of costs to RBS backhaul.

- 4.230. We note that Reference Question 3 relates not only to the price controls imposed by conditions G4, GG4, GH4 and H4 but also condition HH4. Condition HH4 relates to AISBO services.
- 4.231. However, we further note that C&W indicated in its Notice of Appeal that, with respect to the remedies sought from us, the only arguments it relied on to reduce the price control for the AI basket were those concerning BT's cost of capital and its allocation of overheads between 'core' and 'non-core' business activities,²²³ ie the allegations we assessed in Reference Question 3(d) and that part of Reference Question 3(c) relating to the allocation of costs to overseas operations, respectively.
- 4.232. We also note that C&W's pleadings relating to Reference Question 3 otherwise concerned only TI services, and its supporting evidence did likewise.
- 4.233. For the avoidance of doubt, our conclusions with respect to Reference Question 3(d) and to the allocation of costs to overseas operations apply to both TI and AI services, ie these aspects of C&W's appeal were unsuccessful.
- 4.234. However, given that condition HH4 is relevant to all of Reference Question 3 and that we are required to answer the Reference Question posed by the Tribunal, we invited the parties to indicate whether our findings under Reference Question 3(c) in respect of 21CN costs and SiteConnect would require any adjustment to the value of X for the AI basket.
- 4.235. In their replies, none of the parties expected us to make such a finding.
- 4.236. We subsequently requested confirmation from the Tribunal that it was content for us to proceed on the basis that we will not determine Reference Questions 3(c) and 5 contained in the Tribunal's Order of 16 December 2010 (as amended) in so far as they related to the AI services.
- 4.237. The Tribunal held that, in light of our views and the views of the other parties, it was content for us to proceed on that basis, ie not to make a determination in respect of Reference Questions 3(c) and 5.

²²³NoA, §7, and, in particular, §7.3 & fn 11.

Reference Question 3(d)

- 4.238. This section (paragraphs 4.238 to 4.333) sets out our conclusions as to whether the price controls imposed by the Price Control Conditions have been set at an inappropriate level because Ofcom erred in estimating BT's efficient costs and associated revenues for leased line services, in particular that Ofcom erred in the calculation of the relevant cost of capital for the reasons set out in §§105–107 of the NoA.
- 4.239. For the reasons given below, we consider that Ofcom did not err in the calculation of the relevant cost of capital for the reasons set out in §§105–107 of the NoA.
- 4.240. In assessing the evidence, we took into account advice from the CC's Finance and Regulation Group (FRG). The FRG is an expert advisory committee that provides advice to groups appointed to determine matters referred to the CC, where requested, in particular on cost of capital and financeability.²²⁴ It is not involved in decision-making on particular cases, which is solely the responsibility of the group appointed to consider and determine a particular reference.²²⁵ Its advice in this appeal was provided to the parties; each of the parties told us that they wished to make no comments on the advice.
- 4.241. We set out below the evidence received from the parties on the appropriate cost of capital, followed by our assessment.

Ofcom's approach to cost of capital in the LLCC Statement

- 4.242. In its Defence,²²⁶ Ofcom stated that its approach to the assessment of risk in the cost of capital was established in its 2005 Cost of Capital Statement.²²⁷ It said that 'Following the method set out in that statement ... Ofcom determined an appropriate cost of capital for the "copper access services" provided by Openreach, which are low (systematic) risk services, and a higher rate appropriate to the rest of BT, which is higher risk.' In the 2005 Cost of Capital Statement, Ofcom said that:

It remains of the view that copper-based PPC tail segments should not be classified within BT's copper access business for the purposes of an assessment of risk levels. Ofcom agrees that SDH-based private circuits are mature services, but 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.²²⁸

- 4.243. Ofcom also noted in its Defence²²⁹ that the 2005 Cost of Capital Statement set out its view on the circumstances in which it was appropriate to identify separate betas for different activities undertaken by an individual firm. These included: strong a priori reasons for believing that the risk faced by the activity was different from that of the overall company; availability of evidence to assess differences in risk; and an

²²⁴More information on the FRG can be found on the CC website at:

www.competition-commission.org.uk/about_us/our_organisation/workstreams/frg.htm.

²²⁵www.competition-commission.org.uk/appeals/communications_act/current_cases.htm.

²²⁶Defence, §206.

²²⁷Ofcom's overall approach to calculating the cost of capital was set out in a document published in August 2005, entitled *Ofcom's Approach to Risk in the Assessment of the Cost of Capital—Final Statement* (the 2005 Cost of Capital Statement).

²²⁸2005 Cost of Capital statement §7.47.

²²⁹Defence Annex C §58.

expectation that reflecting differences in risk in an adjusted rate of return would bring gains for consumers. As part of that review, Ofcom engaged PwC to write a report on the quantitative evidence for assessing differences in risk (the PwC report).²³⁰ In relation to leased lines, Ofcom noted that much of the evidence that it had used to test its view regarding the relative risks of copper access and other services either did not apply at all, or did not apply to the same extent, to private circuits.²³¹

4.244. Following the above approach, in the 2009 Openreach charge control (which concerned copper access services),²³² Ofcom estimated the BT Group equity beta at 0.86 and then disaggregated it into a beta for Openreach of 0.76 and beta for the rest of BT of 0.96. Table 4.5 below is taken from the Openreach charge control and shows Ofcom's assessment of the WACC for Openreach, BT Group and the rest of BT. This table shows that the sole difference between the WACC for Openreach and the rest of BT is the equity beta applied to the respective business segments. All other components of the WACC are identical.

TABLE 4.5 Final value for weighted average cost of capital for BT

	<i>per cent</i>		
	<i>Openreach</i>	<i>BT Group</i>	<i>Rest of BT</i>
Equity risk premium	5.0	5.0	5.0
Equity beta	0.76	0.86	0.96
Risk-free rate	4.5	4.5	4.5
Debt premium	3.0	3.0	3.0
Pre-tax nominal WACC*	10.1	10.6	11.0

Source: Ofcom's LLCC Statement, Table 3.1.

*We consider it prudent to round our range estimates of the WACC to the nearest 0.5 per cent.

4.245. In its LLCC Statement, Ofcom decided that the appropriate WACC for BT's leased lines business was the rest of BT WACC, which was calculated in the context of the Openreach charge control,²³³ as it captured the risks associated with leased lines markets and as future demand for leased lines was more cyclical than for Openreach.²³⁴ In its Defence,²³⁵ Ofcom said that it concluded that the rest of BT rate was the appropriate rate to apply, as neither the AI or TI basket²³⁶ should be regarded as similar to BT's access network for the purposes of an assessment of risk levels, even though AI services were provided by Openreach.

4.246. Ofcom argued in the LLCC Statement that (in line with the conclusion in the 2005 Cost of Capital Statement):

Since the retail leased lines services from which the demand for these wholesale services is derived are mostly used by SME and corporate customers, future demand for these [AI and TI] services, particularly in the case of the demand for new circuits, is likely to be more closely

²³⁰PwC for Ofcom: Disaggregating BT's beta, June 2005.

²³¹2005 Cost of Capital Statement, §7.47.

²³²Ofcom: a new pricing framework for Openreach, May 2009.

²³³See §7 and *ibid*.

²³⁴LLCC Statement, §§3.260 & 3.262.

²³⁵Ofcom Defence, Annex C, §57.

²³⁶Wholesale Alternative interface (AI) and traditional interface (TI) products that are the subject of the LLCC.

correlated with the economy-wide level of economic activity than other access services.²³⁷

4.247. Ofcom went on to note in the LLCC statement²³⁸ that:

Unlike Openreach's LLU and WLR access-based services leased lines services also require additional backhaul and, in some cases, trunk capacity, which are a significant proportion of the end-to-end costs of providing leased lines. However, even if access elements form a large part of the costs of wholesale services, we think that the important issue is that there are different levels of risks associated with delivering services to different markets. Openreach's core access services are primarily WLR and MPF services used, in the main, to deliver narrow-band and asymmetric broadband to residential customers. On the other hand, BT's PPC and AISBO service customers ultimately use wholesale leased lines services to deliver services to SME and corporate customers, as well as more generally (in the case of BES²³⁹) to provide broadband services. And as stated above future demand for new circuits is more likely to be correlated to economic activity, whereas other access services are less sensitive to those changes. Therefore, it is mainly the nature of the demand for leased lines products (derived from downstream markets) that lead us to use the higher rest of BT rate for leased lines.

4.248. On the basis of the above, Ofcom therefore set the cost of capital for TI and AI services as the rest of BT rate.²⁴⁰

Summary of C&W's argument

4.249. C&W argued in its NoA that Ofcom's decision on the cost of capital was flawed because Ofcom had not properly justified its choice of WACC. C&W's arguments concerning cost of capital can be divided into two areas:

- (a) Ofcom gave insufficient weight to the similarity between Openreach services and the leased line services subject to the LLCC Statement.²⁴¹ C&W presented various arguments as to why Ofcom was incorrect to conclude that the provision of leased lines services was more risky than the provision of services by Openreach. We have addressed these arguments under three headings: first, arguments relating to demand (discussed in paragraphs 4.253 to 4.268); secondly, the argument that leased line services use similar components to Openreach services (discussed in paragraphs 4.269 to 4.275); and finally, the argument that delivery of leased lines is relatively low risk due to low levels of bad debts (discussed in paragraphs 4.276 to 4.281).
- (b) There was no reasonable basis for concluding that the risk associated with leased line services was as high as for the rest of BT excluding Openreach, given the similarities with Openreach, and further given that it was not comparable to

²³⁷ LLCC Statement, §3.262.

²³⁸ LLCC Statement, §3.264.

²³⁹ Backhaul extension services.

²⁴⁰ LLCC Statement, §3.265.

²⁴¹ NoA, §106.1.

the BT Retail Division, or the BT Global Services Division.²⁴² Ofcom erred in concluding that it must choose either the cost of capital for Openreach or the cost of capital for the rest of BT Group. Ofcom could alternatively and more appropriately have conducted fresh calculations specifically considering the cost of capital for the leased lines business.²⁴³ Failing this, C&W argued that ‘less rigorous but preferable’ solutions were available, namely:

- (i) Ofcom could have assigned the leased lines business a cost of capital equivalent to that of the whole of the BT Group;²⁴⁴
- (ii) Ofcom could have assigned the leased lines business a cost of capital between the mid-range points for Openreach and the rest of the BT Group;²⁴⁵ and
- (iii) Ofcom could have calculated a disaggregated WACC for the ICT business.²⁴⁶

4.250. We consider the parties’ arguments in each area in further detail below. We then set out our assessment of each argument and our overall assessment of arguments (a) and (b) having looked at each sub-argument before setting out our determination.

Argument (a): Ofcom has given insufficient weight to the similarity between Openreach services and the leased line services subject to the LLCC Statement

Ofcom’s decision

4.251. We set out our understanding of Ofcom’s consideration of the relative risk of Openreach and leased line services in paragraphs 4.242 to 4.248 above.

Summary of C&W’s overall arguments

4.252. C&W set out its overall argument in §106.1 of the NoA. It then made various sub-arguments in support of this elsewhere in §106. The following sets out our understanding of the sub-arguments made by C&W in relation to the overall argument. We look in turn at the arguments made by C&W and the points made by Ofcom in its Defence under three headings: (i) demand; (ii) similarity of components; and (iii) bad debts.

(i) Ofcom’s focus on demand was incomplete

Summary of C&W’s arguments

4.253. C&W stated in its NoA²⁴⁷ that:

²⁴²NoA, §106.3.

²⁴³NoA, §106.4.

²⁴⁴NoA, §106.4(a).

²⁴⁵NoA, §106.4.

²⁴⁶Reply, §59.

²⁴⁷NoA, §106.2.

It is incorrect for Ofcom to conclude that the provision of leased line services is more risky than the provision of services by Openreach given that:

- (a) there is a relatively low level of risk associated with delivering leased lines services;
- (b) Ofcom itself has acknowledged that the risk that it considers is, for leased line services, 'more closely correlated with the economy-wide level of economic activity than for other access services' is the risk as to 'future demand for new circuits'. A large proportion of BT's revenues for wholesale leased lines are a function of previous decisions to invest and not correlated with demand for new circuits ... therefore the services relevant to the LLCC Statement are likely to be insulated from any general downturn in the economy and would warrant a lower cost of capital ...; and
- (c) There is risk associated with the delivery of Openreach's residential services. Residential customers may be more likely to default on payments; LLU rollout is already approaching economic limits; the pace of new development has slowed; and there is likely to be increasing competition for residential broadband such as from mobile broadband.

4.254. C&W's argument on demand was supported by the witness statement of Mr Ridyard. In this, Mr Ridyard stated that 'it is not clear that Ofcom's interpretation of the effect of demand on risk is correct. Nor does Ofcom provide any evidence to justify its argument that demand for AI and TI services will be more correlated with the general economy than is demand for the services supplied by Openreach.'²⁴⁸

4.255. Mr Ridyard stated: 'it is arguable that because SMEs and larger firms use leased lines, whereas residential customers make up a larger proportion of the customer base using Openreach's services, the returns from leased lines will be less correlated with the general economy than other access services'.²⁴⁹

4.256. In support of his argument, Mr Ridyard quoted the witness statement of Mr Harding, supporting BT's Sol (§197(b)): 'much of the risk of customer churn is borne by the retail provider rather than BT's wholesale business'²⁵⁰ and 'the fact that a high proportion of BT's PPC revenues are secured in existing contracts also undermines Ofcom's reliance ... on the relevance of demand for new circuits to support its position'.²⁵¹

4.257. Mr Ridyard concluded: 'this description underlines the difficulty in making simple generalisations about the levels and patterns of risk assumed by BT simply on the basis of the identities of the typical customer'.

4.258. In its response to our questions on beta of 26 February, C&W pointed out that Ofcom's position could be traced back to the PwC report,²⁵² which contained only

²⁴⁸C&W W/S Ridyard I, §61.

²⁴⁹C&W W/S Ridyard I, §67.

²⁵⁰C&W W/S Ridyard I, §67.

²⁵¹C&W W/S Ridyard I, §68.

²⁵²See paragraph 4.222.

supposition that business demand tended to be more responsive to changes in general economic conditions than residential demand.

- 4.259. C&W further pointed out that if PwC's conjecture was correct, it should be possible to use statistical tests to show that the correlation between number of lines and economic conditions was stronger for business lines. It performed a regression analysis of the percentage growth in lines on the percentage growth in GDP and showed that both business and residential lines grew in response to the economy, but also noted that the difference between the two types of line was not statistically significant. In the light of this finding, C&W stated that it did not consider that PwC's conjecture should be given any weight.

Summary of Ofcom's response

- 4.260. In Annex C to its Defence, Ofcom stated that 'demand was indeed the factor upon which Ofcom placed the highest weight ... However, Ofcom does not agree that its sole focus was on demand; rather demand is one factor that Ofcom placed strong weight upon when assessing the appropriate cost of capital because it is particularly important for the volatility of cash flows.'²⁵³
- 4.261. Ofcom explained its view that demand is particularly important in further detail in its Defence²⁵⁴ (which in turn refers to the 2005 Cost of Capital Statement):

The cyclical nature of both a project's cash inflows and cash outflows contribute to the level of systematic risk associated with the project. The more cyclical a project's cash inflows are, and the more fixed (or, indeed, counter-cyclical) its cash outflows are, the higher its beta will be. The type of assets used in a project clearly play an important part in determining the cash outflows associated with a project, and will therefore have some impact on its level of systematic risk. ... However, the nature of the underlying assets used in a project is unlikely to play any significant part in the risk associated with variations in a project's cash inflows, ie the extent to which demand specifically for that project is correlated with aggregate demand at an economy wide level. Ofcom's view is therefore that the nature of the underlying assets is only one of the factors that determines systematic risk, and is of the view that the cyclical nature of demand is a more important factor.

- 4.262. Ofcom rejected C&W's argument that it relied only on demand for new circuits as the basis for adopting the 'rest of BT' rate. Ofcom thought that, given that the underlying retail demand was from businesses, demand for leased lines would be relatively more correlated with the overall level of economic activity than was the case for BT's access services.²⁵⁵ Ofcom then went on to say that:

if fewer businesses decide to purchase new circuits ... then the way in which BT might decide to recover its costs of providing PPCs ... would have less bearing on the cyclical nature of revenues with economic activity.²⁵⁶

²⁵³Defence, Annex C, §165.

²⁵⁴Defence, Annex C, §177.

²⁵⁵Defence, Annex C, §170.

²⁵⁶Defence, Annex C, §171.

BT's only future source of revenue from these [legacy] customers will be the ongoing rental charges. Demand for PPCs as a whole has generally been in decline for a long period (reflecting its position as a legacy product); this also means that increasingly a larger proportion of BT's returns from PPCs will rely on the rental charges from the installed base of customers. However, C&W incorrectly draws the conclusion that this means that returns associated with leased lines are low risk.²⁵⁷

The key issue is the retail customers underlying demand for leased lines are SMEs and firms whose demand will be more sensitive to the general level of economic activity than is the case for domestic customers.²⁵⁸

4.263. In its responses to the questions on beta of 26 February,²⁵⁹ Ofcom stated that 'the nature of the demand for these [copper access] services is relatively stable. Even when incomes of households decline with an economic downturn—very few householders would reduce their demand for services that are critical for modern living such as voice or internet access' and that 'copper access business revenue is likely to contribute less to systematic risk than the revenue of other parts of the business'. By contrast, Ofcom noted that the nature of demand in the leased lines market was such that when incomes available to businesses declined, they would look at ways to reduce the number of circuits.

4.264. Again in its responses to the questions on beta of 26 February,²⁶⁰ Ofcom quoted the PwC report as follows:

it seems reasonable to anticipate that call volumes will fluctuate more in response to changing economic circumstances, because businesses and individuals are more likely to react to changes in business activity and incomes by altering their immediate pattern of consumption of telecommunications services than by changing their consumption of access.²⁶¹

Summary of BT's Intervention

4.265. In support of Ofcom, BT's Sol²⁶² referred to the witness statement of Mr Esslin-Peard, who explained 'that demand for leased lines is substantially driven by demand for network products. Wholesale leased lines are sold partly externally to customers like C&W, and partly internally. In 2008/09 ... 65% of wholesale leased lines revenue came from internal sales'²⁶³ and 'Thus demand for leased lines is strongly driven by demand for "rest of BT" services'.²⁶⁴

4.266. BT's Sol was also supported by the witness statement of Dr Firla-Cuchra, who noted that 'there is, however, some a priori evidence to consider that the demand risk for

²⁵⁷Defence, Annex C, §172.

²⁵⁸Defence, Annex C, §173.

²⁵⁹Ofcom's response to questions on beta of 26 February, question 1.

²⁶⁰Ofcom's response to questions on beta of 26 February, question 1.

²⁶¹Disaggregating BT's Beta, June 2005: A report prepared for Ofcom by PricewaterhouseCoopers LLP, p11.

²⁶²BT Sol, §34.

²⁶³BT W/S Esslin-Peard I, §48.

²⁶⁴BT W/S Esslin-Peard I, §49.

leased lines may be higher for leased lines than for Openreach²⁶⁵ and continued that:

some demand characteristics of leased lines distinguish them from copper access products. For example, whilst pricing of access to a copper line is not typically related to the usage of that line, pricing of a leased line is typically based on its capacity (bandwidth). This implies that consumers of leased lines might be expected to reduce more easily their consumption of bandwidth during an economic downturn. By contrast, consumers of copper access are less likely to reduce their consumption since this would require them to disconnect from the network.²⁶⁶

- 4.267. Mr Esslin-Peard stated that 'Connection revenue does not cover most of BT's sunk costs as C&W says. Connection revenue only covers those activities directly associated with providing new services, ie the initial set-up visit and installing equipment at the customer's premises'.²⁶⁷
- 4.268. In response to the questions on beta of 26 February,²⁶⁸ specifically on the predictability of demand, BT provided evidence that 'the forecasting error for copper lines is lower on average than for leased lines and lower in almost every case in each individual year'.²⁶⁹ In response to question 4, BT produced a chart illustrating the percentage change in copper access and leased line volumes by bandwidth in 2008/09. The chart showed more variability and steeper declines in all bandwidths of leased lines than copper access over the year with a particularly sharp drop in high bandwidth leased line volumes over the period.

(ii) Leased line services and Openreach services use similar components

Summary of C&W's arguments

- 4.269. In support of C&W's NoA, Mr Ridyard stated that 'the fact that PPCs use many of the same physical assets as other services (eg LLU) that are supplied by Openreach provides some indication that the Openreach WACC would be the more natural one to adopt'.²⁷⁰ This is supported by the witness statement of Mr Harding, who stated that:

I note that the vast majority of assets used in the delivery of PPCs ultimately originate in Openreach. Probably the only exception, and the reason why PPCs became the responsibility of BTW rather than Openreach, is trunk. In fact the copper local ends used in the provision of DPCN²⁷¹ circuits are no different from the copper used in the provision of LLU and WLR. A significant aspect of the cost of fibre is the duct that carries it, and it is common for duct to carry both copper and

²⁶⁵BT W/S Firla-Cuchra I, §2.65.

²⁶⁶BT W/S Firla-Cuchra I, §2.66.

²⁶⁷BT W/S Esslin-Peard I, §57.

²⁶⁸BT's Response to questions on beta, 26 February Question 2.

²⁶⁹BT's Response to questions on beta, 26 February.

²⁷⁰C&W W/S Ridyard I, §66.

²⁷¹DPCN are a type of low-bandwidth leased lines with specific technical capabilities.

fibre. The exchange space and power can be used equally for broadband and WLR as it can for PPCs and Ethernet circuits.²⁷²

Summary of Ofcom's response

4.270. In its Defence,²⁷³ Ofcom referred back to its 2005 Cost of Capital Statement as follows:

The type of assets used in a project clearly play an important part in determining the cash outflows associated with a project, and will therefore have some impact on its level of systematic risk However, the nature of the underlying assets used in a project is unlikely to play any significant part in the risk associated with variations in a project's cash inflows Ofcom's view is therefore that the nature of the underlying assets is only one of the factors that determines systematic risk, and is of the view that the cyclical nature of demand is a more important factor.²⁷⁴

Summary of BT's Intervention

4.271. BT stated that C&W's claim that the leased lines business used largely the same components as Openreach was 'simply wrong. In particular, only 26 per cent of the capital employed in BT's PPC business is common to Openreach copper'.²⁷⁵

4.272. BT's Sol was supported by the witness statement of Mr Esslin-Peard, who noted that:

The numbers show that access components are less than half of the leased lines total, not most of it as C&W alleges. Access copper and duct costs, shared with Openreach copper services, comprise only 26% of the total. It is this 26% which is shared with the Openreach copper services for which Ofcom has applied a disaggregated cost of capital.²⁷⁶

4.273. Mr Esslin-Peard criticized the emphasis that Mr Ridyard placed on the significance of the assets shared between leased lines and Openreach noting that 'In any event, C&W overstates the similarities between assets used in PPCs and LLU'.²⁷⁷

C&W's further submissions

4.274. In its response to the questions on beta of 26 February, C&W stated that: 'C&W is surprised about the figure of 26 per cent, and has no way to verify it, but the similarity of the systematic risks between Openreach and the PPC business does not rest to a significant extent on the premise that the two share common infrastructure' and that:

the relevant question is not how much infrastructure is shared between the PPC business and Openreach, but whether the cash flows of the PPC business (a wholesale business) are more closely correlated to the cash flows of Openreach (another wholesale business) or to the rest of

²⁷²C&W W/S Harding I, §197(a).

²⁷³Defence, Annex C, §160.

²⁷⁴Ofcom 2005 Cost of Capital Statement, §5.26.

²⁷⁵BT Sol, §33.

²⁷⁶BT W/S Esslin-Peard I, §42.

²⁷⁷BT W/S Esslin-Peard I, §41.

BT (which includes BT's retail services) ... [and that] even if BT and Ofcom were correct that the PPC business is not as similar to Openreach as C&W believes to be the case, that does not justify the use of the rest of BT as the source of the equity beta since it cannot be considered to capture solely the risks associated with the PPC business.

- 4.275. In the hearing with C&W, Mr Ridyard (in support of C&W) stated that the 'premise that you can determine beta based on the commonality of the assets in the two businesses is false in itself'.²⁷⁸

(iii) Delivery of leased lines is relatively low risk due to a low level of bad debt

Summary of C&W's arguments

- 4.276. C&W's contention that Ofcom considered only the impact of demand on beta was supported by Mr Ridyard, who stated that:

Another important factor that influences the risk associated with revenue is default and in this regard the wholesale nature of AI and TI services suggests that the beta would be closer to that of Openreach which provides only wholesale services (ie business-to-business for the purpose of reselling) than to the rest of BT which incorporates mostly retail services which are more exposed to default.²⁷⁹

- 4.277. C&W stated that 'BT's work on PPC payment terms shows that BT itself considers its PPC business inherently stable and with a low risk of bad debt';²⁸⁰ and that 'BT makes low provisions for bad debt'.²⁸¹

- 4.278. In its response to the questions on beta of 26 February, C&W stated that it wanted 'to highlight that debt default was one example of why the risks associated with the wholesale PPC business might be more like Openreach than the rest of BT', and that even if debt default did not explain the differences, it did not follow that the rest of BT beta was appropriate for the PPC business.

- 4.279. Nevertheless C&W stated that it 'cannot agree with Ofcom's analysis since Ofcom fails to take account of the correlation of debt default with the general economy and instead reaches its conclusion on the basis of a single observation of the level of debt default'.

Summary of Ofcom's response

- 4.280. Ofcom noted that C&W had not put forward specific financial information to support its contentions. It noted that data contained within BT's Regulated Financial Statements for 2007/08 showed zero bad debt costs against all regulated wholesale markets and bad debt of 0.6 per cent of total revenue for retail services. It described the latter figure as insignificant and concluded that it 'does not consider that debt default by BT's customers will be a significant variable that would explain variations

²⁷⁸C&W hearing transcript, p59, line 3.

²⁷⁹C&W W/S Ridyard I, §70.

²⁸⁰NoA, §106.2(a)(i).

²⁸¹NoA, §106.2(a)(ii).

in the correlation between returns earned by parts of BT's business with the market returns as a whole'.²⁸²

Summary of BT's Intervention

4.281. BT's Sol did not include any consideration of the impact of bad debts except to endorse the arguments made Ofcom's Defence about materiality.²⁸³

Argument (b): There is no reasonable basis for concluding that the risk associated with leased line services is as high as for the rest of BT excluding Openreach, given the similarities with Openreach, and further given that it is not comparable to the BT Retail Division, or the BT Global Services Division.²⁸⁴ Ofcom erred in concluding that it must choose either the cost of capital for Openreach or the cost of capital for the rest of BT Group. Ofcom could alternatively and more appropriately have conducted fresh calculations specifically considering the cost of capital for the leased lines business²⁸⁵

4.282. In our view, Argument (b) has a number of parts that are capable of separate consideration, though we recognize that there are links in regard to the reasoning. We consider the argument in four parts:

- (i) whether Ofcom had no reasonable basis for concluding that the risk associated with leased line services is as high as for the rest of the BT Group excluding Openreach;
- (ii) whether Ofcom erred in concluding that it must choose either the cost of capital for Openreach or the cost of capital for the rest of the BT Group;
- (iii) whether Ofcom could have conducted fresh calculations to establish a cost of capital for the leased lines business; and if not
- (iv) whether C&W's alternative solutions (set out in paragraph 4.298 below) offer a pragmatic and preferable alternative.

In our view, the argument in part (ii) relied upon C&W having made out its case for part (i) and either of parts (iii) or (iv). In other words, we think that C&W needed to demonstrate both that Ofcom's assignment of the rest of BT beta was wrong, and that it could have more appropriately adopted one of C&W's alternative suggestions. We therefore considered parts (i), (iii) and (iv) first before turning to part (ii).

Our understanding of Ofcom's approach

4.283. We set out our understanding of Ofcom's general approach in paragraphs 4.242 to 4.248 above.

²⁸²Defence, Annex C, §174.

²⁸³BT Sol, §35.

²⁸⁴NoA, §106.3.

²⁸⁵NoA, §106.4.

*Argument b(i): Whether Ofcom had a reasonable basis for concluding that the risk associated with leased line services is as high as for the rest of the BT Group excluding Openreach, given the similarities with Openreach, and further given that it is not comparable to the BT Retail Division, or the BT Global Services Division*²⁸⁶

Summary of C&W's arguments

4.284. In its NoA,²⁸⁷ and as discussed in this paper under Argument (a), C&W argued that Ofcom gave insufficient weight to the similarity between Openreach services and leased line services and was incorrect to conclude that the provision of leased line services was more risky than the provision of services by Openreach. Having developed this argument, C&W went on to argue as follows:²⁸⁸

In any event, there is no reasonable basis for concluding that the risk associated with leased line services is as high as for the rest of BT excluding Openreach given the reasons cited in §106.2(b) and (c) above²⁸⁹ and further that the BT Wholesale leased lines business is not (or not necessarily) comparable to the BT Retail Division or, particularly, the BT Global Services Division (which has accrued very substantial losses).

4.285. There was then a reference to the witness statement of Mr Ridyard,²⁹⁰ which stated:

Further, the provision of retail services entails different variable costs compared to the provision of wholesale service. Specifically, the sale of retail services generally incurs proportionally more variable costs and less fixed infrastructure costs. Therefore, even if Ofcom were correct in arguing that the level of demand for AI and TI services suggests that Openreach WACC is not appropriate, since the actual return on the business depends on a combination of demand and supply-side (ie cost) factors there can be no assurance that Ofcom is justified to opt for the rest of BT as the source of the appropriate equity beta.

4.286. Mr Ridyard also argued that 'Ofcom's suggestion that the WACC for Openreach is not appropriate does not necessarily lead to the conclusion that the WACC for the rest of BT is the relevant measure of the cost of capital' and 'To justify a positive choice for an equity beta equivalent to the rest of BT Ofcom would have needed to establish that this residual part of BT's business has a risk profile that is similar to that of the AI and TI services'.²⁹¹

Summary of Ofcom's response

4.287. In relation to Mr Ridyard's argument that Ofcom needed to establish that the rest of BT had a risk profile similar to that of AI and TI services, Ofcom said²⁹² that its decision to choose the rest of BT rate reflected the practical issues regarding a lack of available evidence to support specific disaggregation to estimate individual project

²⁸⁶NoA, §106.3.

²⁸⁷NoA, §§106.1 & 106.2.

²⁸⁸NoA, §106.3.

²⁸⁹See paragraph 17.

²⁹⁰C&W W/S Ridyard I, §71.

²⁹¹C&W W/S Ridyard I, §66.

²⁹²Defence, Annex C, §154.

specific betas and Ofcom's generally cautious approach to assessing parameters underlying the cost of capital. Ofcom maintained that it was not practical to have a burden of proof in the way suggested by Mr Ridyard, who suggested that Ofcom should have provided evidence of the correlation of risks of leased lines with the rest of BT rate. Ofcom referred back to the conclusions of the 2005 Cost of Capital Statement, which suggested that if there were to be a different beta from the rest of BT, this needed to be produced using robust data. In the absence of such evidence, Ofcom was faced with a choice of selecting between one of the available benchmarks (ie the Openreach and rest of BT rates) taking into account any changes that might have occurred since the 2005 Cost of Capital Statement.

- 4.288. Ofcom then set out in further detail its choice of the rest of BT rate over the Openreach rate, including its assessment of the risks associated with leased lines. Ofcom noted that it considered that there were different levels of risk associated with delivering services to different markets; and in particular that Openreach's core access services were primarily WLR and MPF services used, in the main, to deliver narrowband and asymmetric broadband to residential customers. On the other hand, BT's PPC and AISBO service customers ultimately used wholesale leased lines services to deliver services to SME and corporate customers, as well as more generally to provide broadband services. Further, Ofcom's view was that future demand for new circuits was more likely to be correlated to economic activity, whereas other access services were less sensitive to those changes.²⁹³
- 4.289. Ofcom also pointed out that much of the evidence that it used to examine the relative risk of copper access and other services either did not apply at all, or did not apply to the same extent, to the leased lines business.²⁹⁴ For example, it stated that it had 'reasonably good evidence that income elasticities of demand on exchange lines are relatively low'. However, it concluded that the evidence was insufficient to allow further disaggregation of other services.²⁹⁵
- 4.290. Ofcom contended that, on balance, the arguments (set out in the 2005 Cost of Capital Statement), as revisited in the LLCC Statement, favoured regarding PPCs as more similar to the rest of BT than to basic exchange line services. Ofcom was not convinced that there were new arguments put forward by respondents to the LLCC charge control that were relevant to support an alternative position to the use of the rest of BT rate. For example, C&W's consultation response largely related to underlying access elements being similar between LLU and WLR and leased lines, which was a point that had been considered in the 2005 Cost of Capital Statement and that Ofcom responded to in the LLCC Statement. Ofcom submitted that, ultimately, this was a matter for Ofcom's regulatory judgment and, having considered the competing arguments and the evidence available, it came to a reasonable view that should not be impugned.

²⁹³Defence, Annex C, §159.

²⁹⁴Defence, Annex C, §161.

²⁹⁵Defence, Annex C, §142.

Argument (b)(iii): Whether Ofcom could have conducted fresh calculations to establish a cost of capital for the leased lines business

Summary of C&W's arguments

4.291. In its NoA,²⁹⁶ C&W argued that Ofcom erred in concluding that it must choose either the cost of capital for Openreach or the cost of capital for the rest of BT *when it could alternatively and more appropriately have conducted fresh calculations specifically considering the cost of capital for the leased lines business* (emphasis added).

Summary of Ofcom's response

4.292. In its Defence,²⁹⁷ Ofcom stated: '... Ofcom considers that any expectation by C&W that Ofcom should have determined the "true cost of capital" of leased lines is an unrealistic proposition' and 'The decision to choose the rest of BT rate reflects the practical issues regarding a lack of available evidence to support specific disaggregation to estimate individual project specific betas and Ofcom's generally cautious approach to assessing parameters underlying the cost of capital.'

4.293. In its Defence, Ofcom²⁹⁸ quoted the 2005 Cost of Capital Statement, where it set out the conditions under which it would be appropriate to consider separating out a firm's beta for individual projects. Ofcom stated that the list of conditions was 'non-exhaustive, and it is not the case that all need to be satisfied for a disaggregated approach to be appropriate. However, the more conditions that are satisfied, the more likely it is that a disaggregated approach will be appropriate'. The following is a summary of those conditions:

- (a) the systematic risk faced by the project was significantly different from that faced by the overall company;
- (b) there was evidence available which could be used to assess variations in risk (eg pure play comparators were available, it was possible to use other quantitative analysis—for example, quantitative risk assessments, data on the firm was available at a disaggregated level—for example, in separate accounts); and
- (c) correctly identifying variations in risk, and reflecting this in an adjusted rate of return, was likely to bring about significant gains for consumers.

4.294. Ofcom stated²⁹⁹ that it would generally be difficult to obtain the data needed to perform a disaggregation of a business into different projects and that in the case of BT it was only possible to do so for Openreach (ie the copper access services), as there was sufficient data available to do so.³⁰⁰

²⁹⁶NoA, §106.4.

²⁹⁷Defence, Annex C, §153.

²⁹⁸Defence, Annex C, §141.

²⁹⁹Defence, Annex C, §141.

³⁰⁰Defence, Annex C, §142, summarizes why Ofcom was able to perform a disaggregation for Openreach. 'This was because there was reasonably good evidence that income elasticities of demand for exchange lines are relatively low. The profitability of basic access services is therefore likely to be relatively stable over time, hence the lower "access services" cost of capital. However it concluded that the evidence was insufficient to allow further disaggregation of other services.'

Summary of BT's Intervention

4.295. In its Sol, BT stated that:

the task of disaggregation is formidably difficult. Amongst other things, there are no benchmark firms to direct market comparators to the leased lines business which might provide a comparison. Nothing in C&W's appeal comes close to providing the kind of analysis that might support such a disaggregation, or departure from Ofcom's established approach, in this case.

This statement was supported by the witness statements of Mr Esslin-Peard and Dr Firla-Cuchra.

4.296. Mr Esslin-Peard noted that the following factors weighed against further disaggregating the cost of capital for the leased lines business:

- (a) the lack of suitable comparator businesses;
- (b) the lack of quantitative evidence;
- (c) the lack of sufficiently disaggregated data from BT; and hence
- (d) the large potential margin of error.

4.297. Specifically to the disaggregation of the leased lines business, Mr Firla-Cuchra noted³⁰¹ that:

there are some significant challenges with carrying out a more granular disaggregation in this case and estimating a separate cost of capital for leased lines.

First, leased lines share assets with other services and the asset allocation necessary to assess the riskiness of returns to 'leased lines-only' assets would significantly depend on a particular methodology chosen to allocate assets where alternative methodologies may lead to a range of different outcomes.

Second, and analogously to the above, leased lines share costs with other services and the cost allocation necessary to assess the riskiness of net cash flows from leased lines will depend on the methodology used to allocate costs.

Third, there are significant synergies and other linkages between leased lines and other parts of BT.

Fourth, for all of the reasons outlined above, it is difficult to consider leased lines to be a stand-alone business division of the BT Group.

³⁰¹BT W/S Firla-Cuchra I, §2.41.

Argument (b)(iv): Whether C&W's alternative solutions offer a pragmatic and preferable alternative

Summary of C&W's arguments

4.298. If Ofcom concluded that fresh calculations were not practicable, C&W proposed the following three solutions:

- Ofcom could have assigned the leased lines business a cost of capital equivalent to that of the whole of the BT Group including Openreach given that the leased lines business related partly to Openreach components and partly not—as was the case for the BT Group as a whole; or³⁰²
- Ofcom could have assigned the leased lines business a cost of capital between the mid-range points for Openreach and the rest of the BT Group reflecting the position that the relevant risk associated with the leased lines business might be higher than Openreach but was less than for the rest of BT Group excluding Openreach;³⁰³ and
- Ofcom could have calculated a disaggregated WACC for the ICT business.³⁰⁴

4.299. In its Reply to Ofcom's defence, C&W stated that it was inappropriate to apply a WACC derived in part on the basis of risk faced by BT's ICT business. C&W proposed that even if a WACC for leased lines could not be robustly calculated, Ofcom should have calculated a WACC for ICT and accordingly reduced the rest of BT WACC.³⁰⁵

4.300. C&W drew attention³⁰⁶ to the 2005 PwC report, which said that there was a stronger case for disaggregating a WACC for BT's ICT business than even its copper access business.³⁰⁷ C&W contended that 'Ofcom's reasons at the time for not doing it are far from convincing'. One reason was its concern that it 'assumes that all of BT's non-ICT figures have a similar level of risk'.³⁰⁸ C&W accepted that this was so but noted that this was very much C&W's objection to Ofcom's decision to use the rest of BT WACC for leased lines. In other words, the same criticism could be applied to the approach that Ofcom actually adopted, and with more force since even Ofcom agreed that ICT activities were 'very likely to be riskier than the BT average'.³⁰⁹

4.301. C&W continued:³¹⁰

Ofcom adds to its earlier reasoning that it remains appropriate not to use a separate disaggregated WACC for BT's ICT business because Ofcom believes that 'the proportion of BT's value accounted for by its ICT business is likely to be significantly lower now than in 2005' (§150, Defence Annex C). C&W accepts that the proportion may be lower but notes that analysts still consider that ICT services account for

³⁰²NoA, §106.4(a).

³⁰³NoA, §106.4.

³⁰⁴Reply, §59.

³⁰⁵Reply, §59.

³⁰⁶Reply, §60.

³⁰⁷Disaggregating BT's Beta (PwC, June 2005), p iv, [R/8/95].

³⁰⁸Ofcom's approach to risk in the assessment of the cost of capital—final statement (18 August 2005) §7.62, quoted in §148, Defence, Annex C.

³⁰⁹§7.64, *ibid*, quoted in §149, Defence, Annex C.

³¹⁰Reply, §61.

approximately 10% of BT's equity value or approximately 1/7th of the equity value of BT excluding Openreach.³¹¹ It is to be anticipated that the significantly higher risk associated with ICT services would still therefore have a material impact on the WACC for the rest of BT.

Summary of Ofcom's response

4.302. In its response to our questions on beta of 26 February, Ofcom made the following points regarding calculation of an ICT beta:

- (a) It concluded that the conditions under which it would be appropriate to consider disaggregation were not met (see §75 for a list of these conditions) in large part because of a lack of disaggregated financial information for ICT, with no audited financial statements or clearly distinguishable assets or cash flows.³¹²
- (b) A reduction in investor's perceptions of the value of BT Global Services meant that the effect on the rest of BT beta would be minimal now.
- (c) In 2005, the PwC report suggested an asset beta for the ICT business, based on a set of five comparators, of 1.76. Ofcom noted that the comparators were pure ICT businesses without the telecommunications bias of BT Global Services, and so were not necessarily very close comparators.
- (d) Ofcom further commented that 'it would be necessary to follow the conservative principle that we followed in the disaggregation of Openreach's beta'. Hence Ofcom told us that it would have been reasonable to consider a beta of up to 1.2, rather than the beta of greater than 2 suggested by PwC.³¹³ The effect on the beta of the rest of BT would be a reduction from the 0.96 in the LLCC to about 0.9, which 'would not materially impact the resulting charge control X value of -3.25%'.

4.303. At its bilateral hearing,³¹⁴ Ofcom expanded on this point, saying,

If you look at the components of the ICT business within BT you will find that, compared with companies like IBM, PBS and Hewlett Packard, a very significant proportion of it relates to core telecommunications services, so there are IT applications and services on top of it but a lot of it is the more traditional provision of connectivity and managing communication services.

Summary of BT's Intervention

4.304. At the hearing, BT's expert witness, Mr Firla-Cuchra, said that ICT was not a separate business either in a corporate or functional sense, and was part of BT Global Services.³¹⁵

4.305. Mr Esslin-Peard, for BT,³¹⁶ went on to explain the difficulties in describing BT's activities as ICT:

³¹¹Summary of recent comments from analysts [R/9/96].

³¹²Ofcom response to questions on beta of 26 February 2010.

³¹³Ofcom calculated that the beta of 1.76 suggested by PwC would be equivalent to an equity beta of >2 at 35 per cent gearing.

³¹⁴Ofcom bilateral hearing, transcript, p66, line 10.

³¹⁵BT hearing, p44, line 25.

The ones carried out by BT—almost all of them in Global Services—are specifically networked IT services. Global Services would not want to compete with IBM, Cisco or what-have-you in providing routers or computing power as such. Global's proposition, if you like, is: BT owns an extensive UK and international network and a good proportion of those services can be supplied using BT's networks. It is not a kind of conventional high-tech computing and systems business from that point of view. Global is looking for the customers where it can use BT's network. I am not sure there are no other examples of companies following that pattern, but the people you tend to find doing that sort of activity are the big telcos rather than companies coming at it more with the computing power approach like IBM and Cisco. It is too big a market to describe it as 'niche' but it is all based around applying services over networks.

Argument (b)(ii): Whether Ofcom erred in concluding that it must choose either the cost of capital for Openreach or the cost of capital for BT Group

Summary of C&W's arguments

4.306. C&W stated in its NoA that 'Ofcom erred in concluding that it must choose either the cost of capital for Openreach or the cost of capital for the rest of BT Group when it could alternatively and more appropriately have conducted fresh calculations specifically considering the cost of capital for the leased lines business'.³¹⁷ Failing this, C&W argued that 'less rigorous but preferable' solutions were available, namely that Ofcom could have assigned the leased lines business a cost of capital equivalent to that of the whole of the BT Group,³¹⁸ or Ofcom could have assigned the leased lines business a cost of capital between the mid-range points for Openreach and the rest of the BT Group.³¹⁹

Summary of Ofcom's response

4.307. Ofcom did not make any further arguments other than those already discussed in relation to this point.

Assessment

Assessment of arguments in relation to demand

4.308. In assessing the impact of demand risk on beta, the key issue is the extent to which future variations in demand for services are correlated with variations in GDP growth. C&W made observations in its NoA regarding LLU roll-out already approaching economic limits, the pace of development slowing, and the existence of competition from residential broadband from mobile broadband, but C&W has not explained why and how these are connected to macroeconomic or systematic risk, and neither are these connections obvious to us. For this reason, we have not given them detailed attention. We therefore turn to the arguments that the parties have made about the identity of the customer base for leased lines and Openreach services and the implications for the elasticity of demand with respect to GDP.

³¹⁶BT hearing, p25, line 26.

³¹⁷NoA, §106.4.

³¹⁸NoA, §106.4(a).

³¹⁹NoA, §106.4.

- 4.309. C&W argued against making generalizations about risk simply based on the identity of the typical customer, and we would tend to agree with this. The fact that leased lines services are bought mainly by businesses while Openreach's services are bought mainly by households does not in itself indicate to us that one business is more risky than the other. Corporate and household earnings have both been affected adversely by the recent economic downturn; conversely, a period of strong GDP growth is likely to improve both business and household finances. It is not at all clear to us that one group of customers sees its purchasing power change more than the other as GDP growth varies or that we should regard one customer base as being inherently more risky than the other.
- 4.310. However, we were persuaded by Ofcom's evidence that it had not merely formed its judgment based on the identity of the customer, but had also considered the extent to which the nature of the product that was being sold led to variations in BT's sales volumes and revenue over the economic cycle. We thought that Ofcom and BT both made strong arguments when pointing to differences in the ways that business and residential customers adjusted demand in the face of a downturn, specifically the fact that:
- (a) businesses purchasing leased lines services could reduce their consumption of bandwidth and could rationalize the number of circuits that they purchased and in doing so reduce the charges they paid to BT; whereas
 - (b) the way that residential products were sold meant that it was only if households chose to disconnect their line that BT suffered a loss of revenue.
- 4.311. The arguments presented by Ofcom and BT tended to support the view that demand for leased lines services was more sensitive to economic conditions than demand for Openreach services. Empirical data submitted to us by BT³²⁰ seemed to demonstrate that this had been borne out by recent experience in that it showed a sharp drop in high bandwidth leased lines services at the end of 2008 whereas demand for copper lines fell only marginally. We note that evidence of this type has to be treated with some caution,³²¹ but in our view it supports Ofcom's approach.
- 4.312. We were less persuaded by C&W's regression of demand for lines versus GDP growth. This was mainly because the data was more limited than that discussed above in paragraph 4.311 in that it considered only the aggregate number of lines. Since, as noted above, BT's income is determined as much by the bandwidth of leased lines as by the number of lines sold, C&W's analysis omits a very important variable and gives an incomplete picture of the relationship between revenues and GDP growth.
- 4.313. We did not see force in C&W's contention that Ofcom considered the risk as to future demand for new circuits to be more closely correlated with the economy-wide level of economic activity than the risk for other access services. We saw no evidence to support C&W's claim and Ofcom clarified in its Defence and in its response to questions that this was not its position and that it considered that all leased lines demanded to have a higher sensitivity to GDP growth. We see no reason to question this explanation and consider the points made in paragraphs 4.310 and 4.311 to be as relevant to sunk investments as to new circuits, even if BT collects some of the

³²⁰BT's response to questions on beta of 26 February 2010.

³²¹In particular, the analysis is insufficient to demonstrate with certainty that the observed patterns of demand are related to the economic downturn. BT also pointed out that the data was not published or audited.

cost of investment from customers upfront via charges for customer-specific investments.

- 4.314. For the above reasons, it is our view that C&W has not provided convincing evidence to show that Ofcom was wrong to think that demand for leased lines would exhibit greater correlation to the economic cycle than demand for Openreach services. We consider Ofcom and BT to have made stronger arguments in support of Ofcom's position that it was likely that businesses would reduce their consumption of leased lines (for example, by reducing the number of leased lines purchased, or reducing the amount of bandwidth purchased) in response to a downturn in the economy, and that it was less likely that residential customers would dispense with their single broadband connection when faced with a similar downturn. All other things being equal, we consider this to support Ofcom's argument that this would tend to make the cash flows of the leased lines more variable and result in a higher cost of capital.

Assessment of arguments on similarity of components

- 4.315. BT's clarification of the extent to which the leased lines business shared components with Openreach was acknowledged by C&W to be material information. In our view, the fact that only 26 per cent of the assets used by the leased lines business are shared with Openreach supports Ofcom's argument that in this case the nature of the underlying assets used was unlikely to point to a correspondence in the two businesses' risk profiles. Even if it were the case that the two businesses shared more underlying assets than BT set out, the parties now appear to agree that this would not by itself determine beta. We see force in Ofcom's argument that whilst the type of assets used would play some part in determining cash outflows and therefore systematic risk, they were unlikely to play any part in the risk associated with the cash inflows and hence the cyclicity of demand was the more important factor. Given this, and the relatively small degree to which the two businesses share assets, we do not believe that C&W has presented convincing evidence or arguments to support this point.

Assessment of arguments on bad debt

- 4.316. The parties did not appear to us to have a marked difference in views about the theoretical relationship between bad debt and beta. Since bad debts can be expected to increase during periods of economic downturn and decrease during periods of strong GDP growth, it seems to us that C&W's claim that default risk is a relevant factor influencing beta is a reasonable one and Ofcom does not appear to dispute this.
- 4.317. The arguments that the parties have made require us to focus on the extent to which bad debt is a material or immaterial influence on the cost of capital for the different BT businesses. Ofcom, supported by BT, pointed out that levels of bad debt within BT were very low in 2007/08 at less than 1 per cent of revenue and could not be expected to drive a meaningful gap between different business units' costs of capital. C&W pointed out in response that this said nothing about the correlation of debt default with the macroeconomic cycle. We think there is some merit to this narrow point made by C&W, but this does not address how and to what extent it impacts on any differences in beta.
- 4.318. In our view, C&W has not demonstrated that bad debt levels in the retail business necessarily rise markedly during economic downturns or that bad debt causes a material difference in the leased lines and rest of BT betas. Although C&W criticized

Ofcom for failing to analyse the correlation between bad debt levels and GDP growth, it has not itself provided us with any evidence to support its contention that Ofcom had wrongly estimated the leased lines cost of capital.

- 4.319. Finally, we note that C&W said in its response to the questions on beta of 26 February that bad debt was an example of why the risks of the leased lines business *might* be similar to the risks of the Openreach business but again did not present any arguments or evidence to support what is otherwise a general assertion.

Assessment of Argument (b)(i): Whether Ofcom had a reasonable basis for concluding that the risk associated with leased line services is as high as for the rest of the BT Group excluding Openreach

- 4.320. C&W made two contentions in support of its argument that Ofcom did not have a reasonable basis for its conclusion: first, that the leased lines business had similarities with Openreach, and secondly, that the leased lines business was not comparable to the BT Retail Division, or the BT Global Services Division.
- 4.321. C&W's first contention, that the leased lines business had similarities to Openreach, is assessed above under Argument (a). We consider that C&W has not provided convincing evidence in support of this contention (see paragraphs 4.314, 4.315, 4.318 and 4.319).
- 4.322. We therefore turn to C&W's argument that the leased lines business was not comparable to the BT Retail Division, or the BT Global Services Division.
- 4.323. The parties appear to agree that retail services generally incurred more variable costs and less fixed infrastructure costs and that it seemed likely that the cost structure of PPCs was more similar to that of Openreach than to that of BT Retail (for example) in that both Openreach and PPCs might feature relatively large amounts of fixed costs and relatively low levels of variable costs, although no evidence had been adduced to confirm this. However, C&W has not explained how it necessarily follows that Ofcom would not have been justified to opt for the rest of BT rate. Since it is necessary to consider the cyclical nature of both cash outflows and inflows, it is possible for two businesses with similar cost structures to have differing risk levels due to variations in demand volatility.
- 4.324. C&W itself pointed out that the actual return on the business depended on a combination of demand- and supply-side (cost) factors³²²—and it seems that Ofcom agreed with this statement.³²³ The fact that Ofcom viewed demand as a more important determinant of any possible difference in the cost of capital for access-related services and PPCs, given its comments about the similarity of cost structures in paragraph 4.261, seems reasonable.
- 4.325. C&W appeared to place the burden of proof on Ofcom to justify its choice of rest of BT by its assertion that 'to justify a positive choice of an equity beta equivalent to the rest of BT, Ofcom would have needed to establish that this residual part of BT's business had a risk profile that is similar to that of the AI and TI services'.³²⁴ In our view, for C&W to make a case that Ofcom erred in this respect, it needed to demon-

³²²C&W W/S Ridyard, §71.

³²³See, for example, Defence, Annex C, §178.

³²⁴C&W W/S Ridyard I, §65.

strate why and to what extent the leased lines business is not comparable to either the BT Retail Division or the BT Global Services Division, which it has not done.

Assessment of argument (b)(iii): Whether Ofcom could have conducted fresh calculations to establish a cost of capital for the leased lines business

- 4.326. We consider that Ofcom and BT have presented credible arguments that fresh calculations to establish a cost of capital for the leased lines business were an unrealistic proposition due to lack of evidence to support specific disaggregation. In particular, BT's arguments that leased lines shared costs and assets with other services and there were significant synergies and other linkages between leased lines and other parts of BT support Ofcom's view that it was difficult to consider leased lines to be a stand-alone business that could be benchmarked to an identifiable set of pure-play comparators and that would enable a sufficiently reliable assessment of beta to be made for Ofcom's purposes.
- 4.327. C&W has not explained how the practical difficulties cited by Ofcom and BT could be overcome. Accordingly, it is our view that C&W has not provided support for its contention that Ofcom could have conducted fresh calculations to establish a cost of capital for the leased lines business.

Assessment of argument b(iv) in relation to C&W's alternative solutions

- 4.328. It is our view that C&W has not set out sufficient reasoning as to why it would have been more appropriate for Ofcom to adopt either of the first two alternative solutions; that is, to assign the leased lines business a cost of capital equivalent to the whole of the BT group; or a cost of capital between the mid-range points for Openreach and the rest of the BT Group. The sole reason that C&W set out in support of assessing a figure on the basis of the whole of the BT group was that the leased lines business related partly to Openreach components and partly not. However, as discussed in paragraph 4.315, we did not accept that C&W had made a clear argument that the similarity of components was a determinative factor in the choice of beta. In support of assessing a figure between the mid-range points for Openreach and the rest of BT, C&W stated that this would reflect the position that the risk of the leased lines business was less than for the rest of BT. However, as discussed in paragraph 4.325, we did not accept that C&W had supported its argument that the risk of the leased lines business was less than for the rest of BT.
- 4.329. Ofcom also argued that the reduction in investor perceptions of the value of BT Global services meant that, had they decided to disaggregate ICT, any effect on the rest of BT beta would be minimal.³²⁵ C&W agreed that the value had lowered but argued that ICT still accounted for approximately 1/7th of the equity value of BT excluding Openreach.³²⁶
- 4.330. We thought that C&W had provided some evidence, particularly the 2005 PwC report, to support a separate beta for BT's ICT business. We thought that it was possible to conceive of ICT as a separable business, despite the lack of separate accounting data, and that, based on the evidence of the PwC report, it was possible in principle to identify comparators for BT's ICT business, even if they were not

³²⁵Ofcom response to questions on beta of 26 February 2010, Question 14.

³²⁶Reply, §61.

necessarily exact or perfect comparators. However, in our view the viability of this approach depends in large part on the extent to which the comparators can be demonstrated to be similar to the business in question, and we thought that Ofcom and BT had presented some credible arguments that cast doubt on this because of the difference in nature between BT's ICT business and the comparator group suggested by PwC. C&W has not suggested how, in practice, these issues might be addressed. Significantly, even if C&W had shown that it could be done, we thought that it was unlikely that any separate estimation would result in a very high beta for ICT taking into account Ofcom's view on the specifics of BT's ICT business which would tend to support a beta at the lower end of the range of plausible ICT betas, and the inherent difficulties of obtaining robust evidence in an exercise of this nature which tend to favour weight being placed on the known information that the business is part of the BT Group. These factors, combined with the apparent reduction in value of the business since 2005, would tend to support Ofcom's contention that any resulting reduction in the rest of BT beta would not materially impact the LLCC charge control.³²⁷

- 4.331. For these reasons, it is our view that C&W has not presented sufficiently strong arguments that Ofcom acted inappropriately in applying to the leased lines business a WACC derived in part on the basis of the risk faced by BT's ICT business.

Assessment of argument (b)(ii): Whether Ofcom erred in concluding that it must choose either the cost of capital for Openreach or the cost of capital for BT Group

- 4.332. This argument does not appear to have been presented as a stand-alone argument but rather as an argument that is contingent on whether Ofcom could have alternatively and more appropriately done something else. As set out in paragraphs 4.328 to 4.331, in our view, C&W has not set out sufficient reasoning in support of this contention. It follows therefore that C&W has not demonstrated that Ofcom erred in concluding that it must choose either the cost of capital for Openreach or the cost of capital for BT Group.

