

## Section 8

# Passive remedies

## Summary

- 8.1 Some stakeholders asked us to consider imposing passive remedies, such as regulated access to BT's ducts and poles and/or dark fibre, in order to address BT's continuing SMP in leased lines markets.
- 8.2 After due consideration, we have decided not to impose passive access in markets for leased lines services. In this Section, we discuss stakeholders' views and our considerations, and set out the reasoning that led us to our decision.
- 8.3 Our approach to remedies in leased lines markets is designed to promote effective competition in downstream markets by promoting competition in the long-term at the wholesale level based on investment in economically efficient alternative infrastructure, and by regulating wholesale access to BT's leased lines services. In this review, as in our previous reviews of leased lines markets, we are imposing a package of remedies to give effect to this approach, and address, in so doing, the competition issues we identified. However, we recognise that it is possible that the imposition of passive remedies in leased lines markets could be another way of supporting competition in downstream markets.
- 8.4 The existing remedies, and those which are set out in this Statement, support substantial existing investments in infrastructure and commercial activities in leased lines throughout the UK. If we were to impose passive remedies then, at least in the short term, we would need to manage the co-existence of the two types of remedies (both existing remedies and passive remedies).
- 8.5 However, imposition of passive remedies is likely to be inconsistent with important aspects of the package of remedies which we are imposing, including the form of the charge controls. In other words, imposition of passive remedies would be likely to be part of an alternative, rather than a complement, to that package of remedies. In reaching the decisions in this Statement, we therefore needed to decide which approach we considered would be likely to be more consistent with securing or furthering our statutory duties.
- 8.6 We have considered the potential benefits that the imposition of passive remedies could deliver. Some CPs have argued, for example, that the pace of innovation could be increased in some parts of the market. However, it is not clear to us that the competition issues we have identified in leased lines would be addressed more effectively in the round by the imposition of passive remedies than by our current approach to remedies. Our analysis suggests that the specific benefits put forward by stakeholders of imposing passive remedies could, to a large extent, be achieved by imposing alternative remedies such as price controls on BT's provision of wholesale leased lines services. At the same time, we consider that there are significant risks that the imposition of passive remedies could lead to worse outcomes for consumers and for competition.
- 8.7 Some stakeholders suggested that we should impose passive infrastructure access (PIA) targeting specific leased lines applications, such as mobile backhaul. We think that incentives to invest using PIA for leased lines could be weaker than those stakeholders assume. This is because we consider that the charges for PIA targeted

at a specific leased lines application should be set so as to incentivise efficient investment, with reference to the (controlled) charges for downstream alternatives, and not, as some stakeholders appear to believe, set equal to BT's current prices for PIA (which is available only for application in fixed next-generation access (NGA) networks for consumer superfast broadband services).

- 8.8 Having considered responses to the CFI and to the June BCMR Consultation, we have seen no evidence that any CPs would invest substantially in leased lines infrastructure based on passive remedies in the forward-looking period covered by this review if we were to impose such remedies. Furthermore, we have seen no evidence that imposing passive remedies in leased lines markets would, as some stakeholders have claimed, unlock significant new investments in NGA infrastructure for consumer superfast broadband services.
- 8.9 Overall, the imposition of passive remedies would be likely to require significant regulatory changes and intervention, and we would therefore need clear evidence to justify such an approach. Having carefully considered the evidence before us, it is not clear at present that imposing passive remedies would lead to better market outcomes in the round than the package of remedies we have decided to impose. We have therefore decided not to impose passive remedies.

## Introduction

- 8.10 The term *passive remedies* refers to regulated access for CPs to physical network assets of the regulated firm, such as ducts and poles or to unlit ("dark") fibre. We use the term *active remedies* to refer to regulated access to communication services which the regulated firm provides using infrastructure which includes electronic equipment. Currently, all access obligations imposed on BT in the leased lines markets are active remedies.<sup>1008</sup>
- 8.11 In the 2007/8 Review, we considered whether BT should be required to provide dark fibre in the access network as a means of promoting more effective competition in downstream leased lines markets. We concluded, at that time, that a review of dark fibre for the purpose of promoting competition in wholesale leased lines access markets was not warranted.
- 8.12 One of the remedies we imposed on BT in concluding our review of the wholesale local access market in October 2010 (the WLA Review) was passive infrastructure access (PIA). This remedy requires BT to provide access to its ducts and poles for the specific purpose of allowing other CPs to deploy fixed next-generation access (NGA) networks to support superfast broadband services, but not leased lines.<sup>1009, 1010</sup> We said at that time that we would consider the case for allowing PIA to be used for leased lines in our next review of the business connectivity market – which is the current review.
- 8.13 In the WLA Review, alongside PIA, we imposed an active remedy, virtual unbundled local access (VULA). This requires BT to provide wholesale access to the fixed NGA

<sup>1008</sup> For example, BT provides PPCs in compliance with regulations in TISBO markets and Ethernet Access Direct (EAD) and Ethernet Backhaul Direct (EBD) in compliance with regulations in the AISBO market.

<sup>1009</sup> *Review of the Wholesale Local Access Market*, 7 October 2010. See [http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA\\_statement.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf).

<sup>1010</sup> PIA enables CPs to use BT's ducts and poles to deploy optical fibre in the access network, either to support deployment of fibre-to-the-premises (FTTP) technology, or to enable a fibre backhaul connection between a street cabinet and the CP's network to support fibre-to-the-cabinet (FTTC) solutions.

network which it is currently deploying to make superfast broadband services available to two thirds of UK consumers. BT plans to complete this deployment by the spring of 2014. We imposed two remedies in the WLA Review (VULA and PIA) because we expected CPs to use them in different circumstances: VULA to support competition where BT has already upgraded its local access network; PIA to support investment either in advance of BT's deployment or in locations in which BT does not plan to deploy its NGA network and which may be in receipt of public funding support.