Determination

- 4.333. For the reasons set out above, we conclude that Ofcom did not err in the calculation of the relevant cost of capital for the reasons set out in §§105–107 of the NoA.

³²⁷Ofcom response to questions on beta of 26 February 2010, Question 14.

Section 5: Reference Question 4

In this section we address Reference Questions 4(a)(i), 4(a)(ii), 4(a)(iii), 4(a)(iv), 4(b)(i) and 4(b)(ii). We set out below, for each question, the paragraphs at which we (a) start our analysis of that question, (b) start our assessment of that question and (c) conclude with our determination of that question.

	<i>Paragraph</i>
Reference Question 4(a)(i)	5.1
Assessment	5.39
Determination.....	5.55
Reference Question 4(a)(ii)	5.56
Assessment	5.66
Determination.....	5.93
Reference Question 4(a)(iii)	5.94
Assessment	5.137
Determination.....	5.242
Reference Question 4(a)(iv)	5.243
Assessment	5.265
Determination.....	5.286
Reference Question 4(b)(i)	5.287
Assessment	5.295
Determination.....	5.317
Reference Question 4(b)(ii)	5.318
Assessment	5.346
Determination.....	5.374

Reference Question 4(a)(i)

- 5.1. This section (paragraphs 5.1 to 5.55) sets out our conclusions as to whether Ofcom erred in the setting of the PoH charges in Part 1 of Annex C to the TI Price Controls in deciding not to set the charges on local ends used by BT but only on those used by BT's competitors, and in particular whether Ofcom erred in its use of BT's estimate of the costs to be recovered by the charges for the reasons set out in §§110–111 of the NoA.
- 5.2. §§110–111 set out the first allegation of error made under Ground D of the NoA. Ground D addresses the alleged errors that Ofcom made in setting PoH charges for OCPs in the LLCC Statement. §110 sets out C&W's reasons for believing that the PoH charges are higher than they should be; §111 sets out C&W's view on BT's incentives. We discuss further below the detail of C&W's allegation on this ground.
- 5.3. For the reasons given below, our determination is that Ofcom erred in its use of BT's estimate of the costs to be recovered by the PoH charges for the reasons set out in §§110–111 of the NoA.

Summary of Ofcom's rationale and methodology

- 5.4. In 2002, as part of its PPC phase II determination, Oftel introduced a local end uplift to recover some of the costs related to PoH for PPCs. Oftel described these costs as network overheads—BT started charging a percentage mark-up on each external local end to recover the overheads (amounting to 32 per cent for TISBO services of 1 Mbit/s and below, and 30 per cent for TISBO services of over 1 Mbit/s). These mark-

ups were subsequently adjusted upwards following further work by Oftel to confirm these figures.¹

- 5.5. As part of the LLCC Statement, Ofcom determined that OCPs pay for PoHs in two ways:²
- (a) The first occurs when the OCP pays the upfront capital costs and direct annual maintenance charge for each PoH.
 - (b) The second is the 'New PoH Charge' on each circuit to cover network overheads not covered by the direct charges.
- It is this second 'New PoH Charge' that is covered by Reference Question 4(a)(i).
- 5.6. Also as part of its LLCC Statement, Ofcom requested that BT estimate the PoH costs, and BT did so. As the RFS did not separately identify PoH costs, BT estimated the costs using a top-down model.³ We refer in our determination of this Reference Question to these costs as 'the original BT estimated costs'.
- 5.7. Ofcom set out in its LLCC Statement that it had completed the following checks on the original BT estimated costs:⁴
- (a) Ofcom ascertained what costs were incurred in supplying a PoH link and how BT recovered these costs.
 - (b) Ofcom then obtained BT's top-down model (which was based on estimates of the type and quantity of PoH boxes) and reviewed the methodology applied and the key assumptions used in estimating the costs to be recovered.
- 5.8. Ofcom concluded that the methodology which BT had applied and the original BT estimated costs were reasonable.⁵
- 5.9. In the LLCC Statement, Ofcom set the amount to be recovered by PoH charges to be £11.7 million, and provided the following breakdown.

TABLE 5.1 **BT's estimate of costs to be recovered through the New PoH charges**

	<i>£ million</i>
Exchange indirects	6.3
Access fibre/copper/duct	2.3
<i>Equipment maintenance & indirects</i>	
Customer sited	1.0
Exchange located	0.8
Subtotal	1.8
Selling, general & admin on PoH	<u>1.3</u>
	11.7

Source: Defence Annex D Table D2.

- 5.10. We consider each of these categories in turn, using information provided by BT.⁶

¹BT W/S Morden, §§124–125, and C&W W/S Harding, §102.

²C&W plenary presentation of 5 February 2010, p17.

³BT W/S Morden, §129.

⁴LLCC Statement, §4.146.

⁵Defence, §130.

Exchange indirects

- 5.11. We understand that 'exchange indirects' are indirect costs allocated to PoHs. These costs are intended to reflect the indirect costs associated with the LSEs in which the PoHs are sited. The costs principally include accommodation ([~~3~~] per cent), which includes space, heating and lighting, and general management ([~~3~~] per cent).⁷
- 5.12. The costs were calculated by estimating the approximate operating costs that would be allocated to the PoHs under BT's RFS allocation methodology. To do this, BT first estimated a notional depreciation charge for the equipment used in PoH (using estimates of the cost and age of the assets used). BT then used the relationship between synchronous digital hierarchy (SDH) equipment costs and depreciation charges in the general RFS system and the notional depreciation charge for the equipment used in PoH to apportion operating costs in the same proportion as was apportioned to SDH equipment more widely in the BT system.⁸

Access fibre/copper/duct costs

- 5.13. BT informed us that these were the estimated costs of the physical bearers used in PoH. The costs included ROCE, depreciation, maintenance and other operating costs.⁹
- 5.14. Given that the costs appear to relate directly to PoHs and not to other services hosted at the LSE or within the wider BT business, we therefore understand that these costs are only attributable to PoHs.

Equipment maintenance and indirects

- 5.15. This category of costs relates to maintenance carried out on the exchanges at which PoHs are sited. Since PoHs are hosted at exchanges, BT allocates a part of these costs to PoHs.
- 5.16. The costs are calculated using a similar method to the exchange indirects: establishing in this case the relationship between maintenance costs and the notional depreciation associated with PoH equipment at the customer site or BT exchange.

Selling, general & admin on PoH

- 5.17. We understand that these costs relate to the general overheads required to operate BT's business and therefore are not directly incurred by operating the PoHs.¹⁰ The costs are allocated across all of the services that BT provides using BT's detailed attribution methodology.¹¹ For PoH, BT estimated the 'selling, general & admin' (SG&A) costs related to private circuits as a percentage of revenue. This percentage was then applied to the PoH revenues to estimate the appropriate mark-up.
- 5.18. A further breakdown of these costs is set out in Table 5.2 below.

⁶BT responses to CC, 2 March 2010.

⁷BT responses to CC, 2 March 2010, Q19.

⁸BT responses to CC, 2 March 2010, Q19.

⁹BT responses to CC, 2 March 2010, Q19.

¹⁰BT responses to CC, 2 March 2010, Q19 (4).

¹¹www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2009/DetailedAttributionMethods.pdf.

Further consultation on PoH charges

5.19. Following further consultation, on 8 April 2010 BT informed us that it had recalculated the PoH charges, and effective from 1 July 2010, the total New PoH Cost would be reduced to £6.7 million. We refer to these revised estimates of the costs of PoH which BT provided as ‘the revised BT estimated costs’.

5.20. The detailed split is set out below, showing the original figures as calculated by BT as part of the LLCC Statement and the revised figures.

TABLE 5.2 BT’s estimate of costs to be recovered through the New PoH Charges

	£ million	
	New estimate	LLCC Statement
<i>Exchange indirects</i>		
Accommodation	[X]	[X]
Plant support	[X]	[X]
Finance & billing	[X]	[X]
Computing	[X]	[X]
Personnel	[X]	[X]
General management	[X]	[X]
Other	[X]	[X]
Total exchange indirects	[X]	[X]
Access fibre/copper/duct	[X]	[X]
<i>Equipment maintenance</i>		
Customer sited	[X]	[X]
Exchange located	[X]	[X]
Total equipment maintenance	[X]	[X]
<i>Selling, general and admin on PoH</i>		
General management	[X]	[X]
Customer support	[X]	[X]
Accommodation	[X]	[X]
Personnel & admin	[X]	[X]
Finance & billing	[X]	[X]
Software	[X]	[X]
Operator services	[X]	[X]
Other	[X]	[X]
Total SG&A	[X]	[X]
Less recovered via existing rental charges	[X]	
Total PoH charge	6.73	11.74

Source: BT (response dated 13 April 2010).

5.21. The revised BT estimated costs reflect changes to the original BT estimated costs. In its response to further questions,¹² BT confirmed which of the underlying assumptions used to calculate the categories in Table 5.2 above had been adjusted. In paragraph 5.37, we consider the specific assumptions appealed by C&W under Ground D in greater detail. BT also made adjustments to other underlying assumptions not directly referred to by C&W in its appeal.

¹²BT response dated 13 April 2010.

Summary of C&W's arguments

5.22. In its NoA, C&W argued that:¹³

- (a) The costs recovered by the New PoH Charges were more than 10 per cent greater than those recovered by the local end uplift despite developments suggesting that costs should have fallen.¹⁴
- (b) The £11.7 million of costs cited for PoHs were much higher than would be expected when considering charges for other regulated products using the same inputs.¹⁵
- (c) To the extent that it might be suggested that this was because of unrecovered capital costs due to the migration of retail circuits,¹⁶ C&W noted that:
 - (i) Oftel previously found that capital costs for retail leased line circuits of 2 Mbit/s or less were recovered by BT within three months or less, and the period of three months was much less than the one-year minimum contract period for retail circuits;¹⁷ and
 - (ii) the appropriate response would be to extend the minimum contract period for retail PoHs rather than recover any outstanding capital expenditure from the users of all PoHs (except BT).¹⁸

5.23. C&W stated that BT had had both the ability and incentive to increase the proportion of common costs allocated to the New PoH Charges as BT did not pay these charges but it competed against those that did.¹⁹

5.24. In his witness statement, Mr Harding expanded on these points, making the following detailed points:

- (a) C&W now paid about [~~3%~~] per cent more than previously.²⁰ C&W would now pay about [~~3%~~] per cent of the total New PoH Charges. Mr Harding expressed surprise that unit costs of PoHs had increased by 10 per cent and provided the following reasons:
 - (i) Mr Harding believed that SDH today represented a greater proportion of PoHs than PDH than in 2002 but SDH used less space and power and so he expected that exchange indirect costs (which made up most of the total PoH costs) would be lower.²¹
 - (ii) He believed that the proportion of migrated PoHs must have declined since 2002 and yet £1.5 million of costs appeared to relate to these migrated PoHs in the new charging structure.^{22,23}

¹³§110.

¹⁴NoA, §110.1.

¹⁵NoA, §110.2.

¹⁶NoA, §110.3.

¹⁷NoA, §110.3 (a).

¹⁸NoA, §110.3 (b).

¹⁹NoA, §111.

²⁰C&W W/S Harding, §105.

²¹C&W W/S Harding, §106(a).

²²C&W W/S Harding, §106(b).

(b) Mr Harding estimated the amount of space used by its SDH PoHs and compared these with the exchange space costs in the New PoH Charges. He estimated that C&W's SDH PoHs drove costs of £[§] compared with C&W's contribution of £[§] under the new charges.²⁴ From this, he concluded that either C&W was paying too much for space or C&W's legacy PDH costs drove most of the exchange costs despite representing only a small amount ([§] per cent) of C&W's capacity.²⁵

(c) Mr Harding then estimated the fibre costs related to SDH and PDH PoHs for both In Span Handover (ISH) and Customer Sited Handover (CSH) variations. Based on these estimates, he believed that the total fibre maintenance costs would only be £[§] compared with C&W's contribution of £[§] under the new charges. As before, he concluded that either C&W was paying too much for fibre or C&W's legacy PDH costs drove most of the fibre costs.²⁶

5.25. In its Reply, C&W stated that BT's calculations of PoH were unreliable as they were based on estimates which were inaccurate.²⁷ Specifically, C&W argued that:

(a) BT's calculation was driven by the number of PoH boxes, but these figures were merely estimates as BT had no information on the number of boxes for circuits of 2 Mbit/s and above.²⁸

(b) BT assumed DPCNs were only carried on 4 x 2 Mbit boxes or over copper bearers. However, the majority of C&W's DPCN circuits were handed over on SDH or 16 x 2 Mbit boxes.²⁹

(c) BT assumed that over half of DPCN circuits were handed over on copper bearers. However, none of C&W's DPCN lines were carried on copper (and C&W accounted for 66 per cent of all DPCN). DPCN circuits handed over on copper bearers accounted for 75 per cent of the total cost for DPCN PoHs.

(d) BT assumed an average of 3.4 circuits per box, C&W estimated it had over 30 circuits per box on average, C&W therefore believed that BT had greatly over-estimated the number of boxes.³⁰

5.26. In addition, C&W noted that:

(a) No justification had been provided for why the SG&A uplift should be 13 per cent on sales price by circuit volume.³¹

(b) The exchange overheads allocated appeared 'wholly excessive'. C&W believed that the space and power costs (ie the exchange overheads) should be the same for CSH STM—16 boxes³² and for ISH STM—16 boxes as these costs should

²³In the LLCC Consultation, Table A7.3, costs of £1.5 million are described as equipment maintenance and footnoted as relating to migrated PoHs. An exactly similar category does not appear in the LLCC Statement, but may be the £1.8 million of equipment maintenance and indirects.

²⁴C&W W/S Harding, §121.

²⁵C&W W/S Harding, §122.

²⁶C&W W/S Harding, §125.

²⁷Reply, §64.

²⁸Reply, §64.1.

²⁹Reply, §64.2a.

³⁰Reply, §64.2c.

³¹Reply, §64.4c.

³²Synchronous Transport Modules (STM) are high bandwidth multiplexes. STM-1 has a capacity of 155Mbit/s, STM-16 has a capacity of 16x155Mbit/s.

reflect identical equipment in the BT exchange. However, the exchange overhead costs for the two amounted to £3,500 and £9,800 respectively.

- 5.27. C&W noted that according to BT (and C&W figures), C&W would pay over 60 per cent of the costs (£[redacted] ÷ £11.7 million) while having only 10 per cent of the boxes ([redacted] ÷ 21,018). Using BT's costs per box (taken from the spreadsheet submitted by BT), C&W estimated that it was responsible for only £[redacted] out of the £[redacted] million that it would pay under the New PoH Charge.
- 5.28. In its response to our provisional determination, C&W noted that it and other OCPs had raised specific concerns about the level of PoH costs in consultation responses before the LLCC Statement.³³

Summary of Ofcom's Defence

- 5.29. Ofcom noted in its Defence that BT had provided the original BT estimated costs and that Ofcom had reviewed the model and assumptions, and had concluded that they were reasonable and consistent with the methods used to produce the RFS.³⁴
- 5.30. Ofcom rejected the allegation that PoH charges were higher than they had previously been. Ofcom observed that the original BT estimated costs were marginally less than the revenues generated by the old 2007/08 local end uplift.³⁵ However, Ofcom noted that the total cost to be recovered from each different user of PoHs would depend on the mix of the type and capacity of PoH that a particular OCP used.³⁶ Ofcom also disagreed with Mr Harding's overall calculation of 10 per cent increase as the total prices could not be used to infer unit cost changes because the 2007/08 local end charges already reflected changes in costs since 2002.³⁷
- 5.31. Ofcom stated that it was unable to refute C&W's comments on SDH costs as it did not have the necessary information.³⁸
- 5.32. Ofcom disagreed that capital costs were included in the PoH charges (and hence that retail contract lengths should be increased). Ofcom stated that capital costs associated with equipment and fibre of migrated PoH were not recovered through the new charges.³⁹
- 5.33. In its response to our provisional determination, Ofcom acknowledged that BT's original POH cost estimates were wrong,⁴⁰ but stated that the estimates had been produced by industry experts in BT and reviewed by financial and engineering experts within Ofcom. Ofcom stated that there was nothing intrinsically implausible about the estimates and that the errors only became apparent when set alongside actual equipment usage.⁴¹
- 5.34. Ofcom accepted that had it consulted with OCPs on the assumptions used by BT, it was likely that the errors would have been identified, but Ofcom believed that since BT regarded the information as confidential, the only option available to it would have

³³C&W Response to provisional determination, p5.

³⁴Defence, §210.

³⁵Defence, §211.

³⁶Defence Annex D, §34.

³⁷Defence Annex D, §35.

³⁸Defence Annex D, §36.

³⁹Defence Annex D, §39.

⁴⁰Response to provisional determination, §43.

⁴¹Response to provisional determination, §45.

been to issue formal information requests to OCPs.⁴² We consider this later in paragraph 5.48.

Summary of BT's evidence

- 5.35. BT rejected C&W's argument that the PoH charges may be too high, referring both to Ofcom's Defence and BT's witness statement of John Morden which provided greater detail on the background to the PoH charges. However, BT relied on Ofcom's Defence (Annex D) for a detailed rebuttal of C&W's argument.
- 5.36. In response to further questions following the bilateral hearing,⁴³ BT provided evidence setting out the new charges it would impose to replace the PoH charges set by Ofcom in its LLCC Statement. The total amount to be recovered would be £6.7 million rather than £11.7 million for the following reasons.
- 5.37. The revised BT estimated costs reflect changes to the original BT estimated costs. We set out below BT's explanation of the estimates that changed from the original BT estimated costs which C&W had criticized in its Reply:
- (a) PDH costs now represented a small percentage (less than [redacted] per cent) of the overall PoH costs.
 - (b) BT now estimated that [redacted] circuits were handed over on copper (BT had previously estimated this to be [redacted] per cent) and had reduced the estimates for PoHs handed over on 4 x 2 Mbit and 16 x 2 Mbit boxes.
 - (c) Similarly BT had now increased substantially the estimates of circuits handed over on SMA-1, SMA-4 and SMA-16 boxes.⁴⁴
 - (d) BT now estimated the number of circuits per box to be substantially higher for all PoHs other than the 4 x 2 Mbit boxes (for example, BT now estimated that there were [redacted] circuits per SMA-4 box rather than its previous estimate of [redacted]). The increase had been greatest for the highest bandwidth boxes.
 - (e) It appeared that the ISH and CSH exchange costs were now [redacted].⁴⁵ We have not confirmed this but note that the answer would not affect the reasons behind our determination as set out in paragraphs 5.39 to 5.55.
- 5.38. In addition, the revised BT estimated costs are approximately 40 per cent lower than the original BT estimated costs which were the basis of the figures in the LLCC Statement, a reduction which addresses many of C&W criticisms (that the costs were too high).

Assessment

- 5.39. This Reference Question requires us to consider whether Ofcom erred in its use of BT's estimate of the costs to be recovered by the PoH charges for the reasons set out in §§110–111 of the NoA. As noted above, we refer to this original estimate by BT of those costs as 'the original BT estimated costs'.

⁴²Ofcom response to provisional determination, paragraph 47.

⁴³BT response to CC questions dated 9 April 2010.

⁴⁴Synchronous Multiplex Access (SMA) multiplexes are higher bandwidth PoHs than 16 x 2 Mbit/s PoHs.

⁴⁵Based on BT responses to CC questions of 9 April.

- 5.40. In the heading introducing §§110–111 of the NoA, C&W alleged that Ofcom had erred as a matter of fact and/or assessment in accepting as accurate the original BT estimated costs. At §110, C&W advanced a number of reasons why the original BT estimated costs appeared to have been higher than they should be. At §111, C&W observed that BT had an incentive to increase the original BT estimated costs, since BT's downstream operations did not pay the New PoH Charges and compete against those who would have to pay them.
- 5.41. We therefore assess here whether Ofcom erred in its use of the original BT estimated costs. We note here that the heading to §§110–111 of the NoA describes Ofcom's error as having been to accept the original BT estimated costs as 'accurate'. As they remain estimates, we would expect Ofcom to assess not the 'accuracy' of the original BT estimated costs, but the 'reasonableness' of those estimated costs. Hence, we consider the pertinent question to be whether Ofcom erred in accepting those estimated costs as 'reasonable' or 'reasonably accurate'. We use this wording in our assessment below.
- 5.42. In assessing this question, we consider whether the original BT estimated costs were in fact reasonable in the light of the evidence which was available to Ofcom at the time, ie whether the original BT estimated costs were such as should have given Ofcom cause to doubt their reasonableness. We also consider what checks Ofcom performed on the original BT estimated costs before deciding to use them and whether those checks were sufficiently rigorous to identify any errors in them, ie whether Ofcom took appropriate steps to confirm their reasonableness.
- 5.43. Before turning to assess this question, we consider it helpful to make clear our position on the following point. We are conscious that the fact that BT has now provided the revised BT estimated costs, which are approximately 40 per cent lower than the original BT estimated costs, does not answer the question whether Ofcom erred in accepting as reasonable the original BT estimated costs. It is not for us to assess the reasonableness of the original BT estimated costs from our position now (with the benefit of hindsight), but rather to assess whether Ofcom's approach was correct at the time of the LLCC Statement. That said, for reasons which we elaborate on below, we do not regard the intervening period as wholly irrelevant to our assessment of Ofcom's approach at that time.
- 5.44. For ease of reference in addressing the arguments at NoA §110 (as elaborated upon in the Reply), we summarize below the criticisms of the original BT estimated costs made by C&W in its Reply (as set out in paragraph 5.25 above), together with the revised figures as stated in the revised BT estimated costs:
- (a) The original BT estimated costs rested on an estimate that DPCN circuits were all handed over on 4 x 2 Mbit/s boxes or copper. C&W appealed on the basis that most of its DPCN circuits were handed over on SDH or 16 x 2 Mbit/s boxes. The revised BT estimated costs assumed that less than 1 per cent were handed over 4 x 2 Mbit/s boxes and none over copper.
- (b) In the original BT estimated costs, BT had estimated that most ([~~80~~] per cent) of the circuits were handed over on copper. C&W appealed on the grounds that none of its circuits were handed over on copper.⁴⁶ BT subsequently estimated that [~~80~~] circuits were handed over on copper.

⁴⁶Reply, §64.2b.

- (c) BT had assumed an average of [X] circuits per box in the original BT estimated costs, whereas C&W estimated in its Reply that it had over 30 circuits per box on average. In the revised BT estimated costs, BT assumed over [X] circuits per box.
- 5.45. We considered more generally the criticisms of the original BT estimated costs which C&W advanced in its pleadings, but particularly those more detailed criticisms which C&W made in its Reply following receipt of BT's Sol.⁴⁷
- 5.46. In our view, many of the detailed criticisms of the original BT estimated costs which C&W made in its Reply are observations which Ofcom would have been able to make for itself at the time of the LLCC Statement. We note, for example, the fact that BT had assumed that approximately 50 per cent of all DPCN circuits were handed over on copper bearers, despite the fact that C&W accounted for approximately [X] per cent of all DPCN circuits using PoHs of which none were carried over copper bearers. This is information of a type which we consider should have been apparent to Ofcom, as the telecommunications regulator. We therefore find that Ofcom erred in accepting as reasonable the original BT estimated costs.
- 5.47. We further note the scale and scope of the revisions, to which we refer above in paragraph 5.44. In our view, these revisions demonstrate that the assumptions used in producing the original BT estimated costs were in some cases entirely wrong.
- 5.48. We further note that it has been relatively straightforward for C&W successfully to challenge the assumptions underlying the original BT estimated costs. Thus, even if the inaccuracy of the original BT estimated costs had not been immediately apparent to Ofcom, in our view Ofcom would have been able to assess the accuracy of the original BT estimated costs without needing to invest significant time or effort in order to do so, for example by consulting with OCPs, or with those industry experts at BT or Ofcom who had a detailed understanding of actual PoH equipment usage. We note Ofcom's comments in paragraph 5.34 that it would have been difficult to consult with OCPs but we do not believe that the problems were insurmountable: for example, Ofcom could have asked the OCPs about their own PoH usage, which would have provided an indication of the accuracy of BT's estimates.
- 5.49. We turn to consider C&W's additional argument, at NoA §111, that BT had an incentive to increase the original BT estimated costs. In support of that assertion, C&W relied on the expert evidence of an economist, who also stated that Ofcom did not seem to recognize this incentive for BT and did not provide assurance that the BT data had been checked for bias.⁴⁸
- 5.50. In its Defence, Ofcom agreed with C&W's comments regarding BT's incentives, but stated that it had carefully scrutinized BT's claimed level of costs and had confirmed that they had been reasonable.⁴⁹ Ofcom had also stated in the LLCC Statement that it had reviewed the cost model and the assumptions behind it.⁵⁰ The assumptions on which the cost model relied would naturally include the estimates used to calculate the costs. Ofcom did not provide any explanation of how it conducted this careful scrutiny and what steps it took to confirm that the original BT estimated costs had been reasonable.

⁴⁷Cf paragraphs 5.25–5.27 above.

⁴⁸C&W W/S Ridyard, § 40.

⁴⁹Defence, Annex D, §40.

⁵⁰LLCC Statement 4.146.

- 5.51. Given that Ofcom did not challenge the contention at §111 of the NoA but rather referred to its careful scrutiny of the original BT estimated costs, the pertinent question remains that which we have already assessed above in our consideration of §110 of the NoA.
- 5.52. Therefore, as we have stated above, it would have been possible for Ofcom to have identified many of the errors in the original BT estimated costs on the basis of Ofcom's own expertise, through consultation with OCPs or by questioning the assumptions behind the model used by BT, and that it could reasonably have been expected to do so.
- 5.53. The relative ease with which C&W has successfully challenged the original BT estimated costs leads us to doubt that the scrutiny of those costs by Ofcom was sufficiently rigorous for Ofcom to satisfy itself of the reasonableness of those estimated costs. Further, the fact that the numbers were wrong by such a significant margin reinforces this conclusion: these errors were not such as to be easily missed if the original BT estimated costs had been properly and carefully scrutinized.
- 5.54. Thus, we find that the reasonableness of the original BT estimated costs was or should have been doubtful to Ofcom, and that this would have been evident to Ofcom had Ofcom taken appropriate steps to check those cost estimates by carefully scrutinizing them. Consequently, we also find that Ofcom erred in accepting as 'accurate' (ie reasonable), and using, the original BT estimated costs to be recovered with the New PoH Charges.

Determination

- 5.55. For the reasons given above, we find that Ofcom erred in its use of BT's estimate of the costs to be recovered by the PoH charges for the reasons set out in §§110–111 of the NoA.

Reference Question 4(a)(ii)

- 5.56. This section (paragraphs 5.56 to 5.93) sets out our conclusions as to whether Ofcom erred in the setting of the PoH charges in Part 1 of Annex C to the TI Price Controls and, in particular, whether Ofcom erred in deciding not to set the charges on local ends used by BT but only those used by OCPs with which BT competes because Ofcom erred in not treating promotion of competition as its primary objective and/or erred in its assessment of what the promotion of competition would require for the reasons set out in §112 of the NoA.
- 5.57. For the reasons given below, our determination is that C&W has not demonstrated that Ofcom failed to treat the promotion of competition as its primary objective nor that Ofcom erred in its assessment of what the promotion of competition would require for the reasons set out in §112 of the NoA.

The calculation of PoH charges in the LLCC Statement

- 5.58. In the context of the present Reference Question 4(a)(ii), we note that, when deciding whether it should amend the then current approach to recovering PoH costs, Ofcom took into account the six principles of cost recovery. Those principles were derived from the principles adopted by the Monopolies and Mergers Commission (MMC) in its 1995 inquiry and report entitled 'Telephone number portability: a report on a reference under section 13 of the Telecommunications Act 1984' (MMC Telephone Number Portability Inquiry).⁵¹ Those principles are: cost causation; cost minimization; distribution of benefits; effective competition; practicability; and reciprocity.⁵²
- 5.59. Ofcom explained that, in general, it often gave prominence to the principle of cost causation, on the basis that it was economically efficient for third parties to pay those costs which they directly caused to be incurred. However, while it often took cost causality as the starting point, it deemed consideration of a wider set of principles to be justified because there might be grounds to depart from the main principle of cost causality in specific circumstances. This might relate to very practical implementation issues and to wider cost recovery considerations such as competition effects or externalities.⁵³

Summary of C&W's arguments

- 5.60. C&W argued that Ofcom erred as a matter of law and/or assessment in not treating the promotion of competition as the primary consideration in determining the charges payable for PoHs.⁵⁴
- 5.61. C&W referred to the fact that Ofcom had stated that it had reached its decision on the recovery of PoH costs through the New PoH Charges by reference to the six principles of cost recovery, and that it had given prominence to the principle of cost causation.⁵⁵

⁵¹ [Competition Commission—Telephone number portability](#). The MMC endorsed the application of the six principles of cost recovery, which had been commended to the MMC by the Director General of Telecommunications.

⁵² LLCC Statement, §4.148.

⁵³ LLCC Statement, §4.149.

⁵⁴ NoA, §112. (Cf also the subheading introducing §112.)

⁵⁵ NoA, §112.

- 5.62. C&W argued that Ofcom had erred in proceeding on this basis rather than having regard to its ‘principal duty of promoting competition where appropriate’.⁵⁶ As authority for this proposition, C&W referred to ‘*inter alia*, ... section 3(1) of the 2003 Act’ and to §35 of the NoA.⁵⁷
- 5.63. §35 of the NoA purports to provide a ‘very broad summary’ of the key legal principles C&W derived from the authorities on which it relied. Selected quotations from those authorities were set out in the Legal Schedule to the NoA, to which §34 of the NoA refers. Those authorities included parts of the European regulatory framework, to which we have referred in part in our determination of Reference Question 1, and parts of the 2003 Act. In particular, C&W referred to sections 3 (general duties of Ofcom), 4 (duties for the purpose of fulfilling Community obligations), 47 and 88 of the 2003 Act. We have referred to sections 47 and 88 above when considering various allegations under Ground B.⁵⁸

Ofcom’s Defence

- 5.64. Ofcom largely addressed C&W’s arguments under §112 of the NoA together with those under §§113–121.⁵⁹ §§113–121 of the NoA are the subject of Reference Questions 4(a)(iii) (see paragraphs 5.116 to 5.127) and 4(a)(iv) (see paragraphs [5.192 to 5.204]) and we set out Ofcom’s arguments in defence in more detail in our determination of those Reference Questions.
- 5.65. However, with reference to C&W’s allegation that Ofcom’s primary duty is to promote competition, Ofcom disagreed that this was an accurate statement of its primary duty. Ofcom clarified that its primary duty, as set out by section 3 of the 2003 Act, was ‘to further the interests of consumers in relevant markets, *where appropriate by promoting competition*’.⁶⁰ Ofcom therefore noted that its duty was not an unqualified duty to promote competition. However, Ofcom also noted that it must, by virtue of section 4 of the 2003 Act, have regard to the Six Community Requirements, which included the requirement to promote competition.⁶¹

Assessment

- 5.66. We note that C&W’s allegation under §112 of its NoA is interrelated with its allegations under §§113–121, which make further criticisms of Ofcom’s approach in deciding whether to amend the previous method by which BT recovered its PoH costs and, in particular, of how Ofcom complied with its statutory duties in applying the six principles of cost recovery. The allegations under §§112, 113–116 and 117–121 form the basis of Reference Questions 4(a)(ii), 4(a)(iii) and 4(a)(iv) respectively. We address Questions 4(a)(iii) and 4(a)(iv) in paragraphs 5.94 to 5.286.
- 5.67. The specific error alleged at §112, to which we have regard in determining Reference Question 4(a)(ii), is that Ofcom did not treat promotion of competition as its primary objective because Ofcom reached its decision by reference to the six principles of cost recovery and/or because it gave prominence to cost causation. Reference Question 4(a)(ii) further or alternatively requires us to consider whether Ofcom erred

⁵⁶NoA, §112.

⁵⁷NoA, fn 109 (see §112).

⁵⁸See paragraphs 3.21, 3.24, 3.187 & 3.188.

⁵⁹Defence, §§208(b), 213–17; Annex D, §§46–93.

⁶⁰Defence Annex D, §48: emphasis added by Ofcom.

⁶¹Defence Annex D, §48.

in its assessment of what the promotion of competition would require for the same reasons. We address each argument in turn.

Error in not treating promotion of competition as Ofcom's primary objective

5.68. C&W expressly referred to section 3(1) of the 2003 Act in support of its contention that the 'promotion of competition where appropriate' was Ofcom's primary statutory duty. C&W also referred to its summary of Ofcom's duties in §35 of and the Legal Schedule to its NoA.

Ofcom's duties under section 3 of the 2003 Act

5.69. We consider first the scope of Ofcom's duties under section 3(1) of the 2003 Act. As Ofcom rightly observed,⁶² C&W has misstated Ofcom's duty under section 3(1), which reads:

3 General duties of OFCOM

- (1) It shall be the principal duty of OFCOM, in carrying out their functions—
 - (a) to further the interests of citizens in relation to communications matters; and
 - (b) to further the interests of consumers in relevant markets, where appropriate by promoting competition.

5.70. Ofcom's principal statutory duty is therefore to further the interests of citizens and consumers in connection with the specified matters and markets. Promoting competition is, in this context, referred to as a means by which the latter group's interests should be advanced where appropriate. Section 3 of the 2003 Act goes on to provide further explanation of the things which, by virtue of section 3(1), Ofcom is required to secure in the carrying out of its functions, including the availability of a wide range of electronic communications services.⁶³ The 2003 Act also sets out a range of additional considerations to which Ofcom must have regard in performing its duties under section 3(1) where they appear to Ofcom to be relevant in the circumstances, including the desirability of promoting competition in the relevant markets.⁶⁴ We note too that, as Ofcom itself observed,⁶⁵ Ofcom has further duties for the purpose of fulfilling EU obligations, including the duty to act in accordance with the requirement to promote competition in relation to (among other areas) the provision of electronic communications networks and services.⁶⁶

5.71. We further note that the 2003 Act accords Ofcom a certain measure of discretion in relation to the duties set out above, not only in determining when the promotion of competition is a relevant consideration in certain circumstances⁶⁷ but also in resolv-

⁶²Defence, Annex D, §48.

⁶³2003 Act, section 3(2) (and section 3(2)(b) in particular).

⁶⁴2003 Act, section 3(4) (and section 3(4)(b) in particular).

⁶⁵Defence, Annex D, §48.

⁶⁶2003 Act, section 4(3) (and section 4(3)(a) in particular).

⁶⁷Cf, eg, 2003 Act, section 3(4).

ing a conflict among its general duties or among the EU requirements to which Ofcom is subject.⁶⁸

- 5.72. Thus, Ofcom is under duties variously to further the interests of consumers (where appropriate by promoting competition), to promote competition, and to have regard in performing its general duties to the desirability of promoting competition in relevant markets when that appears relevant to Ofcom in the circumstances. But it cannot be said that Ofcom's 'principal statutory duty'⁶⁹ or 'primary objective'⁷⁰ is the 'promotion of competition'⁷¹ or even 'promoting competition where appropriate'.⁷²
- 5.73. We therefore find that C&W's allegation that, having regard to section 3(1) of the 2003 Act, Ofcom erred in failing to treat the promotion of competition as the primary consideration in determining the charges payable to PoHs is flawed: C&W misinterpreted the nature of Ofcom's duties under section 3 of the 2003 Act; while the promotion of competition is clearly an important consideration for Ofcom in fulfilling its duties under the 2003 Act, it is not correct to state that it is Ofcom's primary or principal statutory duty or objective to promote competition.

Ofcom's duties under section 88 of the 2003 Act

- 5.74. However, as noted previously,⁷³ we observe that Ofcom is also subject to a specific requirement not to set an SMP condition, including those under the LLCC, except where, among other considerations, it appears to Ofcom that the setting of the condition is appropriate for the purposes of promoting sustainable competition.⁷⁴
- 5.75. C&W did not expressly refer to this requirement under section 88 of the 2003 Act in support of its allegation at §112. However, section 88 is one of the various statutory provisions to which C&W referred in the Legal Schedule to its NoA and which it purported to summarize at §35 of the NoA. C&W cross-referred to that summary at §35 in support of its allegation at §112 of the NoA.
- 5.76. C&W did not make clear what the alternative legal basis was for its assertion at §112 (besides section 3(1) of the 2003 Act). A footnote reference to the broad summary of Ofcom's legal duties at §35 of the NoA, which in turn referred to a list of statutory provisions in the Legal Schedule to the NoA, was in our view an unsatisfactorily opaque means by which to plead C&W's case.
- 5.77. However, we consider below whether section 88 provides any support for C&W's allegation at §112 of its NoA.
- 5.78. We find that section 88 does not assist C&W in proving that Ofcom erred in not treating the promotion of competition as its primary objective in deciding to adopt the New PoH Charges, because there is nothing in section 88 to sustain C&W's contention at §112 of its NoA that the promotion of competition where appropriate is Ofcom's principal statutory duty. Section 88 requires, among other matters, that Ofcom be satisfied in setting an SMP condition that that condition is appropriate for: promoting efficiency; promoting sustainable competition; and conferring the greatest possible

⁶⁸Cf 2003 Act, sections 3(7), 4(11). However, when carrying out its functions derived from EU law under section 4(1), Ofcom must give priority to its duties for the purpose of carrying out those functions if they conflict with its general duties.

⁶⁹Cf NoA, §112.

⁷⁰Cf Reference Question 4(a)(ii).

⁷¹Cf Reference Question 4(a)(ii).

⁷²Cf NoA, §112.

⁷³See paragraph 3.187.

⁷⁴2003 Act, section 88(1)(b)(ii).

benefits on the end-users of public electronic communications services. Promoting sustainable competition is one of the three objectives listed under section 88; there is nothing to suggest that it is the principal or primary objective. Rather, Ofcom must be satisfied of the appropriateness of the SMP condition for all three of those objectives in order to meet the test.

- 5.79. We therefore conclude that neither section 3(1) nor section 88 of the 2003 Act supports C&W's argument that the promotion of competition where appropriate is Ofcom's principal statutory duty. Accordingly, we find that C&W has failed to demonstrate that Ofcom erred in not treating promotion of competition as its primary objective.

Error in Ofcom's assessment of what the promotion of competition would require

- 5.80. As noted above, Reference Question 4(a)(ii) further or alternatively requires us to determine whether Ofcom erred in its assessment of what the promotion of competition would require for the reasons set out at §112 of the NoA.
- 5.81. It is not immediately clear how the matters to which C&W referred at §112 support an allegation that Ofcom erred in assessing what the promotion of competition would require. In §112, C&W asserted that Ofcom erred in reaching its decision on PoH charges by reference to the six principles of cost recovery and by giving prominence to cost causation, rather than 'properly having regard to its principal statutory duty of promoting competition where appropriate'. Therefore, on its face, §112 is concerned with an alleged error on Ofcom's part in prioritizing cost causation over the promotion of competition; it does not appear to concern what the duty of 'promotion of competition' does or 'would' require.
- 5.82. Moreover, even if we had reached a different understanding of the scope of the allegations at §112, we consider the facts cited by C&W at §112, whether taken alone or together, to be insufficient to demonstrate that Ofcom erred in an assessment of what the promotion of competition would require.
- 5.83. In support of its allegation at §112, C&W relied on two facts: (i) that Ofcom reached its decision by reference to the six principles of cost recovery; and (ii) that, in considering those principles, Ofcom gave prominence to the principle of cost causation.
- 5.84. We did not find it easy to understand whether there was any difference between C&W's allegation at §112, in which C&W referred generally to Ofcom's reliance on the six principles and which we are called to determine in the present Reference Question 4(a)(ii), and C&W's more specific criticisms of Ofcom's application of the six principles at §§117–121, which we assess in Reference Question 4(a)(iv). To the extent that §112 was intended merely as an introduction to the *specific* criticism in those latter paragraphs, we refer to our assessment of Reference Question 4(a)(iv).
- 5.85. However, we note that §112 formed the basis of a separate Reference Question. Therefore, in our assessment below, we proceed on the basis that C&W intended to make a separate criticism of the fact that Ofcom *generally* had regard to the six principles in an assessment of what the promotion of competition would require.
- 5.86. Turning to consider fact (i) (see paragraph 5.83), therefore, we note that it is true that the relevant tests to which Ofcom must adhere in setting an SMP condition are those provided for under the 2003 Act, and particularly in the present context the test in section 88 of that Act. As noted above, section 88 includes a requirement that Ofcom

be satisfied that the proposed SMP condition is appropriate for promoting sustainable competition.

- 5.87. However, there is in principle no tension between the statutory test in section 88 of the 2003 Act and the six principles of cost recovery. Ofcom is ultimately required to ensure that it complies with the statutory test, rather than the six principles of cost recovery. But this does not mean that it is an error to have regard to the six principles. We can readily envisage situations in which consideration of those principles may assist Ofcom in conducting its assessment of whether the setting of any given SMP condition is appropriate for the fulfilment of the objectives set down under section 88(1)(b).
- 5.88. We consider further below in our determination of Reference Question 4(a)(iv) Ofcom's application of the six principles of cost recovery in the specific circumstances leading to this appeal (ie when considering the appropriate approach to the recovery of PoH charges).
- 5.89. However, as we explained in paragraph 5.85, our conclusions under Reference Question 4(a)(iv) regarding how specifically Ofcom applied the six principles in the present case are distinct from our assessment of the six principles here in the context of Reference Question 4(a)(ii). In our view, the mere fact that, as a *general* rule, Ofcom has regard to the six principles of cost recovery when applying its mind to the statutory tests to which it is subject does not demonstrate any error in principle in Ofcom's understanding of what the promotion of (sustainable) competition does or 'would' require. Nor, for that matter, has C&W explained what that might be; we consider this concept further in our assessment of Reference Question 4(a)(iii).
- 5.90. As to fact (ii) (see paragraph 5.83), our conclusion is similar: the mere fact that Ofcom *generally* gives prominence to the principle of cost causation does not demonstrate any error on Ofcom's part either. Indeed, C&W's citation from Ofcom's LLCC Statement is incomplete. Ofcom did not simply state that it 'gave prominence to "cost causation"'. Rather, in the LLCC Statement, Ofcom had explained that, while it generally gave prominence to the principle of cost causation, it also gave consideration to a wider set of principles because it was alive to the possibility that there might be grounds to depart from what it regarded as the main principle of cost causality in specific circumstances, including where wider cost recovery considerations such as competition effects were relevant.⁷⁵ This qualification is an important one (and fortifies our conclusion as set out above), since this caveat accords with the need under section 88 for Ofcom to be satisfied, among other matters, that the setting of an SMP condition is appropriate for promoting sustainable competition.
- 5.91. Our reasoning and conclusions as set out above relate only to the general allegations set out at §112 and are independent of our assessment of the specific allegations in §§113–121 in the context of Reference Questions 4(a)(iii) and 4(a)(iv), which we set out below.
- 5.92. We therefore conclude that the reasons set out in §112 do not provide any support for the contention that Ofcom erred in an assessment of what the promotion of competition would require.

⁷⁵LLCC Statement, §4.149.

Determination

- 5.93. For the reasons given above, our determination is that C&W has not demonstrated that Ofcom failed to treat the promotion of competition as its primary objective nor that Ofcom erred in its assessment of what the promotion of competition would require for the reasons set out in §112 of the NoA.

Reference Question 4(a)(iii)

- 5.94. This section (paragraphs 5.94 to 5.242) sets out our conclusions as to whether Ofcom erred in the setting of the PoH charges in Part 1 of Annex C to the TI Price Controls and, in particular, whether Ofcom erred in deciding not to set the charges on local ends used by BT but only those used by BT's competitors, the OCPs, because Ofcom erred in setting PoH charges that are discriminatory, inefficient and/or distort competition for the reasons set out in §§113–116 of the NoA.
- 5.95. For the reasons below, our determination is that, in light of the impact of PoH charges on OCPs' competitiveness and having regard to the arguments set out at §114 of the NoA, Ofcom erred in concluding that its decision regarding the recovery of PoH charges was appropriate for promoting sustainable competition.
- 5.96. In our determination of Reference Question 4(a)(iv) below, we explain in more detail how Ofcom applied the six principles of cost recovery when deciding whether to amend the current approach to recovering PoH costs through local end uplift.

Summary of C&W's arguments

- 5.97. In the section of the NoA to which we are referred by Reference Question 4(a)(iii), C&W alleged that Ofcom erred in determining charges to be paid for PoHs which were discriminatory, inefficient and distort competition.
- 5.98. C&W reiterated its contention that Ofcom's primary obligation was to promote competition, noting that Ofcom's approach to determining PoH charges in the LLCC Statement did not promote competition. Rather, Ofcom's approach was discriminatory and inefficient.⁷⁶
- 5.99. C&W argued that the New PoH Charges distorted competition and discriminated against OCPs, including C&W, in favour of BT because different charges were payable in materially the same circumstances without justification.
- 5.100. C&W sought to substantiate its allegations by reference to the following five arguments:
- (a) BT does not incur New PoH Charges.⁷⁷
 - (b) The New PoH Charges will add to cost disparity between BT and OCPs.⁷⁸
 - (c) When BT uses PoH equipment it does not pay the same charge.⁷⁹
 - (d) The New PoH Charges are not limited to marginal or incremental costs.⁸⁰
 - (e) The New PoH Charges distort migration incentives.⁸¹

⁷⁶NoA, §113.

⁷⁷NoA, §114.1.

⁷⁸NoA, §114.2.

⁷⁹NoA, §114.3.

⁸⁰NoA, §114.4.

⁸¹NoA, §116.

BT does not incur New PoH Charges

- 5.101. First, C&W observed that, unlike OCPs, BT's downstream operations did not use PoHs. C&W argued that BT's downstream operations benefited simply because they were a part of the same undertaking as the wholesale provider with SMP. They had effectively continued to benefit from a first mover advantage.⁸²
- 5.102. C&W explained that the first mover advantage which BT's downstream operations enjoyed followed from BT having had the network designed around its requirements. As a consequence of OCPs having built rival infrastructures, additional network requirements had arisen in the form of PoHs. But these additional requirements were not the result of OCPs having been fundamentally less efficient than BT downstream. Rather, they were essentially a historic accident.⁸³
- 5.103. In C&W's view, this situation had created a public policy dilemma. On the one hand, principles of cost minimization and accountability indicated that OCPs should have been obliged to cover the additional costs they incurred as a result of their choices on how to compete. Making PoHs free to the OCPs could have encouraged an excessive number of PoHs because the costs that PoHs imposed on BT would be ignored, although this distortion would be limited if acquiring the PoH were also costly to the OCP. On the other hand, considerations of creating a level playing field to promote competition would dictate that BT's downstream operation should not have been permitted to gain competitive advantage from BT's first mover advantage in telecommunications infrastructure.⁸⁴ We note that following the provisional determination, C&W clarified that setting the New PoH Charges at zero would not make PoHs effectively free as OCPs would continue to bear the connection costs for PoHs and the ongoing charges for direct costs.⁸⁵

The New PoH Charges will add to cost disparity between BT and OCPs

- 5.104. Secondly, C&W argued that the New PoH Charges would add to the disparity between the costs faced by BT's downstream operations and OCPs in the situations where BT had no PoH costs at all. Even before the latest increases, PoH charges represented some [✂] per cent of C&W's total PPC costs.⁸⁶
- 5.105. C&W made a further similar claim regarding the situation when BT's downstream operations competed with C&W (and other OCPs) for the provision of the types of services for which PPCs were used as inputs. Any charge for PoH had imposed a burden on the OCPs that BT did not itself have to face in competing for a customer contract. According to C&W, Ofcom had acknowledged in §6.35 of its 2006 Replicability Statement that BT had an advantage in this respect that 'leads to material differences which are detrimental to the ability of the OCPs to compete with BT in this market'. C&W believed that the New PoH Charges would only add to this detriment.⁸⁷ C&W had calculated that, if BT had to pay for PoHs, it would face an 11.6 per cent increase in its expenditure on PPC components.⁸⁸

⁸²NoA, §114.1.

⁸³C&W W/S Ridyard, §43.

⁸⁴C&W W/S Ridyard, §44.

⁸⁵C&W comments on our provisional determination, p6.

⁸⁶NoA, §114.2.

⁸⁷NoA, §115.

⁸⁸C&W W/S Harding, §127.

When BT uses PoH equipment it does not pay the same charge

- 5.106. Thirdly, C&W explained that BT used PoH-style equipment—multiplexors—for the provision of some virtual private network (VPN) services. However, where OCPs provided the same VPN services, they often must also use those multiplexors in addition to PoHs.⁸⁹
- 5.107. C&W claimed that when BT used PoH-style multiplexors, the charges paid by BT's downstream operations were not the same as those paid by OCPs. C&W argued that the New PoH Charges represented a material difference in the charges as C&W would pay approximately £[~~3~~] million a year in the New PoH Charges. The New PoH Charges would not be payable by BT's downstream operations. It is not clear what (if any) equivalent charge would be payable.⁹⁰
- 5.108. C&W explained that the New PoH Charges would appear to be determined by simply dividing BT's estimated external PoH costs by external volumes⁹¹ C&W did not know the costs incurred by BT's downstream operation as BT did not provide any details of its internal transfer charge for PoHs in its regulatory accounts.⁹²

The New PoH Charges are not limited to marginal or incremental costs

- 5.109. Fourthly, C&W argued that the costs payable by OCPs were not limited to the marginal or incremental costs of each additional interconnection they created and included a proportion of indirect costs that would be better recovered through other charges. In effect, in the New PoH Charges, the OCPs were being required to contribute to BT's fixed costs.⁹³
- 5.110. C&W explained that the New PoH Charges did not only reflect costs that OCPs directly caused BT to incur and that would be avoided if OCPs did not exist or if they purchased fewer PoHs, but also included common costs such as space at an exchange that BT would in any case have to incur absent the presence of OCPs. In so far as such costs were to be recovered through the New PoH Charges, Ofcom had focused primarily or even exclusively on cost recovery and had not attached weight to the case for promoting competition.⁹⁴
- 5.111. With respect to the claims made in §114 of the NoA presented in paragraphs 5.99 to 5.108 above, C&W explained that it had discussed this issue in the context of the PPC Disputes but Ofcom had declined to deal with it, indicating that it had considered it appropriately a matter for the LLCC Statement.⁹⁵

The New PoH charges distort migration incentives

- 5.112. C&W claimed that the New PoH Charges were also inefficient in distorting incentives to migrate to newer and more efficient PoH equipment for the reasons discussed further at §§122–132 of the NoA.⁹⁶

⁸⁹NoA, footnote 111.

⁹⁰NoA, §114.3.

⁹¹C&W W/S Harding, §128.

⁹²C&W W/S Harding, §117.

⁹³NoA, §114.4.

⁹⁴C&W W/S Ridyard, §47.

⁹⁵NoA, footnote 110.

⁹⁶NoA, §116.

Evidence from the plenary hearing

5.113. At the plenary hearing, C&W explained that its claim that the New PoH Charges should be levied on all CPs and should be limited to marginal costs was pleaded in the alternative.⁹⁷

Evidence from the bilateral hearing

5.114. C&W explained that there was a danger that PoH charges created a disparity between BT Retail and C&W costs and distorted competition. If the regulatory principle was to favour competition, there was clearly a case for creating a level playing field. The ideal way of doing this would be to impose PoH costs on both BT and OCPs. However, C&W recognized that there was another regulatory principle of cost causation. C&W also recognized that if the New PoH Charges were made 'free' to OCPs, this would encourage over-consumption and create distortions as a consequence. These considerations, in C&W's view, suggested that some form of charging was justified. In sum, C&W argued that Ofcom faced a policy dilemma and had to make a trade-off between regulatory principles. This should have led to a compromise. However, Ofcom seemed to have prioritized cost-causation.⁹⁸

5.115. C&W also explained that Ofcom wrongly applied its own principle of cost causation when it decided to include common cost in the PoH charges. The common cost element of the PoH charges was not caused by the PoH being needed by OCPs. Common cost charges were not costs that increased because of the existence of another PoH; they were purely an allocation of a common cost which would be incurred independently of the number of PoHs installed. PoH charges were a tax on competition which was bound to distort competition.⁹⁹

5.116. C&W further explained that, with respect to the PoH-style multiplexors, it did not take the position that BT did not allocate cost to components in the same way in both cases. Rather, its complaint related to how that translated into the charges for external providers. C&W was paying effectively for the choices of all OCPs and was not able to reduce the costs to any significant extent itself. One might be able to say that internally BT, C&W and OCPs had the same starting point, but this did not mean that the amount OCPs paid in New PoH Charges was the same as BT paid just on the allocation of cost.¹⁰⁰

C&W's comments on our provisional determination

5.117. Following our provisional determination, C&W argued that its discrimination point was not limited to the fact that BT paid only for its own technology choices, but that there was an intermediate step present in the translation of costs to charges in the case of OCPs but not BT. This is because BT did not go through the same process of guessing the number of boxes and number of circuits per box in respect of its downstream operations.¹⁰¹

⁹⁷Plenary hearing of 5 February 2010, p33, line 4, to p34, line 26.

⁹⁸Bilateral hearing, p73, line 6, to p73, line 27.

⁹⁹Bilateral hearing, p78, lines 8–15.

¹⁰⁰Bilateral hearing, p80, line 11, to p81, line 5.

¹⁰¹C&W's comments on our provisional determination, p5.

Summary of Verizon's intervention

5.118. In Verizon's view, the correct approach should have been that BT's downstream business bought the same products as its competitors. This approach would require that, to the extent that BT's downstream business did not buy the same products, it should bear the charges as if it did buy them.¹⁰²

Summary of Ofcom's response

Ofcom's Defence

5.119. Ofcom explained that, as part of the LLCC, it had decided that external PoH costs should continue to be recovered over all external circuits. In deciding how best to recover these costs, Ofcom took into account the six principles of cost recovery that were first used by the MMC in the MMC Telephone Number Portability Inquiry of 1995.¹⁰³ Much of Ofcom's Defence in relation to C&W's arguments under this head was focused on justifying Ofcom's approach to the application of the six principles of cost recovery. We address those arguments primarily in our determination of Reference Question 4(a)(iv). We set out here Ofcom's arguments where they relate more generally to promoting efficiency and/or to promoting competition with respect to Reference Question 4(a)(iii).

5.120. In Ofcom's view, it was economically efficient for third parties to pay for those costs which they directly caused to be incurred. It would be contrary to the principle of cost causation if the PoH costs were allocated to BT's internal local ends.¹⁰⁴ Ofcom argued that charges which reflected costs would generally be consistent with promoting effective competition which it understood as 'competition which tends to reduce costs overall' or 'competition which tends to reduce the overall cost to the consumer'.¹⁰⁵

5.121. Ofcom acknowledged that its approach would place C&W and other external competitors at a disadvantage, as they would incur costs which BT did not have to bear. They might therefore need to be more efficient than BT if they were to compete successfully against it.¹⁰⁶

5.122. However, Ofcom disagreed with C&W that it had not put forward reasons why the extra charges on OCPs would not distort competition. Ofcom submitted that PoH costs had previously been borne by external parties in the form of the Local End Adjustment which applied an uplift to the price of external local ends. In this context, the separate New PoH Charges should be seen as simply constituting a more transparent way of recovering costs than were previously included in PPC charges and recovered from external parties. They did not constitute a change in the regulatory approach to PPCs.¹⁰⁷

5.123. Ofcom argued that there was no distortion to competition because the New PoH Charges reflected the cost incurred by BT in providing interconnection services and PPCs. PoH requirements caused static inefficiency: there was an additional cost caused as a result of OCPs' need to connect to BT's network. In this respect there

¹⁰²Bilateral hearing, p20, line 20, to p21, line 5.

¹⁰³Defence Annex D, §20 and fn 7.

¹⁰⁴Defence Annex D, §21(a).

¹⁰⁵Defence Annex D, §21(c), and Defence, § 214.

¹⁰⁶Defence, §216.