- 8.14 In the CFI that we issued when we started the current review,<sup>1011</sup> we asked stakeholders for their views on the role that passive remedies in leased lines markets could play in promoting downstream competition, and on the implications that adoption of passive remedies could have on the provision of active remedies.<sup>1012</sup>
- 8.15 In the June BCMR Consultation we considered stakeholders' responses to the CFI. We recognised the general possibility that imposing passive remedies could improve the prospects for competition, but our analysis of the specific cases put forward by stakeholders suggested that the potential benefits that could flow from doing so could to a large extent be achieved by imposing alternative remedies such as price controls on BT's provision of wholesale leased lines services. We also considered that imposition of passive remedies could carry significant risks to market outcomes, specifically:
- adding to the costs of competition in leased lines markets;
  - encouraging inefficient entry;
  - narrowing the promotion of competition to the provision of high-revenue services and/or of services in dense geographic clusters of businesses (such as urban centres), while increasing the charges paid by many customers in the same geographies, and by most customers elsewhere; and
  - undermining the recovery of BT's common costs that underpins the current pricing of all of BT's regulated leased lines services.
- 8.16 Having considered stakeholders' responses to the CFI, we concluded provisionally in the June BCMR Consultation that we should not impose passive remedies to address competition issues in leased lines markets. We nevertheless recognised the possibility that the current limitation of application of PIA to the wholesale local access market could deter CPs from investing in NGA infrastructure to support superfast broadband services, and said that we would consider any evidence that would show that such investment would be unlocked if we extended the scope of application of PIA to include leased lines services.
- 8.17 In the rest of this section we discuss our considerations of passive remedies in sub-sections as follows:
- **Consultation responses and Ofcom's considerations**, including discussion of stakeholders' responses to the CFI and the June BCMR Consultation, under the following headings:

<sup>1011</sup> Business Connectivity Market Review, Call for Inputs, published 21 April 2011.

<sup>1012</sup> See CFI paragraphs 1.47, 1.48 and Question 18.

- **Potential role of passive remedies in leased lines**, including explanation that imposition of passive remedies would require significant regulatory intervention and that passive remedies would be likely to be part of an alternative to the package of remedies we are imposing in this Statement, rather than a complement;
  - **Whether competition based on passive remedies would be more effective**, considering whether passive remedies could lead to better market outcomes than the current active remedies; and
  - **Likelihood that passive remedies will be used**, assessing the extent to which CPs would invest in using passive remedies in the forward-looking period covered by this review.
- **Conclusions**, in which we set out our decision not to impose passive remedies.

## Consultation responses and Ofcom's considerations

- 8.18 Stakeholders expressed a range of different views about whether we should impose passive remedies in leased lines markets. BT and Virgin argued that we should not impose them and KCOM did not think they were necessary. CWW did not attach a high priority to them but was keeping an open mind. Telefónica and EE, together with MBNL, suggested that passive remedies could increase competition in mobile backhaul. In Vodafone's view, the only way we could ensure ubiquitous coverage of high-speed data services was to open up access to BT's ducts and poles. Verizon and Sky thought that passive remedies could help provide services in some specific instances, for example in data centres and in certain backhaul routes. TalkTalk and Level 3 argued that passive remedies could help promote technical innovation and reduce costs.
- 8.19 In the following paragraphs we summarise and address the specific points made by stakeholders.

### Potential role of passive remedies in leased lines

#### Comments in response to the CFI

- 8.20 In their responses to the CFI, Telefónica, EE/MBNL, Three UK, TalkTalk, Geo and Verizon argued that imposition of passive remedies could have a significant effect on competition generally, while CWW and Sky envisaged potential application of passive remedies in more limited circumstances.
- 8.21 Telefónica thought that PIA, if imposed in leased lines markets, would enable opportunities for alternative operators to compete, and, in doing so, [3<]. EE and MBNL jointly and, separately, [3<], said that access to BT's dark fibre and ducts for provision of leased lines could lower Virgin's and CWW's costs of supply and stimulate a competitive market. Verizon thought that access to BT's dark fibre and/or ducts would greatly assist in opening up the market by reducing costs and increasing competition.
- 8.22 TalkTalk expressed the view that passive remedies could have a significant impact on downstream competition. It argued that passive remedies would encourage competition at an infrastructure level, but noted that this is likely to be selective, either in support of major long-term customer contracts or to allow CPs to address

gaps in their existing infrastructure. CWW, similarly, regarded passive remedies as having potential niche applications.

- 8.23 Geo argued that CPs need access to Openreach's dark fibre in order to compete with BT on an equivalent basis, and that we should now extend PIA to leased lines in order to allow CPs to provide a complete range of services from the NGA networks they deploy, on the same basis that BT currently enjoys.
- 8.24 BT did not think that passive remedies would do anything to make the market more competitive, either in the short or long term. Similarly, KCOM did not see a role for passive remedies in promoting downstream competition in leased lines markets. It argued that there was no evidence of demand that could not be satisfied by existing remedies, nor evidence that existing remedies were insufficient to meet demand for leased lines services.
- 8.25 Telefónica explained that it saw PIA as part of a "*mixed economy of complementary remedies*" in leased lines markets, alongside the existing remedies, and highlighted that we had imposed PIA in the wholesale local access market alongside VULA. EE and MBNL also said that passive remedies should be imposed in parallel with, rather than instead of, the current remedies, at least for the purposes of this market review. Geo, similarly, believed that the current remedies in leased lines markets need to be expanded to include the addition of passive remedies such as PIA. Sky thought that, while passive remedies may offer the possibility to deregulate downstream markets in future, it would not be appropriate to do so until any new remedies had had time to take effect.

### Comments in responses to the June BCMR Consultation

- 8.26 In its response to the June BCMR Consultation, Vodafone said it believed that imposing PIA for all purposes, but in particular for mobile backhaul, was the best way of achieving Ofcom's and the Government's policy objectives. Vodafone proposed that such an intervention should be complementary to the restructuring of regulated pricing of Ethernet leased lines to better reflect the underlying cost structure.
- 8.27 After the end of the consultation period, Vodafone submitted an additional document for our consideration (the Vodafone Paper).<sup>1013</sup> Among other things, the Vodafone Paper argued that a modest amount of regulatory and quasi-regulatory effort would be likely to deliver a cost effective PIA product for mobile backhaul and other uses.<sup>1014</sup>
- 8.28 The same paper argued that PIA would be better-suited to application in mobile backhaul than to application in fixed NGA networks, for which PIA is currently available, because demand for PIA in mobile backhaul (if not the timing of that demand) is clear, while it is less clear in the case of fixed NGA networks, and also because less passive infrastructure would be required to fulfil that demand for mobile backhaul than for fixed NGA networks.<sup>1015</sup>
- 8.29 Vodafone also argued that the cost structure of PIA would offer advantages for long-term investments and increasing bandwidth demand which could not be fulfilled through the regulated reduction of Ethernet prices. Vodafone compared its estimated

<sup>1013</sup> *Unlocking 4G – Fixing the backhaul bottleneck*, paper for Vodafone by Towerhouse Consulting.

<sup>1014</sup> Vodafone Paper paragraph 3.47.

<sup>1015</sup> Vodafone Paper paragraphs 2.13-2.14.

costs (opex and capex) for provisioning mobile backhaul at a hypothetical site over a period of ten years, under different deployment scenarios. It showed that, according to its model, providing a 1Gbit/s connection to the site [3<].<sup>1016</sup> Vodafone also estimated that [3<].<sup>1017</sup>

- 8.30 TalkTalk commented on our proposal not to impose passive remedies both in its formal response to the June BCMR Consultation and in a subsequent paper (the TalkTalk Paper).<sup>1018</sup> It suggested that PIA and dark fibre are likely to be used initially on a case-by-case basis, reacting to particular needs.
- 8.31 Geo said it believes that the availability of passive remedies is necessary now for use in mobile and NGA backhaul. It said that [3<].
- 8.32 Geo argued that our concerns that the use of passive remedies could undermine the remedies already imposed are not well founded. In its view, parallel regulatory intervention requiring both active wholesale products and access to cost-based passive remedies is the tried and tested route to product innovation, lower consumer prices and faster product roll-out.
- 8.33 Vtesse argued we should extend the use of PIA beyond residential NGA. In its view, if we decide to extend the allowed uses of PIA to leased lines and it is then not used by CPs then there will be no effect on BT. If, on the other hand, CPs make use of PIA in leased lines then the market will benefit from more innovation and choice. In Vtesse's view, passive remedies would, at least, complement and reinforce price controls by providing a constraint on BT's active services.
- 8.34 Verizon suggested that access to BT's fibre would allow CPs to extend their reach to data centres in areas where they do not own network infrastructure. Verizon considered that extending a CP's own network is usually not cost effective, while use of BT's active products could demand expensive connection and rental charges.
- 8.35 Verizon also said that dark fibre could increase the level of competition and put downward pressure on prices leading to greater consumer choice and overall better consumer outcomes.
- 8.36 BT, on the other hand, argued that the extension of the uses of PIA to include leased lines would inevitably lead to the withdrawal of some of the existing regulated products and redraw the functional separation boundary within BT by changing the level in the value chain at which network competition is judged not to be feasible.
- 8.37 In BT's view, it is very difficult to restrict the use of passive remedies in particular product markets. It therefore suggested that passive remedies could undermine the investments of other infrastructure owners, particularly in those areas where competitive networks exist.
- 8.38 Finally, BT argued that passive remedies, if imposed, would be, in effect, irreversible. This is because CPs would have set up their networks and sunk their assets based on the existence of passive remedies, while the structure of downstream markets would be changed to reflect the availability of these remedies.

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<sup>1016</sup> Figure 3 in Vodafone's response to the June BCMR Consultation.

<sup>1017</sup> Figure 4 in Vodafone's response to the June BCMR Consultation.

<sup>1018</sup> The paper was entitled *Additional Comments on Business Connectivity Market Review and Leased Lines Charge Control*.