¹⁰⁷Defence Annex D, §88.

was an efficiency-based argument that those interconnection costs should be borne by those PPC users that caused those particular costs to be incurred.¹⁰⁸

Evidence from the bilateral hearing

- 5.124. Ofcom explained that when BT and C&W used PoH-style equipment to provide VPN services, their use of this equipment would be the same and there would be no distortion of competition.¹⁰⁹ BT and C&W incurred the same costs when providing these services.¹¹⁰
- 5.125. Ofcom further explained that when providing services other than VPNs, OCPs would have to incur an extra cost in the form of PoH. This would put them at a disadvantage but in Ofcom's view this did not constitute a distortion of competition because effective competition was competition that minimized overall costs to consumers. This was consistent with BT's competitors incurring costs that were somewhat higher than BT's.¹¹¹
- 5.126. Ofcom argued that PoH cost recovery was an issue of principle, not an empirical question. Ofcom submitted that if PoH costs were to be spread across all services, this might lead to a change in the pattern of competition between BT and its competitors and it could be overall that there was some disadvantage to consumers and a higher overall level of pricing as a result.¹¹² However, Ofcom did not carry out any specific analysis on static and dynamic efficiency with respect to PoH.¹¹³
- 5.127. Ofcom stated that PoH circuits were a type of interconnection circuit. It was reasonable to expect those circuits to make a contribution over and above incremental costs to the common costs of the business. Ofcom might modify this approach in circumstances when it considered that this could have a significant, detrimental impact on competition. Ofcom did not consider that, in this instance, the PoH costs were likely to be significant enough to have such an effect, and did not see that there was a case for departing from the approach that Ofcom generally used when costing and pricing those types of circuits.¹¹⁴
- 5.128. Ofcom said that the evidence available over the past several years did not support the contention that PoH charges had been sufficiently high to deter competition or to prevent the development of competition. Most of the downstream leased line markets were competitive.¹¹⁵
- 5.129. Ofcom explained that, while it would be possible to design a pricing structure based on marginal cost pricing, it would have to be convinced that PoH costs gave rise to significant concerns to pursue such a structure.¹¹⁶ Ofcom also argued that it would be very easy for BT to game such a structure of charges as BT would be able to buy just one unit of a service and the service would pass from marginal cost pricing to fully allocated cost (FAC) pricing.¹¹⁷

¹⁰⁸Defence Annex D, §89.

¹⁰⁹Bilateral hearing, p91, lines 6–16.

¹¹⁰Bilateral hearing, p93, lines 13–19.

¹¹¹Bilateral hearing, p93, line 19, to p94, line 3.

¹¹²Bilateral hearing, p94, lines 8–18.

¹¹³Bilateral hearing, p95, lines 2–3.

¹¹⁴Bilateral hearing, p98, lines 17–31.

¹¹⁵Bilateral hearing, p99, lines 7–30.

¹¹⁶Bilateral hearing, p101, lines 27–32.

¹¹⁷Bilateral hearing, p101, lines 16–26.

5.130. Ofcom emphasized that competition could occur at various points in the value chain. C&W was referring to the process of downstream competition between operators, all of which were purchasing services or tended to be purchasing upstream services from BT and were dependent on it. However, there were other providers who provided their own local infrastructure, such as Virgin Media and Colt. Ofcom wanted to encourage that sort of ‘infrastructure competition’ as well. If the costs of PoHs were spread across all operators, it might reduce the incentive on operators such as C&W to extend their own network infrastructure thereby decreasing their reliance on BT’s infrastructure.¹¹⁸

Ofcom’s comments on our provisional determination

5.131. As noted above in the introduction (in paragraphs 1.47–1.48), we issued our provisional determination of the Reference Questions to the parties for comment.

5.132. In its comments on our provisional determination of Reference Question 4(a)(iii), Ofcom argued that, contrary to certain of the views expressed in our provisional assessment (in terms similar to those set out in paragraphs 5.146 to 5.173 below), it *had* considered alternatives to what we have described as Option 1 in paragraph 5.148(a) below.¹¹⁹

5.133. Ofcom also argued that its decision to select Option 1 was consistent with: (a) the application of the six principles of cost recovery, and particularly the principles of practicability and effective competition;¹²⁰ and (b) the findings of the MMC inquiry into number portability, to which Ofcom had referred in §4.148 of the LLCC Statement.¹²¹

Summary of BT’s intervention

5.134. BT argued that C&W was ‘flatly incorrect’ when it claimed at §114.3 of the NoA that, where downstream BT provided VPNs and used PoH-style multiplexors, there was a material difference between the amount paid by BT’s downstream operation and that paid by OCPs. BT explained that, in the case of VPNs, the multiplexors used were the same as PoHs and had the same capital cost, which became part of the asset base attributed to BT’s downstream operation. Operating costs were apportioned internally within BT by the same rules that were used to derive the PoH costs. BT’s downstream operation therefore paid the same cost as the cost recovered from OCPs in the PoH charges. This was significant to the extent that VPNs constituted a large percentage of C&W’s PPC business.¹²²

5.135. BT further argued that C&W was mistaken in its claim, in §114.4 of the NoA, that the charges in Table 4.4 of the LLCC Statement were not limited to the marginal or incremental costs of each additional interconnect they created, but also included indirect costs (eg common costs) not attributable to specific PoHs (for example, the cost of space at an exchange) which BT would have to incur absent the presence of CPs. C&W was mistaken because common costs, such as the cost of space at an

¹¹⁸Bilateral hearing, p102, lines 1–24.

¹¹⁹Ofcom’s provisional determination comments, §§53(i) & 77. We note also that Ofcom referred to other previous reports in which the same or similar regulatory options had been appraised before: see Ofcom’s provisional determination comments, §51 (referring to the 2005 Strategic Review of Communications) and §§73–75 (referring both to the Phase II Determination in relation to PPCs in 2002 and to the 2008 BCMR, to which we refer in paragraphs 1.74 to 1.79 and 1.82 of our introduction).

¹²⁰Ofcom’s provisional determination comments, §§54–56 & 82; and §§52, 53(iii) & 57–65, addressing the principle of practicability, §§52 & 66–68, addressing the principle of cost causation, and §§69–76, addressing the principle of effective competition.

¹²¹Ofcom’s provisional determination comments, §§53(ii) & 78–81.

¹²²BT W/S Morden I, §§139–140.

exchange, were attributable to the PoH. If there was no PoH in the exchange, the space would be used to support other revenue-generating services. Therefore, any service using the space would be expected to contribute to recovery of these costs and there was no reason to treat PoH any differently. The same was true of the other common costs such as power or ventilation.¹²³

- 5.136. With respect to C&W's reference in §115 of the NoA regarding Ofcom's 2006 Replicability Statement whereby issues with the design of the PPC product materially affected OCPs' ability to compete with BT's sub-2 Mbit/s retail leased lines, BT argued that Ofcom had now progressed its work on replicability and did not view PoH as a barrier to replicability. In Ofcom's June 2009 Draft Consent, it concluded that retail low bandwidth digital leased lines were now replicable.¹²⁴

Assessment

- 5.137. Under §§113–116 of the NoA, C&W made allegations under three heads: (i) arguments based on an allegation of distortion of competition (§§113, 114, 114.1, 114.2, 114.4 and 115 of the NoA); (ii) arguments based on an allegation of discrimination (§§113, 114 and 114.3 of the NoA); and (iii) arguments based on an allegation of inefficiency (§§113 and 116 of the NoA).
- 5.138. By way of introduction to its arguments under these heads, C&W repeated its contention that 'Ofcom's primary obligation is to promote competition'. We have considered that contention in our determination of Reference Question 4(a)(ii). We do not consider that C&W advanced any further arguments in support of that contention in §§113–116 of the NoA in respect of this Reference Question 4(a)(iii). Accordingly, we refer to our conclusions as set out above with respect to that contention. We do not address it further here.
- 5.139. We note that, as was the case in relation to the arguments in the NoA relevant to Reference Question 2(a)(i), C&W did not expressly refer to the statutory tests under sections 47 and 88 of the 2003 Act in §§113–116.
- 5.140. But we understand from the language used in these paragraphs (particularly the express references to discrimination, inefficiency and distortion of competition) that C&W's allegation that Ofcom had erred as a matter of law and/or assessment in determining charges to be paid for PoHs that were discriminatory, inefficient and which distorted competition must be grounded in an alleged failure to adhere to those statutory tests. We repeat here for ease of reference the requirements of sections 47 and 88 of the 2003 Act as relevant to the allegations under §§113–116 of the NoA.
- 5.141. By virtue of section 47 of the 2003 Act, Ofcom must not, in the exercise of any of its powers or duties relating to electronic communications networks or services, set a condition (including an SMP condition) unless it is satisfied that the condition meets certain statutory tests, including that it is not such as to discriminate unduly against particular persons or against a particular description of persons.¹²⁵
- 5.142. Section 88 of the 2003 Act stipulates that Ofcom is not permitted to set an SMP condition except where, among other matters, it appears to Ofcom that the setting of the condition is appropriate for the purposes set out in section 88(1)(b), namely: (a) pro-

¹²³BT W/S Morden I, §§141–142.

¹²⁴BT W/S Morden I, §143.

¹²⁵Communications Act 2003, section 47(2)(b).

moting efficiency; (b) promoting sustainable competition; and (c) conferring the greatest possible benefits on the end-users of electronic communications services.¹²⁶

5.143. We also consider it important to note that sections 47 and 88 accord Ofcom a certain measure of discretion in determining whether the tests are met. Under section 88(1)(b), for example, it is for Ofcom to decide whether the setting of an SMP condition appears appropriate for the purposes of meeting the objectives there set out. We refer to our remarks above¹²⁷ about how we approach an allegation that Ofcom has erred in the exercise of its discretion.

5.144. We turn now to consider C&W's allegations under each of the three heads we identified at the outset of this assessment with these statutory tests in mind.

Distortion of competition

5.145. We first consider C&W's allegations with respect to the distortion of competition. C&W's argument under this head was directed primarily towards the general allegation that Ofcom erred because its decision regarding the recovery of the New PoH Charges distorted competition ('the primary allegation'). However, in §114.2, C&W made a specific allegation that Ofcom had erred in setting the new PoH charge because it would add to the disparity between BT and OCPs ('the secondary allegation'). In our view, this secondary allegation raises issues separate from those arising under the primary allegation and, accordingly, we address it separately below.

The primary allegation

5.146. In light of our initial observations in paragraphs 5.133 to 5.137 above, we consider that the relevant question for us to determine in relation to the primary allegation is whether Ofcom erred in concluding that its decision to levy the New PoH Charges only on external local ends was appropriate for the purpose of promoting sustainable competition, along with the other objectives set out under section 88(1)(b) of the 2003 Act.

5.147. C&W alleged that Ofcom's decision distorted competition, ie that it was inappropriate for the purpose of promoting sustainable competition. We found it helpful to assess C&W's claims with respect to distortion of competition by reference to a comparison of three regulatory options. These options capture the alternatives (in synthetic form) against which C&W brought its challenge; and these alternatives are engaged by Ofcom for the purposes of defending its decision to adhere to Option 1 which we will describe in what follows. That the parties joined issue with one another within the framework provided by these options is hardly surprising, since they set out the obvious regulatory alternatives.

5.148. The options are as follows:

(a) Option 1: 'The Status Quo' whereby only OCPs pay the New PoH Charges and this charge comprises common costs. This is the regulatory option chosen by Ofcom and appealed by C&W.

¹²⁶Communications Act 2003, section 88(1)(b).

¹²⁷See paragraphs 1.24 and 1.46.

- (b) Option 2: ‘All CPs Pay’ whereby both OCPs and BT pay the New PoH Charges despite the fact that BT does not incur those charges. This is a regulatory option favoured by C&W and presented in §§114 and 114.1 of the NoA.
- (c) Option 3: ‘Marginal Cost Pricing’ whereby only OCPs pay the New PoH Charges but these charges are limited to marginal or incremental costs excluding common or indirect costs. This is a regulatory option also favoured by C&W and presented in §114.4 of the NoA.¹²⁸

- 5.149. The thrust of C&W’s challenge to Ofcom’s current regulatory option—Option 1, ‘The Status Quo’—is that a PoH charge is only incurred by OCPs and that it worsens OCPs’ relative competitiveness with respect to BT.¹²⁹ C&W suggested that either all CPs, including BT, should pay the New PoH Charges¹³⁰ or these charges should be limited to marginal costs.¹³¹
- 5.150. However, C&W accepted that, given that only OCPs incurred PoH costs, it would be consistent with the principle of cost causation for OCPs to bear those costs in some form. Furthermore, C&W also suggested that if the New PoH charges were zero, OCPs would have no incentive to minimize the costs associated with this charge.¹³² Even though C&W also argued that OCPs would continue to pay other PoH-related charges such as the connection costs and the ongoing charges for direct PoH costs,¹³³ it is clear that the pressure on OCPs to minimize costs would be reduced.¹³⁴ This would lead to static inefficiency. C&W accepted that in consequence Ofcom may need to find a compromise between promoting efficiency and promoting competition.¹³⁵
- 5.151. Ofcom agreed with C&W that OCPs would need to be more efficient than BT to compete with it.¹³⁶ Ofcom advanced several arguments why, by choosing Option 1 ‘The Status Quo’, Ofcom did not err: Ofcom contended that PoH costs created static inefficiency and therefore it was necessary to recover the PoH costs from those who incurred them.¹³⁷ In addition, Option 2 ‘All CPs Pay’ would not encourage infrastructure competition^{138,139} and Option 3 ‘Marginal Cost Pricing’ would be very costly to implement, easy to game and Ofcom would only be minded to implement it if it had serious concerns about competition in the market,¹⁴⁰ which it did not have.¹⁴¹
- 5.152. In paragraphs 5.154 to 5.160 below, we test the strength of C&W’s primary allegation under this head, before moving on to assess Ofcom’s and BT’s responses to that allegation, in paragraphs 5.161 to 5.166 and 5.167 to 5.172 respectively.
- 5.153. Our task in determining this aspect of Reference Question 4(a)(iii) is to assess whether Ofcom erred in choosing Option 1 ‘The Status Quo’ because it was incorrect

¹²⁸We note that there is another possible option that could be inferred from the NoA whereby all CPs pay the New PoH Charges but this charge is limited to marginal costs. However, in our view, this option has the same effect on competition as Option 2 but is just more complicated to implement.

¹²⁹NoA, §115 and bilateral hearing, p72, line 20, to p73, line 27.

¹³⁰NoA, §114.1.

¹³¹NoA, §114.4.

¹³²Bilateral hearing, p73, lines 6–12.

¹³³C&W’s comment on the provisional determination, p 6.

¹³⁴This is particularly the case given the fact that, based on C&W’s data, [§]. See W/S Harding, §§113–116.

¹³⁵Bilateral hearing, p72, lines 12–17.

¹³⁶Defence, §216.

¹³⁷Defence Annex D, §89.

¹³⁸Bilateral hearing, p102, lines 1–24.

¹³⁹See paragraph 5.35.

¹⁴⁰Bilateral hearing, p98, lines 17–31.

¹⁴¹Bilateral hearing, p99, lines 7–30.

to conclude that Option 1 was appropriate for promoting sustainable competition, along with the other objectives set out under section 88(1)(b) of the 2003 Act.

- *Our assessment of C&W's claim*

- 5.154. We commence our assessment with this observation. Ofcom made its decision to set charges on local ends used by OCPs, and hence adopted what we have styled Option 1, 'The Status Quo', without regard to the other options that we have set out in options referred to above. In this Ofcom has erred. Option 2, 'All CPs Pay', and Option 3, 'Marginal Cost Pricing', are self-evident candidates for regulatory consideration, together with Option 1. These options all warranted consideration, as C&W's appeal of Ofcom's 2009 LLCC Statement has now amply demonstrated. Ofcom's failure to do so gave rise to an Ofcom decision that simply failed to engage the relevant issues and thus did not permit Ofcom to come to a decision that properly assessed the promotion of efficiency and sustainable competition, as required by section 88(1)(b).
- 5.155. We turn next to a consideration of C&W's claim in the light of the regulatory options available to Ofcom.
- 5.156. We agree with C&W that PoHs are indispensable for competition in the leased line market and, because they are only used by OCPs, they worsen OCPs' relative competitiveness with respect to BT. Of the three regulatory options discussed, the one chosen by Ofcom makes it hardest for OCPs to enter the leased line market. This is so for the following reasons: both Option 1, 'The Status Quo', and Option 3, 'Marginal Cost Pricing', require OCPs to be more efficient than BT to be able to enter the leased line market and compete with BT. However, Option 3 requires OCPs to be more efficient than BT to a lesser degree than under Option 1 and therefore makes it easier for OCPs to compete than under Option 1 and is consistent with OCPs covering the additional costs they impose on BT. We note that Option 2, 'All CPs Pay', does not require OCPs to be more efficient than BT to enter the leased line market and therefore makes it easiest for OCPs to enter the leased line market.
- 5.157. However, we disagree with C&W that this reasoning of itself necessarily means that Ofcom erred in not choosing Option 2, 'All CPs Pay'. This is so because there are other issues that Ofcom needed to take into consideration in applying the other two of the three limbs of the test under section 88(1)(b) of the 2003 Act, and in particular the appropriateness of the selected option for promoting efficiency. C&W itself identified (see paragraph 5.150 above) that Option 2 would lead to static inefficiency. C&W did not make a case that this static inefficiency would be outweighed by dynamic efficiency in the long run. Yet this objection does not extend to Option 3, 'Marginal Cost Pricing' which makes Option 3 a viable alternative to Option 1, 'The Status Quo'.
- 5.158. This gives rise to the following assessment of Options 1 and 3. There is little to differentiate Options 1 and 3 on efficiency grounds. Under each option, the common costs incurred are the same and the different ways of distributing those costs do not, prima facie, give rise to different efficiencies. But when assessed on competition grounds, there is a significant reduction in the competitive disadvantage that PoH charges represent to OCPs associated with Option 3.
- 5.159. Seen in this way, Option 3 appears to be superior to Option 1 on competition grounds, and there is nothing to choose between the two options on efficiency considerations. We accept that a full analysis of all the options has yet to be done, but on the appraisal that was possible within the limits of this appeal, there are strong

grounds to consider that Option 3 might be appropriate upon an application of the statutory criteria in section 88. We do not need to make that finding. It suffices that the decision by Ofcom to adopt Option 1 was sub-optimal on competition grounds, without compensating efficiencies, and that Ofcom's decision cannot, as a result, be allowed to stand. This conclusion is not disturbed by the defences that Ofcom has put forward to support its adoption of Option 1, which we consider in the next section (paragraphs 5.161 to 5.166).

5.160. For this reason, our preliminary conclusion is that C&W presented a convincing case that Ofcom had erred in concluding that Option 1, 'The Status Quo', was appropriate for the purposes of promoting sustainable competition, along with the other objectives set out under section 88(1)(b) of the 2003 Act.

- *Our assessment of Ofcom's Defence*

5.161. Before turning to address Ofcom's Defence in detail, we consider Ofcom's argument that it understood effective competition to be competition that reduced costs overall. We note that the statutory test refers to the promotion of 'sustainable competition' rather than 'effective competition'. However, we also note that C&W has not founded any of its allegations on the distinction between these two terms. Since the question of how, if at all, these two terms differ has not been argued in this case, we proceed for present purposes on the basis that there is no material difference between them.

5.162. We now turn to consider Ofcom's substantive arguments supporting its choice of Option 1. We discuss these arguments in turn.

5.163. First, we note that Ofcom argued that its chosen regulatory approach had not prevented competition in the leased line market and that this market was competitive. However, we further note Ofcom's statement that it had not carried out any assessment of the impact of the New PoH Charges on competition. In this regard, we recall that, in order to set an SMP condition, Ofcom must be satisfied that the setting of that condition is appropriate for the purpose of promoting sustainable competition. It is difficult to see how Ofcom could consider that its chosen regulatory approach was appropriate for promoting sustainable competition if it had not carried out an impact assessment of some kind in circumstances where Option 3 appeared to present a viable alternative.

5.164. Secondly, therefore, we turn to assess Ofcom's suggestion that Option 3, 'Marginal Cost Pricing', was not a viable regulatory option because it involved a risk of gaming. Ofcom did not develop its argument in detail, but we understand that the risk of gaming would occur in the following way: Ofcom seems to assume that marginal cost pricing of PoH is based on an approach according to which all services that are only consumed by OCPs would be priced at marginal cost. If this were the case, then BT could 'game the system' by purchasing just one unit of any service that had previously been purchased only by OCPs. This would transform this service from a service only purchased by OCPs and thus subject to marginal cost pricing into a service purchased by all CPs and thus subject to fully allocated cost pricing. This would defeat the purpose of the marginal costing rule.

5.165. Ofcom's argument does not address C&W's claim. C&W did not argue that as a general rule, *all* services purchased solely by OCPs should be subject to marginal cost pricing, but only that *PoH* services should be subject to marginal cost pricing. We have therefore considered C&W's argument for marginal pricing in the context of PoH services. It does not follow that Ofcom needed to consider marginal cost pricing as a general rule. Moreover, by limiting the new PoH charge to marginal costs,

Ofcom would not be making any judgement about how other leased line products should be priced. Therefore, Ofcom's concern that if BT purchased one unit of PoH, it would 'tip' PoH pricing from marginal cost pricing to FAC pricing would not materialize since the PoH service would have been isolated by Ofcom as a service subject to marginal cost pricing.

5.166. We therefore find that Ofcom's defence has not displaced our conclusion as set out in paragraph 5.160 above, namely that Ofcom erred in concluding that Option 1 was appropriate for the purposes of promoting sustainable competition, along with the other objectives set out under section 88(1)(b) of the 2003 Act.

- *Our assessment of BT's intervention*

5.167. We also noted BT's arguments that the existing common costs attributed to the New PoH Charges were in fact caused by PoHs and therefore should be borne by OCPs. Specifically, BT argued that the common costs allocated to PoHs were de facto opportunity costs to BT of hosting other services on LSEs.

5.168. We first analysed the different cost components of the New PoH Charge. We note that the concept of marginal or incremental costs is based in economic theory while in practice it may be more difficult to determine which costs are directly 'caused' by a particular service and which costs are common.

5.169. BT identified four cost categories of costs attributable to the New PoH Charges: (a) 'exchange indirects'; (b) 'access fibre/copper/duct costs'; (c) 'equipment maintenance & indirects'; and (d) 'selling, general & admin on PoH'. Having reviewed BT's evidence on this issue, we concluded that only category (b) is clearly and directly attributable to PoHs, while categories (a) and (c) represent a portion of general BT exchange costs and (d) are general BT overheads.¹⁴²

5.170. On this basis, it would appear that category (b) 'access fibre/copper/duct costs' can reasonably be considered as a proxy for incremental or marginal costs while category (d) 'selling, general & admin on PoH' can be reasonably considered as common costs. Cost categories (a) 'exchange indirects' and (c) 'equipment maintenance & indirects' are common costs associated with BT's exchanges and therefore more difficult to define. We note that, in theory, PoHs are hosted at BT exchanges and therefore BT exchanges may incur some costs as a result of that. However, we also note that these cost categories are labelled as 'indirects' and it would therefore appear that they only relate to indirect costs.

5.171. We then considered BT's argument that hosting PoHs at BT's exchanges makes BT incur opportunity costs because this means that BT cannot host other profitable services at the exchanges. We note that BT has not provided any evidence beyond its assertion. We also note that BT explained in some detail at the technical presentation that PoH equipment that was hosted at the exchange was principally an ADM box. Similarly, at no point did BT mention scarcity of space at its exchanges. It is therefore not apparent to us that PoH equipment takes valuable space away from BT.

5.172. However, even if BT were correct, it is not clear to us that common costs allocated to PoH-style equipment at the exchange would be an appropriate measure of such opportunity costs as these would depend on the value of services that BT had to

¹⁴²BT's letter to the CC, 2 March 2010.

forgo in order to host PoHs rather than the unavoidable costs associated with BT's exchanges.

- *Our conclusion on the primary allegation*

5.173. Having reviewed the arguments and evidence from C&W, Ofcom and BT, we confirm our preliminary conclusions in paragraphs 5.160 and 5.166 that Ofcom erred in concluding that Option 1 was appropriate for the purposes of promoting sustainable competition, along with the other objectives set out under section 88(1)(b) of the 2003 Act. In particular, we note that Ofcom arrived at the conclusion that Option 1 was appropriate for these purposes after having discounted the need to consider other options because it did not have serious concerns about competition in the market. Yet we further note that it arrived at this conclusion despite the fact that (a) it had not conducted any assessment of the impact of its solution (ie Option 1) on competition in the market, and (b) Option 3 appeared to present a viable alternative. We therefore find that Ofcom's decision was based on an erroneous premise and was therefore inappropriate for the purposes of meeting the statutory objectives set out under section 88(1)(b).

- *Our response to Ofcom's comments on our provisional determination*

5.174. We turn now to consider Ofcom's comments on the conclusions we reached in relation to the primary allegation in our provisional determination. Those conclusions were in terms very similar to those expressed in paragraphs 5.146 to 5.173 above.

5.175. Before turning to consider those comments, we should note that we had concerns that some of Ofcom's comments in relation to Reference Question 4(a)(iii) advanced new arguments or relied on new evidence. However, we do not consider it necessary to decide whether those arguments were in fact new or relied on new evidence principally because, even if we took those arguments and/or evidence into account in our assessment, they would not alter the conclusions we had reached without them. We elaborate below on our reasons for taking this view of Ofcom's comments.

5.176. We address first Ofcom's argument that it had in fact considered alternatives to what we have described as Option 1 in paragraph 5.148(a) above, before proceeding to address its arguments in relation to: (a) the application of the six principles of cost recovery; and (b) the findings of the MMC inquiry into number portability.

- *Ofcom's consideration of alternative regulatory options*

5.177. We should first like to correct an apparent misconception on Ofcom's part regarding the nature of our provisional determination of error in respect of this part of Reference Question 4(a)(iii), which was in terms very similar to that set out above.

5.178. We note that Ofcom suggested that our assessment contained a 'proposal' that PoH charges should be set on the basis of marginal costs.¹⁴³ We did indeed state that, in the light of our preliminary evaluation of the three options discussed in our assessment above, Option 3 appears to be superior to Option 1 on competition grounds with nothing to choose between them on efficiency grounds.¹⁴⁴

¹⁴³Ofcom's provisional determination comments, §51.

¹⁴⁴See paragraph 5.159 above.

- 5.179. However, we went on to refer to the fact that a full analysis of all the options had yet to be done.¹⁴⁵ Hence, we concluded that Ofcom had erred in deciding that Option 1 was appropriate for the purpose of promoting sustainable competition and efficiency, after having discounted the need to consider other options and despite not having conducted any assessment of the impact of Option 1 on competition in the market in circumstances where Option 3 appeared to present a viable alternative.¹⁴⁶
- 5.180. It is therefore inaccurate to describe our determination as setting out a proposal for implementing Option 3. Rather, we set out what we regard as important considerations which should properly have been evaluated by Ofcom in formulating its decision on this aspect of the LLCC. This qualification is particularly significant when it comes to our determination of the appropriate remedy for the error identified in relation to Reference Question 4(a)(iii) for reasons on which we elaborate in paragraphs 6.96 to 6.99 below.
- 5.181. We move now to consider Ofcom's claim that it had actually considered alternative means of recovering overheads in the LLCC consultation.¹⁴⁷ Ofcom referred in particular to §§4.143 and 4.145 of the LLCC Statement. In paragraph 4.143, Ofcom summarized C&W's contribution to the LLCC consultation process. From that summary, we understand that C&W had been championing primarily what we have identified as Option 2, 'All CPs Pay'; Option 3, 'Marginal Cost Pricing', is not discussed there. In paragraph 4.145, Ofcom explained what steps it had taken before reaching its conclusions with respect to PoH charges, including checking BT's estimates, applying the six principles of cost recovery, and considering alternative ways to recover these costs in future.
- 5.182. On our analysis of these and following paragraphs of the LLCC Statement, we did not find any evidence of Ofcom having conducted any proper assessment of Option 1 by comparison with any other alternative options including Option 3 with a view to satisfying the statutory test under section 88(1)(b) of the 2003 Act. The section addressing Ofcom's consideration of 'alternative ways to recover costs in future' refers to the matters addressed in Reference Questions 4(b)(i) and (ii) below; it does not include any consideration of Option 3. While in its analysis by reference to the six principles of cost recovery Ofcom addressed some of matters raised by C&W under Reference Question 4(a)(iii), Ofcom did not identify in any systematic way the potential regulatory options for PoH cost recovery, nor did it subject these options to the relevant statutory tests under the 2003 Act.
- 5.183. Instead, Ofcom conducted a high-level appraisal of the deficiencies of Option 2, 'All CPs Pay', which C&W had proposed in its response to the LLCC consultation as one possible regulatory option. Ofcom did not provide any appraisal of the benefits of Option 2 or any explanation of why the deficiencies of Option 2 outweighed its benefits. Conversely, Ofcom admitted that its favoured option, Option 1, 'Status Quo', put OCPs at a competitive disadvantage with BT's downstream operation, but did not provide any explanation why this deficiency of Option 1 was outweighed by its benefits.
- 5.184. We consider it incumbent upon Ofcom in such a situation properly to evaluate the viability of the salient regulatory options. Yet we have been unable to identify anywhere in the LLCC Statement where Ofcom considered any other reasonable option for PoH costs recovery.

¹⁴⁵See paragraph 5.163 above.

¹⁴⁶See paragraph 5.173 above.

¹⁴⁷Ofcom's provisional determination comments, §77.

- 5.185. As we noted in our assessment above, we are of the view that Option 3, 'Marginal Cost Pricing' (or any similar variant such as incremental cost pricing), would have been a viable alternative and, hence, an obvious regulatory option for Ofcom to have considered. We note that Ofcom itself, while questioning Option 3's practicability, accepts that there are 'theoretical attractions' to such an option. This concession by Ofcom tends to support our view that Option 3 was a sufficiently obvious regulatory option that merited proper consideration by Ofcom when assessing alternative means by which to implement a new method for PoH cost recovery.
- 5.186. We note that Ofcom also refers in passing in its comments on our provisional determination of this Reference Question to its appraisal of regulatory options in other reports it has prepared. It was not immediately apparent to us whether Ofcom thereby sought to argue that it had properly considered alternative regulatory options in the context of deciding on the new method for recovery of PoH charges. We very much doubt that it would be sufficient for Ofcom to have considered other options in the past without at least referring to those past assessments and explaining why the conclusions reached in the past remained applicable in the context of the then current assessment process.
- 5.187. However, even if Ofcom had at the time of its LLCC Statement provided such an explanation of the past assessments which it has now cited in its comments on our determination, we would not regard those assessments as sufficient to satisfy the requirement to conduct a proper assessment of its favoured option for PoH cost recovery by comparison with other viable alternative options in order to satisfy the statutory test under section 88(1)(b) of the 2003 Act. We adopt this view for the following reasons.
- 5.188. First, we consider Ofcom's reliance on the 2005 Strategic Review of Telecoms.¹⁴⁸ Ofcom admitted in its comments on our provisional determination that one of the benefits of Option 3 would have been that it would to a greater extent have placed OCPs on an equivalent footing to BT in competing to supply leased lines. But Ofcom referred to this 2005 Review as the occasion on which Ofcom had considered and rejected the adoption of the principle of equivalence for PPCs, although it had previously adopted such a principle for some regulated wholesale products.
- 5.189. We note that, while Ofcom had referred in passing its 2004/05 Telecoms Strategic Review for other reasons in its Defence,¹⁴⁹ Ofcom had not given any indication that this review was of any relevance to PoH cost recovery. It therefore appears to us that this argument is an entirely new one advanced only after our provisional determination.
- 5.190. However, even if we were minded to allow such new arguments and evidence at this late stage in our procedure, we would not regard this document as of material assistance to us in determining the present question. From our reading of the 2005 Review and in particular paragraph 7.6 (to which Ofcom drew our attention¹⁵⁰), we would consider it imprudent to rely too heavily on its contents. The relevant paragraph did not expressly reject the possibility of equivalence for PPCs; it simply does not include them on the list of products to which it should be applied.¹⁵¹ Even more importantly,

¹⁴⁸Ofcom's provisional determination comments, §51.

¹⁴⁹See Ofcom Defence, Annex B, §126, at which Ofcom referred to the principle of proportionate, 'light touch' regulation.

¹⁵⁰In subsequent correspondence with us dated 15 June 2010, in a comment on paragraph 51 of Ofcom's provisional determination comments.

¹⁵¹Paragraph 7.6 of the Review states: 'The current products to which such equivalence is to be applied include shared and full metallic path facility (MPF), wholesale line rental (WLR), backhaul extension service (BES), WAN extension service (WES) and IPStream'. 2005 Strategic Review of Telecoms, www.ofcom.gov.uk/consult/condocs/statement_tsr/statement.pdf.

we did not find in this Review any properly reasoned analysis explaining why Ofcom concluded that equivalence should not apply PPCs, still less a discussion of why PoH charges did not require equivalence.

- 5.191. Secondly, we move on to consider Ofcom's argument that BT had been allowed to recover overheads through the local end surcharge since 2002, when PPC charges were first consulted on and set.¹⁵² In this context, we note that BT advanced a similar argument in its original evidence,¹⁵³ where BT observed that the local end adjustment had been set by Oftel in the 2002 Phase II Direction. However, the 2002 Phase II Direction simply stated that PoH costs would be recovered through local end adjustments and would include overheads. It did not explain why Oftel considered that this was a reasonable regulatory approach in light of the alternative options then available, still less why it should remain the most appropriate option in the light of the statutory test which subsequently entered into force in section 88(1)(b) of the 2003 Act.
- 5.192. Thirdly, we turn to Ofcom's argument that it had only recently prior to the LLCC conducted a review of the competitiveness of leased lines markets in the BCMR and, therefore, had been well placed to judge the effectiveness of the regulation governing PPC charges as it had applied until then.¹⁵⁴ Again, we observe that we have not found any discussion of the impact of PoH costs on competition in the BCMR, nor a wider discussion of 'equivalence' or 'replicability' that would adequately address the point raised by C&W that PoH charges put OCPs at a competitive disadvantage with respect to BT's downstream operation.
- 5.193. For these reasons, we would not derive any material assistance from the evidence now advanced by Ofcom in support of its argument that it had in fact considered alternatives to Option 1, even if we regarded that evidence as admissible.

•• *Ofcom's further arguments regarding the application of the six principles*

- 5.194. Before we turn to address certain of Ofcom's arguments regarding the application of the six principles of cost recovery to Option 3, we should first explain why we have two important reservations regarding such arguments.
- 5.195. First, we should emphasize, as we did in paragraph 5.159 above, that we have not in our determination put forward Option 3 as our 'proposal' for the correct means of implementing New PoH Charges. Rather, we have noted its apparent merit and that, absent a proper appraisal of Option 1 in comparison with other ostensibly viable options (such as Option 3), Ofcom was not in a position properly to conclude that Option 1 was appropriate in the light of the statutory tests under section 88(1)(b) of the 2003 Act.
- 5.196. Thus, the fact that Ofcom has chosen now in the latter stages of this appeal to provide its views as to the disadvantages of Option 3 would not, even if we accepted Ofcom's analysis, alter our conclusion that Ofcom had erred in failing to conduct at the time of its LLCC Statement a proper appraisal of Option 1 in comparison with other regulatory options. In our view, therefore, Ofcom's submissions in this vein do not alter our determination of this Reference Question.

¹⁵²Ofcom's provisional determination comments, §73.

¹⁵³BT's witness, first statement of Mr Morden, §120.

¹⁵⁴Ofcom's provisional determination comments, §74.

- 5.197. Secondly, we should also re-emphasize our view as to the proper role of the six principles of cost recovery in the context of the statutory tests under section 88(1)(b). As we observed in paragraph 5.87 above, we do not regard there as in principle being any tension between the statutory test in section 88(1)(b) of the 2003 Act and the six principles of cost recovery. Ofcom is ultimately required to ensure that it complies with the statutory test, rather than the six principles of cost recovery. But this does not mean that it is an error to have regard to the six principles. We can readily envisage situations in which consideration of those principles may assist Ofcom in conducting its assessment of whether the setting of any given SMP condition is appropriate for the fulfilment of the objectives set down under section 88(1)(b). We also discuss the application of the six principles further below in the context of our determination of Reference Question 4(a)(iv).
- 5.198. However, in our view, Ofcom's analysis of Option 3 solely by reference to the six principles of cost recovery discloses a failure properly to appreciate the limitations on the utility of the six principles in this context. In particular, we note that Ofcom appears to have misunderstood the scope of our provisional determination in relation to the six principles, which we had set it out in terms very similar to the foregoing paragraph. Ofcom stated that we had agreed in our provisional determination that it was reasonable for Ofcom to use the six principles as a framework for addressing the issue of PoH costs and that this was consistent with Ofcom's statutory duties.
- 5.199. To be clear, we regard it as reasonable for Ofcom to use the six principles as an analytical framework only *to the extent that* their application is consistent with Ofcom's statutory duties. We repeat that, in our view, there is no necessary tension between those statutory duties and the six principles. But this is not to say that an analysis by reference to the six principles will never produce an outcome at odds with the statutory test, and it is certainly not to say that the six principles operate as a substitute for application of the statutory test. We further repeat that Ofcom is ultimately required to ensure that it complies with the statutory test, rather than the six principles of cost recovery.
- 5.200. It therefore caused us some concern to review Ofcom's comments on our provisional determination in relation to this Reference Question. In those comments, Ofcom had analysed Option 3 solely by reference to the six principles of cost recovery and, in concluding that recovery of overheads from PoH charges was consistent with Ofcom's six principles, Ofcom went on to add that this approach to PoH recovery was also consistent with Ofcom's statutory duties.¹⁵⁵ It was a particular cause of concern to note that Ofcom arrived at this additional conclusion without having provided any specific analysis of how it would apply the statutory tests to which it is obliged to have regard before setting any SMP condition. Absent specific consideration of the relevant statutory tests, we would approach Ofcom's conclusions with caution, even if we were otherwise persuaded by them.
- 5.201. However, even if (notwithstanding these two fundamental reservations regarding the relevance and robustness of Ofcom's submissions on this issue) we were minded to consider them, we would not regard them as capable of persuading us to revisit our conclusion that Ofcom had erred on this issue.
- 5.202. We explain our reasons for adopting this position briefly in the following paragraphs, focusing on (a) Ofcom's arguments that a marginal cost pricing solution would carry

¹⁵⁵Ofcom's provisional determination comments, §82.

with it the risk of 'gaming'¹⁵⁶ and (b) its arguments regarding the principle of effective competition.

5.203. We note that Ofcom identified two types of 'gaming',¹⁵⁷ one carried out by OCPs and another carried out by BT. We analyse each in turn.

5.204. First, Ofcom argued that OCPs could game the system by requiring that any service that they purchased should be charged on the basis of marginal costs. In our view, our provisional determination did not create any such risk. We had argued, in terms similar to those set out above, that in the PPC market PoH charges represented an essential additional input that only OCPs had to purchase and without which competition would not occur. In our view, Ofcom therefore should have considered marginal pricing as a reasonable regulatory option. These conclusions do not preclude the possibility that in a different setting Ofcom might find otherwise or that there are different telecommunications markets with costs similar to PoH costs in the PPC market. In these cases, the analysis of the different regulatory options would have to be carried out anew.

5.205. Secondly, Ofcom argued that BT could game the system by starting to purchase products that only OCPs used. We note that apart from restating the risk of gaming,¹⁵⁸ the entire argument and evidence presented by Ofcom in this context are new.¹⁵⁹ However, even if we were to accept this evidence, we would not be persuaded by it. This is because Ofcom presented examples from telecommunications markets which were different from leased lines and which did not face equivalent challenges. The inputs that Ofcom discussed in this context¹⁶⁰ can be used as substitutes for each other whereas PoH costs are an additional cost that OCPs incur.¹⁶¹

5.206. In relation to Ofcom's analysis of the principle of effective competition, we make the following brief observations. As part of its submissions in relation to this principle, Ofcom argued that its view that competitive entry was profitable and was not deterred when PoH charges were set on a FAC basis was supported by the evidence, including the fact that, during the time since the local end charge was set in 2002, competition in downstream markets had developed to the extent that most of the retail leased lines markets were now competitive (ie with no operator having SMP).¹⁶²

5.207. In our view, this analysis is apt to mislead. First, the BCMR did find competition problems in a number of markets and recommended regulation of a previously unregulated service, ie trunk. Secondly, Ofcom used an inappropriate counterfactual to support its argument. The proper counterfactual would have been to compare the status quo with the level of competition one would have expected to see under different PoH recovery options. Ofcom could maintain the argument it sought to advance only if it could argue that the leased line market would not have been more competitive under a different PoH recovery option. As noted in paragraphs 5.188 to 5.192 above, Ofcom has presented no such analysis in any of the three reports to which it referred in its comments on our provisional determination.

¹⁵⁶Ofcom's provisional determination comments, §§59 to 61.

¹⁵⁷We understand that by "gaming" Ofcom is referring to the possibility that a given regulatory action may have unintended consequences.

¹⁵⁸Bilateral hearing, p101, II16–26.

¹⁵⁹Ofcom's provisional determination comments, §§60 to 62.

¹⁶⁰See Ofcom's provisional determination comments, §61

¹⁶¹As C&W explains, '[t]he risk of gaming is not present in respect of PoHs since, by definition, a PoH is only required where connecting a non-BT network to the BT network.' (See C&W's provisional determination comments on CC's paragraph 5.158 of the provisional determination.)

¹⁶²Ofcom's provisional determination comments, §§73 to 75.

5.208. We also consider that Ofcom's reliance here on an argument based on the principle of effective competition provides a helpful illustration of why it is that we caution against supposing that the six principles should be taken to operate as a substitute for the relevant statutory test. The requirement that Ofcom be satisfied that any SMP condition promote sustainable competition necessitates a prospective assessment: the words 'promote' and 'sustainable' both underscore the importance of considering the consequences for the competitive environment in the future, and therefore import a different appraisal from the concept of 'effective competition'. Therefore, even if Ofcom could argue for Option 1 by reference to the past or present competitive environment when relying on the principle of effective competition, we do not regard that as a tenable argument when applying the correct statutory test under section 88(1)(b)(ii).

•• *Ofcom's reliance on the 1995 MMC number portability inquiry*

5.209. Finally, we turn to address Ofcom's argument that its analysis of PoH charges, based on its application of the six principles of cost recovery, was consistent with the findings of the MMC inquiry into number portability.¹⁶³

5.210. We have three key observations to make with respect to Ofcom's reliance on the 1995 Telephone Number Portability report: (a) we note that, in line with our analysis above, the MMC applied the six principles only as a guide in applying, not as a substitute for, the primary regulatory duties; (b) contrary to Ofcom's suggestion in its comments on our provisional determination, the MMC did in fact consider LRIC pricing; and (c) there are important points distinguishing the three existing PoH charges from the three number portability charges to which the MMC referred in its 1995 report.

5.211. As to the first point, we consider it instructive to cite the following paragraph from the report:

2.126. We have found it useful to analyse the issues by reference to the six principles which the DGT suggested should guide decision-making on the allocation of the costs caused by implementing portability (see paragraph 2.86). In this way we have, as required, had regard to the duties which the Act imposes on the Secretary of State and the DGT, including the promotion of the interests of consumers, the maintenance and promotion of effective competition and the promotion of efficiency and economy (see paragraphs 2.171 and 2.172).

5.212. We note that the MMC described the six principles as 'useful' in guiding decision-making, but that the MMC went on specifically to note the primary requirement to have regard to the relevant statutory duties imposed.

5.213. It is also instructive to note that, in paragraph 2.191 (the passage cited by Ofcom in its comments on our provisional determination), the MMC expressly concluded that the recovery of the per line costs associated with implementing number portability would not put at risk the wider benefits of enhanced competition.¹⁶⁴ Ofcom therefore rightly referred to this text in its comments on our provisional determination, but it then drew an incorrect conclusion from it.¹⁶⁵ The MMC considered whether the

¹⁶³Ofcom's provisional determination comments, §§78 to 81.

¹⁶⁴1995 Telephone Number Portability report, MMC, paragraph 2.191, ll 5–7.

¹⁶⁵Ofcom's provisional determination comments, §80.

additional costs of number portability under the per line set-up costs heading would have a negative impact on competition and concluded that they would not.

5.214. As to the second point, we doubt very much whether the MMC 1995 Telephone Number Portability report could be said to support Ofcom's argument that the inclusion of overheads in PoH charges was consistent with the MMC's conclusions in 1995.¹⁶⁶ We note that the quotation from paragraph 2.194 of the report which Ofcom included in its comments on our provisional determination omitted the qualification contained in the second half of the sentence quoted (emphasis added):

2.194. ... We propose that the accounting basis for calculating charges should be the equivalent of that used for interconnection, namely fully allocated costs plus an element for profit, *but changing to an incremental costs basis if that is agreed for interconnection in due course* (see the second sentence of paragraph 3 of Appendix 2.1).

5.215. Appendix 2.1, paragraph 3, of the 1995 report reads (with emphasis added):

3. There should be a new provision enabling BT to recover from the other operator its reasonable costs incurred in providing portability subject to the limitations in sub-paragraphs (a) and (b) below. Charges should be calculated by reference to BT's fully allocated costs *or, if Condition 13.5(a) of BT's licence is amended to provide for interconnection charges to be calculated by reference to incremental costs, by reference to such costs*. The DGT should have power to determine that costs are not reasonable if he considers that it would have been reasonable for BT to have used lower-cost methods at the relevant time. The DGT should also be able to determine into which categories of cost-system set-up, per line setup, additional conveyance and other-individual items fall.

5.216. In our view, it is clear from the full excerpt we have quoted above that the MMC did not exclude incremental cost pricing (ie an option similar to marginal cost pricing) in its decision. Quite the contrary, it was one of the possible regulatory outcomes to which the MMC specifically referred in its report.

5.217. As to the third point, we note that the three main cost categories of costs identified by the 1995 MMC Telephone Number Portability Report—ie (a) system set-up costs, (b) per line set-up costs, and (c) additional conveyance costs—are distinguishable from the PoH costs categories and therefore preclude the drawing of a simple parallel between them. Rather, these differences tend to underline the appropriateness of evaluating properly the different regulatory options for PoH recovery within the framework of Ofcom's primary duties under the 2003 Act and based on evidence directly relevant to PoHs.

5.218. For these reasons, even if we were minded to take them into account, Ofcom's comments on our provisional determination would not cause us to alter our conclusion in relation to the primary allegation advanced by C&W that Ofcom had erred in concluding that Option 1 was appropriate for the statutory purposes set out under section 88(1)(b) of the 2003 Act.

¹⁶⁶Ofcom's provisional determination comments, §81.

The secondary allegation

- 5.219. Finally, and without prejudice to our conclusions above regarding C&W's other arguments under this head, we address the secondary allegation, namely that C&W's argument that the New PoH Charges would 'add' to the disparity between BT's and OCPs' costs.¹⁶⁷
- 5.220. We note that C&W claimed that the PoH costs were a burden on OCPs and that the New PoH Charge would add to the disparity between BT's and OCPs' costs.¹⁶⁸ Ofcom disagreed, arguing that the New PoH Charges had been previously borne in the form of 'local end adjustments' and that the New PoH Charges were simply a more transparent way of recovering these costs.
- 5.221. We do not agree with C&W. In our view, Ofcom's decision in the LLCC Statement regarding the New PoH Charges was to implement a new means of recovering old charges rather than introducing new charges. Therefore, the replacement of old local end adjustments with the New PoH Charge did not of itself alter the disparity of costs between BT and OCPs and thus their relative competitive positions.
- 5.222. We consider C&W's arguments in relation to the cost data and BT's methodology above in our determination of Reference Question 4(a)(i) and do not rehearse our conclusions again here.

Discrimination

- 5.223. C&W's allegations in §§113–114 with respect to discrimination are set out in §114.3 of the NoA: C&W claimed that in those cases where BT used PoH-style multiplexors, the charges paid by BT's downstream operations were not the same as those paid by OCPs when using PoHs. On the basis of §114.3, we therefore understood that C&W alleged that BT treated OCPs differently in materially the same circumstances.
- 5.224. We consider that the relevant question for us to determine in relation to C&W's allegation of discrimination is whether Ofcom erred in concluding that its decision to levy the New PoH Charges only on external local ends was not such as to discriminate unduly against particular persons or against a particular description of persons. In determining this question, we refer to our discussion in our assessment of Reference Questions 2(b) and 2(d) regarding the meaning of the test at section 47(2)(b) and, in particular, the phrase 'to discriminate unduly against particular persons or against a particular description of persons'. Our remarks under Reference Questions 2(b) and 2(d) on that issue are also relevant here.
- 5.225. We note that BT strongly denied C&W's claim¹⁶⁹ and Ofcom believed that inputs into VPN services were the same for OCPs as for BT.¹⁷⁰
- 5.226. We also note that C&W's arguments on this issue were unclear. While the NoA does not provide any detail of how such differential treatment could occur, Mr Harding in his witness statement explained that since the New PoH Charges were based only on BT's external volumes of PoH-style multiplexors and since internal volumes were

¹⁶⁷See paragraph 5.10ff above.

¹⁶⁸NoA, §§114.2 & 115.

¹⁶⁹BT W/S Morden I, §§139–140.

¹⁷⁰Bilateral hearing, p93, ll13–19.

not reported in BT's RFS, C&W did not know the amount of cost that BT incurred internally.¹⁷¹ C&W's claim therefore lacked any supporting evidence.

- 5.227. We further note that, at the bilateral hearing, C&W sought to explain its position with respect to the allegation of discrimination. First, C&W stated that it did not take the position that BT allocated cost to components in different ways internally and externally. Secondly, C&W explained that its allegation in fact related to how this issue translated into the charges paid by external providers. By way of elaboration of this second point, C&W further explained that it was paying effectively for the choices of all OCPs and was not able to reduce the costs to any significant extent.¹⁷²
- 5.228. In our provisional determination, we found that in the light of these arguments, C&W did not appear to be concerned about different allocation of costs by BT to its downstream operation but rather the fact that C&W was unable to realize efficiency savings because the pricing of equipment of a type similar to that used at PoHs ('PoH-type equipment') was averaged. Therefore, as regards C&W's first point, C&W's purported clarification at the bilateral hearing in fact appeared to contradict its allegation made in the NoA. This is because C&W no longer alleged that there was any difference in the treatment of cost allocated to internal and external components in the manner originally suggested or at all.
- 5.229. We have not found C&W's second point easy to understand in the context of the arguments deployed in relation to §114.3 of the NoA. Rather, we understand that these remarks made during the bilateral hearing, while made in the context of questions about §114.3, instead go to the allegations set out at §§129–132 of the NoA. These points are addressed in more detail in our determination of Reference Question 4(b)(ii) below. We do not discuss them further here.
- 5.230. We therefore concluded that C&W appeared to have withdrawn the factual basis for its allegation under this head and, in any event, had failed to provide sufficient evidence to demonstrate that, for the reasons set out in §114.3 of the NoA, Ofcom had erred in concluding that its decision regarding the recovery of PoH charges was not unduly discriminatory.
- 5.231. Following our provisional determination, C&W rejected our suggestion that there was a contradiction between the position explained by C&W in its bilateral meeting (see our summary in paragraph 5.116 above) and what it said in §114.3 of the NoA regarding its point on discrimination. C&W claimed that its discrimination argument was not limited to an allegation that BT would use different methods of cost allocation to PoH-style equipment internally and externally. Rather, C&W argued that discrimination could result from the fact that BT did not go through the same process of estimating the number of PoH boxes and number of circuits per box in respect of its downstream operations as it did when calculating the PoH charges for OCPs.¹⁷³ C&W contended that these points had been covered in paragraphs 66 and 67 of its Reply to Ofcom's Defence, while accepting that they had been articulated slightly differently.¹⁷⁴
- 5.232. We are unconvinced by C&W's argument that this point had been properly pleaded in its Reply to Ofcom's Defence. This is for the following three reasons.

¹⁷¹C&W W/S Harding, §§117&129.

¹⁷²Bilateral hearing, p80, l11, to p81, l5.

¹⁷³C&W's comments on our provisional determination, p5.

¹⁷⁴C&W's letter of 15 June 2010 referencing C&W's comments on our provisional determination, p5.

- 5.233. First, paragraph 66 of the Reply does not make it clear that C&W was arguing that it was the estimate of the number of boxes and circuits per box that led to discrimination. Paragraph 66 clearly referred to the technology choices that BT can make and OCPs cannot (ie the point we consider under Reference Question 4(b)(ii)); it did not make clear that C&W sought to advance a discrimination argument based on BT's discretion when estimating the number of PoH boxes in determining PoH costs.
- 5.234. Secondly, paragraph 67 of the Reply only contains the following passing reference to the fact of BT's discretion in estimating PoH costs: 'even if it were true that it had an incentive to minimise the unit cost, it is clear that the charges borne by OCPs depend as much on estimates by BT as to the number and type of boxes used as on the cost per box'. This comment is not further explained and the means by which discrimination could occur is not clarified or properly articulated. Indeed, C&W pursued its technology-based argument in the preceding and following sentences of that paragraph: in this context, we had quite naturally understood that the technology-based argument was C&W's key point. We understood the reference to the estimates as a mere reminder of the issues raised under Reference Question 4(a)(i), ie C&W's dissatisfaction with the amount of costs allocated to PoHs.
- 5.235. Finally, we consider it telling that C&W itself recognized that paragraphs 66 and 67 articulated its argument 'slightly differently'.¹⁷⁵ It would have been open to C&W to articulate more clearly such an argument during the course of its pleadings or during the hearings; it did not avail itself of this opportunity.
- 5.236. However, even if we were to have accepted that C&W had been clear that it sought to advance a further or alternative discrimination argument on the grounds of BT's discretion in estimating the number of PoH boxes, which we do not, we would find C&W's argument on such a basis deficient: in our view, C&W has not made a case that discrimination occurred or could have occurred in this manner.
- 5.237. From C&W's comments on our provisional determination, we understand that the alternative discrimination argument which C&W now seeks to advance relies on the following logic: (a) BT did not have to estimate the number of PoH-style boxes internally but instead used the correct number for cost allocation purposes; and (b) given that BT's estimate of the number of PoH boxes used by OCPs had been inflated and given that BT had used the correct, uninflated number of PoH-style boxes internally, it followed that BT had discriminated against OCPs.
- 5.238. In our view, such an argument is deficient in at least two respects. First, C&W has not provided any evidence to show that BT does not use estimates of PoH-style boxes for its internal cost allocation purposes, nor has it suggested that there is any onus on Ofcom to ascertain whether this is the case. Secondly, we note that the fact that BT uses estimates in calculating PoH charges is not of itself discriminatory since the use of estimates could instead have resulted in BT underestimating the number of boxes used by OCPs, in which case OCPs would be paying less than they ought to have done.
- 5.239. We therefore maintain our conclusion that C&W failed to provide sufficient evidence to demonstrate that, for the reasons set out in §114.3 of the NoA, Ofcom had erred in concluding that its decision regarding the recovery of PoH charges was not unduly discriminatory.

¹⁷⁵C&W's letter of 15 June 2010 referencing C&W's comments on our provisional determination, p5.

Efficiency

- 5.240. C&W's allegations with respect to inefficiency appear in §§113 and 116 of the NoA. However, they are only particularized in §116 where C&W submitted that the New PoH Charges were also inefficient in distorting incentives to migrate to newer and more efficient PoH equipment for the reasons discussed further in §§122–132 of the NoA.
- 5.241. This allegation therefore relates, and adds nothing, to the allegations in §§122–132, which form the basis of Reference Questions 4(b)(i) and 4(b)(ii). We examine those arguments in our consideration of those questions and do not address them further here.

Determination

- 5.242. For the reasons given above, our determination is that, in light of the impact of PoH charges on OCPs' competitiveness and having regard to the arguments set out in §114 of the NoA, Ofcom erred in concluding that its decision regarding the recovery of PoH charges was appropriate for promoting sustainable competition.

Reference Question 4(a)(iv)

- 5.243. This section (paragraphs 5.243 to 5.286) sets out our conclusions as to whether Ofcom erred in the setting of the PoH charges in Part 1 of Annex C to the TI Price Controls and, in particular, whether Ofcom erred in deciding not to set the charges on local ends used by BT but only those used by BT's competitors because Ofcom erred in its assessment of its 'six principles of cost recovery' for the reasons set out in §§117–121 of the NoA.
- 5.244. For the reasons given below, our determination is that Ofcom's approach to the assessment of the 'six principles of cost recovery' and the particular arguments set out in §§117–121 of the NoA do not materially affect our conclusions under Reference Question 4(a)(iii), at which we consider the pertinent question, namely, whether Ofcom had followed the applicable statutory tests under the 2003 Act.