### Ofcom's considerations

- 8.39 CPs expressed a range of different views about whether or not we should impose passive remedies, and on the extent of the role that passive remedies could have in supporting competition in leased lines.
- 8.40 We recognise the possibility that passive remedies could support such competition to some degree. Although the up-front costs incurred by competitors using them would generally be higher than those currently incurred by CPs that use BT's regulated wholesale services, they would be likely to be lower than those faced by CPs which invest in construction of their own passive infrastructure.
- 8.41 The prices of passive products relative to those of downstream alternatives would be a key factor in CPs' incentives to use them. These incentives are illustrated by the comparison that Vodafone presented between the costs it would expect to face in providing an access link to a base station using PIA on the one hand, and using Openreach Ethernet wholesale services on the other.
- 8.42 It is important to note that the current charges for PIA in the WLA market are not necessarily a reliable indicator of the costs that CPs using PIA for leased lines might face. PIA is currently available to support investment in fixed NGA infrastructure. If we required BT to extend the allowed uses of PIA to support competition in leased lines then the prices of PIA may need to change to take a number of factors into account, including incentives for efficient investment and recovery of BT's common costs. We discuss these factors more fully in the next sub-section.
- 8.43 In the event that we impose passive remedies, we may therefore need to intervene to set their prices. Imposition of passive remedies may also be inconsistent with the parameters and design of the charge controls we are imposing on BT's wholesale services, and, if so, we would need to change them. Specifically, it may be appropriate to relax or remove price controls from certain BT wholesale services for which controls may no longer be necessary, or to adjust them to take account of the likely effect of passive remedies on demand for active products; and additional intervention may be appropriate to secure that incentives for efficient investment are maintained by the relative prices of passive remedies and of downstream alternatives, for example, by agreeing or imposing floors on BT's charges for wholesale services. These potential inconsistencies between the imposition of passive remedies and the parameters and design of the charge controls we are imposing are part of the reason for our view that imposition of passive remedies is likely to be part of an alternative to the package of remedies we are imposing, rather than a complement. We explain this view further below in this Section.
- 8.44 We may need to take additional or alternative steps to ensure a level playing field for CPs, for example by requiring that passive remedies are provided on an appropriately non-discriminatory basis. This could mean changing the role of Openreach to include provision of passive remedies on the basis of equivalence of inputs.
- 8.45 At the same time, BT's charges for wholesale services and for passive access would need to be set in a manner which would allow BT to recover its common costs. The current charge controls, and the ones we have decided to impose on BT in this review, allow BT a degree of flexibility in the way it recovers its common costs across its range of wholesale services. As we explain below, CPs' incentives to invest in using the passive remedies would tend to be strongest where the alternative active wholesale service is one from which BT currently recovers a relatively high proportion

of its common costs. BT could, in turn, seek to reduce its charges for those services, and in that case its charges for other services would need to increase in order to allow BT to continue to recover its common costs.

- 8.46 Looking further ahead, we do not consider that it would be appropriate to regulate concurrently and indefinitely at multiple levels of the value chain. Where passive remedies prove to be successful, we would be unlikely to need to require BT to provide active wholesale versions of services which CPs were providing successfully by using regulated access to BT's passive assets. We would therefore expect to withdraw from at least some regulation of services downstream of passive remedies as and when competitive conditions allow us to do so after a period of transition.
- 8.47 Overall, therefore, if passive remedies were introduced, a period of transition is likely to follow in which active remedies are restructured, which may lead in the medium to long term to the withdrawal of some or all of the active remedies. While it is difficult to draw exact parallels, some features of a similar evolution followed the introduction of LLU, including, for example, BT's pricing commitments on wholesale broadband access products in 2005 and downstream deregulation in some geographic wholesale broadband access markets in 2008.<sup>1019, 1020</sup>
- 8.48 However, unlike the case of LLU, which was introduced to support the development of consumer broadband services from a relatively low base, the business connectivity industry is well established, has annual leased lines revenues which we estimate exceed £2bn, and currently depends largely on BT's regulated wholesale services. CPs and end-users of leased lines would need to adjust their activities to any changes brought about by the introduction of passive remedies, and we would need to manage the transition to ensure that it would not be unduly disruptive.
- 8.49 Our view is that facilitating the transition from the current regulatory regime to one where competition based on passive remedies is sustainable and effective, would require a significant degree of regulatory support and intervention, potentially including changes to the definition of the regulatory boundaries and to the role of Openreach. We consider the potential need for such regulatory intervention is further reason for our view that passive remedies would be likely to be part of an alternative to the package of remedies we are imposing in this Statement, rather than a complement. Therefore, while it is appropriate to consider imposing passive remedies, the case for doing so would depend on there being concrete evidence that the transition would lead to a better overall outcome.
- 8.50 We note, in response to stakeholders who draw a parallel with our decision to impose complementary active and passive remedies in the wholesale local access market, that the reasoning underlying that decision is not relevant to leased lines markets. In imposing PIA in the wholesale local access market in October 2010, our purpose was to support investment in fixed NGA infrastructure in locations in which there is no such infrastructure. The remedy we imposed to support competition in that market is VULA, a remedy which is applicable only in locations in which BT deploys its fixed NGA network. The current situation in the leased lines markets is very different. BT's wholesale leased lines services are already available throughout the UK, and absence of infrastructure is therefore not a particular concern in the current review. In

<sup>1019</sup> The relevant commitments from BT are summarised in the 2005 Broadband Regulation statement <http://stakeholders.ofcom.org.uk/binaries/consultations/rwlam/statement/bbr.pdf>

<sup>1020</sup> In the 2007 market review of the Wholesale Broadband Access market we withdrew regulation in exchanges where BT faced competition by 3 or more "principal" operators <http://stakeholders.ofcom.org.uk/consultations/wbamr07/>



addition, regulated access to BT's wholesale leased lines services is available in all locations in which BT has SMP in the relevant product market, for all applications, including mobile backhaul.