The calculation of PoH charges in the LLCC Statement

- 5.245. We have explained above, under Reference Question 4(a)(i), Ofcom's methodology and rationale for setting New PoH Charges and how Ofcom took into account the six principles of cost recovery when deciding whether it should amend the then current approach to recovering PoH costs.¹⁷⁶
- 5.246. Those principles are: cost causation; cost minimization; distribution of benefits; effective competition; practicability; and reciprocity.¹⁷⁷ In the LLCC Statement, Ofcom explained what each principle involved in the context of its decision regarding the approach to recovery of PoH costs.¹⁷⁸ We summarize below only the four of those six principles which are the subject of C&W's challenge under §§117–121 of the NoA:
- (a) With respect to cost causation, Ofcom explained that this principle suggested that PoH costs should be recovered from those whose actions caused the costs to be incurred at the margin. BT did not use PoHs in the delivery of internal end-to-end PPCs (ie those using only BT's network). The costs were driven primarily by other CPs wishing to purchase PPCs in order to provide disaggregated services and, therefore, to interconnect with BT's network. Therefore, Ofcom regarded it as contrary to the principle of cost causation for PoH charges to be allocated to BT's 'internal' local ends as well as 'external' local ends (ie those provided to OCPs).¹⁷⁹
- (b) With respect to cost minimization, Ofcom explained that this principle would require that the mechanism in place for costs recovery of PoHs should ensure that there were strong incentives to minimize these costs. Ofcom acknowledged the risk that BT might not have incentives to minimize costs if PoH costs were recovered only from OCPs. But Ofcom noted factors mitigating against this risk: first, the fact that BT itself incurred these costs in interfacing its core networks with certain VPNs; secondly, given that there could still be a risk were BT able to pass these costs through to customers, the fact that PoH charges were included within the TI basket further operated to incentivize BT; and, in any event, BT's individual PoH charges were subject to RPI+0 per cent sub-caps.¹⁸⁰

¹⁷⁶See also our analysis under Reference Question 4(a)(i).

¹⁷⁷LLCC Statement, §§4.148–4.149.

¹⁷⁸LLCC Statement, §§4.150–4.157.

¹⁷⁹LLCC Statement, §§4.150–4.152.

¹⁸⁰LLCC Statement, §4.153.

- (c) With respect to the distribution of benefits, Ofcom explained that PoH costs should be recovered from the beneficiaries, especially where there were externalities. Ofcom noted the suggestion from some stakeholders that PoH costs should be recovered from all CPs, including BT, because the customers of all providers benefited from being able to connect to other networks. Ofcom did not believe that this argument applied to PPCs, the value of which lay in connectivity between defined business sites, not wider interconnectivity. Ofcom also noted that, in some previous cases, it had also decided to recover system set-up costs from all customers, including BT's. However, as PoH costs were incurred on a per operator/per circuit basis, Ofcom stated that this argument did not apply to the recovery of those costs, which were generally recovered from the operator or customer concerned.¹⁸¹
- (d) With respect to effective competition, Ofcom explained that the mechanism for PoH cost recovery should not undermine or weaken the pressures for effective competition.¹⁸² Ofcom noted that some stakeholders had pointed out that PoH charges meant that the price paid by OCPs for PPCs was in effect higher than that paid by BT's downstream operation, which in turn put them at a competitive disadvantage. Ofcom agreed that this might be the case, but argued that this was mitigated by the fact that: first, BT itself faced similar costs in some of its downstream markets; and secondly, Ofcom had placed a sub-cap on PoH revenues. Ofcom also noted that it had asked BT to implement the proposal to introduce a cost recovery mechanism that would incentivize migration to new, aggregated PoHs, which would provide stakeholders with an opportunity to minimize and eventually avoid PoH charges altogether.¹⁸³

Summary of C&W's arguments

5.247. C&W argued that Ofcom erred as a matter of law and/or assessment in its assessment of the six cost recovery principles.¹⁸⁴ C&W then proceeded to make particular allegations of error with respect to how Ofcom applied four of the six principles of cost recovery specifically in the present case.

Cost causation

- 5.248. First, C&W alleged that Ofcom erred in its assessment of what the cost causation principle implied for the recovery of the PoH costs that were the subject of the New PoH Charges. In particular, C&W noted that:¹⁸⁵
- (a) Nothing in the MMC's report from the MMC Telephone Number Portability inquiry which set out the six principles of cost recovery supported the contention that cost causation should be given primacy over the other principles.
 - (b) Ofcom had previously accepted that the cost causation principle was irrelevant or a neutral factor where a cost was incurred to implement a regulatory decision intended to promote competition.
 - (c) An OCP's need for PoHs was a function of the regulatory decision to require BT to provide wholesale leased lines or, to put it another way, a function of the con-

¹⁸¹LLCC Statement, §4.154.

¹⁸²LLCC Statement, §4.155.

¹⁸³Ofcom cross-referred in LLCC Statement §4.155–§4.161, which forms the basis of Reference Questions 4(b)(i) and 4(b)(ii).

¹⁸⁴NoA, §117. (Cf also the sub-heading introducing §§117–121.)

¹⁸⁵NoA, §118 (and its sub-paragraphs).

- clusions that (i) it was desirable to have competition for the services now provided by leased lines and (ii) that it was not possible to have effective competition for those services without requiring BT to provide the leased lines wholesale products.
- (d) The costs payable by OCPs were not limited to the marginal or incremental costs of each additional interconnect they created.
 - (e) Insufficient account had been taken of the fact that the majority of the remaining costs were incurred in respect of a small minority of PoHs.

Cost minimization

5.249. Secondly, C&W alleged that Ofcom erred in its assessment of what the cost minimization principle implied for the recovery of the PoH costs that were the subject of the New PoH Charges. In particular, C&W noted that:¹⁸⁶

- (a) The fact that BT's downstream 'internal' operations also sometimes used similar equipment to that used to provide PoHs did not provide any or any material incentive to BT to minimize costs, because: (i) the New PoH Charges were based solely on 'external' costs and revenues and Ofcom did not establish that a reduction in the costs of the 'internal' solutions would necessarily reduce the costs associated with the 'external' solutions; and (ii) it was in BT's interests to maximize PoH charges because it would increase BT's competitive advantage over OCPs given that BT's downstream operations did not use PoHs.
- (b) The fact of any pass-through of PoH charges to BT's customers did not negate the increased incentive to minimize costs that would have been created by levying the New PoH Charges equally on all local ends including BT 'internal' local ends.
- (c) Any RPI-X control would encourage a regulated entity to seek to reduce costs to an extent, but any mitigation this might have provided was far from perfect. BT would also have taken into account any general competitive advantage it gained by not reducing costs.

Distribution of benefits

5.250. Thirdly, C&W alleged that Ofcom erred in its assessment of what the distribution of benefits principle implied for the recovery of the PoH costs that were the subject of the New PoH Charges. In particular, C&W noted that:¹⁸⁷

- (a) Ofcom's observation that the value of PPCs lay in connectivity between defined business sites, so wider interconnectivity, was irrelevant. The customers of all CPs benefited from the provision of PoHs because they allowed greater competition for the services that used PPCs as an input.
- (b) There was no relevant distinction between system set-up costs incurred once for the benefit of all customers and PoH costs incurred on a per operator/per circuit basis. The benefit of a PoH on a particular circuit extended beyond the customer to whom the circuit was provided since the extra competition drove down costs

¹⁸⁶NoA, §119 (and its sub-paragraphs).

¹⁸⁷NoA, §120 (and its sub-paragraphs).

and increased innovation for all customers including those who chose to contract with BT.

- (c) There was no general presumption that per operator or per customer costs should be recovered from the operator or customer concerned and/or there was no proper basis for such a presumption in the context of the 2003 Act and the communications regulatory framework.

Effective competition

5.251. Fourthly, C&W alleged that Ofcom erred in its assessment of what the effective competition principle implied for the recovery of the PoH costs that were the subject of the New PoH Charges. In particular, C&W noted that:¹⁸⁸

- (a) It was unduly restrictive to interpret this principle as meaning that the mechanism for PoH cost recovery should not undermine or weaken the pressures for effective competition. Consistent with Ofcom's statutory general duties, Ofcom should have sought to adopt a cost recovery mechanism that promoted competition.
- (b) Ofcom had been wrong to conclude that it merely might have been the case that OCPs were put at a competitive disadvantage by being required to pay PoH charges that were not incurred by BT's downstream operations. Ofcom advanced no reason, nor could it properly have done, for concluding that the extra charges would not distort competition.
- (c) In any event, having acknowledged at least the possibility of competitive distortion, Ofcom had been wrong to the extent, if at all, that it had concluded that those concerns had been adequately mitigated for the reasons Ofcom gave or any other reasons because, among other reasons: (i) the fact that BT needed PoH-style multiplexors to offer some services provided no mitigation beyond those services; and (ii) the RPI+0 per cent sub-cap provided no mitigation against the effects of the charges at current levels; it merely limited the extent to which the charges might rise further.¹⁸⁹

Ofcom's Defence

5.252. Ofcom argued that the six principles of cost recovery were consistent with its statutory duties.¹⁹⁰ Ofcom offered a specific rebuttal of C&W's criticisms of Ofcom's application of the four principles set out above.

Cost causation principle

5.253. Ofcom argued that the MMC Telephone Number Portability inquiry of 1995 had sought to distinguish between system set-up costs and operator-specific-type costs. The first category should be borne by BT, the second by operators who caused them.¹⁹¹

¹⁸⁸NoA, §121 (and its sub-paragraphs).

¹⁸⁹C&W also cross-referred to other arguments under NoA §§113–116 and NoA §§123–125, which we address in our determination of Reference Questions 4(a)(iii) and 4(b)(i) respectively.

¹⁹⁰Defence Annex D, §49.

¹⁹¹Defence Annex D, §54.

- 5.254. Ofcom therefore argued that system set-up costs that benefited customers of all operators through enhanced competition should be spread over all operators and that it was efficient to recover per operator costs that benefited only that particular operator or its customers from that operator.¹⁹² Ofcom argued that PoH interconnection was not a system set-up cost as it benefited a particular operator and its customers.
- 5.255. Ofcom further argued that cost causation did not preclude the recovery of common costs through PoH charges. Recovery of common costs was likely to be necessary for the sustainable provision of the services in question.¹⁹³
- 5.256. Ofcom explained that the recovery of overheads through PoHs was not new to the LLCC and was the case under the previous local end uplifts set by Ofel in its 2002 PPC Phase 2 Decision.¹⁹⁴

Cost minimization principle

- 5.257. Ofcom disagreed with C&W that PoH costs had been overinflated. BT's RFS did not identify separately the costs of PoHs and Ofcom asked BT to develop a model estimating the costs associated with PoHs. Ofcom discussed the model with BT and checked the reasonableness of the assumptions it used to ensure that PoH charges were set at a reasonable level.¹⁹⁵
- 5.258. Ofcom noted that the New PoH Charges would ensure that the revenues and costs associated with PoHs would be separately identifiable in BT's RFS and therefore BT's cost recovery would be closely monitored. In Ofcom's view, this was a key improvement introduced by the LLCC Statement.¹⁹⁶
- 5.259. Ofcom further noted that PoH charges were within the TI basket subject to an overall cap of RPI-3.25 per cent which should provide BT with enough incentive to minimize costs. Ofcom also considered that the RPI+0 per cent sub-cap provided an adequate safeguard against BT raising PoH charges in a way that could restrict or distort competition.¹⁹⁷

Distribution of benefits principle

- 5.260. Ofcom argued that the 'distribution of benefits' principle suggested that the costs of an additional PoH should be recovered from the connecting operator. This was because the largest part of the value of an additional PPC connection lay, at the margin, in connectivity between defined business sites and so benefited the user of the PPC rather than creating wider benefits for other operators or their customers. The additional marginal competition benefits of an additional PoH were likely to be minimal. Ofcom therefore did not consider that there was a sufficiently strong case to adjust charges to take into account competition externalities in this case.¹⁹⁸

¹⁹²Defence Annex D, §57.

¹⁹³Defence Annex D, §64.

¹⁹⁴Defence Annex D, §69.

¹⁹⁵Defence Annex D, §71.

¹⁹⁶Defence Annex D, §72.

¹⁹⁷Defence Annex D, §§73-74.

¹⁹⁸Defence Annex D, §§79-81.

Effective competition principle

- 5.261. Ofcom submitted that it had been a long-standing regulatory principle that PPCs were not provided on an 'Equivalence of Input' basis. This concept required BT to provide regulated wholesale services on exactly the same terms to its downstream operation as to OCPs and for BT's downstream operation to consume the same inputs as other retail suppliers. Because of the different network topologies of BT and OCPs, they actually required different inputs in order to supply retail leased lines. Ofcom's concern therefore was that mandating BT to provide retail leased lines on exactly the same basis as OCPs would result either in inefficiency or require BT to provide complete wholesale end-to-end private circuits to OCPs, defeating the object of promoting infrastructure-based competition. Either outcome would be perverse.¹⁹⁹
- 5.262. To avoid undue reliance by OCPs on end-to-end services, which would limit the dynamic benefits that would come from infrastructure-based competition, wholesale services had been provided as 'partial' private circuits which required OCPs to inter-connect with BT. This was intended to encourage BT's competitors to supply as much of their own infrastructure as was economic or purchase circuits from alternative providers. PPCs therefore had the objective of encouraging infrastructure-based competition to an appropriate level in the network. This had the benefit that BT's competitors would seek to compete based on more efficient technology or network provision and/or better service quality.²⁰⁰

Ofcom's bilateral hearing

- 5.263. Ofcom explained that there were different stages to setting the PoH charges. First, Ofcom went through BT's model which was used to estimate the £11.7 million of PoH costs and satisfied itself that the approach BT had used did not inflate the PoH costs.²⁰¹ Once the estimate was agreed and PoH charges set, Ofcom placed a sub-cap of RPI+0 per cent on the charges to ensure that they could not increase in real terms.²⁰² Ofcom further explained that there was no disadvantage in having PoH charges within the overall TI basket so that overall they might do better than the sub-cap and that there was clearly a possibility that prices would come down in real terms.²⁰³
- 5.264. Ofcom further explained that because the New PoH Charge was a small cost category of £11.7 million while the TI basket was around £800 million, it would not have been appropriate for Ofcom to place the New PoH Charges in a separate basket.²⁰⁴

Assessment

- 5.265. We have set out in our determination of Reference Questions 4(a)(iii) and 4(a)(iv) the statutory test Ofcom is obliged to apply when setting an SMP condition. As we indicated there, we do not believe that there is any necessary tension in principle between that statutory test in section 88 of the 2003 Act and the six principles of cost recovery.²⁰⁵

¹⁹⁹Defence Annex D, §84.

²⁰⁰Defence Annex D, §85.

²⁰¹Bilateral hearing, p103, l21, to p104, l1.

²⁰²Bilateral hearing, p104, ll7–12.

²⁰³Bilateral hearing, p104, ll20–27.

²⁰⁴Bilateral hearing, p104, l20, to p105, l2.

²⁰⁵Cf our provisional determination of Reference Question 4(a)(ii) and, in particular, paragraph 5.84 of our assessment.

- 5.266. But we consider it important to recall here that, when deciding as part of the LLCC Statement not to set the charges on local ends used by BT but only those used by BT's competitors, Ofcom was under a statutory duty to apply the test in section 88, rather than the six principles of cost recovery. We therefore regard the six principles of cost recovery as a useful tool to assist Ofcom in conducting its assessment of whether the setting of any given SMP condition is appropriate for the fulfilment of the objectives set down under section 88(1)(b). But the six principles do not operate as a substitute for applying the statutory test set out there.
- 5.267. We also recall that section 88 accords Ofcom a certain measure of discretion, and that we have explained our approach in determining allegations of error in the exercise of a discretion above in paragraph 1.45 in the introduction to this determination.
- 5.268. We turn to consider C&W's arguments relevant to this Reference Question (4(a)(iv)) with these considerations in mind. In our view, C&W's allegation that Ofcom erred in its assessment of the six principles of cost recovery would constitute a relevant error for the purposes of the appellate jurisdiction under sections 192 to 195 of the 2003 Act if and to the extent that any such error in applying the six principles resulted in Ofcom failing to meet the statutory tests to which it is subject. As noted above, we consider the test under section 88 to be that most relevant to the issues raised by C&W in §§117–121 of the NoA.
- 5.269. We therefore assess below C&W's allegations of error by Ofcom in applying those four of the six principles identified above in order to determine whether Ofcom erred in concluding that its impugned decision with respect to the recovery of PoH costs was appropriate for the purposes of promoting efficiency, promoting sustainable competition and conferring the greatest possible benefits on the end-users of electronic communications services.
- 5.270. We note, however, that we have already considered the application of two limbs of the section 88(1)(b) test at some length in our assessment of Reference Question 4(a)(iii), ie the requirements that the SMP condition is appropriate for the purposes of promoting efficiency and promoting sustainable competition. We do not propose to rehearse that assessment here. We therefore only assess in this Reference Question those parts of C&W's arguments in §§117–121 which we consider materially to add to or to differ from the arguments we have already assessed in our determination of Reference Question 4(a)(iii) above.

Cost causation principle

- 5.271. We regard the cost causation principle as one factor to which Ofcom could usefully have had regard when considering whether the statutory test in section 88(1)(b) had been satisfied and, in particular, the appropriateness of any given SMP condition to the promotion of efficiency. But we emphasize that whether or not the cost causation principle has been applied correctly is not determinative of the appropriateness of the setting of a condition to the promotion of efficiency or sustainable competition.
- 5.272. However, in our view, the claims C&W raised under §§118 and 118.1–118.5 of the NoA do not add materially to those we have already discussed under Reference Question 4(a)(iii). In any event, in arriving at our determination of that Reference Question, we had regard to the substance of the allegations and the additional information under these paragraphs and the related points raised by Ofcom in its Defence. We do not discuss those points further here.

Cost minimization principle

- 5.273. C&W claimed under §§119 and 119.1–119.3 of the NoA that Ofcom erred in its assessment of what the cost minimization principle implied for the recovery of PoH costs that were subject to the New PoH Charge.
- 5.274. Before turning to consider C&W’s allegations regarding the cost minimization principle, we make the following observation. In response to questions on this topic during its bilateral hearing, Ofcom explained that the first step it took in considering BT’s incentives was to examine BT’s charges.²⁰⁶ The issue of the starting amount of PoH charges, £11.7 million, and its validity are discussed in more detail under Reference Question 4(a)(i). We do not discuss those points further here.
- 5.275. Turning to consider C&W’s allegations, we note that the cost minimization principle has to be understood in the context of Ofcom’s statutory duty to consider the appropriateness of the setting of a condition to, among other factors, promoting efficiency and sustainable competition. As with the cost causation principle, we regard the cost minimization principle as a relevant factor to which Ofcom should have had regard when considering whether the statutory test in section 88(1)(b) has been met. But, again, the application of the cost minimization principle is not determinative of compliance with the statutory test. We approach these allegations with these considerations in mind.
- 5.276. We understand that C&W was arguing (a) that Ofcom erred in failing to recognize that BT did not have an interest in minimizing the costs of PoH-style equipment just because BT’s downstream operation also used them²⁰⁷ and (b) that the arrangements put in place by Ofcom did not provide adequate incentives to BT to minimize costs or adequate safeguards to guard against BT increasing them.²⁰⁸
- 5.277. In our view, C&W’s arguments under this head fall at the first hurdle: C&W has failed to provide sufficient evidence to support its allegation that Ofcom erred in practice in failing to recognize that BT did not have an interest to minimize the costs PoH-style equipment just because BT’s downstream operation also used them. We do not consider that C&W has demonstrated that there is any need to provide incentives to minimize costs or adequate safeguards to guard against BT increasing them beyond the incentives provided by the TI basket cap and sub-caps in circumstances where BT has not been shown to have incentives to maximize the costs of PoH-style equipment.
- 5.278. As to our reasons for concluding that C&W has failed to provide adequate evidence of BT’s interest in maximizing PoH charges, we note that, as discussed under Reference Question 4(a)(iii), C&W has effectively withdrawn (or at least not demonstrated²⁰⁹) its claim that BT allocated costs to the PoH-type equipment differently when it was used by BT’s downstream operation in the provision of VPN services from when that equipment is used by OCPs for PoHs. If BT needs to use the same PoH-type technology for internal purposes (albeit that those purposes are different) and BT is not discriminating in the allocation of costs in the way C&W originally alleged, then in our view BT gains no advantage in not minimizing costs. This is for the following reasons: if BT allocates a disproportionate amount of cost to PoH-style equipment, it will gain a competitive advantage in the leased line market by

²⁰⁶Bilateral hearing, p103, l21, to p104, l1.

²⁰⁷Cf NoA, §119.1(b).

²⁰⁸Cf NoA, §§119.1(a), 119.2 & 119.3.

²⁰⁹We note that C&W has, after reviewing our provisional determination, contested our suggestion that it had withdrawn this argument. We consider this point above in paragraphs 5.231 to 5.239.

dampening the competitiveness of OCPs but, at the same time, it will dampen its own competitiveness in the VPN market where it also competes with OCPs by inflating its own costs.

- 5.279. We note that Ofcom explained at its bilateral hearing that where both C&W and BT's downstream businesses provided VPN services, the use that BT and C&W made of PoH-style equipment was the same, so there should be no distortion of competition.²¹⁰ C&W did not provide any evidence that this would not be the case. On the contrary, C&W explained that 'OCPs will also need to provide their own [PoH-type] equipment to interface into their own VPN platforms in the same way that BT does [when providing VPN services]'.²¹¹ We understand that to mean that PoH-style equipment is used by both BT and OCPs in providing their VPN services.
- 5.280. While it is still possible that the loss of BT's competitiveness created by inflating the costs associated with PoH-style equipment in the VPN market will be outweighed by the increase in BT's competitiveness in the leased line market created by dampening the competitiveness of OCPs, it is unclear which of these effects will prevail. C&W has not provided sufficient evidence to show which would prevail and, therefore, to demonstrate that BT has an incentive to maximize costs.
- 5.281. We therefore find that C&W has not demonstrated that Ofcom erred in its application of the cost minimization principle by failing to recognize that BT had incentives to maximize costs.
- 5.282. However, in our view, as indicated above, an error with respect to the application of the principle of cost minimization would not alone be sufficient to demonstrate that Ofcom had failed to meet the statutory test under section 88 of the 2003 Act. Thus, even if C&W had shown that had Ofcom so erred in failing to recognize an incentive to maximize PoH costs (and that Ofcom failed to safeguard adequately against these incentives and/or to provide counter-incentives to minimize costs), we would still find against C&W's argument under this head. C&W has not articulated properly how it says that such an error in assessing what the cost minimization principle implies in the present case should have led Ofcom to conclude that its decision with respect to PoH charges was inappropriate for the purposes of promoting efficiency or sustainable competition, nor has it referred in §119 to any evidence going directly to this issue.

Distribution of benefits principle

- 5.283. As with the foregoing two principles of cost causation and cost minimization, we regard the distribution of benefits as a relevant but not determinative factor to which Ofcom could have had regard when considering whether the statutory test in section 88(1)(b) is met.
- 5.284. However, we do not consider that C&W's claims raised under §§120 and 120.1–120.3 of the NoA add materially to the issues we have already discussed and determined under Reference Question 4(a)(iii). We had regard to the substance of the allegations and the additional information provided under these paragraphs, together with the specific points raised by Ofcom in its Defence to these allegations, when making our determination under Reference Question 4(a)(iii). We do not address those arguments further here.

²¹⁰Bilateral hearing, p91, ll 9–16.

²¹¹C&W W/S Harding, §117; a similar point is also made in C&W W/S Harding, §129.

Effective competition principle

5.285. Although, as with the five other principles, we consider the effective competition principle to be a relevant but not determinative factor for C&W to consider, we find that C&W's claims raised under §§121 and 121.1–121.3 of the NoA do not add materially to those we have already discussed and determined under Reference Questions 4(a)(iii) (cf §§121.1, 121.2 and 121.3(d)), 4(a)(iv) (cf §§121.3(a) and 121.3(b)) and 4(b)(i) (cf §121.3(c)). We had regard to the substance of the allegations and any additional information provided by C&W under these paragraphs, as well as any specific points raised by Ofcom in its Defence to these allegations, when making our determination under Reference Questions 4(a)(iii), 4(a)(iv) and 4(b)(i). We do not address those arguments further here.

Determination

5.286. For the reasons given above, our determination is that Ofcom's approach to the assessment of the 'six principles of cost recovery' and the particular arguments set out in §§117–121 of the NoA do not materially affect our conclusions with respect to Reference Question 4(a)(iii), where we considered the pertinent question, namely, whether Ofcom had followed the applicable statutory tests under the 2003 Act.

Reference Question 4(b)(i)

- 5.287. This section (paragraphs 5.287–5.317) sets out our conclusions as to whether Ofcom erred in the setting of the PoH charges in Part 1 of Annex C to the TI Price Controls in deciding to set the same charges on SDH and PDH PoHs and, in particular, in giving BT the discretion it did as to future charges for PoHs for the reasons set out in §§122–128 of the NoA.
- 5.288. For the reasons given below, our determination is that Ofcom did err in giving BT the discretion it did as to future charges for PoH for the reasons set out in §§122–128 of the NoA.

Summary of Ofcom's rationale and methodology with respect to the setting of PoH charges

- 5.289. In preparing for the LLCC Statement, Ofcom consulted on whether to change the way in which PoH costs were recovered. Previously, PoH costs were recovered by applying an uplift to the external local end price. Ofcom suggested that one option would be to introduce a separate PoH charge in order to increase transparency in the RFS and allow better monitoring of cost recovery.²¹²
- 5.290. In the LLCC Statement, Ofcom identified other alternatives, including introducing a cost recovery mechanism which would incentivize migration to new, aggregated PoHs. Under this approach, circuits handed over new, aggregated PoHs would not attract the separate New PoH Charges which Ofcom had imposed. BT proposed to implement this alternative, and Ofcom expected BT to do so within three months following the implementation of the charge controls (on 1 October 2009).²¹³

Summary of C&W's arguments under §§122–128 of the NoA

- 5.291. C&W identified five ways in which Ofcom allegedly erred in law and/or assessment in 'effectively delegating' to BT the power to decide which PoHs should be exempted from the New PoH Charges:²¹⁴
- (a) Ofcom could and should have specified in its LLCC Statement precisely what technology differentiation BT must reflect in any exemption from the New PoH Charges. To leave as much discretion to BT as Ofcom had done deprived the charge control of certainty.²¹⁵
 - (b) Ofcom could not satisfy the requirements of, inter alia, section 88 of the 2003 Act in circumstances where an important element was left unresolved and within the control of BT, the dominant services provider.²¹⁶
 - (c) Delegation to BT deprived OCPs of procedural benefits to which they were entitled under the legislation such as consultation and appeal rights.²¹⁷ (Subsequent to receiving Ofcom's and BT's responses to this point, C&W further noted

²¹²LLCC Statement, §§4.141, 4.145 & 4.159.

²¹³LLCC Statement, §§4.160–4.161 & 4.165.

²¹⁴In NoA §122, C&W alleged that, in failing to reflect the difference in relevant costs between SDH and PDH PoHs, Ofcom had distorted competition. This paragraph primarily appears to introduce the allegations set out in §§129–132 of the NoA, which are the subject of Reference Question 4(b)(ii). Accordingly, we do not address §122 in this section of our determination, which addresses Question 4(b)(i) only.

²¹⁵NoA §§123–124.

²¹⁶NoA §126.

²¹⁷NoA §127.

that, if BT was correct regarding the narrow scope of the role delegated to it (as to which see paragraph 5.294 below), the dispute referral mechanism under the 2003 Act was unlikely to provide a positive resolution since BT would be able simply to respond that it was not asked to do what C&W had requested.²¹⁸ C&W also questioned the desirability of dealing with such matters by the dispute referral route when they could be resolved through the current appeal process.²¹⁹)

- (d) Delegation to BT was discriminatory because it gave BT the opportunity to set the new charge structure so as to benefit BT and disadvantage competitors including C&W.²²⁰
- (e) BT proposed to use the exemption from the New PoH Charges to put in place a structure which would incentivize OCPs to use fewer PoHs but more intensively. The proposed changes would therefore disincentivize OCPs from maintaining spare capacity in PoHs for future growth. This spare capacity allowed OCPs to compete with BT for more customers at the relevant location without additional new investment. BT's proposal to disincentivize such spare capacity was therefore anti-competitive.²²¹

Summary of Ofcom's response

5.292. Ofcom characterized C&W's argument as an allegation that Ofcom had a legal duty to go further than replacing the old local end uplift charge with a new, separate PoH charge, ie Ofcom should have imposed additional requirements related to the structure of PoH charges within the context of the LLCC Statement.²²²

5.293. Ofcom regarded its approach to this issue as based on a reasonable exercise of its regulatory judgment.²²³ Ofcom advanced the following reasons for dismissing C&W's argument:

- (a) In accordance with its belief in proportionate regulation, Ofcom did not consider that it should intervene in detailed pricing decisions because it was not best placed to determine what BT's pricing structure should be.²²⁴ Ofcom did not have the information which would have been required to resolve the remaining issues relating to the detailed structure of the PoH charges as part of the process of setting the LLCC. The only way it could have done so would have been to delay further the completion of the LLCC, which would not have been in the interests of consumers or the industry. Instead, Ofcom agreed with BT that BT should address the outstanding issues through a process of industry consultation. If that process did not yield a satisfactory solution, the parties could bring a dispute to Ofcom.²²⁵
- (b) Ofcom's objective in relation to PoH charges within the context of the charge control was to improve transparency, which was achieved by requiring the introduction of a separate PoH charge.²²⁶

²¹⁸Reply, §70.

²¹⁹Reply, §70.

²²⁰NoA §128.

²²¹NoA §125. C&W W/S Harding I, §§135–136.

²²²Defence, §218.

²²³Defence, §225.

²²⁴Defence, §220.

²²⁵Defence, §224; Annex D, §§95, 98.

²²⁶Defence, §221.

- (c) Ofcom established that the New PoH Charges would not leave external customers worse off in aggregate than under the old regime.²²⁷ Ofcom also ensured that external customers would be protected against future price increases by including PoH charges within the range of services covered by the TI price cap, and by imposing RPI–0 per cent sub-caps on each PoH service.²²⁸
- (d) Giving BT discretion to develop an improved PoH charging mechanism did not deprive the LLCC of certainty; Ofcom had not left an important element of the LLCC unresolved. The PoH costs were already subject to price caps, as noted above, and the structure of PoH charges was unlikely to have any impact on the TI basket ‘X’ value. Even if the level of total PoH costs to be recovered changed, this would also be unlikely to have any impact on ‘X’ either, because such costs amounted to less than 2 per cent of the total TI basket costs and were too low to have a material impact.²²⁹
- (e) Requiring BT to consult with the industry did not deprive OCPs of procedural benefits, since OCPs could bring a dispute to Ofcom (as noted above).²³⁰
- (f) BT’s incentives to discriminate in setting charge structures that benefited its own operations were restricted by its undue discrimination and cost orientation obligations. Again, OCPs could bring a dispute to Ofcom.²³¹

Summary of BT’s intervention

5.294. BT suggested that C&W had overstated the degree of discretion which BT had. Ofcom had been clear that the new cost recovery mechanism implemented by BT should incentivize migration to new, aggregated PoHs and, specifically, that circuits handed over new PoHs would not attract the separate New PoH Charges.²³²

Assessment

5.295. Fundamental to this ground of appeal is a consideration of the scope and consequences of the delegation by Ofcom to BT of a cost recovery mechanism that would incentivize migration to new aggregated PoHs. In the LLCC Statement in §§4.159–4.166, Ofcom set out the different ways in which PoH costs might be recovered.

5.296. Ofcom concluded that the introduction of a separate charge averaged across bandwidths was to be adopted and had, as its main advantage, increased transparency. In addition, Ofcom considered further alternatives to recover PoH costs: the introduction of more granular charges: the introduction of averaging bandwidth-related costs but distinguishing CSH and ISH PoHs; and the introduction of a cost recovery mechanism that would incentivize migration to new aggregated PoHs (§4.161 of the LLCC Statement). Ofcom decided to implement this last alternative.

5.297. In essence, Ofcom decided to introduce a separate charge averaged across bandwidths (‘the charge controls’) and adopted, in addition, a cost recovery mechanism to incentivize migration to new, aggregated PoHs (‘the incentive mechanism’). Ofcom required BT to implement the incentive mechanism, and to do so within three months

²²⁷Defence, §222.

²²⁸Defence, §223.

²²⁹Defence, Annex D §§99 & 101.

²³⁰Defence, Annex D §100.

²³¹Defence Annex D, §100.

²³²BT W/S Morden I, §147.

following the implementation of the charge controls. C&W complained that, while the charge controls determined by Ofcom did not lack specificity, among other things, the power given to BT to implement the incentive mechanism deprived the charge controls of certainty²³³ and that Ofcom had failed to meet the requirements of section 88 of the 2003 Act because important elements of the charge controls remained unresolved.²³⁴

- 5.298. These grounds of appeal contend that Ofcom erred in taking a decision to delegate certain responsibilities for the implementation of the PoH charge controls to BT.
- 5.299. The decision of Ofcom in respect of New PoH Charges appears to be relatively straightforward. Third party PoH costs are recovered on the basis of separate New PoH Charges, as reflected in Table 4.4. However, new aggregated PoHs will not attract these charges so as to incentivize migration. The introduction of a cost recovery mechanism applicable to new aggregated PoHs is given over to BT to implement.
- 5.300. In §4.161 of the LLCC Statement, Ofcom set out the implications of that implementation. First, the set-up costs associated with the use of the new aggregated PoHs would be borne by the CPs. Second, while the future implementation of such a system would have a minimal impact on the LLCC decisions, the New PoH Charges may need to be reset and the rental charges for the new aggregated PoH rentals would increase to reflect the full cost of maintaining the equipment at BT's exchanges. Third, the safeguard cap on each PoH charge would protect users in the meantime, until the new mechanism was implemented by BT.
- 5.301. There is nothing objectionable about a regulatory design that limits the application of the New PoH Charges to one type of PoH. Indeed, this is a frequently used form of regulation, supported in this instance by the consideration of efficiency that migration to new aggregated PoHs would bring about. Nor, in our view, would the determination be rendered problematic simply because BT is required to apply the PoH controls and determine when these charges are not of application. The application of such a regime of charges by BT would not appear to be an impermissible delegation of powers to BT, if all that was required of BT was a determination as to whether a particular type of PoH would not attract the New PoH Charges imposed by Ofcom, then this would be a modest exercise, entailing little discretionary judgement. And if BT was to err in the exercise of such a power, a complaint made under section 185 of the 2003 Act would be sufficient recourse.
- 5.302. However, it does not seem to us that the power given to BT is of this kind. In §4.161 of the LLCC Statement, as indicated, Ofcom explained that the implementation of the incentive mechanism by BT might require that the New PoH Charges were reset leading to an increase in rental charges for the new aggregated PoH rentals. Ofcom, in the Defence,²³⁵ set out in greater detail what it understood the implementation of the incentive mechanism to entail. BT was required to implement a new charging regime in consultation with the industry. Ofcom indicated that there were a number of variables relevant to the implementation of the new charging regime, including set-up costs, who will bear those costs, OCPs investment plans, and the distributional impact on OCPs of a new charging regime. Ofcom admitted that it had limited information as to industry preferences about the appropriate structure for PoHs and insufficient cost data to address the issue properly. Hence, Ofcom left the matter to

²³³NoA §124.

²³⁴NoA §126.

²³⁵Defence Annex D, §26,

BT to engage in consultations with the industry so as to determine the implementation of a new charging regime. Ofcom stated that the new charging regime would have to be recognized in the charge control but did not expect its impact to be significant.

- 5.303. Therefore Ofcom had given the power to BT to determine and introduce a cost recovery mechanism that would incentivize migration to new, aggregated PoHs by implementing the new charging regime. To do so required BT to consider a number of significant matters that Ofcom had not investigated but rather left to be resolved through a consultation process that BT must undertake with the industry. Ofcom recognized that the power to implement the new charging regime was likely to have 'a distributional impact on OCPs with some winners and others losing from its introduction' (sic).²³⁶ Furthermore, Ofcom stated that the introduction of the new charging regime would have important implications for the industry, and hence implementation by BT should only take place after consultation with the industry. In answer to questions posed at the bilateral hearing, Ofcom further explained that there were a number of possible permutations available for the implementation of the new charging regime which could impact different PoHs in different ways.²³⁷
- 5.304. Furthermore, the scope of the task given to BT was not disciplined by clear instructions. BT indicated that it did not receive formal instruction from Ofcom, that the documentation was not very clear but that BT was fairly clear as to the incentive properties of the proposal it had made to Ofcom.²³⁸ Ofcom, for its part, indicated that the instructions to BT were simply those set out in the LLCC Statement in §4.160, and there was no formal written instruction given to BT.²³⁹
- 5.305. Ofcom, in its reply to our provisional determination, made a number of submissions concerning both the scope of the delegation to BT and its consequences. In sum, Ofcom contended that the discretion conferred upon BT pursuant to the delegation was narrow and could not be exercised by BT to harm competition. This contention was based on the following reasoning, captured in paragraph 89 of Ofcom's reply. First, it said that the 'Standard POH charges' (by which we understand Ofcom to mean the PoH charges reflected in Table 4.4 of the LLCC decision and of application to existing PoHs and not new aggregated PoHs) mirrored the charges that were previously built into BT's local end prices and hence OCPs were no worse off. Second, the charges that BT would introduce to encourage migration to new aggregated PoHs were expected to go down so as to induce migration. Third, a number of safeguards 'were put in place' to prevent BT from using the discretion given to it by Ofcom so as to disadvantage its competitors. The Standard PoH charges were subject to RPI-0 per cent sub-caps and BT would have to apply to Ofcom to seek an adjustment if, after its industry consultation, it wished to do so. Furthermore, PoH charges were subject to the prohibition of undue discrimination and the requirement that charges be related to cost.
- 5.306. We observe that these restrictions upon the discretion conferred upon BT are not apparent from the LLCC Statement and, in particular, do not figure in paragraph 4.161 of the Statement where the delegation is granted. Nor was the scope of the discretion set out in proper instructions given by Ofcom to BT. We consider this to be of some significance. C&W and the industry at large were entitled to know the basis upon which BT was empowered to determine a new charging regime. If, as Ofcom

²³⁶Defence Annex D, §26c.

²³⁷Ofcom bilateral, p84 ll 25; p85 ll 26.

²³⁸Bilateral hearing with BT, pp31-32.

²³⁹Bilateral hearing with Ofcom, pp106-107.

contended, safeguards were put in place to ensure that BT did not abuse the discretion to its own advantage, then the place to do so was in the LLCC Statement. So too, if the discretion was of limited scope, it should have been expressly cast in limited terms so that all who engaged with BT over this matter could properly understand the remit of BT's powers. This was not done, and C&W's challenge was well founded on this basis alone.

- 5.307. We observe that evidence so late in the proceedings as to the nature of the delegation is far from satisfactory and does not cure the requirement that a delegation of this kind must be clear in its terms. We have nevertheless considered the submissions of Ofcom that in fact the delegation was limited in the ways described.
- 5.308. These limitations do not, in our view, render the discretion granted to BT free from legitimate objection. The key question to be answered is this: how will the costs previously recovered through local end uplifts be recovered under the regime proposed by Ofcom? Given that the New PoH Charges set out in Table 4.4 are capped and will only apply to existing PoHs, how will migration to new aggregated PoHs be encouraged and yet permit of recovery of the costs of PoHs? We put this question to Ofcom in a letter dated 25 March 2010, and received a response, the relevant part of which we now cite:

Ofcom's response to CC's letter of 25 March 2010 [CC's questions in bold]

Q8. In §4.160 of the LLCC Statement you explain that under the option of cost recovery that incentivises migration to new aggregated PoHs," circuits handed over new PoHs would not attract the separate new PoH charges we are imposing". Could you please clarify whether the costs that were previously recovered through Local End Uplifts (i.e. £11.7m) will be recovered:

Ofcom notes that the New PoH Charges implemented as part of the LLCC Statement are charged on a per circuit basis (e.g. the number of local ends). As these circuits migrate and are handed over the new efficient PoHs, they will no longer attract the New PoH Charges. The remaining costs could be recovered in a number of ways and this is currently the subject of BT's ongoing consultation process and overall design of the new PoH charging structure.

- (i) through all PoHs (i.e. through both Type I and Type II PoH in some form)**

This could be a possible cost recovery mechanism, which is based on the current status quo. However, this mechanism would not incentivise migration to the more efficient/aggregate PoHs as the costs (and hence charges) would still be averaged across all PoHs and would therefore not reward OCPs who have migrated to efficient PoHs.

- (ii) through Type II PoHs and existing Type I PoHs (i.e. newly installed Type I PoHs will be exempt); or**

Same reasoning as in (i) above. In addition, BT will be incurring some direct costs in relation to the newly installed Type I PoHs and it would not be appropriate for these costs to be recovered through the existing

base of PoHs. This would be inconsistent with the principle of cost causality and the no undue discrimination obligation imposed on BT.

(iii) only through Type II PoHs (i.e. all Type I PoHs will be exempt)

This option would reward OCPs who have migrated to efficient PoHs. However as noted in (ii) above, BT will still need to incur some direct costs in relation to the provisioning of the efficient Type I PoHs which would not be appropriate to recover across Type II PoHs only.

(iv) in any other way?²⁴⁰

- 5.309. It is apparent from this response that Ofcom considered that the discretion granted to BT could be exercised in a number of ways. The regulatory solution requires a balancing of different considerations so as to determine which PoHs should be burdened with charges and with what consequence. As Ofcom's response makes plain, incentivizing migration, fidelity to the principle of cost causality, and ensuring a fair distribution of cost recovery as between the different types of PoHs gives rise to a complex regulatory judgment. This judgment is, if anything, made more complex because there is a cap on the New PoH Charges. That cap does not resolve how the costs attributable to the aggregated PoHs will be borne, by whom and with what consequences. These are the very judgments we consider that Ofcom should have made in determining a separate charge that will apply to new aggregated PoHs.
- 5.310. The cap on the New PoH Charges does not determine what charges may be imposed in respect of the new aggregated PoHs. Ofcom expected such charges to be lower to incentivize migration, but given the need to secure cost recovery, the delegation to BT does not compel that outcome. Nor is the general obligation upon BT to avoid discrimination of much assistance. First, the incidence of that obligation in relation to the complexity of the judgment here required is opaque and has not been particularized by Ofcom. Second, it seems of scant comfort that a discrimination challenge could be made after the exercise of the discretion by BT, when the primary regulatory function rests upon Ofcom.
- 5.311. We also do not consider that Ofcom's response to our provisional determination answers the difficulty that the delegation to BT allows BT to determine a separate charge when it is self-interested in the outcome. Its decision entails the imposition of benefits and burdens that may implicate the competitive position of BT and its OCP rivals. In the first place, migration to the new aggregated PoHs entails a diminution of risk to BT because charges for these PoHs will be recovered per box installed and not, as with existing PoHs, per circuit. The decision as to the capacity of the boxes installed and their efficient utilization will lie with the OCPs that choose the aggregated PoHs, whereas at present these choices and the risks associated with them fall upon BT. This would incentivize BT to adopt a charge that would encourage adoption of the aggregated PoHs. But to do so, the charge would need to be low enough to induce switching. This, however, might not be sufficient to allow for the recovery by BT of £11.7 million—the maximum permissible amount for PoH cost recovery. In that event, BT would have to impose a charge that reduced the incentives for switching (the very point of the exercise) or seek to recover the costs from existing PoHs, which it cannot do because the charge is capped.
- 5.312. In our view, these matters entail difficult judgments; and at the very least choices as to how costs are borne, risk is allocated and proper incentives are created. This is

²⁴⁰This is a copy of Ofcom's response to our questions. We received no response from Ofcom in relation to our Question (iv).

terrain in which BT is a self-interested party. The power given to BT to determine a charge will have consequences for different OCPs. The allocation of burdens and benefits entailed by the charge will seldom be borne equally, not least because the judgment required is inherently complex. In this sense, Ofcom was entirely correct to observe that the determination of the charge by BT will have winners and losers. This is what actuated Ofcom to require a process of consultation with the industry, but that process is no cure for the real problem: that this was a matter for Ofcom to determine in its own regulatory judgment and not to delegate to BT.

- 5.313. Thus, in our view, the power given to BT in respect of the recovery of PoH costs is not a simple matter. Rather, Ofcom has determined a broad regime under which migration to aggregated PoHs should be incentivized, but the implementation of the charge controls by BT entails significant matters. We note that the investigation of relevant facts must still take place, further that BT is given the power to determine how the new charging regime will be borne by different OCPs. We consider this to be a matter of real importance, as Ofcom recognized, which concerns distributional questions that are necessarily determined by making policy choices, informed by the preferences expressed by the industry. In our view, the 2003 Act contemplates that Ofcom will be the arbiter of such issues.
- 5.314. The delegation of responsibility for the implementation of the charging mechanism to BT does not, in this instance, seem to be consistent with the need for Ofcom to discharge its regulatory function. We say so for three reasons. First, Ofcom, having decided to adopt a new charging regime, was required to determine the regime in compliance with section 88 of the 2003 Act. Given the absence of information and the need for consultation, it is hard to see how Ofcom could have been satisfied that the charge controls were appropriate for the purposes stipulated in section 88(1)(b). Furthermore, since Ofcom had not ascertained the current and future investment plans of OCPs, it is hard to see how Ofcom could have complied with section 88(2). Second, while we recognize that the regulatory remit of Ofcom cannot and should not extend to every aspect of applying the conditions it imposes, we consider these questions of policy to be central to the exercise of imposing price controls; they cannot be left to BT to determine. These are the very matters of regulatory design that lie at the heart of the functions Ofcom is required to discharge. Without discharging these functions, the imposition of the charge controls is rendered uncertain. Third, as the impact of these charges has a direct bearing on OCPs and their competitive position in the market, a competitor, BT, cannot be given the power to determine how the burden of the new charging regime will be borne by different OCPs. Put simply, BT cannot be allowed to determine which of the OCPs, with which it competes, will be winners or losers in the process of imposing charge controls.
- 5.315. We are mindful of the fact that it is neither possible nor desirable for Ofcom to micro-manage the implementation of every aspect of the charges that it imposes. But where matters are left over for determination that have the features described above both as to gravity and consequences, we do not consider them to be matters amenable to delegation to BT. We note that Ofcom did not assess the scope for BT to use delegated powers to disadvantage its competitors, nor did it introduce safeguards to mitigate such risks.
- 5.316. For these reasons, we conclude that Ofcom did err in giving BT the power to implement the charges for points of handover and uphold C&W's grounds of appeal concerning the legality of the discretion afforded by Ofcom to BT. In the light of this finding, we do not consider it necessary to determine the other grounds of appeal advanced by C&W.

Determination

5.317. For the above reasons, our determination is that Ofcom did err in giving BT the discretion it did as to future charges for PoH for the reasons set out in §§122–128 of the NoA.

Reference Question 4(b)(ii)

- 5.318. This section (paragraphs 5.318 to 5.374) sets out our conclusions as to whether Ofcom erred in the setting of the PoH charges in Part 1 of Annex C to the TI Price Controls in deciding to set the same charges on SDH and PDH PoH and, in particular, in setting charges that are inefficient and discriminatory for the reasons set out in §§129–132 of the NoA.
- 5.319. For the reasons given below, our determination is that C&W did not establish that Ofcom erred in not mandating separation of the PoH charges based on the type of digital hierarchy for the reasons set out in §§129–132 of the NoA.

Summary of Ofcom's decision

- 5.320. BT estimated that the total cost to be recovered through PoH charges was £11.7 million. Ofcom concluded that that the level of PoH cost to be recovered was reasonable.²⁴¹
- 5.321. Ofcom applied six principles of cost recovery when deciding whether to amend the current approach to recovering PoH costs through local end charges. We have discussed these six principles above in our determinations of Reference Questions 4(a)(ii) to 4(a)(iv).
- 5.322. Ofcom explained that the cost causation principle suggested that PoH costs should be recovered from those whose actions caused the costs to be incurred at the margin²⁴² and the practicability principle suggested that the mechanism for PoH cost recovery needed to be practicable and relatively easy to implement. We set out above in our determinations of Reference Questions 4(a)(ii) to 4(a)(iv) more details regarding Ofcom's understanding of the six principles. Ofcom has taken account of these principles when evaluating various alternatives to the recovery of PoH costs, and also that the cost recovery approach should promote effective competition.²⁴³
- 5.323. Prior to the LLCC Statement, Ofcom consulted on two different ways of recovering PoH costs:²⁴⁴
- (a) To keep the status quo of applying an uplift to the external local end price, but update the uplift factor. The main advantage was that there would be no disruption to the status quo.
 - (b) To introduce a separate charge averaged across bandwidths and calculated on the same basis as the uplift factor. The main advantage of this approach was that it would increase transparency in the RFS and allow better monitoring of cost recovery for PoHs and third party local ends.
- 5.324. In the LLCC Statement, Ofcom observed that there were also other alternatives:²⁴⁵
- (a) To introduce more granular charges. This method would require a separate charge for each type of handover, including a different charge for migrated circuits. The prices would reflect the bandwidth of the PoH box used to handover

²⁴¹LLCC Statement §4.147.

²⁴²LLCC Statement, §4.150.

²⁴³LLCC Statement, §§4.156 and 4.158.

²⁴⁴LLCC Statement, §4.159.

²⁴⁵LLCC Statement, §4.160.

traffic, the amount of sharing with other services, the distance and whether the circuits were in-span handover (ISH), customer-sited handover (CSH) or migrated. The recovery of costs would be accurate. However, this approach would add substantially to transaction costs as each variation would need to be listed on BT's price lists and billing engines. In addition, disruptions to services would occur when reconfiguring the PoHs. This approach would be highly impractical to implement.

- (b) To introduce average prices, distinguishing between CSH and ISH. This method would average the bandwidth-related costs, but would distinguish between whether a circuit was handed over using CSH and ISH. This method would ensure that CPs that built their network close to BT's exchanges were not cross-subsidizing operators with more distant networks. The small proportion of PoH costs which were distance related and the small percentage of circuits delivered over ISH meant that there was limited benefit in distinguishing between CSH and ISH PoHs.
- (c) To introduce a cost recovery mechanism that would incentivize migration to new, aggregated PoHs. Under this approach, circuits handed over new PoHs would not attract the separate New PoH Charges Ofcom was imposing. This would incentivize CPs to migrate to the new aggregated PoHs as it would allow them to reduce (and ultimately to avoid) the new PoH rental charges.

5.325. Of the three further alternatives set out above, Ofcom stated that BT had proposed to implement the third one, namely to introduce a cost recovery mechanism to incentivize migration to new, aggregated PoHs. Ofcom expected BT to implement this new mechanism within three months following the implementation of the charge controls.²⁴⁶

Summary of C&W's arguments

5.326. In the heading to §§129–132 of the NoA, C&W asserted that Ofcom had erred as a matter of law and/or assessment in adopting a charge control that did not distinguish between PDH and SDH PoHs and which was consequently discriminatory, inefficient and distortive of competition.²⁴⁷ Ofcom should have required a differentiation of PoH charges between PDH and SDH PoHs within the formal text of the charge control.²⁴⁸

Efficiency and distortion of competition

5.327. In the NoA, C&W set out the following basis for its allegation with respect to efficiency and distortion of competition:

- (a) Ofcom applied the principle of cost causation inconsistently by limiting PoH charges to local ends actually employing PoH technology yet not requiring BT to set charges that distinguish between PDH and SDH PoHs. This was because there were material differences in the costs attributable to different technologies.²⁴⁹
- (b) Not requiring the separation of the New PoH Charges on the basis of PDH and SDH technologies would (i) distort migration incentives in terms of the decision to

²⁴⁶LLCC Statement §4.161.

²⁴⁷NoA, heading preceding §§129-132.

²⁴⁸NoA, §132.

²⁴⁹NoA, §§129–130.

switch to the newer SDH PoH technology and (ii) dampen the competitive dynamic by not allowing a firm that had invested in the new technology to realize the full benefits of its decision to switch to that technology.²⁵⁰

- (c) In C&W's view, Ofcom's arguments that separation of the New PoH Charges on the basis of PDH and SDH technologies would not have been practicable were inadequate. In support of this view, C&W pointed to the fact that: (i) Ofcom expected BT to implement New PoH Charges within three months; and/or (ii) in the context of Ofcom's deliberation having continued over a very extended period, Ofcom could have required BT to implement technology-differentiated charges with effect from the start of the charge control.²⁵¹

5.328. The expert evidence relied upon by C&W explained that the competitive dynamic would be dampened, with adverse effects on competition and efficiency, for the following reasons:

- (a) First, since the different OCPs had different degrees of dependence on SDH and PDH PoHs, Ofcom's proposed flat-rate pricing approach would distort competition between one OCP and another, depending on the mix of technologies used by the respective OCPs.²⁵²
- (b) Secondly, a PoH charging system that properly reflected the different costs incurred would have provided price signals to OCPs that would have encouraged them to make more efficient choices between PoH systems. As they switched from PDH to the more efficient SDH PoH, the total costs of handover would have declined allowing OCPs to compete more effectively with BT downstream.²⁵³
- (c) Thus, allowing PoH charges to reflect different costs would be efficient in both static terms (allowing lower-cost OCPs to gain competitive advantage over higher-cost OCPs) and also in dynamic terms (encouraging OCPs to move towards PoH methods that minimized overall costs).²⁵⁴

5.329. In addition, C&W's expert noted that Ofcom had not explained in its LLCC Statement why differentiating charges based on PoH technology (as opposed to highly granular differentiation based on many characteristics of the PoH) was either impractical or on balance detrimental.²⁵⁵

Discrimination

5.330. C&W explained that the argument on discrimination in the heading of Reference Question 4(b)(ii) in the NoA aligned with the arguments on competition and efficiency. It argued that PDH and SDH technologies should not be treated the same and therefore that to do so was discriminatory.²⁵⁶

²⁵⁰NoA, §130.

²⁵¹NoA, §131.

²⁵²C&W W/S Ridyard, §55.

²⁵³C&W W/S Ridyard, §56.

²⁵⁴C&W W/S Ridyard §57.

²⁵⁵C&W W/S Ridyard, §58.

²⁵⁶Bilateral hearing, p 92, ll 12–19

Difference between SDH and PDH

- 5.331. In its factual evidence, C&W explained that PDH was a technical standard used in the 1980s and 1990s and that SDH had become popular in the 1990s and had continued to develop since. SDH technology used a slightly different bandwidth hierarchy from PDH, with SDH working on bandwidths of 2 Mbit/s, 45 Mbit/s and 155 Mbit/s whereas PDH worked on a hierarchy of 2 Mbit/s, 8 Mbit/s, 34 Mbit/s and 140 Mbit/s. The advance in technology had meant that faults could be more easily diagnosed remotely and configuration of circuits could also be done remotely from a central network management centre. Inevitably, the costs associated with each circuit delivered over a PDH PoH must be significantly higher than for those using SDH PoHs.²⁵⁷
- 5.332. C&W estimated that its SDH PoHs caused BT to incur a cost of less than £[redacted] a year at its exchanges. However, under the New PoH Charge regime, C&W would contribute £[redacted] million towards BT's exchange space costs. There were two possible explanations for this disparity: either C&W was paying much more than the cost it caused, or its PDH PoHs were driving a very large amount of cost in BT's network. If £[redacted] million or [redacted] per cent of the costs associated with space were being caused by less than [redacted] per cent of the capacity, then this meant that PDH PoHs were very inefficient.²⁵⁸

Migration incentives

- 5.333. In its evidence, C&W further observed that, if PDH PoHs were as inefficient as it appeared, then it made sense for OCPs to move their circuits off this infrastructure on to SDH infrastructure, and close down the old PDH infrastructure. However, at present, the business case for such a move did not make sense. Moving circuits had a cost, both in terms of the rearrangement fee an OCP had to pay BT and the work that had to be undertaken in the OCP's network. On the basis of the LLCC pricing structure, C&W paid the New PoH Charge on all circuits and therefore there would be no saving from the investment in switching. It could be the case that this would reduce the charges C&W faced in the next charge control period but that was too far away and too uncertain to justify the investment in rearranging the circuits.²⁵⁹
- 5.334. C&W explained that, normally, migrations occurred as a result of a retail contract previously provided by BT having been won by an OCP and, in those circumstances, would often be moved to one of the OCP's PoHs in order to shorten the circuit length.²⁶⁰

Technology choices

- 5.335. In subsequent correspondence with us, C&W explained that:

(a) C&W had been able to make an active choice of the technology associated with Type II PoHs since 1998. SDH technology had become available since 1999. C&W had been able to provide indicative plans for each point of presence that

²⁵⁷ C&W W/S Harding, §§94–95.

²⁵⁸ C&W W/S Harding, §§121–122.

²⁵⁹ C&W W/S Harding, §134.

²⁶⁰ C&W W/S Harding, §101.

would have enabled the BT planners to select the best equipment to install. The configuration of the PoH had been agreed between BT and C&W.²⁶¹

- (b) No new PDH-based PoHs could have been purchased since July 2003, although OCPs could have added new circuits or moved circuits to pre-existing PDH-based PoHs.²⁶²
- (c) At present, if OCPs wanted to purchase a new PoH, they would only be able to request an SDH-based Type I PoH.²⁶³
- (d) It was possible to migrate from PDH Type II PoH to SDH Type II PoH.²⁶⁴
- (e) If it were true that most of the £11.7 million New PoH Charge had been based on PDH costs, migration to SDH technology would have been desirable. However, if the £11.7 million figure had been based on common costs, it was less clear that such a migration would have been beneficial.²⁶⁵

Summary of Ofcom's response

Efficiency and migration incentives

- 5.336. Ofcom agreed with C&W that the proposed structure of PoH charges could be further improved to encourage CPs to adopt more efficient methods of handover. To this end, Ofcom had requested BT to introduce a cost recovery mechanism that would incentivize migration to new, aggregated PoHs ('Efficient PoHs'). Under this approach, circuits handed over using Efficient PoHs would not attract the separate New PoH Charges Ofcom implemented and this would provide an incentive for OCPs to migrate.²⁶⁶
- 5.337. However, Ofcom disagreed with C&W that Ofcom should have imposed PoH charges which differentiated between PDH and SDH PoHs as part of the LLCC Statement and as the only alternative efficient charging structure. Though Ofcom was not averse to this option, it noted that this was an option put forward by C&W based on C&W's own mix of PoHs rather than being representative of the requirements of all OCPs. When deciding on its approach with respect to PoHs, Ofcom had taken a balanced view based on all stakeholder responses, some of which had expressed a preference for a continuation of the status quo.²⁶⁷

Cost causation and proportionality

- 5.338. Ofcom also disagreed with C&W that it had departed from the cost causation principle. Technology was only one of the characteristics which differentiated PoHs, along with type, bandwidth and length of circuits. The New PoH Charges were differentiated by bandwidth and were cost causal to that extent. To have introduced PoH charges differentiated by all of these characteristics would have led to the creation of 32 different charges. In Ofcom's view, this would have been disproportionate and impractical as BT would have had to incur additional costs to develop and

²⁶¹Letter to CC from C&W of 25 March 2010, response to CC Q2.

²⁶²Letter of 25 March 2010, response to our Q4(i).

²⁶³Letter of 25 March 2010, response to our Q4(i).

²⁶⁴Letter of 25 March 2010, response to our Q4(ii).

²⁶⁵Letter of 25 March 2010, response to our Q4(ii)(a).

²⁶⁶Defence Annex D, §95.

²⁶⁷Defence Annex D, §96.

amend its billing systems to cope with the introduction of such a large number of new charges. In addition, this would have complicated further an already complex charging regime when one took into account all the other PoH-related connection and rental charges in BT's price list. Finally, such an approach would also have been disproportionate due to the declining volumes of TI services.²⁶⁸

- 5.339. At its bilateral hearing, Ofcom clarified that although its model had predicted a sharp decline in the volumes of TI services over the charge control, it acknowledged that quite significant volumes of TI services would remain for some time to come.²⁶⁹ Ofcom further clarified that, before deciding that such separation would have been disproportionate and impractical, it had not carried out a formal assessment of the costs and benefits of the separation. Ofcom had spoken to BT which had given Ofcom an indication of the dimensions that BT would need to address when carrying out such separation.²⁷⁰

Technology choices

- 5.340. In subsequent correspondence with us, Ofcom stated that:

- (a) Type II PoHs could be divided in two categories: (i) 're-designated use of PPCs' using SDH technologies and (ii) 'grandfathered use of PPC' using PDH technologies.²⁷¹
- (b) OCPs could still request a Type II PoH.²⁷²
- (c) BT had not provided any PDH Type II PoHs since August 2001.²⁷³
- (d) Migration from PDH to SDH PoH is possible.²⁷⁴

Summary of BT's intervention

Efficiency of PDH and SDH technologies

- 5.341. In its evidence in support of its intervention, BT explained that SDH was a newer technology than PDH and was developed following reductions in the cost of electronics in the 1980s. SDH technology had a higher resilience to faults and used Add-Drop Multiplexors (ADM), which reduced costs.²⁷⁵

Migration incentives

- 5.342. BT further explained that, once a circuit was set up, it was a costly and disruptive exercise to reroute it. Therefore, when a new platform was introduced, new connections were typically routed on the new network. However, older connections were left. The effect of this was to increase the relative cost of older platforms.²⁷⁶

²⁶⁸Defence Annex D, §97.

²⁶⁹Bilateral hearing, p115, ll 8–20.

²⁷⁰Bilateral hearing, p114, ll 13–26.

²⁷¹Letter of 31 March 2010, response to our Q4(i).

²⁷²Letter of 31 March 2010, response to our Q4(i).

²⁷³Letter of 31 March 2010, response to our Q4(i)(a).

²⁷⁴Letter of 31 March 2010, response to our Q4(ii).

²⁷⁵BT W/S Morden 1, §§58 & 60.

²⁷⁶BT W/S Morden 1, §§66–67.

- 5.343. In BT's view, differentiation between SDH and PDH was irrelevant. The relevant differentiation was between Type I and Type II PoHs. This was because, when OCPs purchased a Type I PoH, they made a decision about the capacity of the PoH, but when they purchased a Type II PoH, they inherited BT's choice of the Type II PoH capacity.²⁷⁷
- 5.344. According to BT, it would have reduced costs overall if PPCs had been handed over at fewer but larger PoHs. This was the purpose of Ofcom's proposal and BT's proposed new pricing scheme—incentivizing OCPs to move to Type I PoHs. However, it was unlikely to induce rapid change as:
- (a) Many Type II PoHs would still support retail services and could not have been withdrawn from service if the PPCs had been moved. CPs would still have had to bear the cost of the Type II PoHs.
 - (b) The cost and disruption of rerouting existing circuits would slow take-up of the new offer.
 - (c) The size and location of a CP's PoH was integral to the design of its own network infrastructure. Cost optimization might have depended upon significant changes to the company's network.
 - (d) New PoHs would require capital expenditure on services that were in decline.²⁷⁸

Technology choices

5.345. In subsequent correspondence and at its bilateral hearing, BT explained that:

- (a) Type II PoHs had originally been retail properties owned by BT and they continued to carry retail services as well as PPCs.²⁷⁹
- (b) BT disagreed with C&W that OCPs could have made technology choices with respect to Type II PoHs. It argued that, before PPCs had been introduced (in August 2001), retail private circuits had not been 'handed over' to OCPs and BT had had sole discretion with respect to the equipment provided at each end of the circuit.²⁸⁰
- (c) As the price of the retail private circuit had not depended on the equipment installed by BT, the objective of BT had not been to minimize the cost of this equipment to BT. The main consideration had been the volume of BT products that could have been supplied at each site. If BT had expected high volumes, it would have installed high-capacity equipment such as SDH. If these volumes had not then materialized, BT had borne the costs of the spare capacity. This was why large customers were more likely to have had SDH boxes.²⁸¹
- (d) When PPCs had been introduced, retail Private Circuits at the OCP's site had become Type II PoH. From that point onwards, new PoH equipment had been

²⁷⁷BT W/S Morden 1, §156.

²⁷⁸BT W/S Morden 1, §§157–158.

²⁷⁹Bilateral hearing, p32, ll 19–21.

²⁸⁰Letter of 8 April 2010, response to our Q7.

²⁸¹Letter of 8 April 2010, response to our Q7.

the responsibility of OCPs and BT had no say in OCPs' choice of technology. From that time onwards, only SDH-based PoHs could be requested.²⁸²

- (e) At present, if OCPs wanted to purchase a new PoH, they would only be able to request SDH-based Type I PoHs.²⁸³
- (f) It was possible to migrate from PDH-based Type II PoH to SDH-based Type II PoH. However, if an OCP did that, it would not be able to add any non-PPC products to such SDH Type II PoH, although the existing non-PPC products would continue to be carried.²⁸⁴
- (g) Under the previous charging system there had been little incentive to move from a PDH Type II PoH to SDH Type II PoH.²⁸⁵

Assessment

5.346. In the heading to §§129–132 of the NoA, C&W alleged that Ofcom erred as a matter of law and/or assessment in adopting a charge control that did not distinguish between PDH and SDH PoHs and which was consequently discriminatory, inefficient and distortive of competition.

5.347. Thus, while C&W did not expressly refer to sections 47 and 88 of the 2003 Act, we understand from the language used by C&W (and particularly the references to discrimination, inefficiency and distortions of competition) that C&W's allegation was essentially that, contrary to the statutory requirements in those sections of the 2003 Act, Ofcom erred in concluding that:

- (a) the charge control was not such as to discriminate unduly against particular persons or against a particular description of persons; and
- (b) the setting of the charge control was appropriate for the purposes of promoting efficiency and promoting sustainable competition.

5.348. We turn to consider the specific arguments in §§129–132 with this in mind. Since the arguments in those paragraphs are focused primarily on the allegations of inefficiency and distortion of competition we consider those first, before addressing the remaining arguments including the allegation of discrimination.

Inefficiency and distortion of competition

5.349. We assess here the argument that Ofcom erred in concluding that its decision to mandate the introduction of a cost recovery mechanism which would incentivize migration to new, aggregated PoHs (ie Type I rather than Type II PoHs) was appropriate for the purposes of promoting efficiency and sustainable competition.

5.350. However, before turning to consider this argument in detail, we wish to address C&W's observation that it would have been 'inconsistent' for Ofcom to depart from cost causation principles to the extent that there were material differences in the costs attributable to PDH and SDH technologies, given that Ofcom had applied cost

²⁸²Letter of 8 April 2010, response to our Q9.

²⁸³Letter of 8 April 2010, response to our Q9(i).

²⁸⁴Letter of 8 April 2010, response to our Q9(ii).

²⁸⁵Letter of 8 April 2010, response to our Q9(ii)(a).

causation principles to justify limiting PoH charges to local ends actually employing PoH technology.²⁸⁶

- 5.351. We did not find it easy to understand whether C&W's reference(s) to the alleged 'inconsistency' of Ofcom's position and/or Ofcom's alleged failure to apply cost causation principles correctly when mandating the specification of PoH charges was or were intended to stand as one or more additional grounds for challenging Ofcom's decision on this issue.
- 5.352. However, we would reiterate that, while there is no necessary tension between the six principles of cost recovery and the statutory test under section 88(1)(b) of the 2003 Act, it is the statutory test to which Ofcom must ultimately have regard.²⁸⁷ Ofcom must ensure that it applies the statutory test correctly on each occasion it is called upon to do so, and may choose to use the principle of cost causation (and the other principles of cost recovery) where those principles assist Ofcom in conducting its assessment of whether the setting of any given SMP condition is appropriate for the fulfilment of the objectives set down under section 88(1)(b).
- 5.353. We also note that, as we observed in our determination of Reference Question 4(a)(ii), it would be a mistake to characterize Ofcom as having justified the limitation of PoH charges to local ends actually employing PoHs on the basis of the principle of cost causation alone. Ofcom had explained in its LLCC Statement that, while it often generally gave prominence to the principle of cost causation, it also gave consideration to a wider set of principles because it was alive to the possibility that there might be grounds to depart from what it regarded as the 'main' principle of cost causality in specific circumstances, including where wider cost recovery considerations such as competition effects were relevant.²⁸⁸
- 5.354. Thus, had Ofcom applied the cost causation principle in one case and not in another, this would not necessarily be an indication of 'inconsistency'. Rather, this difference in approach could have resulted from Ofcom having regarded one or the other situation as one in which other cost recovery considerations outweighed the principle of cost causation.
- 5.355. However, in our view, to the extent that C&W's comments regarding Ofcom's consistency and/or its application of the principle of cost causation were intended to constitute one or more separate grounds of challenge, such argument(s) would only be incidental to the primary question, namely, whether Ofcom erred in its application of the relevant statutory test(s). We therefore focus on that question in the remainder of our assessment of this question.
- 5.356. In this context, we note that C&W argued that Ofcom had erred in failing to require BT to set charges that necessarily would distinguish between SDH and PDH PoHs.²⁸⁹ C&W introduced this argument by asserting that there were material differences in the costs attributable to SDH and PDH PoHs:²⁹⁰ SDH technology was less costly. Thus, C&W's argument proceeded, if the same charges were levied irrespective of whether SDH or PDH technology was used, the effect would be to

²⁸⁶NoA, §129.

²⁸⁷See assessment of Reference Questions 4(a)(ii)–(iv) in paragraphs 5.53–5.226.

²⁸⁸LLCC Statement, §4.149.

²⁸⁹NoA, §129.

²⁹⁰NoA, §130.

distort migration incentives and dampen the competitive dynamic, rather than to promote efficiency and sustainable competition.²⁹¹

- 5.357. We do not disagree with C&W that the presence (or otherwise) of material differences in the costs attributable to SDH and PDH PoHs may well have been a relevant factor for Ofcom to consider in determining the appropriateness of its decision regarding PoH cost recovery for the purposes of promoting efficiency and sustainable competition. But we would emphasize, as we did in our determination of Reference Question 4(a)(iv), that whether or not the cost causation principle has been applied correctly is not determinative of the appropriateness of the setting of a condition to the promotion of efficiency or sustainable competition.
- 5.358. Furthermore, we do not understand there to be any dispute between the parties regarding whether there is a difference in the costs attributable to SDH and PDH technology. We note that both C&W and BT seem to agree that SDH technology is less costly than PDH technology.^{292,293}
- 5.359. However, we further note that it is unclear from the evidence provided by C&W and BT by precisely what margin SDH is less costly. C&W presented a tentative calculation of the SDH-based costs it believed it was causing at BT's exchanges, compared it with BT's total cost estimate for PoH-related exchange costs and found that that its SDH-based estimate represented only a small proportion of BT's total PoH cost estimate. However, the outcome of this calculation was ambiguous. C&W itself proposed two possible explanations for its result: (a) PDH technology was considerably more expensive than SDH technology, and (b) BT's total estimate was incorrect. Furthermore, as we have discussed under Reference Question 4(a)(i), we now know that BT's total estimate was incorrect.
- 5.360. We therefore have no reliable basis on which to compare the costs of PDH and SDH technologies accurately in practice. The absence of reliable comparative cost data (and, therefore, the difficulty in determining whether there are material differences in the costs attributable to SDH and PDH PoHs) would in principle detract to some degree from the usefulness of the cost causation principle as a factor for Ofcom in determining the appropriateness of its decision regarding PoH cost recovery for the purposes of promoting efficiency and sustainable competition.
- 5.361. However, in any event, cost causality is not the only factor to be weighed by us when considering the question for determination: we would still need to consider the evidence regarding the relative costs of PDH and SDH technology in the context of other indicators of efficiency when determining whether Ofcom's decision was appropriate for the purposes of promoting efficiency and sustainable competition.
- 5.362. We therefore turn to consider what other evidence C&W deployed in support of its contention that Ofcom's decision on this issue would have the effect of distorting migration incentives and/or dampening the competitive dynamic. We note that C&W's arguments related to the need both to encourage migration to more efficient technology in the future (in terms of the decision whether or not to switch to the newer SDH PoH technology), and to reward efficient choices in the past (ensuring that a

²⁹¹NoA, §130.

²⁹²C&W W/S Harding, §§94–95 and BT W/S Morden §§58 & 60.

²⁹³We do not regard this apparent agreement regarding the relative cost (and efficiency) of SDH and PDH technology as determinative of the question we have to resolve, namely whether Ofcom erred in concluding that its decision with respect to PoHs was appropriate for promoting efficiency. What the parties appear to agree on is that in general PDH technology is less efficient than SDH technology. However, as we explain in the body of our assessment in paragraph 5.361, the relative cost position is only part of the wider question for us to determine.

firm which has invested in the new technology will realize the full benefits of its decision to switch).²⁹⁴ We deal first with C&W's arguments regarding a firm's past decisions, before turning to consider those relating to its future decisions.

- 5.363. C&W's argument that Ofcom should have mandated a cost recovery mechanism which would reward a firm for having made 'efficient choices' to use SDH technology for its PoHs in the past when setting up PoHs presupposes that the firm had the freedom to make active choices of technology at that time. Thus, even if there were evidence to support C&W's contention that it would have been more efficient to a firm to have used SDH rather than PDH PoHs, C&W would also have needed to show that the firm was responsible for deciding which technology it used.
- 5.364. Having reviewed the available evidence, we find that C&W did not provide sufficient evidence that it had been able to make active choices of technology in the past when requesting PoHs in order to connect to BT's system. In response to questions on this subject posed by us after the bilateral hearings, C&W asserted that it had been able to provide indicative plans for each point of presence that would have enabled the BT planners to select the best equipment to install, and that the configuration of PoHs was agreed between BT and C&W. In its comments on C&W's response, BT stated that it disagreed with C&W to the extent that C&W had suggested that OCPs were able to make decisions with respect to the specifications of Type II PoHs.²⁹⁵ In the face of such disagreement and in the absence of any other evidence supporting C&W's contention that OCPs were able to make active technology choices in the past, C&W has failed to establish that its contention is correct.
- 5.365. We now move on to consider C&W's argument that Ofcom should have mandated a cost recovery mechanism which would encourage a firm to make 'efficient choices' to use SDH technology for its PoHs in the future. This assessment of future choices does not include decisions regarding new PoHs because OCPs can only select Type I PoHs for new PoHs, and Type I PoHs only use SDH technology.²⁹⁶ Thus, for new PoHs, there is no technology choice involved.
- 5.366. Therefore, our assessment of future efficient choices brings us back to the question of whether it is more efficient for an OCP with a Type II PoH to switch from using PDH technology to SDH technology than to maintain its existing Type II PDH PoH.²⁹⁷
- 5.367. On this point, C&W argued that a PoH charging system which properly reflected the different costs incurred would provide price signals to OCPs that would encourage them to make more efficient choices between PoH systems. In C&W's view, as OCPs switched from PDH to the more efficient SDH handover technology, the total costs of handover would decline, thus contributing to minimization of the overall costs of the telecommunication system and allowing OCPs to compete more effectively with BT downstream.²⁹⁸ By mandating a system which encouraged migration only from Type II to Type I PoH, Ofcom encouraged only one type of efficient migration, missing out on the opportunity to encourage a migration from PDH-based Type II PoHs to SDH-based Type II PoHs.

²⁹⁴NoA, §130.

²⁹⁵BT's letter of 8 April 2010, response to our Question 7 (p7).

²⁹⁶See paragraph 5.185(e).

²⁹⁷We observe that our assessment here would also apply in relation to past decisions by OCPs using Type II PDH PoHs not to switch to Type II SDH PoHs, once they were able to do so. Our conclusions regarding the likelihood of migration in this potential 'past switching' scenario would be the same as those for 'future switching' cases, which are set out in the body of our assessment in paragraph 5.365. We therefore do not address these 'past switching' cases separately.

²⁹⁸C&W W/S Ridyard, §56.

- 5.368. However, we find that the evidence available to us points in the other direction: both C&W's and BT's evidence suggests that migration is difficult and unlikely to occur. Taking C&W's evidence first, we note that C&W suggested that, if PDH PoHs were as inefficient as it appeared, it would make sense for OCPs to close down the old PDH infrastructure and move circuits on to SDH infrastructure. However, C&W stated that, at present, the business case for such a move did not make sense. Moving circuits had a cost, both in terms of a rearrangement fee an OCP had to pay BT and the work that had to be undertaken in the OCP's network.²⁹⁹
- 5.369. In our view, two points arise from this evidence which contradict the contention that differentiating between PDH and SDH technology would necessarily encourage migration to the new technology. First, C&W's argument was premised on the understanding that SDH might be significantly more efficient than PDH technology. However, as we discussed in paragraph 5.359 above, the calculation by which C&W arrived at this understanding depended on incorrect assumptions (cf our assessment of those assumptions in our determination of Reference Question 4(a)(i)). Secondly, C&W acknowledged that the business case for switching did not make sense. We consider this to be a significant admission, and particularly so in light of our doubts regarding the precise difference in costs between PDH and SDH technology. In addition, C&W also explained that migration took place within a wider context of a contract being won by an OCP from BT. This further suggests that an OCP's migration decision may require a number of factors to be taken into account, not just the migration costs of PDH or SDH technologies.³⁰⁰
- 5.370. We therefore find that C&W has failed to support its contention that the failure to distinguish between PDH and SDH technology would necessarily result in distorting migration incentives. We have not been presented with any evidence explaining how the benefits of migration from PDH- to SDH-based PoH would outweigh the apparent costs, and proving that it is therefore likely that migration would occur.
- 5.371. In light of this conclusion, we further find that C&W has failed to demonstrate that Ofcom erred in concluding that its decision to mandate a cost recovery mechanism which would incentivize migration to new aggregated PoHs, but not to distinguish between SDH and PDH technologies per se, was appropriate for the purposes of promoting efficiency and sustainable competition.

Discrimination

- 5.372. As set out in paragraph 5.330, C&W's arguments on discrimination in relation to Reference Question 4(b)(ii) rely on the proposition that SDH and PDH technologies should not be treated the same on efficiency grounds. For the reasons set out above, we found that C&W has not established that it is necessary to distinguish between SDH and PDH technologies for the purposes of promoting efficiency and sustainable competition. Therefore we do not find that C&W has established that Ofcom discriminated, in contravention of the test in section 47(2) of the 2003 Act, by treating situations that should be treated differently the same given that we do not find them to have established that the technologies should have been treated differently.

²⁹⁹C&W W/S Harding, §134.

³⁰⁰C&W W/S Harding, §101.

Separation not mandated as part of the charge control

5.373. We note that C&W also argued that Ofcom had erred in not requiring a differentiation of the New PoH Charges based on PDH and SDH technologies within the formal text of the charge control. In our view, this contention adds nothing to the more detailed arguments on this point under §§123–128 of the NoA. These paragraphs are relevant to Reference Question 4(b)(i). We have addressed the issues they raise in our determination of that Reference Question and do not propose to rehearse our conclusions again here.

Determination

5.374. For the above reasons, our determination is that C&W did not establish that Ofcom erred in not mandating separation of the PoH charges based on SDH and PDH technologies for the reasons set out in §§129–132 of the NoA.

Section 6: Remedies

In this section we address Reference Questions 5(a), 5(b), 5(b)(i) and 5(b)(ii). We set out below, for each question, the paragraphs at which we (a) start our analysis of that question, (b) start our assessment of that question and (c) conclude with our determination of that question.

Paragraph

Reference Question 5

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Reference Question 5

Introduction

- 6.1. In the foregoing sections, we have determined that Ofcom has erred in relation to the matters alleged in Reference Questions 2(aa), 3(c) (as it relates to 21CN costs and SiteConnect), 4(a)(i), 4(a)(iii) and 4(b)(i).
- 6.2. We are therefore required to include in our determination:
- (a) clear and precise guidance as to how those errors should be corrected;¹ and
 - (b) in so far as reasonably practicable, a determination as to any consequential adjustments to the level of the price controls, indicating:
 - (i) what price controls should have been set in the LLCC Statement had Ofcom not erred in the manner identified by the CC;² and
 - (ii) if the price controls set in the LLCC Statement have, during the elapsed period of the price control, been at an inappropriate level, and on the

¹Reference Question 5(a).

²Reference Question 5(b)(i).

assumption that it may, having regard to the criteria in section 88 of the 2003 Act, be lawful and appropriate to adjust the price control applicable during the unelapsed period, what adjustments to that part of the price control should be made, if any.³

- 6.3. Accordingly, we address those questions below, adopting the following structure for this part of our determination:
- (a) For each of the errors which we have identified, we first set out guidance as to how the errors should be corrected, thereby addressing Reference Question 5(a): see paragraphs 6.6 to 6.119 below.
 - (b) We then consider how the price control should be adjusted, addressing Reference Question 5(b). We deal with Questions 5(b) and 5(b)(i) in paragraphs 6.120 to 6.218 and then 5(b)(ii) from paragraph 6.221.
- 6.4. For reasons on which we elaborate in paragraph 6.213 to 6.216 below, the errors we have found in relation to Reference Questions 4(a)(i), 4(a)(iii) and 4(b)(i) do not change the X in the RPI- X price control and therefore do not require any consequential adjustments as envisaged in Reference Question 5(b).
- 6.5. For brevity, when referring to the error identified in our determination of Reference Question 2(aa), we use the shorthand 'the 2(aa) error', and we adopt the same approach for each of the other four errors we have identified.

³Reference Question 5(b)(ii).

Reference Question 5(a)

- 6.6. In this section, for each of the questions in respect of which we have determined that Ofcom had erred in turn, we have sought to provide clear and precise guidance as to how that error should be corrected.
- 6.7. In relation to each error, we first set out the initial proposals relating to the remedies for that error which we put to the parties in a letter following our provisional determination, as subsequently clarified in further correspondence (our 'Remedies Letter').⁴
- 6.8. We then summarize the salient points from each party's submissions in respect of the remedies for that error. This includes points from the party's pleadings, its written submissions following our provisional determination and further written submissions provided to us at our request subsequently, and those oral submissions made to us during the plenary hearing held to discuss the questions of remedies following our provisional determination ('the Remedies Hearing').
- 6.9. Finally, we set out our own assessment of the appropriate guidance in relation to that error.

General questions in our Remedies Letter applicable to each error identified

- 6.10. The following principles, proposals and questions set out in our Remedies Letter were of general application to all the instances of error we have identified in this determination. Accordingly, we consider them in the respective assessments of each of those errors in the sections which follow:
 - (a) We asked whether our provisional findings necessitated adjustments to the price control and if they did, whether we could and should determine such adjustments or whether the adjustment was better remitted to Ofcom.
 - (b) We also asked what materiality threshold should apply and, in particular, asked for submissions as to the level of materiality that should apply (i) to individual adjustments and (ii) at an aggregate level.
 - (c) We indicated that we considered the timeliness of implementation to be an important factor in assessing the suitability of any remedy.
 - (d) We further indicated that we would particularly welcome submissions that had been agreed among the parties. Where agreement on remedies was not possible, we asked that parties nonetheless seek to agree on the appropriate methodology to adopt in determining a remedy. However, we were mindful at all times that it remained our duty to determine the Reference Questions for ourselves.

Correcting for the 2(aa) error

Our initial proposals

- 6.11. In our determination of Reference Question 2(aa), we concluded that Ofcom had erred in permitting the one-off increase to 2 Mbit/s local end prices as part of the one-off adjustments to starting charges. In our Remedies Letter, we proposed that this error could be corrected by reversing the one-off adjustment to 2 Mbit/s local ends.

⁴Our letter of 17 May 2010 as clarified by our letter of 20 May 2010.

Submissions from the parties

Summary of C&W's submissions

- 6.12. C&W agreed with our proposal to reverse the one-off increase to 2 Mbit/s local ends.⁵
- 6.13. C&W pointed out that any such reversal would need to take into account the adjustment to the local end prices as a result of the New PoH Charges and that the appropriate 2 Mbit/s local end charge should be £522 a year based on the old external charge less the New PoH Charge set by Ofcom for 2 Mbit/s circuits.⁶
- 6.14. C&W cited various advantages to reversing the one-off increase in starting charges for 2 Mbit/s local ends:⁷
- (a) It was a remedy logically connected to the error and did not go further than reversing (for the final part of the control) that which should never have been permitted in the first place. As such, it is readily defensible as an objectively justifiable and proportionate decision.⁸
 - (b) It would provide a benefit to those specific OCPs and customers who would otherwise have suffered as a result of the error in the final two years of the charge control.⁹
 - (c) It was a decision that Ofcom clearly could have taken itself since the new charge will still be considerably above incremental cost and simply represents what the charge would have been but for Ofcom's intervention to increase the charge.¹⁰
 - (d) It would be simple to implement quickly and should not require any further calculations or decision by Ofcom on the details of implementation nor any consultation with interested parties.¹¹
- 6.15. C&W later added that it did not consider it necessary or desirable to remit the decision on the appropriate remedy for Reference Question 2(aa) to Ofcom as:¹²
- (a) Reference Question 5(b) indicated that there was an onus on us to make a clear decision, where possible and to avoid remitting.¹³
 - (b) The LLCC was a short control with sharply declining volumes—any delay therefore disproportionately reduced the value of the remedy.¹⁴
 - (c) As it was unclear, following the Court of Appeal decision in the Calls to Mobiles Appeal whether there would be any remedy for the elapsed period, the more of the charge control period that had elapsed, the less effective the remedy would

⁵ C&W's response on remedies, 28 May 2010, §5.

⁶ C&W's response on remedies, 28 May 2010, §5.

⁷ C&W's response on remedies, 28 May 2010, §7.

⁸ C&W's response on remedies, 28 May 2010, §7.

⁹ C&W's response on remedies, 28 May 2010, §7.

¹⁰ C&W's response on remedies, 28 May 2010, §7.

¹¹ C&W's response on remedies, 28 May 2010, §7.

¹² Remedy Hearing, p10, line 20ff.

¹³ Remedy Hearing, p11, line 1ff.

¹⁴ Remedy Hearing, C&W's slides, p8.

be.¹⁵ The value of any adjustment to starting charges would be particularly reduced by delay.¹⁶

(d) Remittal would leave in place controls that *are definitely* wrong for a longer period.¹⁷

(e) The arguments for remittal focused on unavailability of information but BT should be able to provide the required information and should not benefit from a failure to cooperate. Furthermore C&W submitted that we had enough information to fully determine what remedies were appropriate.¹⁸

Summary of Ofcom's submissions

6.16. Ofcom's view was that remittal was not appropriate. First, Ofcom believed that the one-off increases did not depend for justification on a quantified analysis of BT's efficiency gains. Secondly, Ofcom had in fact carried out a quantified analysis of the efficiency gains made by BT and this confirmed that the increases to 2 Mbit/s local end charges were justified by the need to allow BT to retain the benefits of the efficiency gains which it had made during the period of the previous control on PPC charges.¹⁹

6.17. When performing its calculations for the revised X, Ofcom used as the appropriate 2 Mbit/s price, ie the price before the one-off adjustments, the price of £521.91.²⁰

Summary of BT's submissions

6.18. BT was of the view that the question of whether or not an adjustment should be made to the starting price of 2 Mbit/s local ends should be remitted to Ofcom, with a direction that it should conduct an assessment of whether BT generated sufficient efficiencies to justify the increase of the 2 Mbit/s local end charge, and thereafter to consider what adjustment to the starting price and X was necessary.²¹

6.19. BT did note, however, that any efficiency assessment could not be done on an individual service level, such as the 2 Mbit/s trunk services, as they were based on publicly available information which generally was only available at an aggregate level.²²

6.20. Efficiency studies therefore had to take place at a higher level of service aggregation. BT submitted that the analysis of BT's network efficiency, conducted by Ofcom in 2004 and 2009 and applied to the price control baskets, could be used as an estimate of the efficiency of provision of individual services.²³

6.21. BT also suggested that if the price increase for 2 Mbit/s local ends was reversed and as a result it was not rewarded for the efficiency gains in the prior control period, then the one-off adjustments should be recalculated with reference to DLRIC and DSAC of the affected services excluding any efficiency gains in the prior control period. This is because the DLRIC and DSAC used by Ofcom for its one-off price

¹⁵Remedy hearing, p12, line 25ff.

¹⁶Remedy hearing, C&W's slides, p8.

¹⁷Remedy hearing, C&W's slides, p8.

¹⁸Remedy hearing, C&W's slides, p8.

¹⁹Ofcom response to C&W's slide on efficiency prepared for the remedy hearing, §24.

²⁰Table 1 Ofcom 24 June 10 letter 'X calculations for CC's proposed remedies scenario'.

²¹BT's comment on our provisional findings and remedies, §§8 and 10.

²²BT's comment on our provisional findings and remedies, §11.

²³BT's comment on our provisional findings and remedies, §11.

adjustments already included the full extent of efficiency improvement made by BT during the previous charge control. The effect of excluding such efficiency gains would be to move the DLRIC and DSAC higher and justify higher one-off price increases for DPCN services and lower price reductions for 2 Mbit/s trunk.²⁴

6.22. BT later summarized its position to indicate that in its view there were four different remedies available:²⁵

(a) Ignoring BT's efficiency gains on the basis that Ofcom did not perform an assessment of those efficiencies. This would be wrong in principle and in law as BT was entitled to those gains if they were something that Ofcom should have assessed, in particular considering that they were included in the DLRIC/DSAC range used for the assessment of the one-off price adjustments.²⁶ Therefore the remedy should include requiring Ofcom to perform an efficiency assessment.²⁷

(b) To accept Ofcom's submissions on efficiency that were provided as part of the provisional determination and therefore not to require a reversal of the 2 Mbit/s local end price increase.²⁸

(c) Ofcom to perform an efficiency assessment.²⁹

(d) The CC to perform an efficiency assessment.³⁰

6.23. BT then stated that Ofcom's evidence on efficiencies that was not admitted at the stage of the PF should now be admitted as evidence for the decision on remedies as it was material to the decision of what the remedy should be.³¹

Summary of Verizon's submissions

6.24. Verizon did not make any submissions.

Assessment

6.25. The first question for us to decide in considering the appropriate guidance for the correction of the 2(aa) error is whether to accede to BT's submission that we should remit the matter to Ofcom.

6.26. We have determined that remittal is not the appropriate remedy in relation to the 2(aa) error. We do not regard remittal as necessary in the light of the reasons for our finding of error in respect of Reference Question 2(aa), nor do we consider it desirable or appropriate in all the circumstances.

6.27. In deciding that remittal is not necessary, we are mindful of the reasons underlying our determination of error in relation to Question 2(aa).

6.28. In this regard, we note that BT's submission that the question of whether the 2 Mbit/s local end price increase is justified should be remitted to Ofcom appears to be based on the premise that carrying out an efficiency assessment at the TI basket level

²⁴BT's comment on our provisional findings and remedies, §§15-16.

²⁵Remedies hearing, p46, line 6ff.

²⁶Remedies hearing, p46, line 8ff.

²⁷Remedies hearing, p46, line 22ff.

²⁸Remedies hearing, p46, line 24ff.

²⁹Remedies hearing, p47, line 4ff.

³⁰Remedies hearing, p47, line 7ff.

³¹Remedies hearing, p47, line 11ff.

(whether as a proxy for the efficiencies attributable for 2 Mbit/s trunk services or to estimate efficiencies generated in the TI basket as a whole) would address the error we had identified in our assessment of Reference Question 2(aa).

- 6.29. We regard BT's apparent premise in arguing for remittal as misconceived and the likely result of a misreading of our provisional determination of Reference Question 2(aa) and, in particular, of what is now paragraph 3.135(c) above. In paragraphs 3.175 to 3.176, we have provided further explanation of the point we had made in paragraph 3.135(c).
- 6.30. We also recall that, in our assessment of Reference Question 2(aa), we found that Ofcom had erred in concluding that the one-off adjustments to starting charges including the increase to 2 Mbit/s local end prices were justified by reference to, or proportionate to, the need to maintain the incentive properties of the charge control applicable to the TI basket.³²
- 6.31. In our view, the corollary of this finding is for the increase in 2 Mbit/s local end prices to be reversed, rather than for the matter to be remitted to Ofcom. This view is based on our reading of the statutory language in section 47 of the 2003 Act. Ofcom failed to meet at least one limb of the statutory test under section 47(2), because a key component of the conditions it had set—the one-off increase to 2 Mbit/s local end prices—was not proportionate to what they were intended to achieve. By virtue of the language of section 47(2), Ofcom would have needed to justify the setting of a condition which included the 2 Mbit/s local end price increase, but failed to do so. Accordingly, we conclude that the defective component should be removed by reversing the one-off increase to 2 Mbit/s local end prices.
- 6.32. The one-off adjustment at issue entails a revision that is particular and non-obligatory, and consequently the most appropriate and simplest remedy is the reversal of the adjustment. In contrast, BT's proposal would not directly address the error and, in any event, it would also take longer and be costly to implement.
- 6.33. We therefore conclude that the price increase to 2 Mbit/s local ends should be reversed without remittal to Ofcom.
- 6.34. In the LLCC Statement, the 2 Mbit/s local end price had been increased by £141.84.³³ We determine that this should be reversed, with the effect that the adjusted 2 Mbit/s local end price should be £521.92.
- 6.35. We note that BT also argued that, if we decided to reverse the price for 2 Mbit/s local ends, the DLRIC and DSAC used for making the one-off adjustments for the purposes of cost orientation should be changed to exclude the efficiency gains of the prior control period. This would lead to higher price adjustments for DPCN services and lower price adjustments for 2 Mbit/s trunk.
- 6.36. We disagree with BT. Ofcom's justification for the one-off price adjustments for DPCN services and 2 Mbit/s trunk was that prices should be cost oriented, ie the prices of those services were set with reference to BT's DLRIC and DSAC. We note that Ofcom used existing BT costs and carried out a number of adjustments. The resulting DLRIC and DSAC information was relevant at the time Ofcom carried out its one-off price adjustments for cost orientation purposes. The hypothetical higher set of costs, which BT is suggesting should be used, would not be suitable for an

³²See paragraph 3.140 above.

³³£141.84 is calculated as the 2 Mbit/s local end price of £833.76 before the price increase less the price of £691.92 after the price increase.

assessment of one-off price adjustments for cost orientation purposes as intended by Ofcom. This is because it would result in a DLRIC and DSAC that is not reflective of the actual costs faced by BT thus defeating the purpose of achieving cost orientation.

Correcting for the errors in question 3(c)

Our initial proposals

- 6.37. In our determination of Reference Question 3(c), we concluded that Ofcom had erred in relation to the 21CN cost adjustment and the allocation of costs to SiteConnect in not making further adjustments for 21CN costs and in not making an adjustment for SiteConnect.
- 6.38. In our Remedies Letter, we proposed that the error in 21CN and SiteConnect could be corrected by calculating the size of the necessary adjustments at the TI basket level. We asked Ofcom to submit a proposal as to how to calculate the size of the adjustments at the TI basket level on which the other parties could comment.³⁴

Our revised proposal as to process following the Remedies Hearing

- 6.39. During the Remedies Hearing, the parties agreed that BT would be better placed than Ofcom to submit a proposal for comment from the other parties. The parties agreed that BT would provide additional information and updated error estimates for 21CN and SiteConnect and that the other parties would comment on those submissions from BT. We therefore followed this process in our decision on the size of the adjustment for 21CN and SiteConnect, rather than the process initially proposed in our Remedies Letter.
- 6.40. In the paragraphs below, we therefore summarize the salient points from the parties both as to our substantive proposal to adjust for 21CN and SiteConnect to correct the errors identified, and as to BT's proposals as to the size of those adjustments. Much of the parties' original submissions as to the means by which to remedy the 3(c) errors was superseded by the decision to proceed by way of comments on BT's proposal. We therefore do not address those submissions in any detail below.

Submissions from the parties

Summary of BT's submission

- 6.41. On 16 June 2010, BT proposed updated estimates for the errors in 21CN and SiteConnect for 2007/08. BT estimated that the error in 21CN was £3.5 million and the error in SiteConnect was £3.2 million.³⁵

Summary of C&W's submissions

- 6.42. C&W indicated that its own estimate for the impact of the error in relation to 21CN was an approximation and it would not expect us to use that figure if better data was available.³⁶

³⁴Our letter to the parties on remedies, 17 May 2010, §15.

³⁵See BT notes 'Corp Ohds 01708 Summary.pdf' and 'Site Connect Adjustment for 0708 Summary.pdf', 16 June 2010.

³⁶C&W's email to the CC, 18 June 2010.

- 6.43. C&W did not have any comments on BT's calculations provided on 16 June 2010 in relation to the adjustments for 21CN and SiteConnect. C&W stated that it could not independently verify BT's figures but had no specific reasons to question them.³⁷

Summary of Ofcom's submissions

- 6.44. Ofcom requested that we should make an explicit assumption regarding the use of MCE as an attribution base when calculating the 21CN adjustment.³⁸ In particular, Ofcom argued that, if the use of MCE as one of the bases of attribution were appropriate for some indirect costs and not reflected in Ofcom's original adjustment, then the most robust approach would be to evaluate in detail the full impact of this attribution method before finalizing the value of the adjustment. Ofcom observed that this was likely to entail BT providing a detailed audit trail of indirect cost attributions from its costing system, including an understanding of the relevant interdependencies on other cost attributions.³⁹
- 6.45. Ofcom's comments on BT's submissions of 16 June 2010 are set out below. Ofcom stated that these comments had been based on a limited review, using existing data and its general understanding and experience of BT's costing process.⁴⁰
- 6.46. In respect of 21CN, Ofcom made the following observations:
- (a) Based on a search of BT's Detailed Attribution Methodology (DAM), Ofcom agreed with BT that only corporate overhead activity costs used MCE as an attribution base.⁴¹
 - (b) Ofcom stated that it was unable to verify the detailed data provided by BT. However, it was of the view that BT's calculation appeared to reflect fairly the necessary adjustment to 21CN as a consequence of some cost being attributed on the basis of MCE.⁴²
 - (c) Ofcom believed that the additional data provided by BT, particularly that taken from its costing system, provided a better evidence base for the calculation of the adjustment to the TI basket for the error in 21CN than the assumptions used by both C&W and Ofcom.⁴³
 - (d) In Ofcom's opinion, BT's estimate of the error for 21CN of £3.5 million did not seem unreasonable.⁴⁴
- 6.47. In respect of SiteConnect, Ofcom added the following further observations:
- (a) Ofcom noted that the total 2007/08 SG&A cost of £76.6 million used by BT in its analysis agreed with the SG&A partial private circuit component cost published in BT's 2007/08 RFS.⁴⁵
 - (b) In Ofcom's opinion, the approach BT adopted in attributing SG&A costs to SiteConnect did not seem unreasonable.⁴⁶

³⁷C&W's email to the CC, 18 June 2010.

³⁸Ofcom's comments on our provisional determination, §25.

³⁹Ofcom's comments on our provisional determination, §29.

⁴⁰Ofcom's comments on BT's data, 18 June 2010, §2.

⁴¹Ofcom's comments on BT's data, 18 June 2010, §5.

⁴²Ofcom's comments on BT's data, 18 June 2010, §7.

⁴³Ofcom's comments on BT's data, 18 June 2010, §8.

⁴⁴Ofcom's comments on BT's data, 18 June 2010, §8.

⁴⁵Ofcom's comments on BT's data, 18 June 2010, §3.

(c) Ofcom did not consider the estimate of the error for SiteConnect of £3.2 million to be unreasonable.⁴⁷

Summary of Verizon's submissions

6.48. Verizon had no substantive submissions on either our or BT's proposals.

Assessment

- 6.49. We note Ofcom's comments on the assumptions and process needed to make the MCE-related adjustments for 21CN, as set out in paragraph 6.44. Those comments were made prior to BT's proposal of 16 June 2010.
- 6.50. Whilst in principle such a detailed assessment would be desirable, we do not consider this proportionate for the purpose of correcting the errors as identified by C&W given the size of the proposed adjustment by BT. Requiring further analysis has the potential to significantly delay the implementation of the remedy. Furthermore, it is not clear that a more detailed analysis would provide a materially different answer, in particular since BT has already provided a relatively detailed assessment of the required adjustments as part of its submissions on 16 June 2010. C&W and Ofcom also subsequently agreed that BT's analysis was not an unreasonable basis for the adjustment for 21CN.
- 6.51. We therefore do not agree with Ofcom that such a detailed analysis as Ofcom originally proposed should be performed as part of our decision on remedies. It would, however, be open to Ofcom to perform such an analysis at the next charge control.
- 6.52. We note that none of the parties considered BT's calculations for the errors in 21CN and SiteConnect on 16 June 2010 unreasonable. On all the evidence available to us, therefore see no good reason to regard those calculations as unreasonable. Accordingly, we determine that the adjustment for 21CN should be £3.5 million and for SiteConnect should be £3.2 million.

Correcting for the error in question 4(a)(i)

Our initial proposals

- 6.53. In our determination of Reference Question 4(a)(i), we concluded that Ofcom had erred in its use of BT's estimate of the costs to be recovered by the PoH charges. We determined that the original BT estimated costs for PoH of £11.7 million were not reasonably accurate and that the revised BT estimated costs announced by BT amounting to £6.7 million appeared to be based on more reasonable assumptions.
- 6.54. In our Remedies Letter, we requested that Ofcom and BT comment on the reasonableness of the revised BT estimated costs.

⁴⁶Ofcom's comments on BT's data, 18 June 2010, §4.

⁴⁷Ofcom's comments on BT's data, 18 June 2010, §4.

Submissions from the parties

Summary of C&W's submissions

- 6.55. C&W noted⁴⁸ that if we found that PoH costs should be set on a marginal cost basis, then there was no need for us to form a final view on whether the figure of £6.7 million is accurate as the costs would be so small.
- 6.56. In fact, even if we did not determine that costs should be set on a marginal costs basis, C&W urged us⁴⁹ to proceed with the figure of £6.7 million as any improvements to the figure would be unlikely to be worth the delay, although this did not mean that C&W believed the figure was accurate.
- 6.57. However, if we determined to remit the charges back to Ofcom, then C&W reserved the right to resubmit on this point.⁵⁰
- 6.58. C&W agreed⁵¹ that the error in PoH charges did not mean that the TI basket was overstated or that there was a need to adjust the X or the local end prices. C&W believed that BT should be free to recover the costs from wherever it wanted.
- 6.59. During the Remedies Hearing and in correspondence following the hearing,⁵² C&W confirmed that its position had changed and that it no longer urged the CC to accept the New PoH Charges as accurate, for the following reasons:
- (a) BT had notified its intention to implement the charges and so these will proceed in any case.
 - (b) C&W noted that accepting the £6.7 million was a pragmatic decision to avoid remittal: if the CC decided to remit question 4(a)(iii) then this point fell away.
 - (c) C&W did not believe that all its issues regarding PoH costs had been addressed.
- 6.60. C&W explained that although BT had addressed one of the most significant errors that C&W had alleged regarding the PoH costs, there were other errors which it believed had not been addressed (such as the use of the Carrier Price List to calculate the notional depreciation).⁵³
- 6.61. C&W also noted that further corrections to the PoH charges could not be dismissed as immaterial. It stated that the large reduction in these charges by BT (from £11.7 million to £6.7 million) indicated that there may be scope for further large reductions, that the amounts in question were material for OCPs, and that Ofcom would only be put to extra work if the CC decided not to remit Question 4(a)(iii) (as Ofcom would need to look at these PoH costs as part of its review of marginal cost-based pricing for PoHs).⁵⁴

⁴⁸C&W's response on remedies, 28 May 2010, §20.

⁴⁹C&W's response on remedies, 28 May 2010, §22.

⁵⁰C&W's response on remedies, 28 May 2010, §23.

⁵¹C&W's response on remedies, 28 May 2010, §24.

⁵²C&W's submission following the remedies rearing, 15 June 2010, §4.

⁵³C&W's submission following the remedies hearing, 15 June 2010, §§7–11.

⁵⁴C&W's submission following the remedies hearing, 15 June 2010, §§13–18.

Summary of Ofcom's submissions

- 6.62. Ofcom disagreed with our provisional determination, specifically with our characterization of what it could have known at the time, but it did not make any comments on the remedies relating to Question 4(a)(i).

Summary of Verizon's submissions

- 6.63. Verizon did not comment on this remedy.

Summary of BT's submissions

- 6.64. BT noted that it believed the £6.7 million cost estimate to be reasonably accurate, that these costs did not require any further adjustments and that the reduction did not have any impact on the operating costs of the TI basket.⁵⁵
- 6.65. BT submitted that in terms of any resulting adjustments on prices, it believed that the New PoH Charges notified and to take effect on 1 July 2010 appropriately reflected the revised £6.7 million cost base and did not require any further adjustment.⁵⁶
- 6.66. In terms of adjustments to other prices, including local ends, BT believed that any changes could be dealt with within the constraints of the charge control.⁵⁷

Assessment

- 6.67. As with the 2(aa) error, the first question for us to decide in considering the appropriate guidance for the correction of the 4(a)(i) error is whether we should remit the matter to Ofcom.
- 6.68. In doing so, we are mindful of the need to consider the proportionality of any remedy we decide upon. We can see the force of certain arguments in favour of not remitting the matter to Ofcom on proportionality grounds. In particular, we note that the basis for the original BT estimated costs has been interrogated by C&W in the context of this appeal and has been reduced by BT by approximately 40 per cent, ie a significant margin. It is arguable that, since it is far from clear whether any further reduction would be significant, this would weigh against incurring the costs and delay of a remittal to assess further the reasonableness of the revised BT estimated costs.
- 6.69. However, we do not believe that these arguments are sufficiently strong for us to conclude that we should decide the matter ourselves. Our reasons for this conclusion are as follows.
- 6.70. First, we consider there to be significant countervailing factors. We recall that we found that the original BT estimated costs were based on estimates that were not reasonably accurate. We are conscious that, although elements of the methodology behind the revised BT estimated costs appeared to us to have been improved and the costs have been reduced, we are not in a position to assess whether they are now reasonably accurate. In this regard, we also note that C&W indicated, as set out in paragraph 6.61 above, that it believed there might be further material errors in the revised BT estimated costs. This reinforces our conclusion that we are not in a position to assess their reasonableness, and calls into question the assumption in

⁵⁵BT's comment on our provisional findings and remedies, §29.

⁵⁶BT's comment on our provisional findings and remedies, §30.

⁵⁷BT's comment on our provisional findings and remedies, §31.

paragraph 6.68 that any further assessment of the revised BT estimated costs would not result in significant further reductions.

- 6.71. Secondly, we do not consider it appropriate to assess the remedy in respect of the 4(a)(i) error in isolation. In particular, we are conscious of the interrelationship between this matter and the question of how to remedy the 4(a)(iii) error. Our assessment of the appropriate remedy in respect of 4(a)(i) is therefore also influenced by the fact that we consider it appropriate to remit consideration of the matters raised by the 4(a)(iii) error to Ofcom. We are mindful of the fact that we would expect Ofcom, as a result of our decision in paragraphs 6.94 to 6.99 below, to review the data supporting the revised BT estimated costs figure of £6.7 million in any event as part of its assessment of the 4(a)(iii) error. This alters the balance of the proportionality considerations outlined in paragraph 6.68 above, since it is likely that there would be relatively small additional costs, if any, in remitting the 4(a)(i) error in addition to the 4(a)(iii) error.
- 6.72. For these reasons, we therefore determine that we should remit to Ofcom the assessment of the reasonableness of the revised BT estimated costs and, hence, the determination of the appropriate figure for the New PoH Charges.
- 6.73. As noted in paragraph 6.71 above, we consider it likely that the first step in answering this question will be to analyse the relevant data underlying the revised BT estimated costs, and that this analysis will also inform Ofcom's consideration of the matters arising from the 4(a)(iii) error.
- 6.74. However, in our view, any such joint analysis should not mean that Ofcom's conclusions in respect of the resolution of the 4(a)(i) error and the 4(a)(iii) error need be issued jointly. Rather, we would expect that Ofcom would be able to determine the 4(a)(i) issues more quickly than those arising under 4(a)(iii). Accordingly, we emphasize for the avoidance of doubt that Ofcom should publish its conclusions in relation to the reasonableness of the revised BT estimated costs and determination of the appropriate figure for the New PoH Charges as soon as reasonably practicable.

Correcting for the error in question 4(a)(iii)

Our initial proposals

- 6.75. In our determination of Reference Question 4(a)(iii), we concluded that Ofcom had erred in concluding that its decision regarding the recovery of PoH charges was appropriate for promoting sustainable competition.⁵⁸
- 6.76. We noted that Ofcom had arrived at the conclusion that Option 1, Status Quo had been appropriate for these purposes after having discounted the need to consider other options because it had not had serious concerns about competition in the market. Yet we further noted that Ofcom had arrived at this conclusion despite the fact that (a) it had not conducted any assessment of the impact of its solution (ie Option 1) on competition in the market, and (b) Option 3, Marginal Cost Pricing appeared to present a viable alternative.⁵⁹ We also noted, in the absence of any better information, that only the 'access fibre/copper/duct' costs appeared to represent truly marginal costs.⁶⁰

⁵⁸Determination, paragraph 5.242.

⁵⁹Determination, paragraph 5.173.

⁶⁰Provisional determination, §5.14, and Remedies Letter, §21.

Submissions from the parties

Summary of C&W's submissions

- 6.77. C&W strongly supported⁶¹ what it described as our 'proposal to require marginal cost pricing for PoH'. C&W agreed with the reasons we had given for indicating that Option 3 appeared to us on the basis of our preliminary analysis to be superior to Option 1 on competition grounds with nothing to choose between the two options on efficiency considerations.
- 6.78. C&W believed that remitting to Ofcom would cause delays and that there was no need to do so as it regarded the matter as involving issues of principle which seemed relatively straightforward to C&W to resolve without any need for further investigation or fact-finding. C&W believed that we could and should reset the New PoH Charges to marginal costs.⁶²
- 6.79. C&W claimed that the onus should be on BT to support any claims as to which costs were marginal.⁶³ C&W believed that we should take a view pragmatically in the time available based on the evidence we had received to date. To do otherwise, in C&W's view, would involve delay for little benefit.

Summary of Ofcom's submissions

- 6.80. Ofcom argued⁶⁴ that true marginal costs were not generally used as a basis for setting regulated charges in telecommunications and that, given the extent of fixed costs in telecommunications, true (short-run) marginal costs were often extremely low or even zero. Ofcom continued by noting that it was unusual for charges to be set on the basis of short-run costs because this would mean that any fixed costs would not be recovered. This would not adequately reward investment and would not be sustainable.
- 6.81. In Ofcom's view, a more generally used concept was that of long-run incremental costs, which included costs which might be fixed in the short run but were caused by the defined 'increment' of output, but excluded common costs. Ofcom therefore took the view that the relevant cost concept, in order to give practical effect to our recommendation, was likely to be long-run incremental cost.
- 6.82. Ofcom believed that the relevant increment was likely to be PoH services. The relevant costs would then be the costs which would be avoided, in the long run, if BT did not supply any PoH services, and PoH charges would be based on these costs averaged over the number of PoHs provided (perhaps with additional variation by type).

Determining what costs are 'marginal'

- 6.83. Ofcom believed that there might well be long-run incremental components to each of the four categories of costs discussed in what are now paragraphs 5.169 and 5.170 of our determination.⁶⁵
- 6.84. In Ofcom's view, it was not the case that 'indirect costs' were synonymous with 'common costs' or 'fixed costs'. Ofcom stated that relying on an interpretation of cost

⁶¹C&W's response on remedies, 28 May 2010, §28.

⁶²C&W's response on remedies, 28 May 2010, §18.

⁶³C&W's response on remedies, 28 May 2010, §30.

⁶⁴Ofcom response on remedies, 28 May 2010, p8.

⁶⁵Ofcom's response on remedies, 28 May 2010, p3.

headings was not sufficiently reliable for such an important adjustment. Further work would therefore be required in order to establish robust estimates of marginal or incremental costs.⁶⁶

Summary of Verizon's submissions

- 6.85. Verizon did not comment on this remedy.