## **Whether competition based on passive remedies would be more effective**

### Comments in response to the June BCMR Consultation

- 8.51 MNOs and some other respondents argued that passive remedies could help them reduce their costs of purchasing leased lines, particularly of high-capacity links, and could increase backhaul availability from alternative providers.
- 8.52 Responding to the June BCMR Consultation, Vodafone said that imposing passive remedies was the only way we could create conditions to ensure ubiquitous high-speed and rich data coverage. It noted that step changes in capacity and unit cost of mobile backhaul – the links between MNOs' cell sites and core networks – are needed to meet the forecast increase in demand for mobile data between the years 2012 and 2030. It argued that this will not happen while BT's regulated charges for bandwidth remain linear to scale, rather than reflecting the underlying low marginal cost of increasing the bandwidth of an established route.
- 8.53 EE jointly with MBNL said that passive remedies would enable other operators to provide connectivity between any radio site and any mobile network core site efficiently, and hence compete effectively with BT, whose ubiquitous network would otherwise confer the key advantage. They said that BT did not have a total monopoly in the provision of mobile backhaul, noting both MBNL's contract with Virgin to provide such backhaul and competition from other providers in certain areas, but added that the extent of such competition was limited and that mobile operators still had no choice but to purchase significant amounts of backhaul from BT. In their view, passive remedies would enable a small number of competing CPs to provide nationwide competition to BT on more equal terms.
- 8.54 In relation to the bandwidth-related gradient in BT's wholesale prices, CWW agreed that there was a risk of inefficient entry if operators try to use passive remedies, but thought that the underlying issue must nevertheless be addressed. Its preference was that we should address the issue at its heart, by tackling the price of BT's high-bandwidth circuits, in particular where they are used for backhaul. However, were we to decide not to do so, then, in CWW's view, it would be better to have slightly inefficient entry with passive remedies than very inefficient entry in other ways.
- 8.55 Colt argued that even if there is positive (and material) cost arising from network duplication, set against it would be the benefits of greater competition arising from alternative infrastructure deployment, and greater simplicity, regulatory certainty, and relief from the anti-competitive pricing and product strategies that, in its view, are evident today. It argued, however, that the impact of network duplication would be small. It explained that an investment depreciated over 20 years may result in an amount that is very small compared to the total costs of service provision, while the comparatively high digging costs mean that network duplication costs would actually reduce with the use of passive remedies for CPs who would otherwise dig their own ducts.
- 8.56 Colt said that BT's model for recovering common costs would be eroded even without passive remedies as NGA services will replace business connectivity services at the margin. Furthermore, it argued that infrastructure access would increase pressure on BT to reduce its total costs by forcing it to unwind a cost

allocation model that is primarily structured for its own benefit and not for the benefit of the market as a whole.

- 8.57 Vodafone also argued that absent passive remedies there is a risk that mobile backhaul will become the bottleneck in meeting its customers' expectations for increased data rates without higher prices. Vodafone forecast that it would require multiple 1Gbit/s links in the backhaul of individual cell-sites and points of aggregation, because of the anticipated increase in traffic demand and its recent network sharing agreement with Telefónica.<sup>1021</sup>
- 8.58 With regards to mobile backhaul, Geo did not believe that the evidence supports the provisional view we set out in the June BCMR consultation that the industry is currently likely to deliver fibre-based services to the radio base station sites where MNOs require them within a reasonable time. In its view this is because networks (other than BT's) are not sufficiently ubiquitous. It further argued that MNOs' capacity requirements are urgent and, in its view, tinkering with the specification of MEAS, or imposing safeguards against discrimination in the leased lines charge control would not address adequately concerns about over-pricing and lack of competitive supply.
- 8.59 Virgin argued that it would neither be necessary nor appropriate to seek to impose passive remedies because CPs which own networks can compete with BT on the same basis as Virgin does, for example, in providing backhaul for mobile services, and because active remedies are available to address identified competition concerns.
- 8.60 BT argued that passive remedies could undermine investment in alternative networks and technologies that have brought significant benefits to end-users. KCOM, similarly, thought that passive remedies could undermine investments in leased line services which had already been made. BT also argued that MNOs have alternative backhaul options, pointing to Virgin's network footprint, and the MNOs' ability to use alternative backhaul methods such as radio or microwave. In BT's view, if the MNOs still need to rely on Openreach's Ethernet services, the current remedies, including charge controls, are sufficient to provide them with a cost effective mobile backhaul solution.
- 8.61 TalkTalk argued that passive remedies could prevent BT from pricing its leased line wholesale products abusively. It questioned whether the way BT chooses to recover its common costs is indeed economically efficient. In its response to the June BCMR Consultation and in the TalkTalk Paper, it argued that BT's incentives in following a particular common costs recovery pattern are driven by incentives to maximise its profits and that it is more likely that BT is doing this by setting prices abusively, rather than by setting Ramsey prices.<sup>1022</sup> In TalkTalk's view, any efficiency impact is a side effect of BT's profit maximising approach.
- 8.62 TalkTalk argued that BT does not have the necessary data on retail price elasticity and is therefore not able to compute and set its charges according to the Ramsey principle. In its view, this is evident from BT's allocation of common duct costs which is based on cross-sectional area and results in copper attracting a larger portion of

<sup>1021</sup> See announcement at:

[http://www.vodafone.com/content/index/media/group\\_press\\_releases/2012/uk\\_network\\_collaboration.html](http://www.vodafone.com/content/index/media/group_press_releases/2012/uk_network_collaboration.html)

<sup>1022</sup> Ramsey pricing is a way of setting prices to recover fixed costs efficiently. Under Ramsey pricing, elasticities of demand are used to determine the amount of such costs which should be recovered from each service. Services with higher elasticities of demand (i.e. for which demand is more sensitive to price) attract lower mark-ups (over marginal costs) than services with lower demand elasticities.

the cost. However, TalkTalk suggested BT is able to work out how to maximise its profits by pricing abusively. It explained that BT could, for example, recover more common cost from less competitive products and markets, and from products that it provides mainly to its competitors. TalkTalk argued that it is therefore more likely that BT prices abusively, rather than in a way that optimises demand.