Summary of BT's submissions

- 6.86. BT noted that we had made clear that our view that Option 3 presented a viable alternative to Option 1 was not a concluded finding and that a full analysis of all the options had not yet been done. BT therefore considered that this issue should be remitted to Ofcom for analysis to be done of the impact of each solution on competition in the market.⁶⁷
- 6.87. However, BT submitted⁶⁸ that, if the ultimate conclusion was that Option 3 should be adopted, PoH charges should be based on incremental rather than marginal costs. BT noted that we had defined Option 3 as 'marginal or incremental costs excluding common or indirect costs', referring to what is now paragraph 5.148(c) of our determination.
- 6.88. BT considered that there was an important distinction between marginal and incremental costs—marginal cost typically referred to the extra cost incurred by supplying the next unit of output, while incremental cost referred to the marginal costs incurred over a defined range of outputs (a specified 'increment'). This range was usually defined as the service as a whole and was thus relevant when considering how BT's costs would vary if all 3,000 PoHs did not exist. In BT's view, incremental cost was the more practical cost definition for PoH price-setting purposes, as it was not possible to price every unit of output (ie a single extra POH) differently to reflect its specific marginal cost.
- 6.89. BT noted⁶⁹ that the unit incremental cost was sometimes abbreviated to LRIC (long-run incremental cost). This included all costs which were variable in the long run, and hence costs which would be avoided by not providing the service.
- 6.90. BT stated⁷⁰ that identifying incremental costs was not always straightforward and the nomenclature used for BT's cost categories could not be viewed as a means of distinguishing incremental costs from fixed costs. These categories were mainly used as a means of allocating shared costs. For example, BT allocated power consumption, which was treated as indirect costs but was incremental to service supply.
- 6.91. BT stated⁷¹ that all four of the PoH cost categories contained costs that were incremental to the PoH service and would not be incurred if the PoH did not exist. BT provided examples of incremental costs that were included in the cost categories 'Exchange Indirects', 'Equipment Maintenance & Indirects' and 'Selling, General & Admin on PoH'.

⁶⁶Ofcom's response on remedies, 28 May 2010, p10.

⁶⁷BT's comment on our provisional findings and remedies, §32.

⁶⁸BT's comment on our provisional findings and remedies, §33.

⁶⁹BT's comment on our provisional findings and remedies, §34.

⁷⁰BT's comment on our provisional findings and remedies, §35.

⁷¹BT's comment on our provisional findings and remedies, §36.

LRIC for PoHs

- 6.92. Given the thousands of individual costs that would need to be considered and agreed, in the interests of time BT proposed that the existing LRIC relationships were used to decide on the level of incremental cost.
- 6.93. BT maintained and published an audited model of LRIC which it suggested should be used. During the Remedies Hearing, BT provided us with the results of its calculation of LRIC for PoHs using this LRIC model. The calculation estimated that LRIC for PoHs would be £6.1 million.

Assessment

- 6.94. As above in relation to the 2(aa) and 4(a)(i) errors, the first question for us in determining Reference Question 5(a) as it relates to the 4(a)(iii) error is to decide whether we should remit the matter to Ofcom.
- 6.95. As noted above in paragraph 6.71, we are conscious of the commonality of certain of the data relevant to the resolution of matters arising in respect of the 4(a)(i) and 4(a)(iii) errors. We are also aware of the need to consider the proportionality of any remedy we put forward.
- 6.96. Taking due account of these factors, we are of the view that we should remit this matter to Ofcom. This view is shaped by the terms of our finding of error. We note that C&W and Ofcom both placed undue emphasis on our preliminary analysis of the relative merits of the regulatory options identified in the pleadings, and drew the conclusion that we had made a 'proposal' to implement Option 3, Marginal Cost Pricing. For the reasons we have set out in our response to the parties' comments on our provisional determination of Reference Question 4(a)(iii) in paragraphs 5.177 to 5.180 above, it is inaccurate to describe our findings in that regard as amounting to a proposal for marginal cost pricing.
- 6.97. Rather, we emphasize that our determination is that Ofcom erred in choosing Option 1 without carrying out appropriate assessment of alternative regulatory options. Although in our view Option 3—which, as BT noted, we defined as encompassing either marginal or incremental costs—appeared on a preliminary analysis to have advantages over Option 1, the error we found resulted from Ofcom's failure to consider properly alternative regulatory options and not from having chosen a particular option (Option 1).
- 6.98. We therefore determine that we should remit the question of how to implement New PoH Charges to Ofcom to assess the various regulatory options available in a manner which then puts Ofcom in a position to satisfy its relevant statutory obligations. For the avoidance of doubt, we are not seeking to limit the scope of Ofcom's review of the regulatory options on remittal to a comparison between Option 1 and Option 3 (or even among Options 1, 2 and 3). Rather, we would expect Ofcom to give due consideration to other regulatory options. We would also expect Ofcom to consider any such options in the light of the matters set out in our assessment of Reference Questions 4(a)(ii), (iii) and (iv).
- 6.99. We anticipate that both alternatives contained within Option 3 would be among those regulatory options which Ofcom would wish to consider, ie Ofcom would assess whether either marginal or incremental cost pricing would provide an appropriate means of promoting sustainable competition and the other statutory objectives under the 2003 Act. From the submissions received from the parties, it is apparent that this is an issue requiring proper consideration by Ofcom. However, again for the

avoidance of doubt, we do not express any view as to whether marginal or incremental cost pricing should be preferred or whether either of those options would put Ofcom in a position to satisfy its relevant statutory obligations.

Correcting for the error in question 4(b)(i)

Our initial proposals

- 6.100. In our determination of Reference Question 4(b)(i), we concluded that Ofcom had erred in giving BT the discretion it did as to future charges for PoH.
- 6.101. In our Remedies Letter, we proposed remitting the matter to Ofcom to take the final decision on how PoH costs should be recovered. We noted our understanding that the industry and BT had already made a number of proposals on how that should be done. It therefore did not appear to us necessary for Ofcom to restart that process but rather to draw on the views which had already been expressed by CPs.

Submissions from the parties

Summary of C&W's submissions

- 6.102. C&W noted⁷² that it appreciated the logic of our proposal that Ofcom should decide on the proposals that had previously been the subject of consultation by BT and, if it did, it should not be necessary to conduct any further consultation.
- 6.103. C&W also proposed⁷³ what it considered to be a much simpler solution in the following terms:
- (a) C&W noted that, if we adopted the reduced revised BT estimated costs in respect of New PoH Charges and the greatly reduced costs implied by a marginal cost-based approach, this would result in overall PoH rental charges being much lower. In turn, this would also result in there being very little absolute difference between the costs attributable to PDH and SDH PoH (or Type I and Type II PoH). In the circumstances, C&W doubted that there was much need for using, or scope to use, these PoH charges to incentivize a change in behaviour with respect to PoHs.
- (b) With this in mind, C&W suggested that we could therefore resolve matters for ourselves by simply directing that the new PoH charges (as adjusted to the level of marginal cost) should be payable on all external local ends regardless of technology. As such, the exercise delegated to BT could be terminated without any further discussion or any decision by Ofcom.
- 6.104. C&W claimed⁷⁴ that the advantages of this approach were that it would be extremely quick and simple to implement and would save BT and OCPs from engaging in any further development work to billing systems or otherwise (which would now, in any case, be disproportionate to the amounts involved).

⁷²C&W's response on remedies, 28 May 2010, §32.

⁷³C&W's response on remedies, 28 May 2010, §§33–35.

⁷⁴C&W's response on remedies, 28 May 2010, §36.

Summary of Ofcom's submissions

- 6.105. Ofcom told⁷⁵ us that in order for it to take the final decision on how PoH costs should be recovered, it would need to take the following steps:
- (a) To undertake its own analysis based on the revised BT estimated costs.
 - (b) To ensure that any new SMP condition met the tests under the 2003 Act (including sections 47 and 88). In particular, Ofcom noted its duty to ensure that the condition imposed was objectively justifiable, non-discriminatory, proportionate and transparent.
 - (c) To ensure compliance with those statutory tests, Ofcom was of the view that it would most likely need to consult on its proposed PoH charges with stakeholders. Ofcom's guidelines provided that the shortest period for a consultation was four weeks so that stakeholders had sufficient time to provide measured comments.
 - (d) At the end of the consultation process, to analyse and take account of all stakeholder responses, before coming to a final decision.
- 6.106. Ofcom believed that overall the process would be likely to take at least three to six months, depending on the range and complexity of issues raised in the consultation process.
- 6.107. Alternatively, Ofcom suggested that, if we had satisfied ourselves that BT had formulated with the industry an agreeable position which met the tests under the 2003 Act, a more expedient option would be for us to direct Ofcom to implement the PoH charges resulting from BT's consultation process with industry.

Summary of Verizon's submissions

- 6.108. Verizon made no comment on this remedy.

Summary of BT's submissions

- 6.109. BT noted⁷⁶ our provisional determination that Ofcom should take the final decision on how PoH costs should be recovered in future. BT confirmed that it had already extensively consulted with industry about the new charging regime and had notified new prices which were to take effect from 1 July 2010.
- 6.110. Given the timings, BT stated⁷⁷ that its then present intention was to move forward with the new pricing effective from the start of July 2010, particularly as it was based on the revised BT estimated costs for PoHs. BT's expectation was that Ofcom could then take a final decision on whether the new regime was justified and appropriate, either following a section 185 dispute referral or by other means.

Assessment

- 6.111. Again, the question for us to decide is whether we should remit to Ofcom, on this occasion in relation to the matters raised by our determination of error in respect of Reference Question 4(b)(i).

⁷⁵Ofcom's response on remedies, 28 May 2010, p11.

⁷⁶BT's comment on our provisional findings and remedies, §46.

⁷⁷BT's comment on our provisional findings and remedies, §47.

- 6.112. Our view, having considered the submissions referred to in paragraphs 6.102 to 6.110 above, is that our final remedy in respect of the 4(b)(i) error should follow that proposed in our Remedies Letter, ie to remit the matter to Ofcom to decide how PoH costs should be recovered.
- 6.113. There may be doubts as to whether we would have the power to determine a remedy in the manner suggested by certain of the parties, even if we were minded to do so for the reasons we explain in the following paragraphs. We note that we wrote to the parties setting out our concerns as detailed below and requesting their submissions in response if they disagreed. We did not receive any indication that the parties contested this analysis.
- 6.114. As a preliminary point, we note that, where a price control matter is referred to us for determination, we are to determine that matter in accordance with the directions given to us by the Tribunal: see section 193(2)(b) of the 2003 Act. We further note that Reference Question 5(a) requires that we include in our determination clear and precise guidance as to how any error we have found should be corrected, and that Question 4(b)(i) alleged that Ofcom had erred 'in giving BT the discretion it did as to future charges for points of handover'. Accordingly, we determined that Ofcom had erred in giving BT the discretion it did.
- 6.115. In our view, the 'remedy' proposed by certain of the parties relates not to the fact of Ofcom having given BT the discretion it did, but rather to the results of BT's exercise of that discretion. As such, we are of the view that the parties' proposal effectively for us to endorse the outcome of BT's consultation and decision process is not sufficiently connected to the error identified. To put it another way: the parties' proposed 'remedy' does not constitute guidance as to how the error identified should be corrected. It would instead be a reflection of how the parties would like the situation now pertaining to be resolved. In our view, this is not a matter properly for us to determine.
- 6.116. We would also note that BT's exercise of the discretion accorded to it has possible consequences for parties beyond those involved in the present appeal. Accordingly, we can see the force of Ofcom's argument that it would be necessary to consult with the industry on BT's proposals, and we doubt that it would be appropriate for us to determine this matter absent such wider consultation, even if we were minded to and had the power to do so.
- 6.117. However, we would expect that, given the fact that we gave advance indication to the parties of our thinking on this issue and the apparent consensus among the industry parties to this appeal, Ofcom would be well placed to launch its consultation if necessary very soon after the Tribunal's judgment in this appeal. In any event, for the avoidance of doubt, we would require that Ofcom determine this matter as soon as reasonably practicable.
- 6.118. As to the detail of the matters for Ofcom to consider on remittal, we would refer to the terms of our determination of the 4(b)(i) error in paragraphs 5.235 to 5.258 above. In particular, we observe that the terms on which Ofcom gave to BT the discretion it did were not made clear to industry stakeholders, nor was it clear how Ofcom expected BT to reconcile what we now understand were Ofcom's various objectives in according that discretion to BT. We would therefore expect that Ofcom would wish to clarify these issues in writing in advance of the consultation so that industry participants are in a position to contribute properly to that consultation process.

Determination

6.119. For the reasons given above, we determine that the errors identified in respect of Reference Questions 2(aa), 3(c), 4(a)(i), 4(a)(iii) and 4(b)(i) should be corrected as follows:

- (a) For the 2(aa) error, we determine that the price increase to 2 Mbit/s local ends should be reversed without remittal to Ofcom.
- (b) For the 3(c) error, we determine that the adjustment for 21CN costs should be a reduction in final year costs of £3.5 million and for SiteConnect costs should be a reduction in final year costs of £3.2 million.
- (c) For the 4(a)(i) error, we determine that the assessment of the reasonableness of the revised BT estimated costs and, hence, the determination of the appropriate figure for the new PoH charges should be remitted to Ofcom.
- (d) For the 4(a)(iii) error, we determine that the question of how to implement new PoH charges should be remitted to Ofcom to assess the various regulatory options available in the light of the matters set out in our assessment of Reference Questions 4(a)(ii), (iii) and (iv) and in a manner which then puts Ofcom in a position to satisfy its relevant statutory obligations.
- (e) For the 4(b)(i) error, we determine that the decision as to how PoH costs should be recovered should be remitted to Ofcom to consider in the light of the matters set out in our assessment of Reference Question 4(b)(i).

Reference Question 5(b)

6.120. By way of introduction, we first provide an overview of how we approach our determination of Reference Question 5(b), as well as addressing one supplemental question directed to us by the Tribunal in correspondence exchanged during the process of preparing our final determination. We then turn to consider Question 5(b) and 5(b)(i) together, before moving on to consider Question 5(b)(ii).

Introduction

6.121. In determining Reference Question 5(b), we have identified what impact the adjustments in our determination of Reference Question 5(a) will have on the charge control. This includes, for example, what the revised value of 'X' in the RPI-X charge control formula for the TI basket should be, in light of the numbers we have recalculated in our determination of Reference Question 5(a).

6.122. In addition to calculating what the revised value of X should be for the purposes of answering the main part of Reference Question 5(b) (ie the wording before subparagraphs (i) and (ii)), we also provide the specific information required by subparagraphs (i) and (ii) of Reference Question 5(b).

6.123. In our view, Reference Question 5(b)(i) requires us to calculate the X across the period from 2009 to 2012, ie to perform the calculation that Ofcom should have done in 2009 had it not erred in the manner we have identified in our determination of Reference Questions 1 to 4.

6.124. We understand that Reference Question 5(b)(ii) asks us to provide a further calculation with adjustments to the price controls applicable during the unelapsed period of the LLCC to allow for the fact that the original price control was set at an incorrect level during the elapsed period.

6.125. We note that Reference Question 5(b)(ii) requires us to proceed on the assumption that it may be lawful and appropriate to make such an adjustment during the unelapsed period. We therefore regard it as neither necessary nor appropriate for us to seek to determine the lawfulness or appropriateness of making such an adjustment. That is a matter which the Tribunal has indicated, in correspondence with the parties following the Court of Appeal judgment in the Calls to Mobiles Appeal, it may decide once it has considered our determination of the questions referred to us.

Summary of the data we provide below in our answer to Reference Question 5(b)

6.126. In the light of the above explanation of our understanding of Reference Question 5(b), we set out briefly below in diagrammatic form with annotations the three groups of data we anticipate providing to the Tribunal in determining that question. These diagrams are illustrative and are included to assist in understanding the underlying logic of the calculations required to produce the actual adjustments which are set out later in Tables 6.1 to 6.7

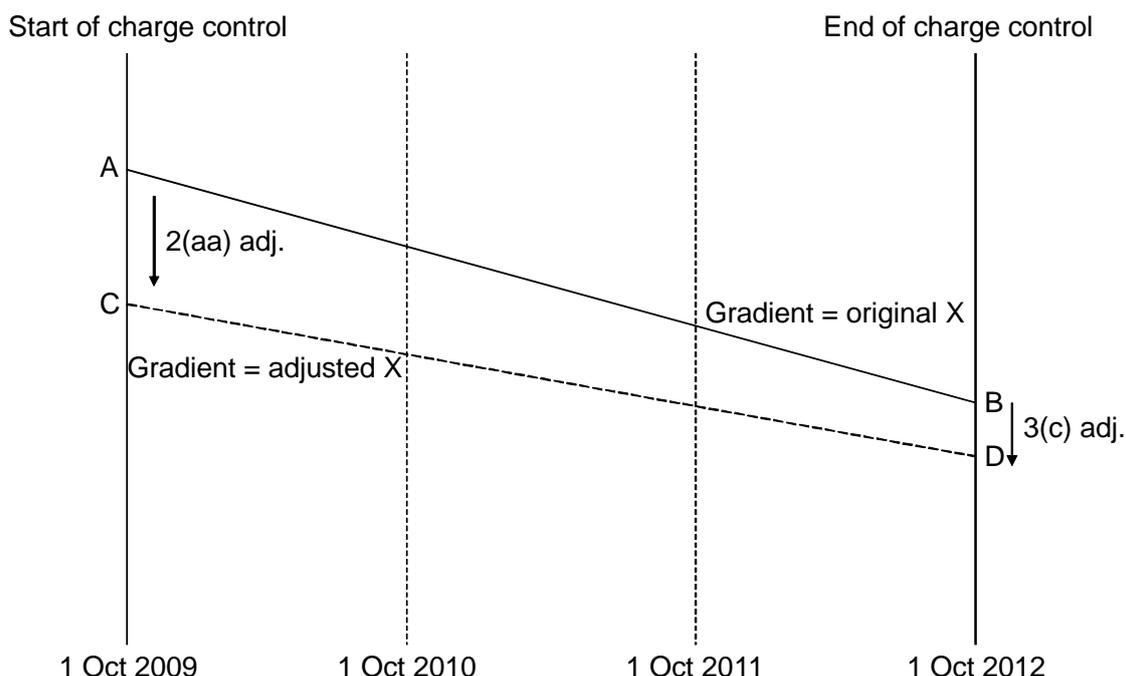
6.127. For each, we illustrate the impact on X in the adjusted charge control taking into account the errors identified in Questions 2(aa) and 3(c). For reasons we explain further in our determination in paragraphs 6.213 to 6.216 below, the other errors we have identified do not affect the X. We have presented the diagrams so that they illustrate the effect of the matters arising under Reference Questions 5(b)(i), 5(b) and 5(b)(ii) in that order. While this does not follow the strict order of the questions, it

accords better with the logic underlying the determination of the three questions. This is because the calculation required under Reference Question 5(b)i is the clearest to understand and the basis for the subsequent calculations.

- 6.128. The diagrams provide an approximate illustration of the calculation of the X in the charge control for each of the three datasets required by the Tribunal. They are based on how Ofcom's RPI-X model operates, ie by forecasting the basket revenues at the start of the charge control and the final year basket costs (including a reasonable rate of return). The charge control is set (and our remedies are designed) so that the revenues converge with the projected costs at the end of the period. We discuss this last point further in paragraphs 6.142 to 6.152 below in addressing the Tribunal's supplemental question to us in correspondence.
- 6.129. We should emphasize that these diagrams are intended only to assist in visualizing the effect of our determination of each of these three questions. They are not an accurate depiction of the precise effects of our determination. They illustrate the effect of our determination on an aggregate basis for all services and with a smooth, constant gradient. For the avoidance of doubt, the calculations we show later are not based on the diagrams but on the principles the diagrams are intended to illustrate.
- 6.130. We have shown the glide path set by Ofcom in the LLCC Statement as line A-B in each of the diagrams. The glide path that would have been set, had Ofcom not erred in the manner we identified in Questions 2(aa) and 3(c) and had instead used the corrected figures is shown as line C-D in the diagrams. It will be seen that the effect of remedying the Question 2(aa) and Question 3(c) errors will be to reduce the initial revenues and the final year costs respectively.
- 6.131. Figure 6.1 illustrates the X (or glide path) in the charge control set by Ofcom for the purposes of our determination of subparagraph 5(b)(i). As noted above, it shows what the impact on X would have been had Ofcom not erred, ie from 2009 to 2012.

FIGURE 6.1

Illustrative glide path as it would have been had Ofcom not erred

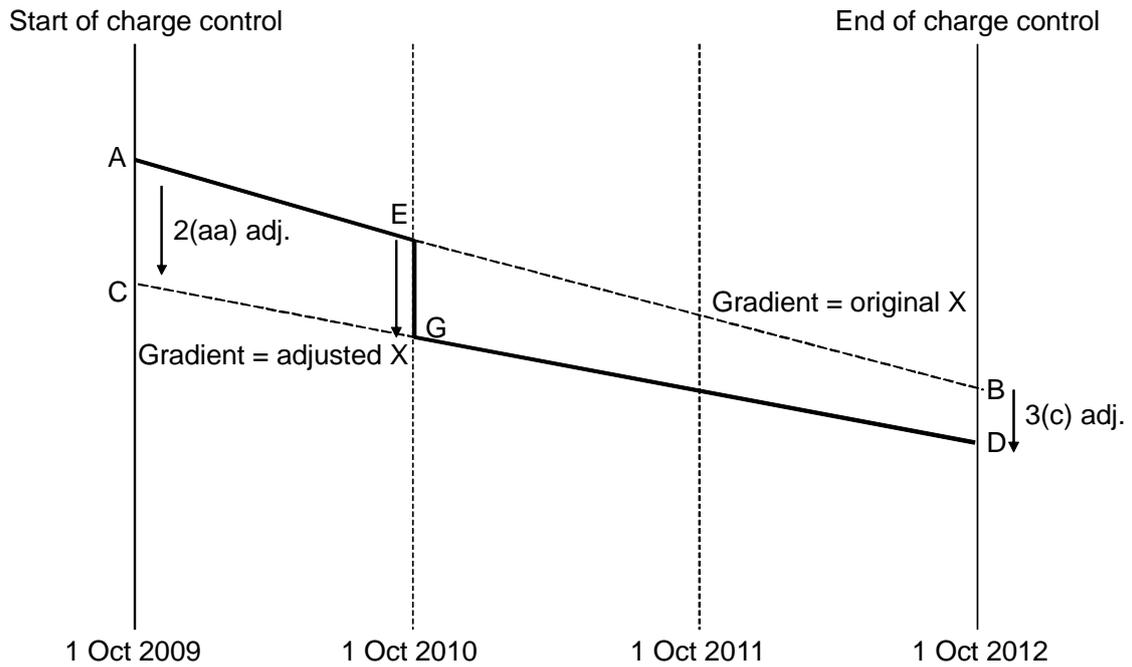


Source: CC.

- 6.132. Figure 6.2 illustrates the X (or glide path) in the charge control set by Ofcom for the purposes of our determination of the main paragraph of Reference Question 5(b) (ie the introductory part of 5(b) preceding the wording before subparagraphs (i) and (ii)).
- 6.133. It shows what the impact on the X during the unelapsed period of the charge control would be, following adjustment for the errors identified in Questions 2(aa) and 3(c) but without any further adjustment of the type envisaged in subparagraph 5(b)(ii).
- 6.134. It is important to note that the effect of reversing the 2 Mbit/s local end price increases (line E–G) needs to be calibrated to allow for the fact that the adjustment will be made following the Tribunal judgment in the light of our determination of this question, rather than on 1 October 2009 when the charge control was originally set. This calibration will determine where point G falls relative to the line C–D.
- 6.135. In Figure 6.2, we have illustrated point G as falling on line C–D. In principle, while the endpoint of the glide path will remain point D (as depicted below and for reasons on which we elaborate in paragraphs 6.142 to 6.152 below), the adjusted starting price for 2 Mbit/s local ends (ie point G) could fall above or below or even be on the line C–D and the adjusted glide path for the remainder of the price control (G–D) could or could not align with line C–D. However, for the reasons set out in paragraphs 6.175 to 6.178, we consider that point G should fall on line C–D and the calculations in our determination of Reference Questions 5(b) and 5(b)(i) in paragraphs 6.217 to 6.220 below rely on that assumption.

FIGURE 6.2

Illustrative glide path not adjusted for errors during elapsed period

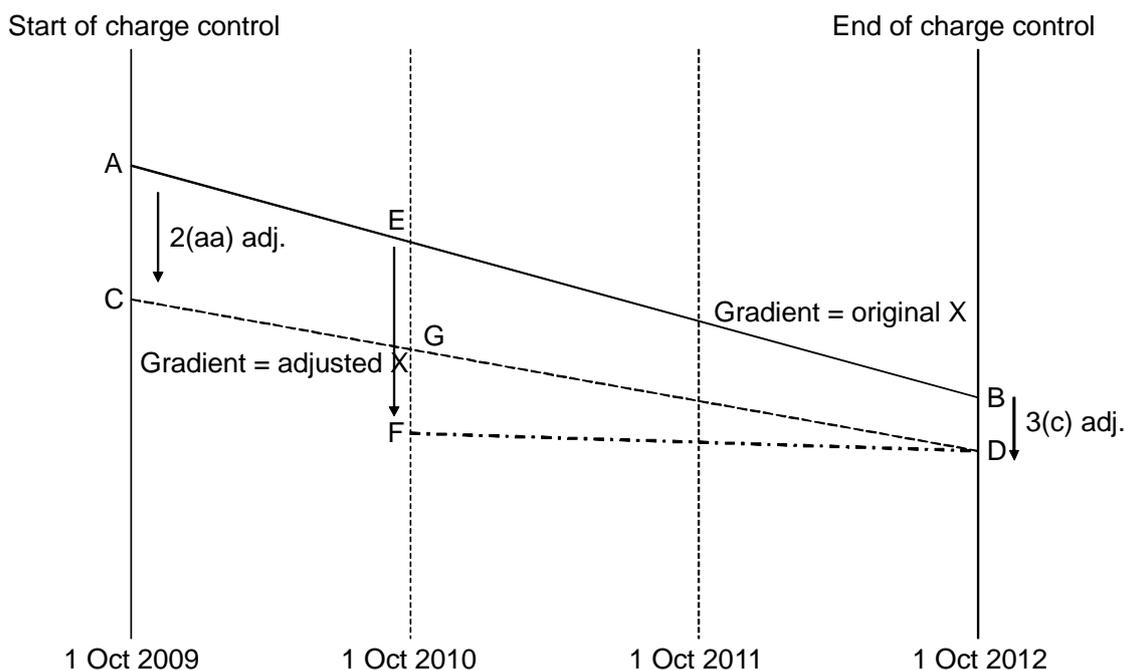


Source: CC.

6.136. Figure 6.3 illustrates the additional, adjusted calculation we make in connection with our determination of subparagraph 5(b)(ii). As noted above, it makes a further adjustment to the X during the unelapsed period (as calculated in our determination of the main part of Reference Question 5(b)) to allow for errors during the elapsed period of the charge control.

FIGURE 6.3

Illustrative glidepath adjusted for errors during elapsed period



Source: CC

6.137. Figure 6.3 relies on the same assumptions as Figures 6.1 and 6.2. In addition, as we have assumed that the charge control would be set so that the final year revenues converge with the final year costs (point D in the figure above), the adjustment E–F would need to move revenues to below the line C–D so that area G–D–F is the same size as area A–E–G–C in NPV (net present value) neutral terms.

Tribunal’s supplemental questions

- 6.138. We wrote to the Tribunal setting out our understanding of Reference Question 5, in terms similar to those set out in paragraphs 6.121 to 6.137 above.
- 6.139. In its response, the Tribunal stated that it was generally content with the approach we had set out, subject to two points.
- 6.140. First, the Tribunal indicated that we should ensure that the reasoning behind any calculation of the aggregate effect of 2(aa) and 3(c) 21CN and 3(c) SiteConnect errors on the X or otherwise is sufficiently clear that it would be possible in practice to isolate the effect of any one of those errors individually. The Tribunal explained that this precaution was necessary to allow for the possibility that, in the event of challenge to our determination, the Tribunal may ultimately dispose of the case by making, for example, one or more of the adjustments set out in the determination but not the other(s).

- 6.141. We take this first point into account in our determination of any consequential adjustments to the level of price controls for each of the errors we have identified in our determination of Reference Questions 1 to 4.⁷⁸
- 6.142. Secondly, the Tribunal noted that we had made an assumption in Figure 6.3 (see above) that the glide path must end at point D and not at a point below D (eg a hypothetical point 'H'). The Tribunal further noted that this meant that there was likely to be a drop from E to F which was much larger than the drop between E to G shown in Figure 6.2 (see above). The Tribunal observed that there were issues raised in this appeal about having a big adjustment to the price, hence the need for glide paths. Therefore, the Tribunal indicated that it would find it useful if we could make clear in our determination whether we had considered and rejected the possibility of, for example, moving from G to a new point H (not shown in our diagrams) in a way that meant that the area in G–D–H was equal to the area A–E–G–C, such that there was not such a large one-off drop from E to F. The Tribunal explained that, if we assumed that the price control must end at point D, it would find it useful to understand our reasoning demonstrating why we reached such a conclusion.
- 6.143. We address the Tribunal's second point in the following paragraphs, explaining why it is indeed our position that the price control must end at point D. We note that the Tribunal's question essentially asks to what extent the last year of the price control must provide BT with a ROCE that is equal to the WACC (ie that BT's forecast final year costs including a reasonable rate of return should equal its forecast final year revenues).

The reason why the ROCE needs to equal the WACC in the last year of the price control

- 6.144. We note that, by the Reference Questions, we are required to determine whether or not Ofcom had erred for the reasons set out in the Notice of Appeal. We therefore have addressed our minds to the alleged errors, rather than approaching our analysis of the LLCC Statement on a broader basis.
- 6.145. As such, we are not directed to make, and have not made, any determination as to any other aspect of Ofcom's LLCC Statement or its rationale and methodology in setting the LLCC. We are therefore not in any position to assess whether we could or should deviate from Ofcom's approach save to the extent that we have identified an error as a result of one or more of the questions referred to us.
- 6.146. For this reason, we are of the view that the remedies we determine should follow as closely as possible what we understand that Ofcom would have likely done in its original LLCC Statement, had it not erred. We consider it highly unlikely that Ofcom would have set a charge control that would have resulted in the ROCE for the TI basket being lower than the WACC in the last year of the charge control. In this regard, we note that Ofcom stated in its LLCC Statement that it typically set the value of the 'X' so that the value of BT's rate of return projected for the last year of the charge control was equal to its WACC.⁷⁹

⁷⁸ For a summary of the different permutations of the effect of each error or combination of errors, please see Appendix C.

⁷⁹ §3.245 in the LLCC statement.

- 6.147. Ofcom responded to the Tribunal's question in the following terms.⁸⁰ Ofcom did not consider that the methodology suggested by the Tribunal was appropriate in any case or that it could meet the section 88 tests.
- 6.148. In Ofcom's view, a disadvantage of the method suggested by the Tribunal would be that compensation would potentially seem to extend into the next charge control as well, since charges at the start of any new control would be below where they otherwise would have been. Given the probable impossibility of calculating the amount of such compensation, since no assumptions could be made about the nature of any future control, this might then necessitate a one-off increase in charges at the start of any new control. This would be disruptive for the users of leased line services and might to some extent offset the advantages (relative to the method we have identified above in Figure 6.3) of allowing a smaller one-off reduction in charges at the time the Tribunal's judgment is handed down.
- 6.149. In addition, Ofcom noted that the Tribunal's method would depart from the usual practice of setting the cap so that charges were brought into line with forecast costs on an FAC basis by the end of the charge control period. Since the cost basis is FAC, then it would be arguable that the fact that the charges would be below forecast cost would not necessarily prejudice allocative efficiency, provided they were not also below DLRIC. However, in practice it might be considered that they should not get too close to DLRIC (on a forecast basis, to the extent that this is possible to ascertain) since a margin should be left for forecast error and a cap which forced average charges to be below DLRIC could have undesirable effects on investment and entry. On balance, Ofcom explained that it believed that the risk of these intended effects was likely to outweigh any benefits from allowing somewhat smaller initial one-off cuts than those required by our method.
- 6.150. BT did not make any comments,⁸¹ and C&W broadly agreed with Ofcom's comments.⁸²
- 6.151. We also broadly agree with Ofcom's explanation of why we would not adopt the Tribunal's alternative methodology. In particular using a ROCE less than the WACC for the last year of the price control would also mean, at the start of the next control period, either that BT would have an upward-sloping glide path, ie the ROCE below the WACC would be carried forward into the next control, or that Ofcom would need to do one-off price adjustments at the beginning of the next charge control to correct for this. Both of this would add unnecessary complexity to the next price control.
- 6.152. For these reasons, we determine that we would maintain our position that the price control must end at point D as illustrated on our diagrams above.

⁸⁰Ofcom letter to Tribunal, 18 June 2010.

⁸¹BT letter to Tribunal, 21 June 2010.

⁸²Letter from C&W on 21 June 2010.

Reference Question 5(b) and 5(b)(i)

6.153. In this section, we address the following matters:

- (a) for each error identified, we consider whether it is necessary for us to determine any consequential adjustments to the level of the price controls;
- (b) if so, we consider whether it is reasonably practicable for us to do so; and
- (c) if so, we determine consequential adjustments to the level of the price controls, having regard only to those errors for which it is necessary for us to do so and indicating what price controls should have been set in the LLCC Statement had Ofcom not erred in the manner we have identified in the preceding sections of this determination.

6.154. In addressing each of those matters, we adopt a similar approach to that set out in our determination of Reference Question 5(a). Thus, we first set out any initial proposals in our Remedies Letter, before summarizing the salient points from each party's submissions in respect of this question. Finally, we set out our own assessment of the appropriate consequential adjustments, if any, in relation to those errors.

6.155. In arriving at our determination of these questions, we are mindful that we must be content that our remedy satisfies the statutory tests, in particular those under sections 47 and 88 of the 2003 Act, and we are satisfied that the remedies do so.

Consequential adjustments to the level of price controls—2(aa)

Our initial proposals

6.156. In our Remedies Letter,⁸³ we proposed that parties make submissions on the adjustments to the X (in the RPI–X glide path) as a result of reversing the one-off adjustments on 2 Mbit/s local ends.

6.157. We also invited submissions on the advantages and disadvantages of reversing the one-off price adjustment for 2 Mbit/s local ends, in particular whether it would be necessary or desirable to maintain the RPI+0 per cent sub-cap.

Summary of C&W's submissions

6.158. C&W did not see any reason why the RPI+0 per cent sub-cap should be removed.⁸⁴ C&W stated that the sub-cap had not been appealed.⁸⁵ Moreover, C&W noted that its removal would not be consistent with Ofcom's reasoning provided in the LLCC Statement, in that the sub-caps had been introduced to prevent BT funding decreases in trunk prices with increases in TI terminating prices given that trunk markets were potentially more competitive than TI terminating segments.⁸⁶

6.159. C&W also contended that, for the purpose of implementing the remedy for the unelapsed period, we should reverse the 2 Mbit/s local end price increase in full, and adjust the glide path so that final year revenues are equal to final year costs plus the WACC. C&W argued that we should take this approach, rather than adjust the

⁸³Our letter of 17 May 2010 as clarified by our letter of 20 May 2010.

⁸⁴See also p76, line 24, in the Remedies Hearing transcript.

⁸⁵§9 in C&W's response on remedies, 28 May 2010.

⁸⁶§10 in C&W's response on remedies, 28 May 2010.

2 Mbit/s local end price so that the glide path for the unelapsed period equals the glide path that Ofcom would have set, had it not erred.⁸⁷

6.160. C&W gave the following reasons for preferring the former approach. First, C&W asserted that the remedy should correct the error, which was the decision to increase starting charges for 2 Mbit/s local ends.⁸⁸ Secondly, C&W argued that reversing the starting charge would fully correct for the initial error on a prospective basis. C&W explained that, since the correction could not be made at the start of the charge control and had to be made later, there was in C&W's view no unfairness in the fact that it resulted in a different glide path (ie different, we understand, from the glide path that Ofcom would have set had it not erred) allowing lower revenues in aggregate in the future. It was not 'compensating' for the elapsed time but was merely the product of the correction being made later in the period.⁸⁹

Summary of Ofcom's submissions

6.161. Ofcom was of the view that both RPI+0 per cent sub-caps in the TI basket were required.⁹⁰

6.162. Ofcom stated that, for the purpose of implementing the remedy for the unelapsed period, it had a slight preference for reversing the 2 Mbit/s local end price adjustment such that the new glide path for the unelapsed period would follow the glide path that Ofcom would have set, had it not erred.⁹¹

6.163. Ofcom provided calculations for the impact of reversing the 2 Mbit/s price adjustment on X.

6.164. The first of Ofcom's calculations assumed that the 2 Mbit/s local end price increase that it applied in the LLCC decision was reversed at the start of the charge control, ie it represented a calculation of what the charge control would have looked like without the increase to 2 Mbit/s local end prices. The impact on X and the associated 2 Mbit/s local end price was as set out in the following table.⁹² (The table also shows the overall impact on X of making a remedial adjustment for the 3(c) errors as well; we discuss the adjustments for the 3(c) errors separately below in paragraphs 6.199 to 6.212.)

⁸⁷§19 in C&W submission re 9 June 2010 points.

⁸⁸§20 in C&W submission re 9 June 2010 points.

⁸⁹§21 in C&W submission re 9 June 2010 points

⁹⁰p4 in Ofcom's response on remedies 28 May 2010.

⁹¹p70, line 18, in the Remedies Hearing transcript.

⁹²p3 in Ofcom's Remedies Hearing slides.

TABLE 6.1 2(aa) adjustments required at the start of the price control

	<i>per cent</i>			<i>Associated reduction in 2 Mbit/s local end price* £</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>1 October 09</i>
X per LLCC	3.25	3.25	3.25	-
X after reversal of 2Mbit/s local end price adjustment†	1.50	1.50	1.50	141.84
X after all adjustments (ie also adjusting for 21CN and SiteConnect)‡	1.75	11.75	1.75	141.84

Source: CC analysis of Ofcom data.

*See paragraph 6.34.

†Table 1 in Ofcom's letter 'Xs based on CC's proposed remedies letter (22/6/10)'.

‡Table 1 in Ofcom's letter 'Xs based on CC's proposed remedies letter (22/6/10)'.

6.165. Ofcom's second calculation was based on adjusting the 2 Mbit/s local end price in its RPI-X charge control model on 1 October 2010 (rather than at the beginning of the charge control) in such a way that the X in the final two years of the price control would equal the X that Ofcom would have set had Ofcom not erred (as per Ofcom's first calculation—see Table 6.1).⁹³

6.166. To do this, Ofcom assumed that average prices were brought into line with costs (including a reasonable rate of return) by the end of the charge control period. Ofcom also assumed that the X in the first year of the price control was the same as in the original charge control model. For the purpose of calculating the adjustment to the 2 Mbit/s local end price Ofcom also assumed that the X in the each year of the price control was the unrounded X (see paragraph 6.182). The resulting X and associated reduction in the 2 Mbit/s local end price is summarized in the following table.⁹⁴

TABLE 6.2 2(aa) adjustments required at the end of year 1 of the price control

	<i>per cent</i>			<i>Associated reduction in 2 Mbit/s local end price £</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>1 October 10</i>
X per LLCC	3.25	3.25	3.25	-
X after reversal of 2 Mbit/s local end price adjustment	3.25	1.50	1.50	110.21
X after also adjusting for 21CN and SiteConnect	3.25	1.75	1.75	116.76

Source: CC analysis of Ofcom data.

Summary of BT's submissions

6.167. As noted above in our determination of Reference Question 5(a), BT's primary position was that the question of whether a starting-price adjustment was necessary should be remitted to Ofcom.⁹⁵

⁹³The X that Ofcom would have set had it not erred is the rounded number for X.

⁹⁴Table 2B in Ofcom's letter 'Xs based on CC's proposed remedies letter (22/6/10)'.

⁹⁵§10 in BT's response on remedies, 28 May 2010.

- 6.168. However, BT stated that, should it be decided that the starting price increase for 2 Mbit/s local ends should be reversed, an adjustment to the value of X would then be required to ensure the RPI–X formula did not lead to price reductions which went beyond the forecasts of efficiently incurred costs at the end of the control period.⁹⁶
- 6.169. BT further stated that, depending on the level of the 2 Mbit/s local end price adjustment, it may be possible to accommodate the price change within the basket cap (ie for it to count towards the achievement of the required X in the charge control), although this could require the suspension of the RPI–0 per cent sub-cap.⁹⁷
- 6.170. BT suggested that the calculation of the final level of X should be remitted to Ofcom to determine in the light of its final conclusions on the starting charge and the approach which should be taken to recovery of PoH costs.
- 6.171. BT stated that, for the purpose of implementing the remedy for the unelapsed period, we should reverse the 2 Mbit/s local end price such that the new glide path for the unelapsed period would follow the glide path that Ofcom would have set, had it not erred.⁹⁸

Summary of Verizon's submissions

- 6.172. Verizon did not make any submissions on this point.

Assessment

- 6.173. In determining what consequential adjustments to the level of price controls should be set, we note first that, for the reasons set out in paragraphs 6.144 to 6.146 above, we are of the view that the remedies we determine should follow as closely as possible what we understand Ofcom would have likely done in its original LLCC Statement, had it not erred.
- 6.174. This principle guides our determination of Reference Question 5(b) generally and applies to our determination of the consequential adjustments for both the 2(aa) error and the 3(c) errors. We address the 2(aa) error here, and the 3(c) errors below in paragraphs 6.188 to 6.212.
- 6.175. The 2(aa) error requires us to consider two possible consequential adjustments: (a) what adjustment should be made to the 2 Mbit/s local end price; and (b) what adjustment should be made to the X. Broadly speaking, there are two approaches available to us in determining these two questions in the context of Reference Question 5(b) and subparagraph 5(b)(i).
- 6.176. The first approach would be to take as a starting point the amount by which the 2 Mbit/s local end price would need to have been reduced on 1 October 2009 in order to reverse the one-off price increase allowed by Ofcom in the LLCC Statement: this is the reduction A–C in Figures 6.1 to 6.3 above. The next step would be to calculate what adjustment to this reduction to the 2 Mbit/s local end price should be made to allow for the fact that we are making the reduction not on 1 October 2009, but notionally a year on, ie on 1 October 2010.⁹⁹ The resulting reduction (ie the move

⁹⁶§17 in BT's response on remedies, 28 May 2010.

⁹⁷§§5 & 17 in BT's response on remedies, 28 May 2010.

⁹⁸§48 in BT's response to CC letter of 8 June 2010.

⁹⁹We note that, although the LLCC Statement was dated July 2009, the charge control is calculated on an annual basis from 1 October each year. This is why we refer to 1 October 2010 as the reference date for the purposes of our determination.

from point E to G in Figure 6.2 above) would then be used to calculate the adjusted X, ie the gradient of the line G to D in Figure 6.2 above.. On this approach, determining the end point 'G' after the reduction E–G would depend on what adjustments we considered it appropriate to make to the 2009 reduction A–C to allow for the fact that the reduction E–G occurs a year later. For this reason, as noted above in paragraph 6.135, point G may or may not fall on the line C–D.¹⁰⁰ Under this first approach, we would therefore calculate the X as a final step once we had determined where point G fell, ie by calculating the gradient of the line G–D.

6.177. For the second approach, the starting point would be to calculate the gradient of the line C–D on the basis that the reduction A–C reversed the one-off price increase to 2 Mbit/s local ends on 1 October 2009 to provide a new starting point 'C' for the glide path. Under this second approach, we would therefore calculate the X of the glide path C–D as the first step: see Figure 6.1,¹⁰¹ which (as noted in paragraph 6.131) provides a rough depiction of what we understand we are required to do by Reference Question 5(b)i. The next step would be to calculate what reduction from point E (ie to the price of 2 Mbit/s local ends) would be necessary to bring the price of 2 Mbit/s local ends as at 1 October 2010 down to meet the line C–D. On this approach, point G would fall on the line C–D, ie the reduction E–G would effectively be calibrated to achieve that result.

6.178. We prefer the second approach, which we consider offers greater simplicity and is therefore the more reasonably practicable route to correcting for the 2(aa) error by making consequential adjustments. For example, under the first approach, it would not be straightforward to allow for the fact that: the gradient of the line A–B (ie the X in the original LLCC Statement) is steeper than C–B (ie what would have been the X had the 2(aa) error not been made); thus the price of 2 Mbit/s local ends as at 1 October 2010 (notionally what is point 'E' in Figure 6.2) is lower than it would otherwise have been had the gradient been less steep; and, therefore, arguably the reduction E–G should be adjusted to allow for this consideration. We also consider that this approach is closer to what we understand Ofcom would have determined had it not erred as it does not require a further adjustment of X.

6.179. In arriving at this conclusion, we reject BT's alternative suggestion (as set out in paragraph 6.168) that, rather than adjusting the X, BT should receive a credit against its charge control obligation of delivering the X as a result of the reversal of the adjustment to 2 Mbit/s local end prices. The main reasons for rejecting this approach are that this is not what Ofcom would have done in its original LLCC decision and that we considered the adjustment to X to be the more transparent remedy. We therefore conclude that the X in the price control should be adjusted to take account of the reversal of the 2 Mbit/s price adjustment following the second approach discussed in paragraph 6.177 above.

6.180. Tables 6.1 and 6.2, based on data provided by Ofcom and set out above,¹⁰² show the steps by which we calculate the X and the associated reduction in 2 Mbit/s local end price as at 1 October 2010 using the second approach. Table 6.1 shows the

However, we refer to paragraphs 6.186 to 6.187 where we explain how we allow for the fact that the effective date of our determination, if approved by the Tribunal, is unlikely to coincide with that reference date.

¹⁰⁰We note that, since we are only considering the consequential adjustments for the 2(aa) error alone at this stage, we should in fact refer to the line G–B, where point B is the figure for final year costs without any adjustment to allow for the 3(c) errors. However, for the sake of simplicity when referring to the illustrative Figures 6.1 to 6.3, we refer to point D instead, ie the figure for final year costs after adjustments for the 3(c) errors, which we consider in paragraphs 6.188 to 6.212 below.

¹⁰¹As noted in footnote 100 above, strictly speaking Figure 6.1 shows the aggregate effect of adjusting for both the 2(aa) error and the 3(c) errors.

¹⁰²We note here that, since Ofcom has been able to provide the required data for us to provide recalculated values for X, there is no need to remit the calculation of X to Ofcom. This renders it unnecessary to consider that part of BT's argument that we remit the matter to Ofcom and we consider that argument in relation to PoH charges later in our determination of this question: see paragraphs 6.168 above and 6.216 below.

reduction in 2 Mbit/s local end price necessary to reverse the one-off price increase in the original LLCC Statement, ie £141.84. On the basis of this reduction in 2009, Table 6.1 also shows that the consequential adjustment to X after the reversal of the 2(aa) error (ie the 2 Mbit/s local end price adjustment) would have been 1.56 per cent (rounded to 1.50 per cent) over each of the three years of the charge control from 2009 to 2012. This calculation of the X constitutes the first step under the second approach.

- 6.181. Table 6.2 shows the second step under the second approach, ie calculation of the calibrated reduction in 2 Mbit/s local end price as at 1 October 2010. On the basis that (a) the X in the first year of the LLCC (ie 2009/2010) remained as it had originally been set at 3.25 per cent and (b) the X in the remaining two years of the LLCC (ie 2010/11 and 2011/12) should be as calculated in Table 6.1 at 1.50 per cent, Table 6.2 shows that the associated reduction to 2 Mbit/s local end prices is £110.21.
- 6.182. We note in this context that in our view the calculation of the calibrated 2 Mbit/s local end price should be based on the unrounded X. This is to ensure that the process we follow in our remedy is as close as possible to Ofcom's original procedures and methods in the LLCC charge control. In the LLCC charge control, Ofcom made the adjustments to the 2 Mbit/s local end price first and then calculated the rounded X. Therefore, in reversing the 2 Mbit/s local end price the adjustment should be calculated with reference to the unrounded X. To put it another way, whilst the first step in calculating the remedy is the correction of X, the first step that Ofcom would have taken when setting the charge control is the adjustment to the 2 Mbit/s local end price. The adjustment to the 2 Mbit/s local end price would then have led to the unrounded X, which would then have been rounded to the nearest 0.25 per cent. It is for this reason that the adjustment to the 2 Mbit/s local end price is based on the unrounded figure of X.
- 6.183. We note, however, that the adjusted value of the X can only be finally determined once all adjustments to the charge control have been made. We therefore need to take into account all adjustments that impact on X when deciding the final adjusted value of X. Table 6.2 therefore shows both the incremental impact on X of reversing the 2 Mbit/s local end price increase and also the cumulative impact once the adjustments consequential to the 3(c) errors are incorporated.¹⁰³ It is the X after all adjustments which forms the basis for our determination of Reference Question 5(b) and subparagraph 5(b)(i).
- 6.184. There remain two related issues to consider: first, whether there is any need to alter the RPI-0 per cent sub-cap; and, secondly, how to make allowance for the fact that the effective date for the determinations we provide to the Tribunal is unlikely to coincide with the reference date for each year of the charge control.
- 6.185. As to the first issue, we note that the parties were broadly in agreement that such action was unnecessary for reasons which we consider persuasive. C&W and Ofcom did not think that an adjustment to the RPI-0 per cent sub-cap was necessary. BT indicated that such an assessment may only be necessary if no adjustment was made to the X (ie if we adopted BT's suggestion to credit the reversal of the 2 Mbit/s price increase to BT's achievement of X, which we did not—see paragraph 6.179). We agree with C&W that the sub-cap has not been appealed. We also consider that our remedies do not materially change the basis for Ofcom's reasoning provided in

¹⁰³We note that this incremental information also satisfies the Tribunal's request that we ensure the reasoning behind any calculation of the aggregate effect of the 2(aa) error and the 3(c) errors is sufficiently clear that it is possible to isolate the effect of any of those errors individually: see paragraph 6.140 above. For a summary of the different permutations of the effect of each error or combination of errors, please see Appendix C.

the LLCC Statement for implementing the sub-caps, which had been introduced to limit the ability for BT to fund decreases in trunk prices with increases in TI terminating prices given that trunk markets were potentially more competitive than TI terminating segments.¹⁰⁴ We therefore conclude that there is no need to change the RPI-0 per cent sub-caps.

- 6.186. As to the second issue, we do not accept the argument advanced by C&W and BT, who suggested that the remedies should be calculated with reference to the date of our determination. It is our view that remedies can only come into effect on the date of the Tribunal's decision and that whilst it would be simpler to use an earlier (or fixed) date this would not be appropriate.
- 6.187. We find that in order to allow for the fact that implementation of the remedy will not occur on 1 October 2010, Ofcom should be required to recalculate a 2Mbit/s local end price adjustment such that the X from the date of the Tribunal's decision and the revenues in the final year of the price control are the same as they would have been had Ofcom not erred. We note that the actual X for the year in which the Tribunal's decision occurs may be a weighted average of the old and the new X. We set out below one methodology which we believe would achieve this, but should Ofcom agree with the parties a simpler solution, that would be acceptable:
- (a) The X in the year of the charge control in which the Tribunal's decision falls should be adjusted on a pro rata basis, using the elapsed period (in that year) as the weight for the X in the original LLCC decision and the unelapsed period (in that year) as the weight for the adjusted X, using an actual days versus actual days count.
 - (b) The price adjustment for 2 Mbit/s local ends should be adjusted pro rata on the basis of the number of days that have elapsed, using the value of the adjustment to the 2Mbit/s local end price calculated for 1 October 2010 and the starting price adjustment for the 2Mbit/s local end price on 1 October 2009 as the price input variables and the number of days from 1 October 2010 as the day input variable. The calculation should be as follows: (size of the price adjustment to 2Mbit/s local ends on 1 October 2010) plus {(the actual number of days from 1 October 2010 to the effective date of the tribunal decision) times (the difference between the size of the adjustment on 1 October 2010 and 1 October 2009)}.¹⁰⁵

Consequential adjustments to the level of price controls—3(c)

Our initial proposals and subsequent developments

- 6.188. In our Remedies Letter,¹⁰⁶ we proposed that the error in 21CN and SiteConnect could be corrected by adjusting Ofcom's charge control model for these errors and then recalculating the X (in the RPI-X glide path).
- 6.189. We proposed that Ofcom submit a proposal for how it intended to calculate the adjustments to the inputs into the RPI-X model that would reflect the corrections to the errors in 21CN and SiteConnect as set out in paragraph 6.119 and that, based on those calculations, Ofcom recalculate the X in the RPI-X glide path individually and cumulatively for both adjustments.

¹⁰⁴Paragraphs 4.23 and 4.24 in the LLCC statement.

¹⁰⁵ Illustrative example: price adjustment on 1 October 2009 is 141, on 1 October 2010 is 110. The effective date of the decision is 1 September 2010. Then the formula would be $(110 + \{(-30/365) \times (110 - 141)\}) = 113$

¹⁰⁶Our letter of 17 May 2010 as clarified by our letter of 20 May 2010.

6.190. Accordingly, we first set out below Ofcom's submissions on these issues, before summarizing the salient points of the submissions received from the other parties.

Summary of Ofcom's submissions

6.191. Ofcom adjusted its charge control model for the adjustments to the TI basket for 21CN and SiteConnect (see paragraph 6.119)¹⁰⁷ and provided the calculations for the impact on X of making adjustments for 21CN and SiteConnect which are set out in Tables 6.3 and 6.4 below. When making this adjustment Ofcom assumed that the corrections to 21CN and SiteConnect were applied on a pro-rata basis.

6.192. Ofcom's calculations as set out in Table 6.3 assumed that the adjustments to 21CN and SiteConnect would apply from the start of the charge control, ie it represented a calculation of what the charge control would have looked like without the errors in 21CN and SiteConnect. The impact on X was as follows.¹⁰⁸

TABLE 6.3 3(c) adjustments required at the start of the price control

	<i>per cent</i>		
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>
X per LLCC	3.25	3.25	3.25
X after adjustment for 21CN	3.50	3.50	3.50
X after adjustment for SiteConnect	3.50	3.50	3.50
X after both adjustments	3.50	3.50	3.50
X after all adjustments (ie also adjusting for 2 Mbit/s local ends)	1.75	1.75	1.75

Source: CC analysis of Ofcom data.

6.193. Ofcom's calculation as set out in Table 6.4 showed what adjustments are required now, considering that the charge control had already started. This was based on adjusting the 2 Mbit/s local end price in its RPI-X charge control model on 1 October 2010 in such a way that the X in the final two years of the price control would equal the X that Ofcom would have set had Ofcom not erred (as per Ofcom's first calculation—see Table 6.3).¹⁰⁹

6.194. To do this, Ofcom assumed that average prices were brought into line with costs (including a reasonable rate of return) by the end of the charge control period. Ofcom also assumed that the X in the first year of the price control was the same as in the original charge control model. For the purpose of calculating the adjustment to the 2 Mbit/s local end price Ofcom also assumed that the X in the last two years of the price control was the unrounded X (see paragraph 6.182). The impact on X was as follows.¹¹⁰

¹⁰⁷p6 in Ofcom's response on remedies, 28 May 2010.

¹⁰⁸Table 1 in Ofcom's letter 'X calculations for CC's proposed remedy scenarios', 22/6/10.

¹⁰⁹The X that Ofcom would have set had it not erred is the rounded number for X.

¹¹⁰Table 2B in Ofcom's letter 'Xs based on CC's proposed remedies letter (22/6/10)'.

TABLE 6.4 3(c) adjustments required at the end of year 1 of the price control

	<i>per cent</i>			<i>Associated reduction in 2 Mbit/s local end price £</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>1 October 10</i>
X per LLCC	3.25	3.25	3.25	-
X after adjustment for 21CN	3.25	3.50	3.50	21.26
X after adjustment for SiteConnect	3.25	3.50	3.50	21.18
X after both adjustments	3.25	3.50	3.50	24.74
X after all adjustments (ie also adjusting for 2 Mbit/s local ends)	3.25	1.75	1.75	116.76

Source: CC analysis of Ofcom data.

Summary of C&W's submissions

6.195. C&W broadly agreed with our proposals as to how to approach remedying the 3(c) errors, and with Ofcom's methodology and data.¹¹¹ In particular, C&W stated that Ofcom's adjustments to X were broadly in line with what they expected.¹¹²

6.196. C&W commented on the materiality threshold that should apply for such an adjustment. C&W considered that we should adopt the same methodological approach to materiality as Ofcom adopted in the LLCC Statement, in particular not to exclude any adjustments on the ground that they were immaterial or too small, but to apply the rounding to the nearest quarter of a percentage point in the final calculation of the value of X.¹¹³

Summary of BT's submissions

6.197. BT was broadly supportive of our proposals of how to calculate the adjustments to X.¹¹⁴ However, BT argued that, since the errors in 21CN and SiteConnect were small, they on their own should not impact the X in the RPI-X glide path.¹¹⁵

Summary of Verizon's submissions

6.198. Verizon did not make any submissions

Assessment

6.199. Before turning to consider what consequential adjustments to the level of price controls should be set for the 3(c) errors, we note first that certain of our observations and determinations above in relation to the 2(aa) error apply in relation to the 3(c) errors as well. In particular, we refer to paragraphs 6.173, 6.183 (to both of which we refer further briefly below), and 6.186 to 6.187 (regarding reconciling the effective date of this determination with the reference date of the charge control).

¹¹¹§14, §16, §17 in C&W's response on remedies, 28 May 2010, and Section 2 in C&W's response to our letter of 20 May 2010 on 4 June 2010.

¹¹²Section 3 in C&W's response to our letter of 20 May 2010 on 4 June 2010.

¹¹³§§4 & 14 in C&W's response on remedies, 28 May 2010.

¹¹⁴p2 in BT's response to our Remedies Letter on 21 May 2010.

¹¹⁵§3b in BT's response on remedies, 28 May 2010.

- 6.200. As to our decision, in paragraph 6.173, to follow as closely as possible what we understand Ofcom would have likely done in its original LLCC Statement, we note that C&W agreed with this approach, submitting that the same principles and methodology (for example, the use of rounding) should be used for calculating the adjustment to X as in the original charge control decision.
- 6.201. We have considered BT's submission that the adjustments for 21CN and SiteConnect were immaterial and therefore should not have an impact on X in the light of this approach. To do so, we refer to Ofcom's calculations for the impact on X in Tables 6.3 and 6.4 above, in which Ofcom provided figures for both 21CN and SiteConnect individually and cumulatively. On the basis of these figures, we reject BT's argument on this ground. These figures show that, applying Ofcom's methodology of rounding to the nearest 0.25 per cent, the X would have increased on both an individual and a cumulative basis. We therefore consider that the X in the RPI-X glide path should be adjusted for both 21CN and SiteConnect.
- 6.202. However, in accordance with our determination in paragraph 6.183, we agree with BT that the adjusted value of the X can only be finally determined once all adjustments to the charge control have been made.¹¹⁶
- 6.203. With this in mind, we turn now to consider the matters specific to the consequential adjustments for the 3(c) errors. We have already determined, in paragraph 6.52, the level of the reduction which should be made to correct for the 3(c) errors.
- 6.204. Therefore, the first consequential adjustment to which we must turn our mind is the calculation of the adjusted value of the X. This adjustment to the X reflects the fact that, after making the reduction for 21CN and SiteConnect costs in accordance with our determination of Reference Question 5(a) as it relates to the 3(c) errors (ie reducing the end point of the glide path from point B to point D in Figures 6.1 to 6.3 above), the gradient of the glide path becomes steeper.¹¹⁷
- 6.205. However, we note that we also need to consider whether a further consequential adjustment is required as a result of the fact that we are now a significant part of the way through the first full year of the LLCC. The possible need for such an adjustment arises from the fact that, as a result of the reduction B-D, the resultant notional glide path A-D¹¹⁸ falls more steeply and therefore diverges from the actual glide path A-B set by the LLCC. This divergence begins at the start of the charge control and, by 1 October 2010, means that we need to consider whether to make a one-off reduction to the current price of certain services in the TI basket in order to bring the actual glide path A-B into line with the new, corrected glide path A-D.
- 6.206. Tables 6.3 and 6.4, provided by Ofcom and set out above, show the steps by which Ofcom has calculated the adjusted value of the X had Ofcom not erred and an associated adjustment in the 2 Mbit/s local end price for the charge control to be implemented now in the light of the fact that some of the charge control period has elapsed.
- 6.207. We determine that Ofcom should make a further consequential adjustment to the price of one or more services in the TI basket in order to align the glide path with the position which would have pertained had Ofcom not erred.

¹¹⁶See also our comments in footnote 103.

¹¹⁷We note that we are only considering the consequential adjustments for the 3(c) errors alone at this stage and, so, do not consider the countervailing effect of the 2(aa) error adjustment on the glide path in making this observation.

¹¹⁸The glide path A-D is not shown on our Figures 6.1 to 6.3 because they illustrate the cumulative effect of adjustments for both the 2(aa) error and the 3(c) errors. But we refer here to the glide path which would be described by a line traced from point A to point D on any of those diagrams.

- 6.208. We note that Ofcom, in the information provided to us, has worked on the basis that the appropriate service in respect of which to make a one-off adjustment is 2 Mbit/s local ends.
- 6.209. In our view, Ofcom's proposal to apply the additional adjustment to 2 Mbit/s local ends represents the most pragmatic solution in effecting the relevant adjustments on 1 October 2010 for SiteConnect and 21CN. We take this position even though there is no direct link between the 3(c) errors and an adjustment to 2 Mbit/s local end prices. However, we favour applying the adjustment to the 2 Mbit/s local end service for practical reasons because it is a price that is being adjusted in relation to Reference Question 2aa and because it is used by BT and OCPs in a similar proportion to the overall revenues.¹¹⁹ It is therefore in our view the most reasonably practicable option available to us in the circumstances.
- 6.210. We are, however, conscious of the need to consider the relevant statutory tests when determining how Ofcom should now remedy the errors we have identified. For this reason, we have verified that the resulting price of 2 Mbit/s local ends after this reduction and the one discussed above in relation to the 2(aa) error in paragraph 6.173 to 6.187 does not result in a price lower than DLRIC.
- 6.211. We also determine that the calculation of the adjustment to 2 Mbit/s local end prices need to be calculated with reference to unrounded figures of X. We refer to our comments in paragraph 6.182 in relation to our determination of the 2aa error, which apply here as well.
- 6.212. In the light of these conclusions and on the basis of the data set out in Tables 6.3 and 6.5, we determine that the consequential adjustments to the X for the 21CN and Site Connect reductions in final year charges are 3.50 per cent, both individually and cumulatively. We further determine that the associated reduction in 2 Mbit/s local end prices for for the 21CN and Site Connect reductions in final year charges are £21.26 and £21.18 respectively on an individual basis and £24.74 cumulatively.

Consequential adjustments to the level of price controls—4(a)(i), 4(a)(iii), 4(b)(i)

Assessment

- 6.213. Given the nature of our finding of error in respect of the 4(a)(i), 4(a)(iii) and 4(b)(i) errors, we determine that no consequential adjustments to the level of the price controls is necessary. We expand briefly on our reasons for this conclusion below.
- 6.214. The 4(a)(i) and 4(a)(iii) errors relate to the level of common or non-marginal costs which were allocated to PoHs. We did not find that the costs themselves had not been incurred, only that they should not be used in the calculation of the price which BT is allowed to charge for PoHs. The remedy in respect of these errors involves the reallocation of the costs from PoHs to other services within the TI basket. As such, the remedy for these errors does not affect the overall level of costs of the TI basket. For these reasons, our remedies in relation to the errors identified in Reference Questions 4(a)(i) and 4(a)(iii) would not affect the charge control.
- 6.215. Our finding of error in relation to Reference Question 4(b)(i) related to Ofcom's decision to give a discretion to BT in deciding how to recover new PoH charges. The 4(b)(i) error therefore does not have any impact on the level of the price controls.

¹¹⁹05 TI Basket base year profitability—PPC principal workbook 20 06 09.xls", tab "PPCs £m

6.216. In the light of these conclusions, it is therefore unnecessary to consider further BT's suggestion that the calculation of the final value of X should be remitted to Ofcom, in particular depending on the approach to the recovery of PoH costs. Given that our remedies for PoH costs will not affect the X of the price control and, given that Ofcom was readily able to provide calculations of the adjusted X, there is no need to refer the calculation of X to Ofcom.

Determination

6.217. For the reasons given above, we determine that the consequential adjustments to the level of the price controls set out in the following table should be made in respect of the 2(aa) and 3(c) errors.

TABLE 6.5 **Cumulative adjustments needed at the start of the price control**

			<i>per cent</i>	<i>Associated reduction in 2 Mbit/s local end price £</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>1 October 09</i>
X per LLCC	3.25	3.25	3.25	-
X after all adjustments	1.75	1.75	1.75	141.84

Source: CC analysis of Ofcom data.

TABLE 6.6 **Cumulative adjustments needed at the end of year 1 of the price control**

			<i>per cent</i>	<i>Associated reduction in 2 Mbit/s local end price £</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>1 October 10</i>
X per LLCC	3.25	3.25	3.25	-
X after all adjustments	3.25	1.75	1.75	116.76

Source: CC analysis of Ofcom data.

6.218. We set out in this table only the aggregate consequential adjustments taking account of the 2(aa) error and both 3(c) errors and assuming that the date of the Tribunal judgment is 1 October 2010. The calculation of the actual adjustment on the effective date of the Tribunal's decision will need to be performed by Ofcom (see paragraph 6.186 to 6.187). For details of the incremental adjustments relevant to each error or combination of errors, see Tables 6.1 to 6.3 above in paragraphs 6.164, 6.166 and 6.192.

6.219. However, we draw to the Tribunal's attention the fact that the figures set out in Tables 6.1 to 6.3 have not been reviewed by us. We therefore further determine that Ofcom should be directed to perform an appropriate review of their calculations at the time at which Ofcom comes to implement the Tribunal's order.

6.220. For the further reasons give above, we determine that no consequential adjustments to the level of the price controls should be made in respect of the 4(a)(i), 4(a)(iii) and 4(b)(i) errors.

Reference Question 5(b)(ii)

- 6.221. In this section, we consider what adjustments, if any, should be made to the unelapsed part of the price control in light of our determination at paragraphs 6.217 to 6.220 that the price controls during the elapsed period of the price control had been set at inappropriate level.
- 6.222. Our determination in relation to this Reference Question is made on the assumption that it may, having regard to the criteria in section 88 of the 2003 Act, be lawful and appropriate to adjust the price control applicable during the unelapsed period in this manner.
- 6.223. In addressing this Reference Question, we structure our determination in the same way as we have done for our determination of Reference Question 5(b)(i).

Our initial proposals

- 6.224. We were conscious that there are numerous possible factors we could consider in determining this Reference Question. We therefore asked the parties to submit their comments on Reference Question 5(b)(ii) in our letter to the parties on 26 May 2010 ('the 5(b)(ii)' letter).
- 6.225. In particular, we asked for the parties' comments on the following considerations:
- (a) whether we should calculate any detriment (or benefit) which has occurred in the *elapsed* period by reference to actual data or the original data in Ofcom's charge control model;
 - (b) whether the adjustments to the charge control during the *unelapsed* period should be calculated by reference to updated forecasts or the original data in Ofcom's charge control model;
 - (c) whether the amount of any detriment (or benefit) during the elapsed period and any adjustment to the unelapsed period should be calculated from the perspective of the gains made by the supplier or from the perspective of losses to individual customers;
 - (d) whether consequential decisions made on the basis of the errors in the original LLCC statement (eg as to the alternative services purchased during the period when the price of certain services was at an inappropriate level) should be taken into account;
 - (e) if calculations should be based on actual data, updated forecasts or consequential decisions, how the relevant data should be procured;
 - (f) if the original data in Ofcom's charge control model should be used, how, if at all, any deviation from the actual detriment/benefit should be accounted for;
 - (g) how, if at all, we should allow for the fact that the effective date for determining the dividing line between the elapsed and unelapsed period is by reference to the date of the Tribunal's judgment following our determination (a date which is unknown, since it is not fixed by the 2003 Act or by court order), rather than our final determination itself;
 - (h) whether any of the calculations should include an allowance for interest and, if so, on what basis any such interest should be calculated; and

- (i) what other considerations, if any, we should take into account in our decision.

Submissions from the parties

- 6.226. As a preliminary observation, we note that some of the parties' submissions were in our view directed primarily to the question of whether it was lawful or appropriate to make an adjustment to the unelapsed period of the price control in consequence of the price controls during the elapsed period had been set an inappropriate level.
- 6.227. In this regard, we refer to paragraph 6.125 above, in which we noted that Reference Question 5(b)(ii) requires us to proceed on the assumption that it may be lawful and appropriate to make such an adjustment during the unelapsed period. We therefore explained that we regard it as neither necessary nor appropriate for us to seek to determine the lawfulness or appropriateness of making such an adjustment.
- 6.228. Accordingly, we focus instead on those parts of the parties' submissions which address the matters we asked them to consider in our 5(b)(ii) letter.

Summary of C&W's submissions

- 6.229. C&W addressed the matters set out in paragraph 6.225 in the following terms.
- 6.230. In C&W's opinion, any calculations should be based on the data used in Ofcom's original charge control model.¹²⁰ C&W was of the view that the original dataset in Ofcom's charge control model (with corrections for the errors as per our determination) should be used to calculate the benefit to BT in the elapsed period and the adjustment to the unelapsed period.¹²¹ Consequential decisions as a result of the error in the price control should not be taken into account in setting the charge control going forward.¹²²
- 6.231. C&W confirmed that, in its view, the adjustment for any detriment (or benefit) in the elapsed period should be calculated with reference to BT only. The benefit achieved by BT in the elapsed period should accrue interest at the Oftel Interest Rate as defined in BT's Standard Interconnect Agreement just as would be the case with any other retrospective adjustment of charges.¹²³
- 6.232. C&W was further of the view that any adjustment to the unelapsed period of the charge control must not lead to BT earning less than the marginal cost in any year of the unelapsed period of the charge control.¹²⁴ C&W referred to the Court of Appeal judgment in the Calls to Mobile Appeals in this context.¹²⁵ C&W later clarified that, since the glide path was still downward sloping, it considered it unlikely that revenues would fall below costs and it therefore regarded this point as a non-issue.¹²⁶
- 6.233. C&W's response as to the uncertainty of the date of the Tribunal decision was to treat the elapsed period as expiring at the time of our determination.¹²⁷

¹²⁰Response to §§6Ai and 6Aii in C&W's response on 5(b)(ii), 2 June 2010.

¹²¹Response to §6Ai and 6Aii in C&W's response on 5bii, 2 June 2010.

¹²²Response to §6Aiv in BT's response on 5bii, 2 June 2010.

¹²³Response to §6C in C&W's response on 5bii, 2 June 2010.

¹²⁴Response to §6Aii in C&W's response on 5bii, 2 June 2010.

¹²⁵Response to §6Aii in C&W's response on 5bii, 2 June 2010.

¹²⁶p71, line 12ff, in the Remedies Hearing transcript.

¹²⁷Response to §6C in C&W's response on 5bii, 2 June 2010.

6.234. C&W noted that BT had implemented a further increase to charges for 2 Mbit/s local ends since the start of the charge control. C&W had no objection to reflect this price increase in the adjusted price for 2 Mbit/s local ends going forward (provided it was consistent with all requirements of the SMP conditions including sub-caps), but that the starting charge for 2 Mbit/s local ends used in calculating the adjusted glide path should be based on the 2 Mbit/s local end price before this price increase.¹²⁸

Summary of Ofcom's submissions

6.235. Ofcom provided us with an estimate for the impact on X that would result if an adjustment to the unelapsed period of the charge control were to be made in order to correct for the overpayment as a result of errors during the elapsed period. In other words, the adjustments were calculated so that BT's revenues would be reduced in the last two years of the control in order to compensate for overpayment in the first year of the control.¹²⁹

6.236. For the purpose of calculating the new X, Ofcom reduced the 2 Mbit/s local end price to a level where the overpayment in the elapsed period was recovered in the unelapsed period.¹³⁰ In other words, the adjustment to the 2 Mbit/s local end price was set so that the overall revenue accruing to BT throughout the charge control would be the same as if the 2 Mbit/s local end prices had not been increased at the start of the charge control. Ofcom further assumed that all adjustments would take place on 1 October 2010 and that the ROCE in the final year of the price control equalled the WACC.¹³¹

6.237. On the basis of these assumptions and certain assumptions regarding the interest rate used, Ofcom provided the following indicative estimate for the adjustment to X.

TABLE 6.7 Required 5(b)ii adjustments at the end of year 1 of the price control

	<i>per cent</i>			<i>Associated reduction in 2 Mbit/s local end price</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>£</i>
				<i>1 October 2010</i>
X per LLCC	3.25	3.25	3.25	-
X after all adjustments *	3.25	-3.17 (rounded to -3.25)	-3.17 (rounded to -3.25)	316.01

Source: CC analysis of Ofcom data.

*Table 3 in Ofcom's letter 'X calculations for CC's proposed remedy scenarios', 22/6/10.

6.238. The negative RPI adjustment in Table 6.7 above means that BT will be able to increase average prices over the last two years of the price control, ie the RPI-X price control becomes a RPI+X price control for the last two years.

6.239. Ofcom noted that in its calculations it had chosen to reduce the price for 2 Mbit/s local ends, but that this would result in the 2 Mbit/s local end price falling below the level of DLRIC, which would be undesirable.¹³²

¹²⁸S6 in C&W's response on remedies 28 May 2010.

¹²⁹p37, line 27ff, in the Remedies Hearing transcript.

¹³⁰p38, line 13ff, in the Remedies Hearing transcript.

¹³¹p2 of Ofcom's Remedies Hearing slides on Reference Question 5(b)ii and p37, line 25, in the Remedies Hearing transcript.

¹³²p38, line 27, and p38, line 18, in the Remedies Hearing transcript.

6.240. Ofcom suggested that a possible solution would be for BT to provide a proposal for an alternative set of adjustments.¹³³ Ofcom also stated that using alternative price reductions would not have any significant impact on the value of the RPI-X per cent calculated by reducing the 2 Mbit/s local end price.¹³⁴

Summary of BT's submissions

6.241. BT addressed the matters set out in paragraph 6.225 in the following terms.

6.242. In BT's view, any calculations should be based on the data used in Ofcom's original charge control model.¹³⁵ Consequential decisions as a result of the error in the price control should not be taken into account in setting the charge control going forward.¹³⁶

6.243. BT disagreed that the purpose of an adjustment to the price control should be to compensate customers for inappropriate conduct or behaviour by BT as the adjustment was based on an error by Ofcom.¹³⁷ As a result, BT argued that any remedy should be about setting correct regulated prices going forward based on total basket revenues and costs and not about compensating customers, whether in aggregate or individually.¹³⁸ BT also argued that interest should therefore not be part of the calculation of the appropriate adjustments to the charge control.¹³⁹

6.244. BT's response as to the uncertainty of the date of the Tribunal decision was to suggest that we calculate remedies up to the date of our determination and indicate what methodology should apply for the period between that date and the Tribunal's judgment.¹⁴⁰

6.245. BT submitted that since the start of the charge control, BT would have changed a number of prices to comply with its charge control obligations and meet customer demand (for example, BT has changed the 2 Mbit/s local end prices). Any calculations should take into account these price changes.¹⁴¹

6.246. Following C&W's observation (in paragraph 6.232) that any remedy must not lead BT to earn less than marginal cost, BT also argued that Ofcom's model should be updated with current actual data and updated forecasts to ensure that BT did not earn less than marginal cost.

Summary of Verizon's submissions

6.247. Verizon did not make any submissions on these matters.

Assessment

6.248. In order to determine Reference Question 5(b)(ii), we need to decide on the size of the one or more reductions in the price of services in the TI basket which would provide an appropriate adjustment to the price control for the unelapsed period to

¹³³p40, line 4, in the Remedies Hearing transcript.

¹³⁴p38, line 28, in the Remedies Hearing transcript.

¹³⁵Response to §§6Ai and 6Aii in BT's response on 5bii, 2 June 2010.

¹³⁶Response to §6Aiv in BT's response on 5bii, 2 June 2010.

¹³⁷Response to §6Aiii in BT's response on 5bii, 2 June 2010.

¹³⁸Response to §6Aiii in BT's response on 5bii, 2 June 2010.

¹³⁹Response to §6D in BT's response on 5bii, 2 June 2010.

¹⁴⁰Response to §6C in BT's response on 5bii, 2 June 2010.

¹⁴¹Response to §6E in BT's response on 5(b)(ii), 2 June 2010.

reflect the fact that the price control during the elapsed period was set an inappropriate level for the reasons we have determined in Reference Questions 2(aa) and 3(c) (and the related parts of Reference Questions 5(a) and 5(b) (including subparagraph 5(b)(i)). These reductions are depicted in Figure 6.3 above by the line E–F (ie a reduction greater than the reduction E–G which we discussed in paragraphs 6.176 to 6.179 above). As a consequence of this reduction E–F, it will also be necessary to calculate the resultant glide path F–D.

- 6.249. We set out below, in subparagraphs 6.257 to 6.265, what we consider to be the appropriate parameters to use in calculating this remedy for Reference Question 5(b)(ii), taking into account the parties' submissions in response to our 5(b)(ii) letter and in subsequent correspondence.

Preliminary observation

- 6.250. However, as a preliminary observation, we note that we have not found it easy to resolve the tension we have found to exist between, on the one hand, the requirement in Reference Question 5(b)(ii) that we proceed on the assumption that it may, having regard to the criteria in section 88 of the 2003 Act, be lawful and appropriate to make the further 5(b)(ii) adjustment and, on the other hand, the need to identify the parameters within which we should proceed to calculate what that adjustment should be.
- 6.251. This tension arises where there are two or more alternative bases on which we could proceed in setting a given parameter for our approach in calculating the relevant adjustment. We refer, by way of example, to the consideration noted above in paragraph 6.225(c), ie whether any adjustment should be calculated from the perspective of the gains made by the supplier or from the perspective of losses to individual customers.
- 6.252. The decision as to which alternative we should choose in relation to a particular parameter should logically depend on a prior decision as to the legal basis on which we are making the relevant adjustment. In the case of the example in paragraph 6.225(c), we would suggest that the decision would depend on whether the legal rationale for making such an adjustment were to compensate purchasers or to disgorge profits made by the supplier or some other reason. In our view, the criteria in section 88 of the 2003 Act are likely to inform which of these legal rationales for making the relevant adjustment should apply.
- 6.253. However, since we are instructed to proceed on the assumption that such an adjustment is lawful having regard to the criteria in section 88 of the 2003 Act, in our view it is not for us to seek to explore the reasons why it is lawful. Consequentially, we have not made the logically prior decision as to the legal basis on which we are making the relevant adjustment.
- 6.254. Whether this tension has any practical impact in this appeal will depend on whether the Tribunal determines that it is lawful and appropriate to make the 5(b)(ii) adjustment and, if so, whether the parameters we have used in calculating that adjustment can be reconciled with the legal basis on which the Tribunal determines that that adjustment was lawful and appropriate.
- 6.255. We did not consider it reasonably practicable in the time available to provide what could have been myriad alternative calculations for the 5(b)(ii) adjustment to allow for all the possible permutations of the parameters set out below, which is what would arguably have been necessary in order to anticipate all possible outcomes of the Tribunal's judgment on the 5(b)(ii) issue.

6.256. In the event that the Tribunal considers that the parameters we have applied in calculating the 5(b)(ii) adjustment are incompatible with its finding on the legality and appropriateness of such an adjustment, we would respectfully invite the Tribunal to refer a supplementary question to us which we will then seek to determine with the benefit of the Tribunal's judgment on the point.

Parameters used in calculating the 5(b)(ii) adjustment

6.257. We now turn to set out the parameters we have applied in calculating the 5(b)(ii) adjustment with these preliminary observations in mind. (For the avoidance of doubt, the order of the paragraphs below is not intended to reflect exactly the order in paragraph 6.225 above.)

6.258. First, we determine that the adjustment to the price control for the unelapsed period should be calculated so that BT is projected to earn the same amount of revenue in the three years of the charge control as if Ofcom had not erred (ie the revenues as determined under Reference Question 5(b)(i)). We regard this as consistent with the general purpose of Reference Question 5, ie to correct for the errors we have identified.

6.259. Secondly, in our view, the detriment (or benefit) that has occurred in the elapsed period and the necessary adjustments to the controls during the unelapsed period should be calculated by reference to the original data in Ofcom's charge control model. None of the parties disagreed with this approach. We consider that using actual data would require a significant amount of additional data to be collected including a significant amount of estimates; and we do not consider that it would have been reasonably practicable or proportionate to do so in the time available. Furthermore, this conclusion is consistent with the guiding principle that we should follow what we understand would have been Ofcom's approach to the extent possible—a principle which we identified in paragraphs 6.173 and 6.174 and which we adopted for the reasons set out in paragraphs 6.144 to 6.146.

6.260. In arriving at the conclusion in paragraph 6.259 that we should use Ofcom's original data, we are conscious that we have thereby not accepted the following argument advanced by BT. Following C&W's observation (in paragraph 6.232) that any remedy must not lead BT to earn less than marginal cost, BT argued that Ofcom's model should be updated with current actual data and updated forecasts to ensure that BT did not earn less than marginal cost.

6.261. We consider it preferable to use Ofcom's original data, despite BT's argument, for the following reasons. First, given that marginal cost is likely to be lower than DLRIC, we consider it unlikely that BT will earn less than marginal cost. Secondly, it would not in our view be reasonably practicable for us to determine Reference Question 5(b)(ii) if we were to attempt to obtain new actual data.

6.262. However, if it were decided that the 5(b)(ii) adjustment should be made, we would recommend that the numbers should be audited by Ofcom before doing so. We are conscious of the need to ensure that the resulting charge control must comply with the relevant statutory tests. Since we are not in a position to assess the underlying data fully in the present circumstances, it would be necessary for Ofcom to do so in order to be satisfied that there was power under the 2003 Act to set such a condition.

6.263. Thirdly, we determine that the amount of any detriment (or benefit) in the elapsed period and any adjustment to the unelapsed period should be calculated with reference to BT as the supplier only, using Ofcom's charge control model. Again, we note that none of the parties disagreed with this approach. In our view, collecting

data for individual customers would be disproportionate and not reasonably practicable. Furthermore, we also considered that implementing a remedy for individual customers would deviate from the original LLCC charge control that only imposed a condition on BT, without any reference to individual customers.

- 6.264. Fourthly, we do not consider that consequential decisions made on the basis of the errors in the original LLCC Statement should be taken into account when calculating the appropriate remedy for Reference Question 5(b)(ii). Once again, we note that none of the parties suggested that consequential decisions should be taken into account. It would be disproportionate and not reasonably practicable to collect the required data to make such an adjustment. In any event, it would be inconsistent with our decision in paragraph 6.263 to focus on the consequential decisions of customers, having decided that we should calculate the adjustment by reference to BT as supplier rather than its customers.
- 6.265. Fifthly, we are of the view that interest should be applied to the amount of overcharging in the elapsed period for the purpose of calculating the remedy for Reference Question 5(b)(ii). We consider it appropriate to make an adjustment for interest for three reasons: (a) BT would otherwise have the benefit of overcharging in the elapsed period for a longer period of time than it would have the detriment of lower prices in the unelapsed period; (b) our assumption is that an adjustment to the unelapsed period is lawful and appropriate; and (c) this decision accords with our decision (in paragraph 6.258 and in the other paragraphs referred to there) that the remedy should put BT in the position over the three years of the charge control as if Ofcom had not erred.
- 6.266. We determine that the interest rate that should apply is the appropriate Ofcom Interest Rate as defined in BT's Standard Interconnect Agreement as suggested by C&W (which currently is LIBOR plus 3/8 per cent¹⁴²). We consider this rate to follow most closely what we understand Ofcom would be likely to have done in the circumstances. In any event, we consider it the most reasonably practicable approach to give effect to this remedy by adopting an NPV-neutral approach using the interest rate described above as the discount factor.
- 6.267. Sixthly, we turn to consider how to reconcile the effective date of this determination with the reference date for the charge control pricing periods. In this regard, we note that C&W and BT suggested that the remedy should be calculated with reference to the date of our determination. However, since Ofcom's charge control model calculates the charge control on an annual basis, we did not consider this a reasonably practicable approach.
- 6.268. We therefore find that the adjustments to the charge control under this Reference Question 5(b)(ii) should be referred to Ofcom to calculate in the event that the Tribunal decides that the 5(b)(ii) adjustment should be implemented. Ofcom's calculation will need to provide an adjustment to the unelapsed period to take into account the overpayment in the elapsed period. To effect this adjustment Ofcom will need to calculate the new X for the unelapsed period and the required adjustment to the 2Mbit/s local end price on the effective date when the tribunal hands down its decision. Ofcom should be required to recalculate a 2Mbit/s local end price adjustment and the new X such that the revenues in the final year of the price control are the same as they would have been had Ofcom not erred and that the NPV of the total revenues for BT in the adjusted charge control are equal to the NPV of the charge control had Ofcom not erred. We note that the actual X for the year in which

¹⁴²www.ofcom.org.uk/static/archive/oftel/publications/pricing/ntsd0901.htm.

the Tribunal's decision occurs may be a weighted average of the old and the new X. We set out below one methodology which we believe would achieve this, but should Ofcom agree with the parties a simpler solution, that would be acceptable:

- (a) calculate the size of the error (ie the revenue that has accrued to BT in the elapsed period less the revenues that it would have earned had Ofcom not erred) by reference to Ofcom's charge control model using the actual date of the Tribunal decision;
- (b) then in order to calculate the new X and the 2Mbit/s price adjustment, taking into account that Ofcom's charge control model is based on annual calculations, Ofcom will need to apply a two stage process: first to calculate the new X and adjustment to the 2Mbit/s price as at the 1 October 2010 and then extrapolate these results to the effective date of the decision of the tribunal:
 - (i) The calculation of the new X and 2 Mbit/s local end price adjustment as at 1 October 10 should be calculated (using Ofcom's charge control model) with reference to the overpayment calculated in subparagraph a) above (ie to assume that the overpayment calculated in subparagraph a) occurred throughout the first year of the charge control) and the associated new X and adjustment to 2Mbit/s local end price adjustment occurred on 1 October 2010). This calculation should be performed on a NPV-neutral basis, assuming that the total NPV of (the recalculated revenues and the revenues for the elapsed period combined) are equal to the NPV of the revenues in the corrected Ofcom model. The discount rate to be used should be the OfTel Interest Rate;
 - (ii) then pro rata the X and the 2 Mbit/s price adjustments for the date and year in which the decision falls using the methods set out in paragraph 6.186; and
- (c) request BT to submit a proposal for the necessary price adjustments.

6.269. As part of step (c) above, Ofcom should stipulate that BT's proposal should be in line with Ofcom's suggestion in paragraph 6.240 and with the requirement that no price adjustment should leave prices outside the DLRIC/DSAC range, as to which see Ofcom's comments in paragraph 6.239. Ofcom should also require BT to use as a benchmark for its proposal the change in revenue that would result if the price adjustment were done solely by adjusting 2 Mbit/s local end prices.

6.270. We would also remit to Ofcom the task of assessing and approving this alternative price adjustment.

6.271. Seventhly, we note that BT and C&W submitted that changes in prices by BT since the start of the charge control should be taken into account in setting the remedy. We consider that any changes in prices since the start of the charge control should be reflected in a change of the same absolute amount to the adjusted prices that result from implementing this remedy.

Calculations of the 5(b)(ii) adjustment

6.272. In response to a request, Ofcom helpfully provided us with a calculation of the appropriate remedy for Reference Question 5(b)(ii), using the parameters outlined above. The new indicative X in the charge control shown in Table 6.8 below.¹⁴³

TABLE 6.8 Required 5(b)(ii) adjustments at the end of year 1 of the price control

		<i>per cent</i>		<i>Associated reduction in 2Mbit/s local end price £</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>1 October 10</i>
X per LLCC	3.25	3.25	3.25	-
X after all adjustments *	3.25	-3.17 (rounded to -3.25)	-3.17 (rounded to -3.25)	316.01

Source: CC analysis of Ofcom data.

*Table 1 in Ofcom's letter 'X calculations for CC's proposed remedy scenarios', 22/6/10.

6.273. The adjustment to the 2 Mbit/s local end price is a reduction of £316.01. However, as stated in paragraph 6.2, Ofcom should ask BT for a proposal how the 2 Mbit/s local end price adjustment can be replaced with other price adjustments should the 2 Mbit/s local end price adjustment result in a price below DLRIC.

6.274. We emphasise that this figure is only indicative and based on the assumption that the relevant date for calculating the elapsed and unelapsed periods of the charge control is 1 October 2010. The actual date for calculating these periods will be the effective date of our determination (ie the date of the Tribunal's judgment on this appeal). It is not possible to use for the purposes of adjusting this 5(b)(ii) figure the same methodology as set out at paragraph 6.187, where we explained how to adjust the figures provided in our determination for the 5(b)/5(b)(i) adjustments to allow for the difference between the assumed date of 1 October 2010 and the actual date once known. In the case of the 5(b)(ii) adjustment, the actual date has a broader impact on the relevant calculations: it affects both the elapsed and unelapsed periods and hence the amount of the adjustment and the impact on the X. For this reason, it will be necessary for Ofcom to calculate the actual total adjustment required and the actual impact on the X once the actual effective date is known.

6.275. For this reason, we have not sought in Appendix C to provide a summary of the different permutations of the effect of each error or combination of errors. If, in the event of a successful challenge to part of our determination, the Tribunal ultimately disposes of the case by making one or more of the adjustments set out in our determination but not others, it will be necessary for Ofcom to take this into account when calculating the actual figures relevant to the determination of Reference Question 5(b)(ii).

Determination

6.276. For the reasons given above and having regard to the considerations and assumptions set out in Reference Question 5(b)(ii), we determine that the size of the additional consequential adjustment to the level of the price control applicable during

¹⁴³See paragraph 6.236.

the unelapsed period would need to be calculated once the effective date of our determination is known (ie the date of the Tribunal's judgment on this appeal).

- 6.277. For the additional reasons set out above, we further determine that the matters referred to in paragraphs 6.248 to 6.6 should be remitted to Ofcom to assess in the event that the Tribunal decides to make such an additional consequential adjustment to the level of the price control applicable during the unelapsed period.
- 6.278. Furthermore, we note the reservations we have expressed above regarding the unusual circumstances surrounding the determination of this Reference Question and, in particular, our comments in paragraphs 6.250 to 6.256 above. In the light of these circumstances, we would respectfully invite the Tribunal to refer any supplementary question to us that it feels necessary and appropriate following its consideration of our determination of the current Reference Questions, which we will then seek to determine with the benefit of the Tribunal's judgment or guidance.

**Reference from the Competition Appeal Tribunal
to the Competition Commission**

**IN THE COMPETITION
APPEAL TRIBUNAL**

Case No: 1112/3/3/09

BETWEEN:

CABLE & WIRELESS UK

Appellant

– supported by –

VERIZON UK LIMITED

Intervener

– v –

OFFICE OF COMMUNICATIONS

Respondent

– supported by –

BRITISH TELECOMMUNICATIONS PLC

Intervener

**REFERENCE OF SPECIFIED PRICE CONTROL MATTERS
TO THE COMPETITION COMMISSION
16 DECEMBER 2009**

1. Having regard to:

- (A) the Leased Lines Charge Control Statement and Notification issued by the Office of Communications (“OFCOM”) dated 2 July 2009 (the “LLCC Decision”);
- (B) the price controls set by:
 - (i) Condition G4, TISBO up to and including 8 Mbit/s, in Schedule 1 to Annex 9 of the LLCC Decision (“Condition G4”);

- (ii) Condition GG4, TISBO above 8 Mbit/s up to and including 45 Mbit/s, in Schedule 2 to Annex 9 of the LLCC Decision (“Condition GG4”);
 - (iii) Condition GH4, TISBO above 45 Mbit/s up to and including 155 Mbit/s, in Schedule 3 to Annex 9 of the LLCC Decision (“Condition GH4”);
 - (iv) Condition HH4, AISBO up to and including 1 Gbit/s, in Schedule 4 to Annex 9 of the LLCC Decision (“Condition HH4”); and
 - (v) Condition H4, Trunk, in Schedule 5 to Annex 9 of the LLCC Decision (“Condition H4”).
- (C) the Notice of Appeal (“the Notice of Appeal”) dated 2 September 2009 lodged by Cable & Wireless UK (“C&W”) in Case 1112/3/3/09 challenging certain aspects of the setting of Conditions G4, GG4, GH4, HH4 and H4 and the statement therein that the appeal relates exclusively to specified price control matters within the meaning of Rule 3(1) of the Competition Appeal Tribunal (Amendment and Communications Act Appeals) Rules 2004 (the “2004 Rules”);
- (E) the Defence filed by OFCOM on 16 November 2009; and
- (F) the Statements of Intervention and supporting evidence filed by each of the Interveners on 30 November and 1 December 2009

the Tribunal, pursuant to Rule 3(5) of the 2004 Rules and section 193 of the Communications Act 2003 (the “2003 Act”), hereby refers to the Competition Commission for its determination the specified price control matters arising in this appeal.

2. By this reference the Tribunal orders the Competition Commission to determine the following questions:

Question 1

Whether the price controls imposed by Conditions G4, GG4, GH4 and H4 on British Telecommunications plc (“BT”) have been set at a level which is inappropriate because OFCOM erred in failing to take the utmost account of the EC Leased Lines Recommendation¹ in setting starting prices for digital private circuit network elements (“DPCN Services”) for the reasons set out in paragraphs 37 to 45 of the Notice of Appeal.

Question 2

Whether the price controls imposed by Conditions G4, GG4, GH4 and H4 on BT have been set at a level which is inappropriate because OFCOM erred in setting starting charges for DPCN Services and 2 Mbit/s Local Ends in one or more of the following respects:

¹European Commission’s 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, 2005/268/EC (the “EC Leased Lines Recommendation”) published at OJ 2005 L83/52.

(a) OFCOM erred in:

(i) that the price increases go beyond what is necessary for individual services to be priced above Ofcom's view of distributed long run incremental cost ("DLRIC") for the reasons set out in paragraph 49 of the Notice of Appeal;

(ii) concluding that the price increases were necessary to avoid BT earning a return on capital employed ("ROCE") on the TI Basket below its weighted average cost of capital ("WACC") for the reasons set out in paragraphs 49 to 51 of the Notice of Appeal;

(b) OFCOM erred in adjusting some prices and not others within the TI Basket for the reasons set out in paragraphs 52 to 56 of the Notice of Appeal;

(c) OFCOM erred in its assessment of the DLRIC for the DPCN Services and 2 Mbit/s Local Ends because it should have made further and/or different adjustments to the figures used in its costs model for the reasons set out in paragraphs 57 to 60 of the Notice of Appeal;

(d) OFCOM erred in setting the price increases to starting charges for the reasons set out in paragraphs 61 to 66 of the Notice of Appeal.

Question 3

Whether the price controls imposed by Conditions G4, GG4, GH4, H4 and HH4 on BT have been set at an inappropriate level because OFCOM erred in estimating BT's efficient costs and associated revenues for leased line services in one or more of the following respects:

(a) OFCOM erred in its use of BT's regulatory financial statements for the reasons set out in paragraphs 72 to 77 of the Notice of Appeal;

(b) OFCOM erred in its adjustments to BT's reported costs and revenues for DPCN Services for the reasons set out in paragraphs 83 to 103 of the Notice of Appeal;

(c) OFCOM erred in the allocation of costs to the services subject to the Conditions for the reasons set out in paragraph 104 of the Notice of Appeal;

(d) OFCOM erred in the calculation of the relevant cost of capital for the reasons set

out in paragraphs 105 to 107 of the Notice of Appeal.

Question 4

Whether OFCOM erred in the setting of the point of handover charges in Part 1 of Annex C to the price controls imposed by Conditions G4, GG4, GH4 and H4 on BT in one or more of the following respects:

(a) OFCOM erred in deciding not to set the charges on Local Ends used by BT but only on those used by BT's competitors:

(i) OFCOM erred in its use of BT's estimate of the costs to be recovered by the charges for the reasons set out in paragraphs 110 to 111 of the Notice of Appeal;

(ii) OFCOM erred in not treating promotion of competition as its primary objective and/or erred in its assessment of what the promotion of competition would require for the reasons set out in paragraph 112 of the Notice of Appeal;

(iii) OFCOM erred in setting point of handover charges that are discriminatory, inefficient and/or which distort competition for the reasons set out in paragraphs 113 to 116 of the Notice of Appeal;

(iv) OFCOM erred in its assessment of its “six principles of cost recovery” for the reasons set out in paragraphs 117 to 121 of the Notice of Appeal;

(b) OFCOM erred in deciding to set the same charges on synchronous digital hierarchy and plesiochronous digital hierarchy points of handover:

(i) OFCOM erred in giving BT the discretion it did as to future charges for points of handover for the reasons set out in paragraphs 122 to 128 of the Notice of Appeal;

(ii) OFCOM erred in setting charges that are inefficient and discriminatory for the reasons set out in paragraphs 129 to 132 of the Notice of Appeal.

Question 5

Having regard to the fulfilment by the Tribunal of its duties under section 195 of the 2003 Act and in the event that the Competition Commission determines that OFCOM erred in relation to any of the above questions, the Competition Commission is to include in its determination:

(a) clear and precise guidance as to how any such error found should be corrected; and

(b) insofar as is reasonably practicable, a determination as to any consequential adjustments to the level of the price controls indicating:

(i) what price controls should have been set in the LLCC Decision had OFCOM not erred in the manner identified by the Competition Commission; and

(ii) if the price controls set in the LLCC Decision have, during the elapsed period of the price control been at an inappropriate level, and on the assumption that it may, having regard to the criteria in section 88 of the 2003 Act, be lawful and appropriate to adjust the price control applicable during the unelapsed period, what adjustments to that part of the price control should be made, if any.

3. The Competition Commission is directed to determine the issues contained in this reference by 30 June 2010. The Competition Commission shall notify the parties to this appeal of its determination at the same time as it notifies the Tribunal pursuant to section 193(3) of the 2003 Act.
4. Should the Competition Commission require further time for making its determination it should notify the Tribunal and the parties so that the Tribunal may decide whether to extend the time set out in the previous paragraph.

5. There shall be liberty to apply for further directions.

Vivien Rose
Chairman of the Competition Appeal Tribunal

Made: 16 December 2009
Drawn: 16 December 2009

**Amended reference from the Competition Appeal Tribunal
to the Competition Commission**

**IN THE COMPETITION
APPEAL TRIBUNAL**

Case No: 1112/3/3/09

BETWEEN:

CABLE & WIRELESS UK

Appellant

– supported by –

VERIZON UK LIMITED

Intervener

– v –

OFFICE OF COMMUNICATIONS

Respondent

– supported by –

BRITISH TELECOMMUNICATIONS PLC

Intervener

ORDER

UPON reading the application dated 29 March 2010 by Cable & Wireless UK to amend the Tribunal's Order dated 16 December 2009 referring to the Competition Commission the specified price control matters raised in the appeal

AND UPON each of the parties and the Competition Commission providing their consent to the application

IT IS ORDERED THAT:

1. The Tribunal's Order of 16 December 2009 be amended as shown by the underlined text in the Schedule to this Order
2. There be liberty to apply

Vivien Rose
Chairman of the Competition Appeal Tribunal

Made: 30 March 2010
Drawn: 30 March 2010

SCHEDULE

1. Having regard to:

- (A) the Leased Lines Charge Control Statement and Notification issued by the Office of Communications ("OFCOM") dated 2 July 2009 (the "LLCC Decision");
- (B) the price controls set by:
 - (i) Condition G4, TISBO up to and including 8 Mbit/s, in Schedule 1 to Annex 9 of the LLCC Decision ("Condition G4");
 - (ii) Condition GG4, TISBO above 8 Mbit/s up to and including 45 Mbit/s, in Schedule 2 to Annex 9 of the LLCC Decision ("Condition GG4");
 - (iii) Condition GH4, TISBO above 45 Mbit/s up to and including 155 Mbit/s, in Schedule 3 to Annex 9 of the LLCC Decision ("Condition GH4");
 - (iv) Condition HH4, AISBO up to and including 1 Gbit/s, in Schedule 4 to Annex 9 of the LLCC Decision ("Condition HH4"); and
 - (v) Condition H4, Trunk, in Schedule 5 to Annex 9 of the LLCC Decision ("Condition H4").
- (C) the Notice of Appeal ("the Notice of Appeal") dated 2 September 2009 lodged by Cable & Wireless UK ("C&W") in Case 1112/3/3/09 challenging certain aspects of the setting of Conditions G4, GG4, GH4, HH4 and H4 and the statement therein that the appeal relates exclusively to specified price control matters within the meaning of Rule 3(1) of the Competition Appeal Tribunal (Amendment and Communications Act Appeals) Rules 2004 (the "2004 Rules");
- (E) the Defence filed by OFCOM on 16 November 2009; and
- (F) the Statements of Intervention and supporting evidence filed by each of the Interveners on 30 November and 1 December 2009; and
- (G) the Reply filed by C&W on 28 January 2010 (the "Reply")

the Tribunal, pursuant to Rule 3(5) of the 2004 Rules and section 193 of the Communications Act 2003 (the "2003 Act"), hereby refers to the Competition

Commission for its determination the specified price control matters arising in this appeal.

2. By this reference the Tribunal orders the Competition Commission to determine the following questions:

Question 1

Whether the price controls imposed by Conditions G4, GG4, GH4 and H4 on British Telecommunications plc (“BT”) have been set at a level which is inappropriate because OFCOM erred in failing to take the utmost account of the EC Leased Lines Recommendation² in setting starting prices for digital private circuit network elements (“DPCN Services”) for the reasons set out in paragraphs 37 to 45 of the Notice of Appeal.

Question 2

Whether the price controls imposed by Conditions G4, GG4, GH4 and H4 on BT have been set at a level which is inappropriate because OFCOM erred in setting starting charges for DPCN Services and 2 Mbit/s Local Ends in one or more of the following respects:

(a) OFCOM erred in:

(i) that the price increases go beyond what is necessary for individual services to be priced above Ofcom’s view of distributed long run incremental cost (“DLRIC”) for the reasons set out in paragraph 49 of the Notice of Appeal;

(ii) concluding that the price increases were necessary to avoid BT earning a return on capital employed (“ROCE”) on the TI Basket below its weighted average cost of capital (“WACC”) for the reasons set out in paragraphs 49 to 51 of the Notice of Appeal;

(aa) OFCOM erred in permitting increases in starting charges for the reasons set out in paragraphs 12 to 29 of the Reply;

(b) OFCOM erred in adjusting some prices and not others within the TI Basket for the reasons set out in paragraphs 52 to 56 of the Notice of Appeal;

(c) OFCOM erred in its assessment of the DLRIC for the DPCN Services and 2 Mbit/s Local Ends because it should have made further and/or different adjustments to the figures used in its costs model for the reasons set out in paragraphs 57 to 60 of the Notice of Appeal;

(d) OFCOM erred in setting the price increases to starting charges for the reasons set out in paragraphs 61 to 66 of the Notice of Appeal.

Question 3

Whether the price controls imposed by Conditions G4, GG4, GH4, H4 and HH4 on BT have been set at an inappropriate level because OFCOM erred in

²European Commission’s 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, 2005/268/EC (the “EC Leased Lines Recommendation”) published at OJ 2005 L83/52.

estimating BT's efficient costs and associated revenues for leased line services in one or more of the following respects:

- (a) OFCOM erred in its use of BT's regulatory financial statements for the reasons set out in paragraphs 72 to 77 of the Notice of Appeal;
- (b) OFCOM erred in its adjustments to BT's reported costs and revenues for DPCN Services for the reasons set out in paragraphs 83 to 103 of the Notice of Appeal;
- (c) OFCOM erred in the allocation of costs to the services subject to the Conditions for the reasons set out in paragraph 104 of the Notice of Appeal;
- (d) OFCOM erred in the calculation of the relevant cost of capital for the reasons set out in paragraphs 105 to 107 of the Notice of Appeal.

Question 4

Whether OFCOM erred in the setting of the point of handover charges in Part 1 of Annex C to the price controls imposed by Conditions G4, GG4, GH4 and H4 on BT in one or more of the following respects:

- (a) OFCOM erred in deciding not to set the charges on Local Ends used by BT but only on those used by BT's competitors:
 - (i) OFCOM erred in its use of BT's estimate of the costs to be recovered by the charges for the reasons set out in paragraphs 110 to 111 of the Notice of Appeal;
 - (ii) OFCOM erred in not treating promotion of competition as its primary objective and/or erred in its assessment of what the promotion of competition would require for the reasons set out in paragraph 112 of the Notice of Appeal;
 - (iii) OFCOM erred in setting point of handover charges that are discriminatory, inefficient and/or which distort competition for the reasons set out in paragraphs 113 to 116 of the Notice of Appeal;
 - (iv) OFCOM erred in its assessment of its "six principles of cost recovery" for the reasons set out in paragraphs 117 to 121 of the Notice of Appeal;
- (b) OFCOM erred in deciding to set the same charges on synchronous digital hierarchy and plesiochronous digital hierarchy points of handover:
 - (i) OFCOM erred in giving BT the discretion it did as to future charges for points of handover for the reasons set out in paragraphs 122 to 128 of the Notice of Appeal;
 - (ii) OFCOM erred in setting charges that are inefficient and discriminatory for the reasons set out in paragraphs 129 to 132 of the Notice of Appeal.

Question 5

Having regard to the fulfilment by the Tribunal of its duties under section 195 of the 2003 Act and in the event that the Competition Commission determines that OFCOM erred in relation to any of the above questions, the Competition Commission is to include in its determination:

(a) clear and precise guidance as to how any such error found should be corrected; and

(b) insofar as is reasonably practicable, a determination as to any consequential adjustments to the level of the price controls indicating:

(i) what price controls should have been set in the LLCC Decision had OFCOM not erred in the manner identified by the Competition Commission; and

(ii) if the price controls set in the LLCC Decision have, during the elapsed period of the price control been at an inappropriate level, and on the assumption that it may, having regard to the criteria in section 88 of the 2003 Act, be lawful and appropriate to adjust the price control applicable during the unelapsed period, what adjustments to that part of the price control should be made, if any.

3. The Competition Commission is directed to determine the issues contained in this reference by 30 June 2010. The Competition Commission shall notify the parties to this appeal of its determination at the same time as it notifies the Tribunal pursuant to section 193(3) of the 2003 Act.
4. Should the Competition Commission require further time for making its determination it should notify the Tribunal and the parties so that the Tribunal may decide whether to extend the time set out in the previous paragraph.
5. There shall be liberty to apply for further directions.

Leased lines—technology and pricing

Introduction

1. Leased lines are products purchased by business customers to connect their various business premises together.
2. Leased line services that involve transmission with capacity below 2 Mbit/s are referred to as DPCN. These services are typically delivered using a separate platform from other leased line services.
3. Leased line services that are sold to end users are referred to as retail private circuits (RPCs) when delivered by BT or OCPs. Partial private circuits (PPCs) are a wholesale version of leased lines that are provided by BT Wholesale to OCPs (and to the retail divisions of BT) that can be used to create RPCs or other business connectivity services. PPCs include circuits with capacity below 2 Mbit/s (DPCN) and circuits of 2 Mbit/s and above.
4. DPCN technology came into service around 30 years ago and has lower capacity and resilience than other PPC technologies that were introduced later. PPC technologies of sub-2 Mbit/s are being phased out over the next eight years or so.
5. PPCs over 1 Mbit/s are generally delivered over two technologies, the older PDH (plesiochronous digital hierarchy) and the newer SDH (synchronous digital hierarchy).
6. In this note, we use C&W as an example of an OCP and 'Bank A' as an example of a business customer purchasing a leased line from it. We will further assume that Bank A purchases a link between its headquarters and its ATM machines. For illustration we will assume in some cases that the service Bank A is purchasing is 2 Mbit/s and in other cases that it is a DPCN service. These differences will be signposted.
7. Bank A purchases a DPCN product that links its ATMs with its headquarters. Thanks to this leased line product, Bank A's ATMs can communicate with Bank A's central systems and final consumers can use those ATMs to withdraw cash or carry out other basic financial transactions.
8. This note also focuses only on the charges that are levied on an annual basis (so-called fixed charges) and per km charges. It ignores the one-off connection charges as they are not part of the appeal.

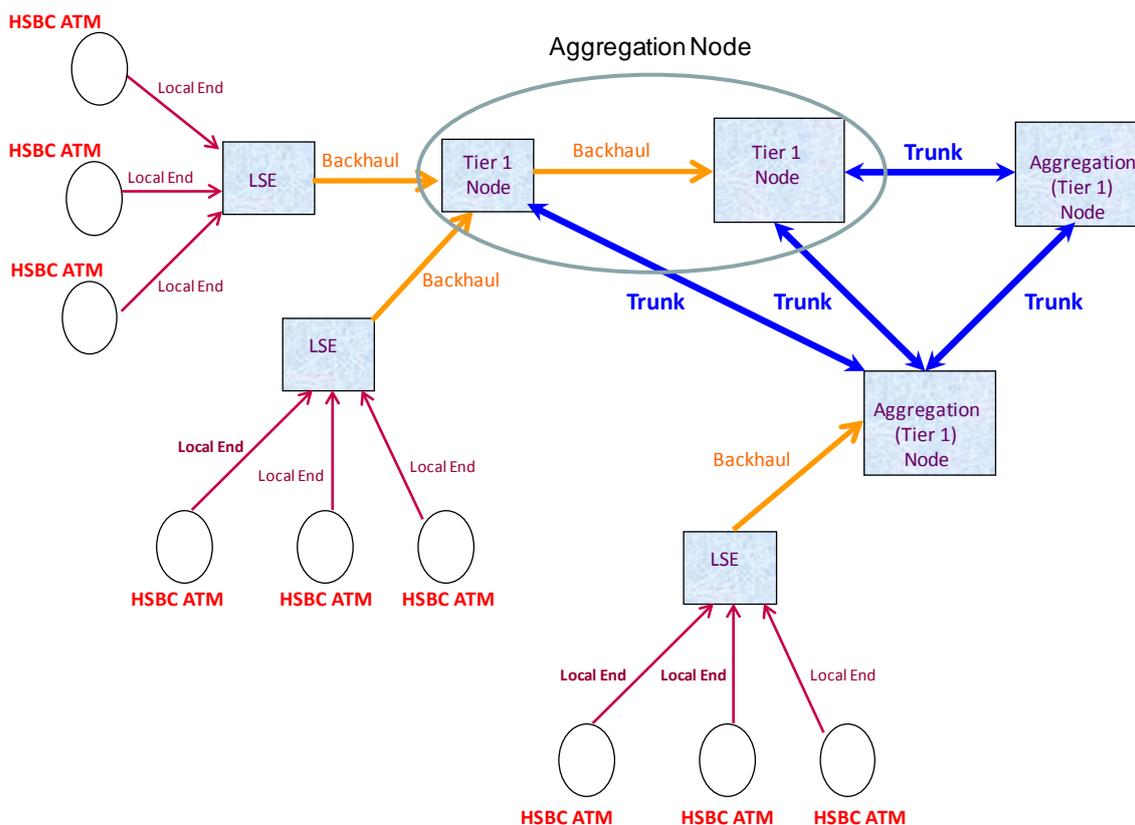
Definitions of the key terms

9. The following defines some of the terms used by the parties when describing the leased line transmission. For graphic representation, see Figure 1:
 - (a) *Trunk* = the core of BT's network, everything that is not a terminating segment; it offers high capacity transmission (a 'motorway').
 - (i) *Trunk from an engineer's viewpoint* = the infrastructure that links different Tier 1 nodes together.

- *Tier 1 Node* = a part of BT's network defined by a set of equipment where transmission can change direction. Historically (before Ofcom's Business Connectivity Market Review, BCMR 2008), the network connecting Tier 1 Nodes was considered to be trunk and the network leading up to Tier 1 Nodes was considered to be terminating segment.
- (ii) *Trunk from a pricing viewpoint* = the infrastructure that links two aggregation nodes together.
- *Aggregation Node* = a Tier 1 node or group of proximate Tier 1 nodes that was designated by Ofcom as an 'aggregation node' following the BCMR 2008. It serves to define trunk for pricing purposes.
- (b) *Terminating segment* = everything that is not a trunk; lower capacity transmission than the trunk ('A and B roads').
- (i) Terminating segment = Local end + Backhaul.
- *Local end* = the wire from Bank A's premises to the nearest BT Local Serving Exchange (LSE), a link dedicated to Bank A, lowest capacity (a 'B road').
 - *Backhaul from an engineer's perspective* = network connecting LSE to a Tier 1 Node, higher capacity than local end (an 'A road').
 - *Backhaul from a pricing perspective* = network connecting LSE to a Tier 1 Node *and* network connecting one Tier 1 Node to another if both Tier 1 nodes are considered to be part of the same Aggregation Node.

FIGURE 1

BT's network



Source: CC, revised by the parties.

10. It is also important to understand the meaning of the terms 'main link' and 'point of handover' (PoH):
 - (a) *Main link (BT)* = the network that exists between the LSE nearest the origination of the transmission (in our case Bank A ATM) and the LSE nearest the destination of the transmission (in our case Bank A's headquarters). See Figure 2.
 - (b) *Main link (C&W)* = the network that exists between the LSE nearest the origination of the transmission (in our case Bank A ATM) and the part of BT's infrastructure where C&W connects to BT, ie point of connection. See Figures 4 and 5:
 - (i) *Main link* = backhaul and in some cases also trunk.
 - (ii) Note also that the definition of the main link is slightly different for DPCN circuits than for higher speed circuits. In the case of DPCN circuits the main link is between the LSE (co-located with an ENA¹) and the DXC² that is closest to the point of connection (connected via a DPCN bearer) whereas for

¹An ENA is an Equipment Network Access point and is described in paragraph 38 below.