- 8.63 TalkTalk suggested that PIA is likely to lead to efficient recovery of common costs. In TalkTalk's view, this is because users of PIA would be likely to offer different bandwidths and services over the same duct, sharing the common costs (PIA charges). They would therefore seek to recover different amounts of these costs from different customers and products, leading to a pattern of common cost recovery that would be governed by demand and competitive pressures.
- 8.64 TalkTalk also suggested that a possible rebalancing in the way BT chooses to recover its common costs could be a beneficial outcome. In its view, a price differential where prices in competitive areas are lower than those in non-competitive areas would bring prices closer to cost, thereby increasing allocative efficiency.
- 8.65 Geo, similarly, suggested that it would be acceptable and equitable if BT rebalanced its recovery of common costs, leading to reduction of the price of high bandwidth services and an increase in charges for other services.
- 8.66 Geo argued that we may have overstated the cost of duplication since, in its view, the first operator to deploy its own fibre in a location using PIA would most likely offer open access to the fibre or active products to other CPs. It suggested that a condition should be set on PIA that dark fibre is made available to the rest of the market on non-discriminatory terms by the first provider to install multiple fibres in a BT duct. It further argued that we had not factored in the additional revenues which passive remedies could bring through potential growth in the industry that could be triggered by increased bandwidth availability and competition. TalkTalk made similar arguments, adding that, in its view, passive remedies would reduce duplicative costs for those CPs who deploy their own infrastructure and who currently carry significant civil works costs.
- 8.67 Some CPs argued that passive remedies could benefit the market by adding to the scope and improving the pace of technological innovation.
- 8.68 TalkTalk argued that passive remedies would allow other operators to deploy their own electronic (or 'active') equipment without relying on Openreach to provide AISBO and MISBO services. TalkTalk and Vtesse argued that there is scope for innovation at this 'active' layer, citing examples from previous evolution steps from PDH to the current, second generation, Ethernet and previous innovation in LLU, and said that further areas to innovate exist such as SyncE, aggregation and new optical technologies. In TalkTalk's view, competition at the 'active' layer had the potential to deliver significant consumer benefits also because it represents a significant proportion of the total cost. Using BT's Regulatory Financial Statements, TalkTalk estimated that proportion at approximately 30%.
- 8.69 Vtesse, Verizon, and Vodafone said that BT's active products suffer from technical constraints that restrict their ability to differentiate their service offerings and to have complete end to end control. Vtesse claimed that if it had direct control over the implementation and management it would have avoided incidents where BT caused extensive installation delays or provided poor repair and monitoring. Vodafone argued that complete end to end control is required to improve its network performance and accelerate its deployment. In the Vodafone Paper it provided

diagrams with measurements of certain performance attributes showing that better service was available to users in countries in which mobile operators can provide their own backhaul over self-managed fibre.<sup>1023</sup>

- 8.70 EE and MBL argued that innovation would occur more quickly in a more competitive environment enabled by passive remedies, and referred to the development of provision of timing information for mobile backhaul as an example. They reported that although BT launched its managed mobile backhaul service, MEAS<sup>1024</sup>, in 2008, it had yet to deliver a truly synchronous Ethernet product, while MBL and Virgin together had developed and delivered such a product in a much shorter time.
- 8.71 With regards to synchronisation over Ethernet in particular, BT argued that it faces the same design challenges in MEAS as other CPs which use Openreach's Ethernet products. It highlighted that there are several technical solutions for mobile synchronisation and that it was not yet clear which one will eventually prevail.
- 8.72 CWW suggested that passive remedies could provide a valuable 'back stop' protection when BT refuses to take forward requests for development of new products, particularly in some cases where there are bespoke requirements. Level3 made a similar point, arguing that we should not foreclose the imposition of a suitable passive remedy in certain circumstances, such as, for example, if BT is unable to deliver a workable and economically efficient high density handover product.

### Ofcom's considerations

- 8.73 We recognise that leased lines need to provide increasing bandwidths at reducing costs per unit of bandwidth to meet end-users' generally increasing demands for faster services across a wide range of applications. In particular, we understand MNOs' desire to reduce the charges they pay for mobile backhaul.
- 8.74 Over the last few years, BT has implemented a national network design, known as 21CN, allowing it to deliver Ethernet-based services more efficiently than was previously possible. Whereas previously BT fulfilled demand for an Ethernet leased line with dedicated point-to-point fibre, the 21CN design aggregates many services into fibre transmission links of very high capacity that run between network nodes. The costs of these links and nodes are largely fixed, and the resulting economies of scale and scope allow BT to drive down unit costs as the volume of services it carries increases.
- 8.75 The industry depends heavily on BT's regulated fibre-based wholesale Ethernet services to fulfil end-users' demand. In concluding this review, we are imposing SMP conditions on BT's provision of those services, including price controls and a requirement to provide them on the basis of equivalence of inputs. BT makes these services available throughout the country, except in Hull.
- 8.76 Requiring BT to share its physical infrastructure by imposing passive remedies, such as PIA or dark fibre, could stimulate competition by lowering barriers to entry for competitors who invest in infrastructure. In the case of a PIA remedy, BT's competitors would avoid the initial cost of investing in their own civil infrastructure

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<sup>1023</sup> Vodafone Paper paragraphs 2.23-2.32

<sup>1024</sup> Managed Ethernet Access Service

such as trenches and ducts, while in the case of a dark fibre remedy they would avoid the same cost as well as the costs of purchasing and laying new fibre.

*Duplication of investment*

- 8.77 Some stakeholders responded to our concern that passive remedies could add to the costs of competition by pointing out that passive remedies would reduce duplicative costs for those providers which choose to deploy their own network infrastructure. We agree that whether PIA leads to duplication or not depends on the counterfactual. PIA could lead to more duplication than use of active inputs, but may lead to less duplication than construction of full alternative infrastructure. Full infrastructure competition is, however, likely to lead to greater benefits in the long run.
- 8.78 Nevertheless, we consider that introducing passive remedies could also add to the costs of competition. Markets downstream of wholesale leased lines currently rely on competition based on either or both alternative infrastructure and active remedies. Extending the use of PIA to leased lines markets could lead to duplicated costs, when compared to the cost of using BT's regulated wholesale products. The investments required would include the costs of purchasing, installing and managing active equipment and, in the case of PIA, the costs of purchasing, installing and managing fibre in BT's ducts. The investments would, to some extent, duplicate BT's, and would therefore add to the cumulative costs of the industry. Models developed as part of our review of the wholesale local access market suggest that these additional costs could be significant. In the case of NGA investment using PIA, the cost per end-user with four competing networks was modelled at more than double than with just one network.
- 8.79 In relation to Geo's suggestion that we could address such duplication by regulating access to CPs' fibres which use BT's ducts, we consider that doing so would add both regulatory burdens and costs, and increase complexity. Additionally, requiring CPs to share the fibres they deploy using BT's ducts could undermine their investment case and may discourage them from using PIA.

*Pricing of passive access, efficient entry, BT's pricing flexibility and scope of sustainable competition*

- 8.80 We generally consider that the relative prices of passive access and of the downstream alternatives should reflect the differences in their respective incremental costs. Relative prices will determine how and where future investments are made, and it is important that these are efficient. Thus the relative prices of PIA and alternative active remedies will be significant because they will influence whether a CP decides to use PIA in preference to a leased line. It is important to set relative prices at levels which give signals to make the right choice so that overall costs are minimised. For example setting too low a price for PIA relative to leased line charges could give too strong an incentive to use PIA, and this could push up costs overall, which would not benefit consumers. Setting relative prices such that the difference between the prices of the alternative services equals the difference in their incremental costs would allow the choice to be made on the merits, and would be more likely to result in overall benefits.
- 8.81 If we targeted passive remedies at specific applications such as mobile backhaul as Vodafone suggested, this approach to setting charges might be implemented by setting the charges for PIA for leased lines at a level that compares to the EAD 1Gbit/s charges to reflect the difference in the incremental costs between the two options. We understand that proponents of PIA for leased lines may not expect it to

be charged for in this way, and may have assumed that the existing (NGA) PIA prices would apply to PIA for leased lines also. However, setting the relative prices in this latter way would encourage use of PIA when it is inefficient and increases costs overall. On the other hand, setting relative prices so as to reflect the difference in the incremental costs between passive access and of the downstream alternatives could result in weaker incentives for use of passive access than proponents of PIA for leased lines currently foresee, and the impact of passive remedies targeted at specific applications could be insignificant.

- 8.82 Alternatively, if passive remedies are to make a significant impact on competition in leased lines generally, then it is unlikely to be practicable to set their charges by direct reference to the charges for downstream alternatives because passive remedies would inherently be applicable to any leased line service, and there would be several such alternatives. In that case, a single flat rate charge for passive access may need to be set, on a basis such as BT's average FAC, for example, and this could have a number of undesirable consequences.
- 8.83 First, the charges could give excessive incentives to use passive access because CPs could find that the sum of the charge for passive access and the costs of their equipment were lower than the charge for BT's equivalent wholesale service even where using passive access increases total costs, which would be inefficient.<sup>1025</sup>
- 8.84 Secondly, if BT lost many sales of its high-margin wholesale leased lines services then BT as a whole may fail to recover its common costs. In response to the potential that this may happen then, thirdly, where BT would face competition from CPs which invest using passive remedies, it may reduce the prices of its wholesale services relative to the charge for passive access, and raise other charges. Thus, the availability of PIA at a single flat rate charge would tend to produce the same flat structure in charges for active services. This would have the effect of removing BT's flexibility in setting charges for its wholesale services. As we explain in Sections 18 and 20, we consider that flexibility to vary relative charges within the charge control basket is an important benefit of our charge control design. These potential undesirable consequences further support our view that passive remedies would be likely to be part of an alternative to the package of remedies we are imposing, rather than a complement.
- 8.85 If BT's ability to recover its common costs from higher-value services is reduced where, nevertheless, its own physical infrastructure is being used to provide them, it may seek to drive up its charges in areas where BT may be the only choice. Investment in fibre-based networks is subject to strong economies of scale, and, while passive remedies could reduce barriers to entry, any additional competition they stimulate may not be sustainable outside some dense geographic clusters of businesses, such as urban centres. End-user prices may therefore rise in areas where BT may be the only choice.
- 8.86 TalkTalk argued that the loss of BT's pricing flexibility resulting from imposition of passive remedies would prevent BT from setting its prices in an anti-competitive or abusive manner, and therefore improve efficiency. We have designed the charge control we are imposing on BT specifically to allow it pricing flexibility whilst addressing the risk of anti-competitive pricing. We explain why and how we have done so in Sections 18 and 20.