²A DXC is a Digital Cross Connect and is described in paragraph 38 below.

higher speed circuits it extends to the part of BT's infrastructure where C&W actually connects to BT.

(c) *PoH* = the equipment that C&W (and OCPs in general) needs in order to connect to BT's network. As we explain in paragraph 19 below, C&W needs to connect to BT's network if it is to provide leased line services because it may not have the 'last mile' of BT's network:

(i) C&W connects via a fibre wire that leads from its own infrastructure to the nearest BT *node* that is SDH technology enabled. This is because *PoH* is normally carried out using SDH transmission (but there are also legacy *PoHs* that are based on the older PDH technology and use nodes that are not SDH-enabled, though the charging is still based on the location of the nearest SDH-enabled node). It is noteworthy that such an SDH-enabled BT node is located in a BT exchange which BT and C&W often refer to as an 'LSE'. This can create confusion as to where C&W actually needs to connect to BT's network and what an LSE is. For clarification on this issue, see paragraphs 11 to 14.

(ii) *PoH* = the infrastructure linking C&W's point of presence to a point of connection in the BT's network:

- *Point of Presence (PoP)* = the beginning of C&W's network.
- *Point of Connection (PoC)* = the beginning of BT's network.

Does C&W connect its network to an LSE or a Tier 1 node?

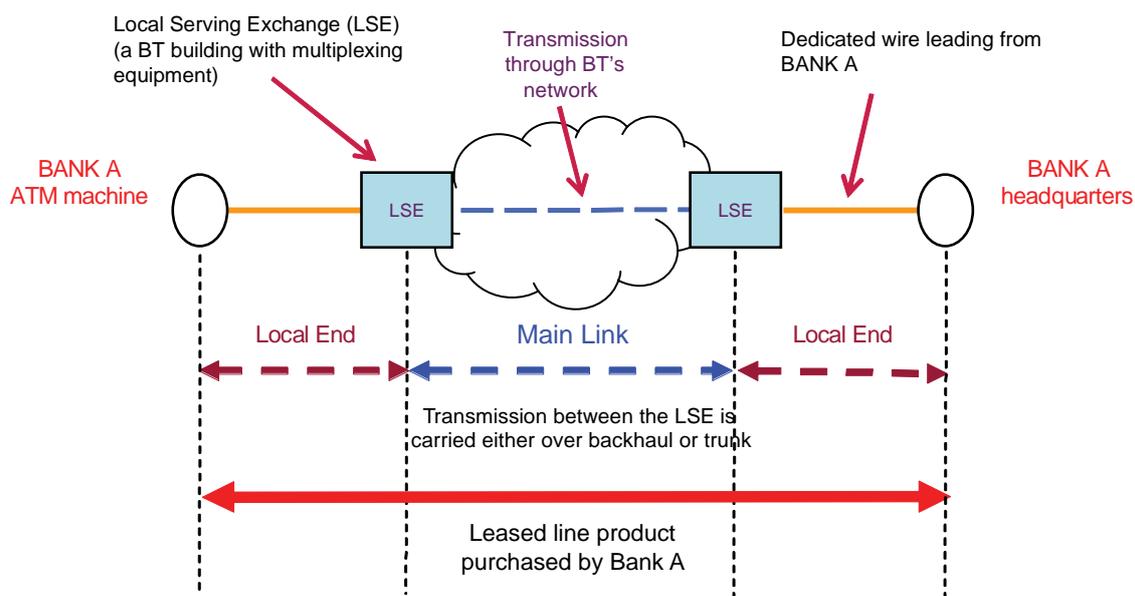
11. To clarify where a *PoH* connection is made, the parties to this appeal have jointly made clear that OCPs can connect to any SDH-enabled node (also referred to as a BT exchange) and do not specifically need to connect to a Tier 1 node. LSE is a generic term, used loosely to describe a 'building with BT infrastructure' and therefore an 'LSE' and a 'BT Serving Exchange' are interchangeable terms.
12. The position on nodes is that in all BT has about 5,600 buildings with communications equipment in them. In general terms, each one can be considered to have PDH equipment in it (it is a PDH node) and each one acts as an LSE. A subset of about 1,800 of these buildings also contain SDH equipment (they are also SDH nodes) which are further subdivided into Tier 1 nodes, Tier 2 nodes and Tier 3 nodes.
13. OCPs can have a *PoH* into any of these 1,800 SDH nodes. BT has indicated that OCPs as a whole currently interconnect at 205 different SDH nodes and of these 50 are Tier 1 nodes.
14. We therefore understand that an LSE can be both the place where OCPs connect to BT's network through a *PoH* (these LSEs have to have an SDH-enabled node inside) and a place where local ends from customer premises are aggregated. We also understand that not all LSEs are able to do both, but some can.

BT's provision of leased lines to business customers

15. Assuming for simplicity a non-DPCN service, when Bank A purchases a leased line service from BT, it purchases a transmission through BT's network that is depicted with a thick red line in Figure 2.

FIGURE 2

A leased line product provided by BT to Bank A



Source: CC, agreed by the parties.

16. If C&W wants to provide leased line services to Bank A, it has to be able to assemble the necessary individual wholesale service elements in order to provide the same service as provided by BT.
17. C&W has its own trunk network. However, in most cases it does not have the dedicated lines leading up to Bank A's (or any other customer's) premises. This part of the network is often called in the telecommunications industry the 'last mile'.
18. In practice, OCPs like C&W do have fibre connections into some customer premises. The likelihood of the OCPs having their own fibre will be greater where the premises are located in key business districts of large cities and where the aggregate demand for circuits (total capacity of all circuits into the premises) is large. In the 2008 BCMR, Ofcom found that in central London there were sufficient OCP fibre connections to find an area of Central and East London that was effectively competitive for circuits of 45 Mbit/s and above.
19. In an example like this, the total capacity of all the circuits at the head office is high and therefore if the head office is close to the OCP's own network it will aim to connect it using its own fibre; however, the ATMs will nearly always be connected using BT's 'last mile' of the network and it would not be economically efficient for C&W or any other OCPs to replicate it. C&W has to purchase access to this part of BT's infrastructure. Sometimes C&W needs to purchase a little more than just the last mile. That will depend on the layout and density of its network and how close to the particular 'last mile' it is located.
20. Ofcom's powers to impose certain regulatory obligations originate from the EC Framework Directive 2002/21/EC and the Communications Act 2003. Under these provisions, where an undertaking has significant market power, Ofcom must impose

appropriate specific regulatory conditions relating to network access.³ Potentially relevant conditions can be, for example, an obligation on the dominant provider to provide access to the relevant network, a non-discrimination obligation, a requirement on the dominant provider to publish certain information for the purpose of securing transparency, a cost orientation obligation and also a charge control.

21. The regulatory obligation for BT to provide PPCs arises from the finding of significant market power in certain wholesale leased lines markets. Ofcom concluded in the Business Connectivity Market Review Statement (the BCMR Statement) that BT has SMP in Traditional Interface Symmetric Broadband Origination (TISBO) markets at various bandwidths and trunk services at all bandwidths. Ofcom therefore imposed a number of SMP obligations, including cost orientation and non-discrimination obligations. In addition, Ofcom concluded that, in principle, BT should be subject to charge controls for the above markets and imposed a charge control obligation in the Leased Lines Charge Control (LLCC) Statement.
22. On the basis of the above, BT has to grant access to certain parts of its infrastructure in a transparent, cost-oriented and non-discriminatory way. In accordance with its non-discrimination obligation, BT has to price the individual wholesale services that C&W (and an OCP) has to purchase at the same level as BT would charge its own downstream division in the form of transfer prices.

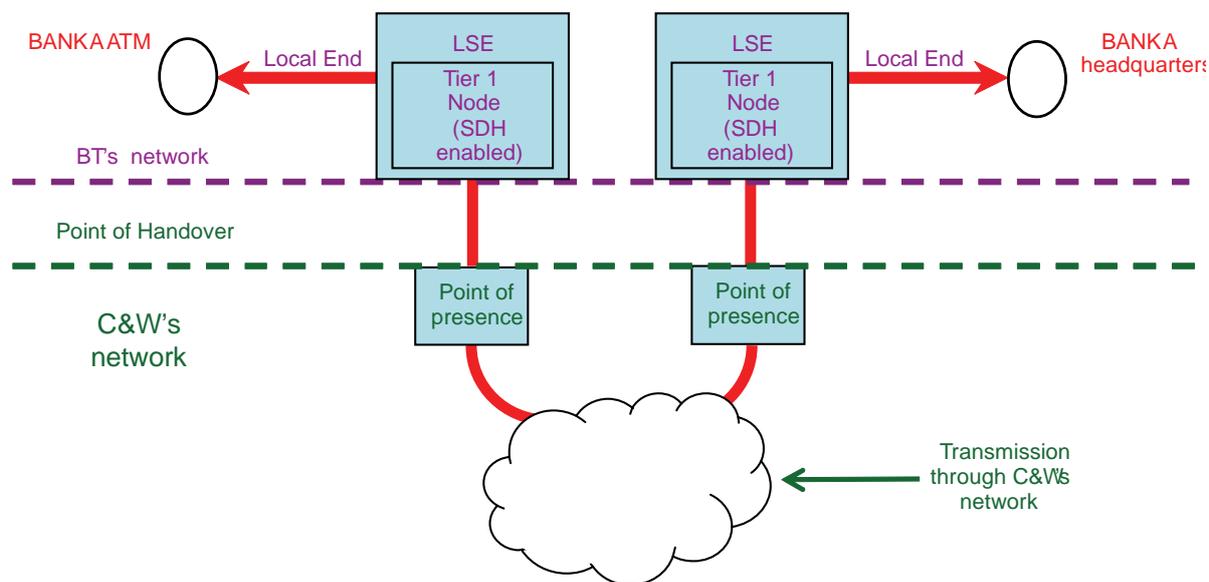
C&W's provision of leased lines to business customers

23. Figure 3 below depicts a situation where C&W's network is located (at both ends) very near Bank A premises (ie C&W is located near the nearest LSE to Bank A) and the nearest LSE to Bank A also has an SDH-enabled node that allows for PoH. We do not know how usual this configuration is but think that this situation must be likely in large conurbations such as London.
24. The fact that C&W connects to the nearest LSE to Bank A means that it does not require any backhaul or trunk. This means that C&W does not purchase any main link (ie backhaul and, when required, trunk—see paragraph (b) for the definition of the main link). As there is no main link, there is no requirement to pay a per km terminating segment charge.
25. The thick red line in Figure 3 depicts the individual wholesale service elements that C&W assembles in order to provide a PPC-based service to Bank A (whether an RPC or other business connectivity service, such as a VPN). The dashed green line shows where C&W's own network starts. Everything above this line represents individual wholesale service elements that C&W has to purchase from BT. This is a theoretical routing, and in practice the signal may travel in a different fashion. Figure 3 shows a symmetrical situation at both ends of the leased line. However, in practice conditions at the two ends (ie the ATM end and headquarters end) can be different.

³Certain conditions are referred to in the Access Directive 2002/19/EC. However, the regulatory mechanism under which conditions have been imposed on BT in this case derives from the Framework Directive.

FIGURE 3

**A leased line product provided by C&W to Bank A
(no trunk or backhaul required, ie no main link)**

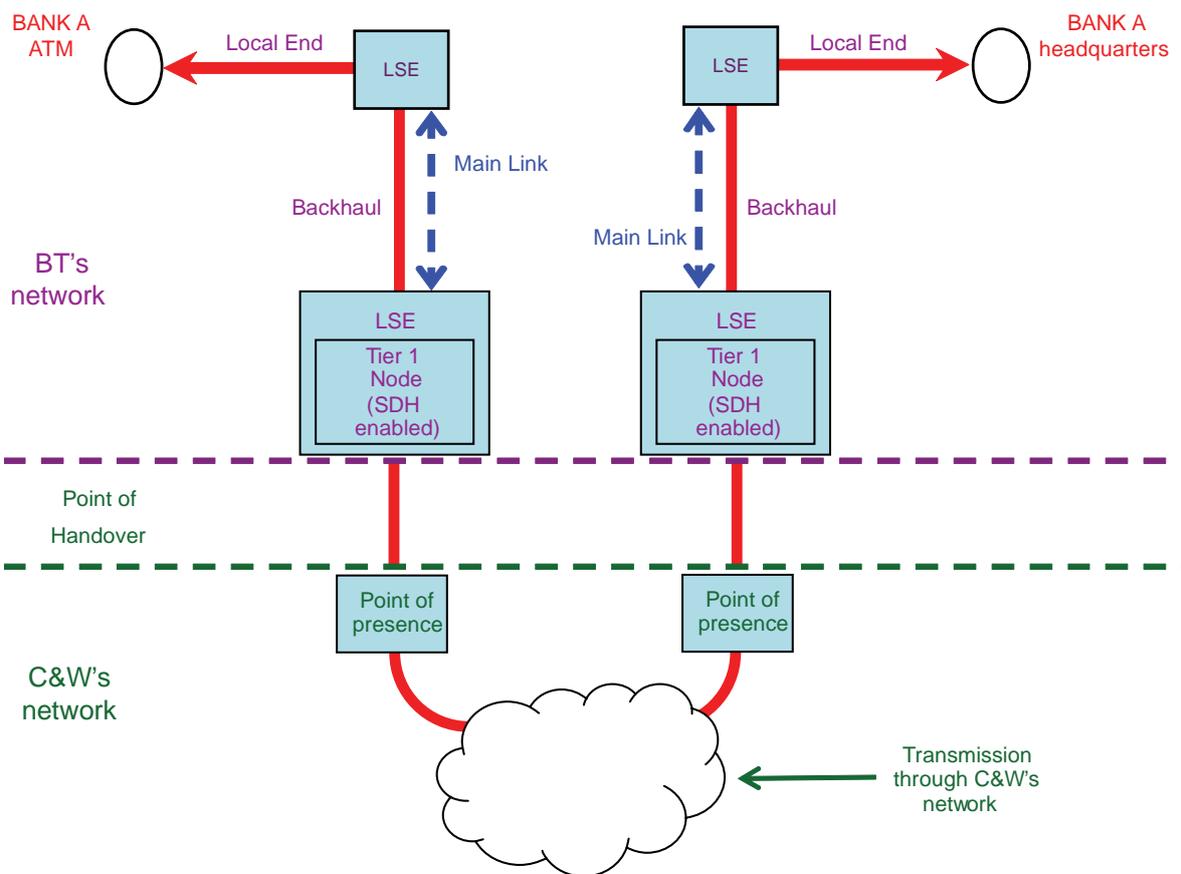


Source: CC, agreed by the parties.

26. Bank A is not one with an SDH-enabled node in it or, at least, not an SDH-enabled node where C&W has a PoH. The backhaul that C&W has to purchase forms part of the main link. In practice, this means that C&W will have to pay a fixed main link charge and a per km charge for the backhaul it is using. In addition, it will have to pay a local end fixed charge for the local end it is using.
27. The thick red line in Figure 4 depicts the individual wholesale service elements that C&W assembles in order to provide a PPC-based service to Bank A (whether an RPC or other business connectivity service, such as a VPN). The dashed green line shows where C&W's own network starts. Everything above this line represents individual wholesale service elements that C&W has to purchase from BT. This is a theoretical routing, and in practice the signal may travel in a different fashion. It should also be noted that Figure 4 shows a symmetrical situation at both ends of the leased line. However, in practice, conditions at the two ends (ie the ATM end and headquarters end) can be different.

FIGURE 4

A leased line product provided by C&W to Bank A (no trunk required)

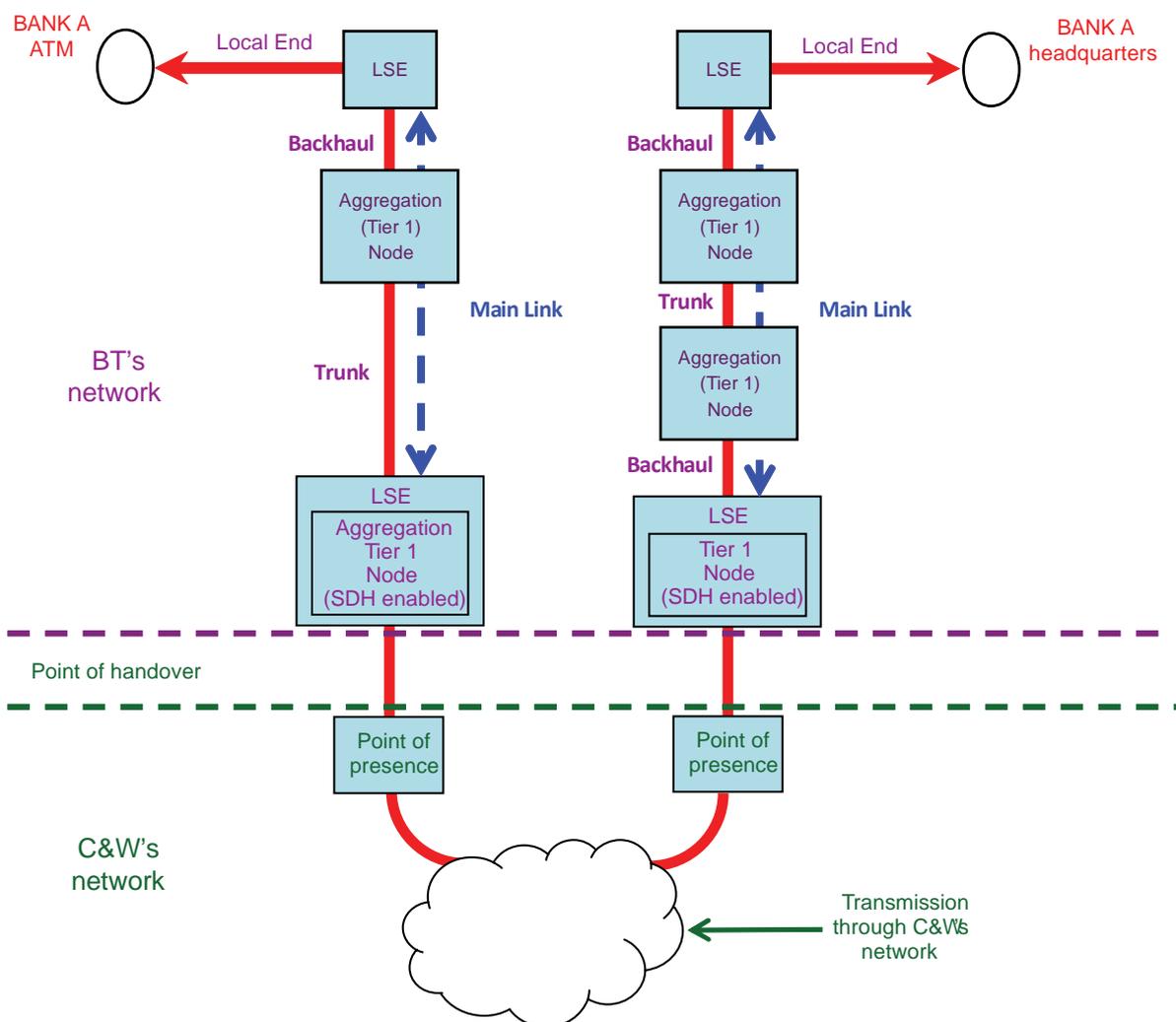


Source: CC, agreed by the parties.

28. Figure 5 below depicts a situation where C&W requires both backhaul and trunk from BT as its nearest infrastructure is located some distance away from Bank A. The backhaul and trunk that C&W has to purchase forms part of the main link.
29. The thick red line in Figure 5 depicts the individual wholesale service elements that C&W assembles in order to provide a PPC service to Bank A. The dashed green line shows where C&W's own network starts. Everything above this line represents individual wholesale service elements that C&W has to purchase from BT. Please note that this is a theoretical routing, and in practice the signal may travel in a different fashion.
30. Finally, Figure 5 does not show a symmetrical situation, although at both ends C&W needs to purchase trunk. We made this distinction to illustrate some of the different situations under which C&W may need to purchase some trunk from BT. In particular, it is possible that the Tier 1 node to which C&W connects through the PoH can be in itself an aggregation node.

FIGURE 5

A leased line product provided by C&W to Bank A (trunk required)



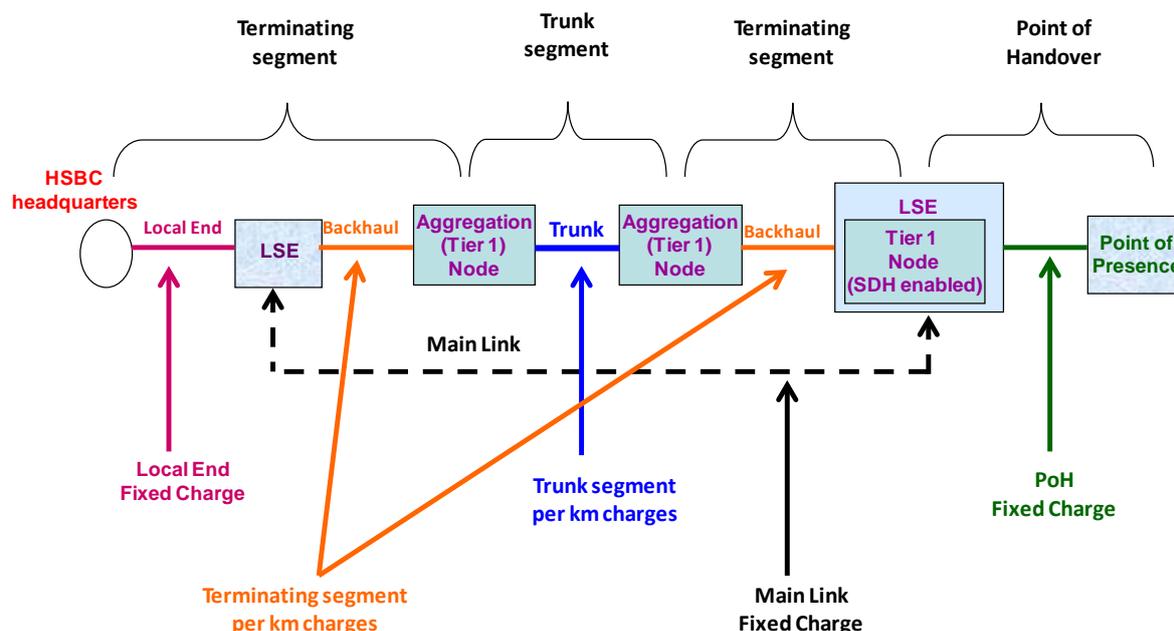
Source: CC, agreed by the parties.

31. Following from the right-hand side of Figure 5, Figure 6 provides more detail as to what charges C&W needs to pay in order to be able to assemble that particular end of the PPC service for Bank A. We note that since the right-hand side and left-hand side of Figure 5 involve both trunk and backhaul, the pricing elements that C&W will have to pay for the left-hand side part of the service will be analogous.
32. The PPC product that C&W purchases is divided into three fixed charges: local end fixed charge, main link fixed charge and PoH fixed charge. In addition, C&W has to pay a per km charge for trunk and the terminating segment (ie local end and backhaul). In addition, C&W has the option to purchase 'enhanced maintenance' on the circuit which provides a higher standard of care and repair. Enhanced maintenance charges take the form of a fixed 'per circuit' charge plus a 'per km' charge calculated from the length of the main link.
33. As we have noted in paragraph 8, these are not the only charges that C&W has to pay. C&W also incurs connection charges. However, since these charges are not subject to the appeal, we do not propose to go into any detail about these charges.

34. For PPCs of 1 Mbit/s and above (ie those that are not provided using the DPCN), the length of the main link for pricing purposes is calculated as the straight-line distance between the LSE to which the customer is connected and the LSE where the BT end of the PoH is located.
35. The length of main link that is considered to be terminating segment and trunk segment is calculated by a formula described in Appendix A (section 11) of BT's PPC Product Handbook:
www.btwholesale.com/pages/downloads/service_and_support/contractual_information/docs/ppcoffer.

FIGURE 6

PPC pricing faced by C&W



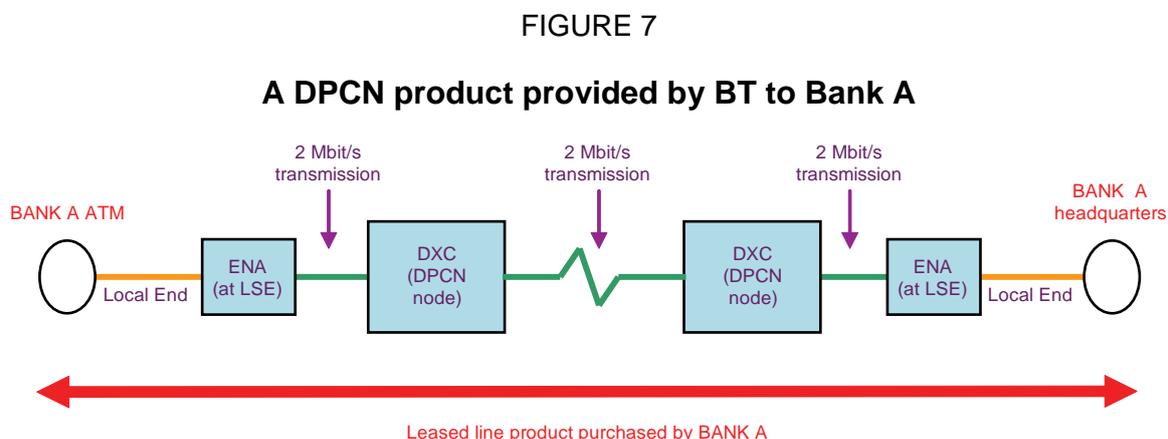
Source: CC, revised by the parties.

DPCN

36. DPCN is an older type of transmission technology that was originally developed for voice transmissions.
37. DPCN is also a term describing those leased line products with capacity of less than 1 Mbit/s.
38. Unlike the remainder of leased lines, DPCN use equipment network access points (ENA) located within the LSE and digital cross connects (DXC). DXCs are also often referred to as DPCN nodes. It is noteworthy that ENAs are located at LSEs, but DXC nodes are not always co-located with Tier 1 Nodes.
39. The DPCN network does not have a trunk hierarchy and is connected through 2 Mbit/s links between DXCs.
40. However, the 2 Mbit/s links connecting together the DXCs can sometimes be physically routed over trunk and terminating segment in the same way as PPCs (eg

following the routing DXC—aggregation node—aggregation node—DXC to take advantage of the large pipes between aggregation nodes). Similarly, since pricing of DPCN products follows the pricing formula devised for PPCs, a trunk segment is defined for DPCN pricing purposes without regard to the actual routing of the DPCN circuits.

41. Figure 7 shows the product that BT assembles in order to provide a DPCN service to Bank A.

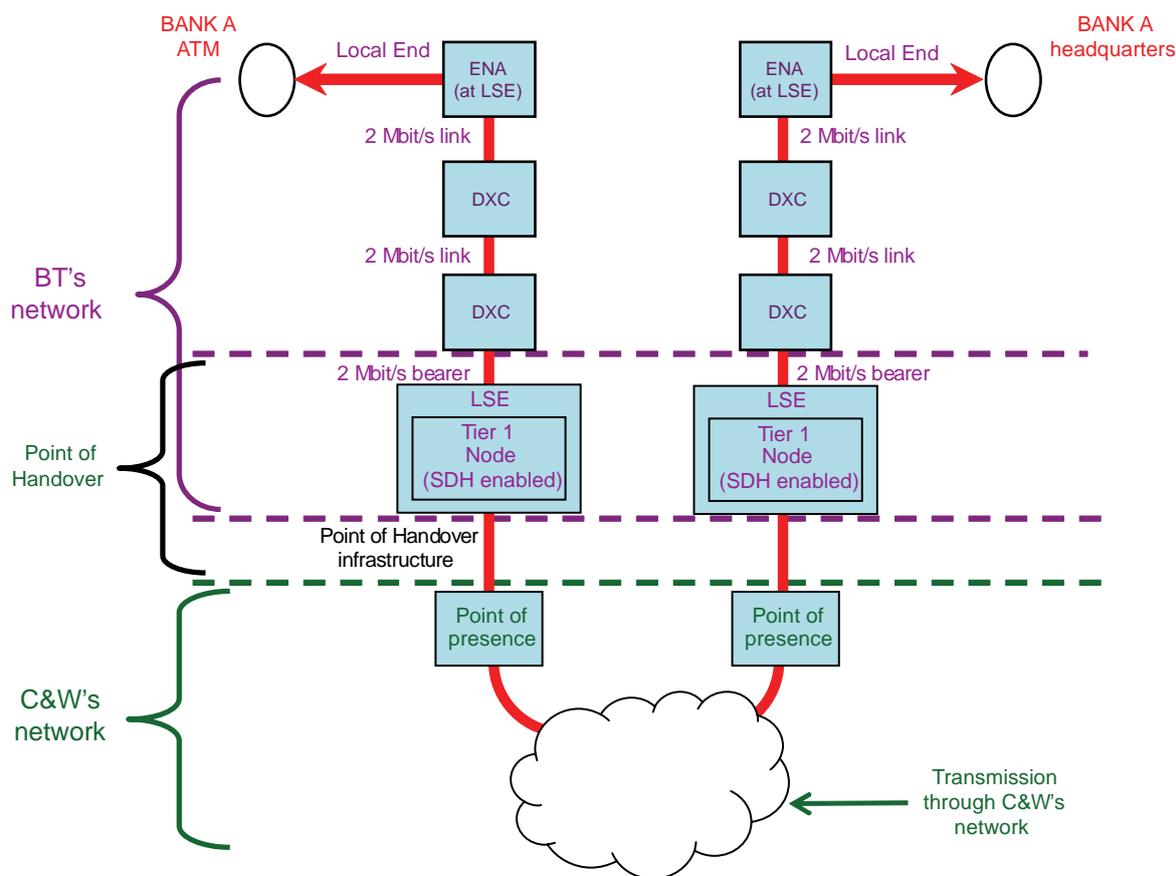


Source: CC, agreed by the parties.

42. Figure 8 shows the equivalent product that C&W would provide. The thick red line depicts the individual wholesale service elements that C&W assembles in order to provide a DPCN service to Bank A. The dashed green line shows where C&W's own network starts. Everything above this line represents individual wholesale service elements that C&W has to purchase from BT. This is a theoretical routing, and in practice the signal may travel in a different fashion. In particular, BT may use its PPC trunk for transmission.
43. Moreover, pricing of DPCN products is different from this theoretical routing. DPCN pricing is based on the pricing model used for other PPC products and adapts the Tier 1 node pricing to the conditions of the DPCN technology. The pricing of DPCN products will be further explained in the following section.

FIGURE 8

A DPCN product provided by C&W to Bank A



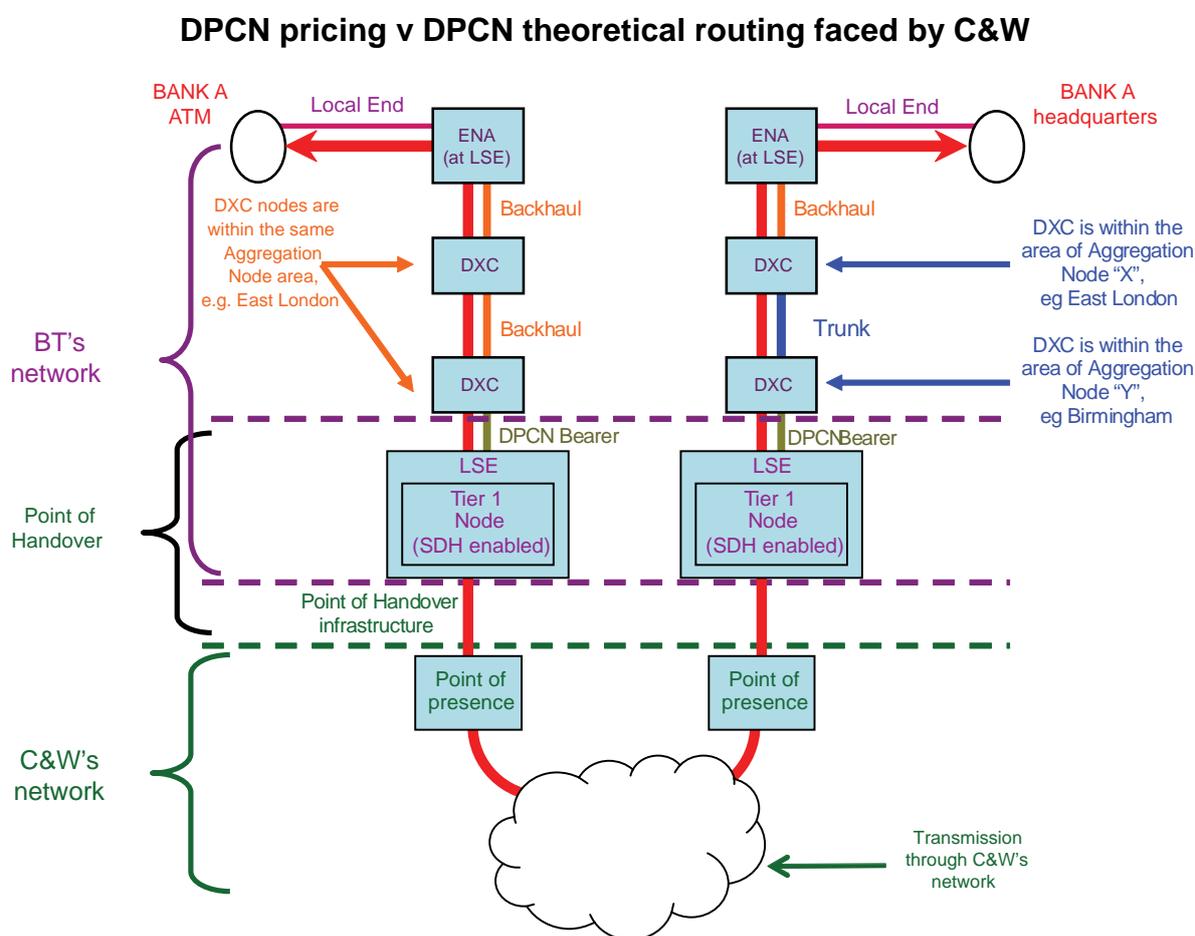
Source: CC, agreed by the parties.

Pricing of DPCN products

44. As explained above, DPCN products are priced according to the PPC model, which means that trunk is defined on the basis of the location of aggregation nodes. For all PPCs, including DPCN circuits, the pricing is done according to 'catchment' areas of aggregation nodes irrespective of what nodes are used in the physical routing. In practice, the UK is divided into a set of aggregation node areas within which DXC nodes falls. If C&W needs to use two DXC nodes in different aggregation node areas, the distance between the two DXCs will be paid for as trunk. Conversely, if the two DXC nodes are within the same aggregation node area, the distance between them will be charged as terminating segment (backhaul).
45. We understand that there are 103 DXC nodes within BT's DPCN network but only 69 are used for pricing purposes.
46. In addition, as with other PPC products, where C&W needs to use either backhaul and, sometimes, trunk (ie the case depicted in Figure 9), C&W will have to pay a fixed main link charge (as the main link is composed of backhaul and trunk) and a per km charge for trunk and terminating segment (ie the main link distance). Furthermore, C&W has the option to buy enhanced maintenance which is paid for with a fixed 'per circuit' charge and a 'per km' charge based upon the length of the main link.

47. Unlike other PPC products, C&W will have to pay a special fixed and per km charge for the DPCN bearer it uses. The DPCN bearer is the infrastructure running between the SDH node where the PoH is connected and the nearest DXC node. The price for the DPCN bearer is published in section B8.01 of BT Wholesale Carrier Price List which covers PoH and BT has indicated that the revenues are accounted for in the PoH market. However, the bearer itself provides a connection between the PoH and the DXC using BT's SDH or PDH network and the costs are included under 64 kbit/s distribution (ie main link rather than PoH).
48. Finally, as before, the thick red line in Figure 9 depicts the individual wholesale service elements that C&W needs to assemble in order to provide a DPCN service to Bank A. Please note that as we explained in paragraph 39, the DPCN technology does not have a physical trunk as it does not aggregate above 2 Mbit/s. However, as we mentioned in paragraph 42, in practice, BT may use the same trunk as used for other PPCs to transmit the DPCN signal across its network.

FIGURE 9



Source: CC, agreed by the parties.

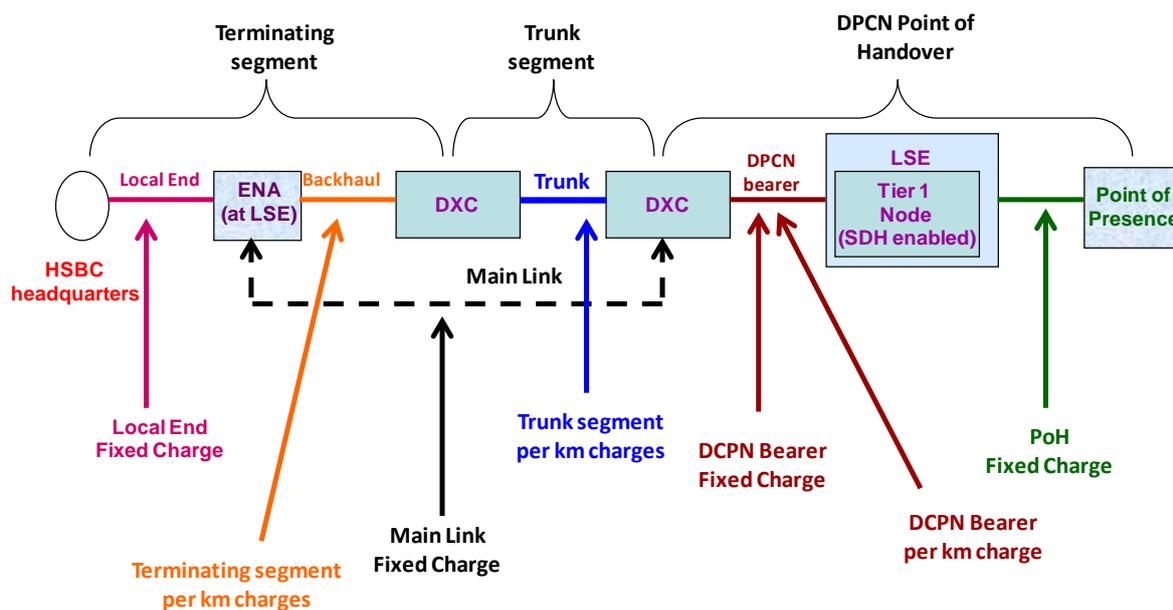
49. Figure 10 is based on the right-hand side of Figure 9 and provides more detail as to what charges C&W needs to pay in order to be able to assemble a DPCN service for Bank A (ie one end of the service).
50. In particular, the DPCN product that C&W purchases is divided into four fixed charges: local end fixed charge, main link fixed charge, DPCN bearer fixed charge and PoH fixed charge. In addition, C&W has to pay a per km charge for trunk, the terminating segment (ie backhaul) and the bearer. Further, C&W has the option to

buy enhanced maintenance which is paid for with a fixed 'per circuit' charge and a 'per km' charge based upon the length of the main link.

51. In the case of DPCN circuits, the total length of the main link is measured as the straight line from the LSE to which the customer is connected (which is where the ENA is located) to the DXC which is nearest to the PoH. This distance is further split between trunk and terminating segment according to the rules described in Appendix A (section 11) of the PPC product handbook.
52. Contrary to leased lines with capacity of 2 Mbit/s and above, when C&W purchases DPCN leased lines, it will also have to pay for a bearer. C&W pays two charges for the bearer, a fixed charge and a per km charge. This part of the infrastructure, that is called the DPCN bearer in the NoA, would fall under 'main link' in the case of leased lines with capacity of 2 Mbit/s and above.
53. As a result of this, the length of the main link will often be different in the case of a DPCN circuit and a higher-speed circuit even if the circuits themselves are between exactly the same two locations. By way of an example, for a circuit connecting a customer in Poole where the nearest DXC (at least for charging purposes) is located in Salisbury:
 - (a) If the OCP has a PoH at the same LSE in Poole that connects the customer, then they could purchase a higher-speed PPC and avoid the need to buy a main link. However, a DPCN circuit must at least go to Salisbury, so that dictates the minimum length for the main link. If the OCP chooses to take the circuit at its Poole PoH, then it must also buy a bearer back from Salisbury to Poole. Alternatively, if the OCP also has a PoH in, or closer to, Salisbury, it can use that and reduce the length of the bearer.
 - (b) If the OCP's closest PoH is at a (hypothetical) LSE *between* Poole and Salisbury that does not have a DXC—since there are 1,800 SDH nodes but only 69 DXCs for charging purposes—then it will need to buy a main link to Salisbury and then a DPCN bearer backtracking to the hypothetical LSE. For a higher-speed PPC, it could simply buy a shorter main link from Poole to the hypothetical LSE.
 - (c) If the OCP's closest PoH to Poole is in Salisbury (at the same LSE where the DXC is located), then the main link length would be the same for a DPCN circuit and a higher-speed PPC, as in both cases it would be measured between the same two LSEs.
54. As we have noted in paragraph 8, these are not the only charges that C&W has to pay. C&W also incurs connection charges. However, since these charges are not subject to the appeal, we do not go into any detail here about them.

FIGURE 10

DPCN pricing faced by C&W



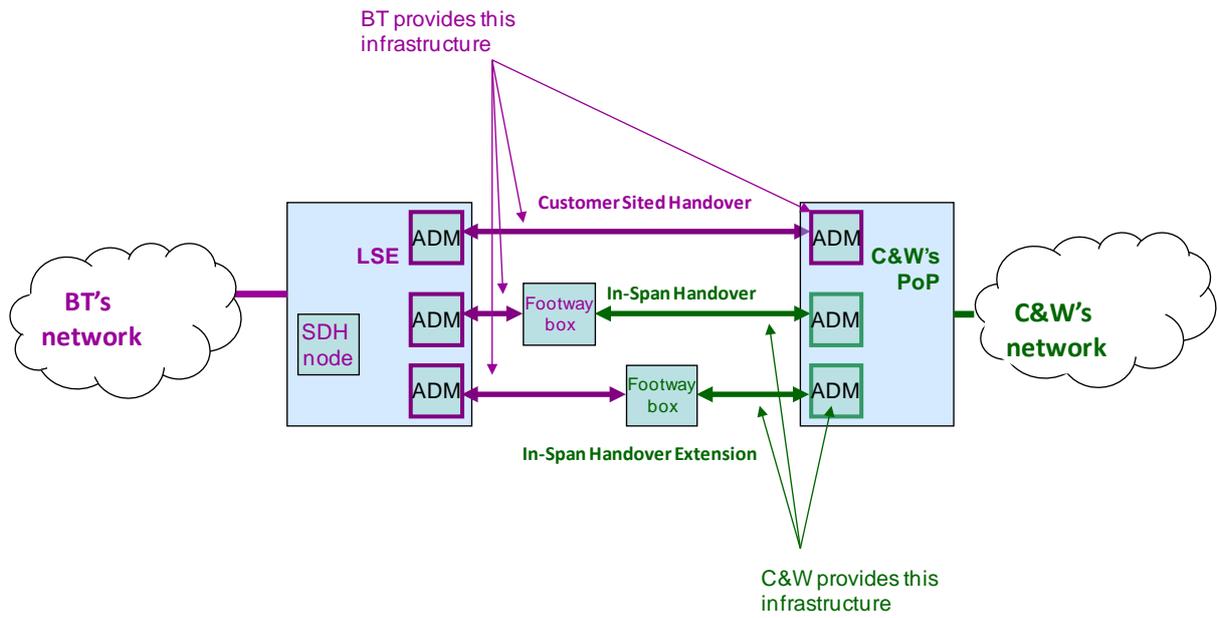
Source: CC (based on the pricing examples presented by BT at the Technical Presentation), revised by the parties.

Point of Handover

55. Lastly, we describe the infrastructure required for a PoH connection. PoH requires a multiplexor on both sides, BT and C&W. The multiplexors used by BT and C&W are ordinary add drop multiplexes (ADMs) which are used across the BT network and are not unique to PoH.
56. There are two configurations of PoH, in-span handover (ISH) and in-span handover extension where C&W provides some infrastructure, and customer-sited handover (CSH) where BT provides the entire handover infrastructure. Figure 11 provides a graphic illustration of the different technologies.
57. PoHs can use either PDH or SDH technology. PDH is the older, less efficient technology and SDH is a newer, more efficient technology. New PoHs ordered by OCPs specifically for PPCs are always SDH. Where old PDH handovers remain in use, they are always CSH.

FIGURE 11

Types of PoH according to who provides the infrastructure



Source: CC, revised by the parties.

All permutations for the correction of the errors in Reference Question 5(b)(i) and 5(b)**TABLE 1 Reference Question 5(b)(i): Adjustments required at the start of the price control (all permutations)**

	<i>per cent</i>			<i>Associated reduction in 2 Mbit/s local end price £</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>1 October 09</i>
X per LLCC	3.25	3.25	3.25	-
X after reversal of 2 Mbit/s local end price adjustment	1.50	1.50	1.50	141.84
X after adjustment for 21CN	3.50	3.50	3.50	-
X after adjustment for SiteConnect	3.50	3.50	3.50	-
X after both 3(c) adjustments (21CN and SiteConnect)	3.50	3.50	3.50	-
X after adjustment for 21CN and 2 Mbit/s local ends	1.75	1.75	1.75	141.84
X after adjustment for SiteConnect and 2 Mbit/s local ends	1.75	1.75	1.75	141.84
X after all adjustments	1.75	1.75	1.75	141.84

Source: CC analysis of Ofcom data.

TABLE 2 Reference Question 5(b): Adjustments required at the end of year 1 of the price control (all permutations)

	<i>per cent</i>			<i>Associated reduction in 2 Mbit/s local end price £</i>
	<i>2009/10</i>	<i>2010/11</i>	<i>2011/12</i>	<i>1 October 10</i>
X per LLCC	3.25	3.25	3.25	-
X after reversal of 2 Mbit/s local end price adjustment	3.25	1.50	1.50	110.21
X after adjustment for 21CN	3.25	3.50	3.50	21.26
X after adjustment for SiteConnect	3.25	3.50	3.50	21.18
X after both 3(c) adjustments (21CN and SiteConnect)	3.25	3.50	3.50	24.74
X after adjustment for 21CN and 2 Mbit/s local ends	3.25	1.75	1.75	113.63
X after adjustment for SiteConnect and 2 Mbit/s local ends	3.25	1.75	1.75	113.33
X after all adjustments	3.25	1.75	1.75	116.76

Source: CC analysis of Ofcom data.

Glossary

2 Mbit/s	2 Megabits per second. One particular bandwidth available for PPCs . Also used generically to refer to all PPCs having a bandwidth of 2 Mbit/s.
2003 Act	Communications Act 2003.
2004 Rules	Competition Appeal Tribunal (Amendment and Communications Act Appeals) Rules 2004 (SI 2004 No 2068).
21CN	BT's 21st Century Network programme.
64 kbit/s	64 kilobits per second. The lowest bandwidth DPCN PPC available. Also used generically for multiples of 64 kbit/s services (eg 512 kbit/s services) up to a maximum of 1024 kbit/s services. See also DPCN .
Access Directive	Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities.
ADM	Add drop multiplexer (see also MUX).
AFS	Additional Financial Statements—unaudited financial statements prepared by BT and designed to provide further, more detailed, information in addition to the RFS .
AISBO	Alternative Interface Symmetric Broadband Origination.
Backhaul	Carriage of traffic from an exchange to a central point: transmission links used to connect local exchanges to each other and/or the core network.
Bandwidth	This is the measure of the maximum capacity of a data link in the network. It indicates the speed at which information can be transferred. In digital systems, it is measured in bits per second (Bit/s).
BCMR	Business Connectivity Market Review. Ofcom's review, undertaken in 2008, of the retail leased lines, wholesale symmetric broadband origination and wholesale trunk segments markets.
BT	British Telecommunications Plc.
BT Sol	BT's Statement of Intervention dated 1 December 2009.
BTW	BT Wholesale .
C&W	Cable & Wireless UK.
Calls to Mobiles Appeal	The judgment of the Competition Appeals Tribunal in relation to the price control matters in <i>Hutchison 3G UK Limited v Office of Communications</i> (Case 1083/3/3/07) and <i>British Telecommunications plc v Office of Communications</i> (Case 1085/3/3/07), [2009] CAT 11 (<i>Judgment: Disposal of the Appeals</i>).
CC	Competition Commission.

CCA	Current cost accounting—an accounting convention, where assets are valued and depreciated according to their current replacement cost.
Copper access network	The part of the access network formed from pairs of copper wires bundled together into cables which are then laid in ducts, carried overhead on poles or directly buried into the ground.
Copper line	An individual pair of copper wires.
Copper loop	A copper line usually used to refer to the metallic path between the exchange and the customer premises.
Core	The part of the network used for high-capacity long-distance switching and transmission.
Cost causation	One of the six principles of cost recovery set out in the Monopolies and Mergers Commission 1995 report <i>Telephone number portability: a report on a reference under section 13 of the Telecommunications Act 1984</i> . It implies that costs should be recovered from those whose actions cause the costs to be incurred at the margin.
Cost orientation	Obligation set in the Business Connectivity Market Review under section 87 of the Communications Act 2003. It requires BT to keep prices within reasonable bounds. Ofcom 's guidelines state that a first order test of cost orientation is whether the charge in question falls between DLRIC and DSAC .
CP	Communications provider. A generic term used to describe all market participants in the leased lines market, ie OCPs and BT .
CSH	Customer-sited handover. This is a PoH where the interconnection between an OCP 's network and BT 's network occurs at the OCP 's premises.
DAM	Detailed Attribution Methodology.
Defence	Ofcom 's Defence document dated 16 November 2009.
DLRIC	Distributed long-run incremental cost. This is estimated by defining a broader increment of a product group, and then adding to the LRIC of an individual product within that product group a share of the intra-group common costs.
DPCN	Digital private circuit network. An older form of TI network used to handle lower bandwidth PPCs available in increments of 64 kbit/s from 64 kbit/s to 1024 kbit/s. Used generically to refer to all PPCs having a bandwidth of less than 2 Mbit/s . These are also known as 'sub 2 Mbit/s' services or just ' 64 kbit/s ' or 'n x 64 kbit/s ' services.
DPCN Bearer	A 2 Mbit/s line used to deliver DPCN circuits from a BT DPCN Node to the POC of an OCP .
DPCN Services	See DPCN .
DSAC	Distributed stand-alone costs: DSAC is estimated by adding to the DLRIC a proportion of costs which are common across all product

groups. In conceptual terms it can be viewed as being **SAC** excluding a proportion of core common costs.

ECRF	European Common Regulatory Framework.
FAC	Fully allocated cost—an accounting approach under which all the costs of a company are distributed applying the principle of cost causality between its various products and services, including a reasonable rate of return. The FAC of a product or service may therefore include some common costs that are not directly attributable to the service.
Framework Directive	Directive 2002/21/EC on the common regulatory framework for electronic communications networks and services.
FRG	Finance and Regulation Group (within the CC).
ISH	In-span handover. This is a PoH where the interconnection between an OCP 's network and BT 's network occurs in between the OCP 's and BT 's premises.
Kbit/s	Kilobits per second. A measure of speed of transfer of digital information. There are 1,000 kbits in 1 Mbit .
Leased line	A permanently connected communications link between two premises dedicated to the customer's exclusive use, providing dedicated transmission capacity between customer sites, which can be used to carry voice, data and video traffic.
LLCC	Leased Lines Charge Control. The current regime of charge control regulation applying to wholesale leased lines.
LLCC Statement	Ofcom 's decision on charge control regulation applying to wholesale leased lines. The latest LLCC Statement , published in July 2009, covers the period October 2009 to September 2012 and is the subject of this appeal.
Local end	The dedicated link that connects the third party customer premises and BT 's local exchange. This can be provided using either copper or fibre pairs depending on the distance and speed required by the customer.
LRIC	Long-run incremental cost—the additional cost caused in the long run by the provision of a defined increment of output, assuming that some level of output is already produced.
LSE	Local Serving Exchange. This is the building where a third party customer is connected to the wider BT (or OCP) network.
M/bits	Megabits per second. A measure of speed of transfer of digital information.
Main link	This provides dedicated transmission capacity between the local exchange and the OCP 's POC with BT 's network. The main link can be a mix of terminating segment and trunk network transmission.

MCE	Mean capital employed.
MCT Determination	The CC 's determination on mobile phones termination charges, 2009: www.competition-commission.org.uk/appeals/communications_act/mobile_phones_de_termination.pdf .
MUX	Multiplexer: a device that carries out multiplexing, a process where multiple analog message signals or digital data streams are combined into one signal over a shared medium.
NoA	C&W Notice of Appeal dated 2 September 2009.
Node	A node or exchange is part of BT 's hierarchical network at which transmission paths are connected. Nodes or exchanges are identified in a series of 'tiers' (Tier 1 Nodes currently being at the highest level of the hierarchy).
NRA	National Regulatory Authority.
OCP	Other communications provider. A generic term used to refer to CPs other than BT .
Ofcom	Office of Communications.
Oftel	Office of Telecommunications: a government department set up under the Telecommunications Act 1984 to promote competition and maintain the interests of consumers in the UK telecommunications market. On 28 December 2003 the duties of Oftel were inherited by Ofcom , which was the result of a consolidation of the British telecommunication and broadcasting regulators.
PDH	Plesiochronous digital hierarchy. An older method of digital transmission used before SDH .
POC	Point of connection. A point where one CP interconnects with another CP for the purposes of connecting their networks to third party end-customers in order to provide services to those end-customers.
PoH	Point of handover. This is a high-capacity link consisting of a bearer fibre typically carrying multiple circuits, which connects PoH equipment in the BT exchange and the OCP 's premises.
PPC	Partial private circuit. A PPC involves a local end linking the customer premises to an LSE and then further transmission between the LSE (via either terminating segment alone or a combination of terminating segment and trunk) to the PoH delivering the circuit to the POC of the OCP .
PPC Dispute	A dispute referred to Ofcom by certain OCPs under section 185 of the 2003 Act about whether BT had overcharged them for certain PPC services (in particular, trunk services) between June 2004 and September 2008.

QoS	Quality of service.
RBS Backhaul	Radio base station backhaul circuit: a circuit provided by BT that connects a mobile CP 's base station to the mobile CP 's mobile switching centre. It is essentially analogous to a PPC .
Reply	C&W 's Reply dated 28 January 2010.
RFS	Regulatory financial statements. Audited financial statements that BT is required to produce and publish each year to comply with its regulatory obligations.
ROCE	Return on capital employed.
SAC	Stand-alone cost: the cost which would be incurred by an efficient provider of a product as a single product company. In a multi-product firm, the SAC of a product group is a sum of the LRIC of that product group and all of the costs which are common to that product and the other products produced by the firm.
SDH	Synchronous digital hierarchy. A method of digital transmission where transmission streams are packed in such a way to allow simple multiplexing and de-multiplexing and the addition or removal of individual streams from larger assemblies.
SG&A	Sales, General & Administration—typically used as a category of costs.
SiteConnect	SiteConnect is a somewhat more comprehensive service than RBS . It uses RBS and other non- PPC services as inputs.
Sol	Statement of Intervention.
SMP	Significant market power.
Sub 2 Mbit/s services	A generic term used to refer to all DPCN circuits and services.
Terminating segments (of leased lines)	All PPC services excluding trunk.
TI basket	The basket of TISBO (ie terminating segment including local ends) services and trunk services subject to Ofcom 's LLCC Statement .
Tier 1 Node	A tier in BT 's SDH network that denotes a network of nodes covering areas of high population or which are otherwise important. These nodes are connected by very high-capacity line systems. Tier 1 Nodes currently are at the highest level of the hierarchy.
TISBO	Traditional Interface Symmetric Broadband Origination.
TI Services	Services included in the TI basket .
Tribunal	Competition Appeal Tribunal.

Trunk segments	The part of the PPC service that represents the transmission between certain Tier 1 Nodes .
Verizon	Verizon UK Limited.
Verizon Sol	Verizon's Statement of Intervention dated 30 November 2009.
VPN	Virtual private network.
WACC	Weighted average cost of capital.