<sup>1025</sup> That is, BT's costs of providing PIA, plus the CP's equipment costs, could be more than BT's costs of providing the active service. This could be true even if BT's charge for PIA plus the CP's equipment costs were less than BT's charge for the active service.

- 8.87 We consider that if it were felt that BT should have less flexibility than it has under the current design of the charge control, then this could be achieved without necessarily imposing passive remedies. For example, caps could be set to bring the charge for each service into line with its own projected FAC.
- 8.88 It is therefore not clear that service prices resulting from the imposition of passive remedies would necessarily achieve efficiency gains over those that BT would set following the imposition of a charge control.
- 8.89 MNOs are concerned about the bandwidth-related gradient in BT's charges. They argue that what they see as the high price of 1Gbit/s AISBO, particularly where multiple circuits are purchased, will lead to an escalation in their costs if, as many industry forecasts predict, the bandwidth demand of mobile broadband services continues to increase in the coming years. MNOs have explained to us that they believe that consumers of mobile data services expect high and increasing bandwidth, but that those consumers are not likely to pay substantially more for higher bandwidth.<sup>1026</sup>
- 8.90 Telefónica UK also raised concerns that operators are not protected against excessive pricing of 1Gbit/s circuits. We took account of these concerns and discuss them in more detail in Section 20, in which we explain that, in designing the charge control, we decided to create a sub-basket for 1Gbit/s EAD products.
- 8.91 In using the flexibility BT has in choosing how to recover its common costs within the constraints of our price controls, BT is not explicitly required to set Ramsey prices. However, in our view, BT is likely to know broadly how changes in prices affect demand for its products, and is likely to have better knowledge of this than we have. In using this knowledge to maximise its profits under the constraints of the price controls, we consider that BT is likely to achieve outcomes consistent with economic efficiency. We consider that the pattern of recovery of common costs that would result from imposition of PIA, which TalkTalk expected to be efficient because it would be governed by demand and competitive pressure, would not necessarily be more efficient than would result from BT setting charges for its wholesale services subject to the constraints of a charge control.
- 8.92 In the June BCMR Consultation we said that continuing to allow BT such flexibility in setting its prices may not be appropriate if we were to conclude that BT has strategic incentives to achieve inappropriate outcomes in allocating its common costs between its regulated wholesale leased line services to increase MNOs' costs. Although we recognise that BT may have incentives to price abusively, we believe that it is more efficient to address such incentives in a way that does not eliminate all BT's flexibility to set prices efficiently. We aim to achieve this in the design of the charge controls through sub-caps and/or separate product baskets where appropriate.

*Effect on investments in alternative infrastructure*

- 8.93 Imposing passive remedies could undermine the significant investments which some CPs have already made in physical infrastructure, and may discourage further expansion of such alternative network infrastructure.
- 8.94 In considering whether to impose passive remedies we take the need for regulatory stability into account. Regulatory stability is important, particularly where entry

<sup>1026</sup> Our research of recent past trends in the mobile market provides some support for this view. See for example Communications Market Report: UK, 4 August 2011, figures 5.21 (page 265) and 5.49 (page 289).

requires significant costs to be sunk which can only be recovered over a period of time. In these circumstances, we consider that we should be wary of making changes to regulation which will affect the ability of operators, such as entrants who have invested in competing infrastructure, to recover their costs and make a reasonable return. If we did so in a way which meant that past investments would not be recovered, we could deter competing investment in future. Making access to BT's passive infrastructure available as an alternative could affect the returns which CPs can make on these investments. This does not necessarily mean that passive remedies for leased lines would be inappropriate, but it may add to the importance of setting the terms and prices for any such remedy appropriately.

*Competition in delivery of mobile backhaul*

- 8.95 We recognise that MNOs need increasing amounts of bandwidth to fulfil their customers' demand for mobile data services, and that much of this demand can be fulfilled cost-effectively with solutions based on Ethernet leased lines. We consider that the scale and pace of deployment of BT's Ethernet mobile backhaul solution, MEAS, together with evidence of entry by competing providers such as Virgin and CWW, suggest that the industry is currently likely to deliver fibre-based services to the sites where MNOs require them within a reasonable time.
- 8.96 BT reported in May 2012 that it had made MEAS available in 13,000 mobile base station sites.<sup>1027</sup> Virgin and MBNL announced in July 2011 that they had signed a deal for Virgin to provide fibre-based Ethernet backhaul to the joint venture partners' RBS sites in certain regions over the next eight years.<sup>1028</sup> We understand that the deal foresees that Virgin will deliver its service to [X] RBS sites.
- 8.97 Prior to the June BCMR Consultation we were also made aware that [X] had an agreement with [X] to supply fibre-based Ethernet backhaul to [X] RBS sites, of which it had delivered [X].
- 8.98 Since the publication of the June BCMR consultation, Vodafone has acquired CWW.<sup>1029</sup> We understand that part of the rationale for this acquisition is the opportunity to use CWW's fibre network to reduce the costs of backhaul from Vodafone's base stations.<sup>1030</sup>
- 8.99 [X]<sup>1031</sup>
- 8.100 In our view, therefore, there are encouraging signs that competition in providing MNOs with mobile backhaul solutions is developing. We recognise nevertheless that BT's competitors are likely to depend on Openreach's provision of wholesale Ethernet access services to a significant proportion of sites because the coverage of their own physical networks, unlike BT's, is not ubiquitous. We are requiring BT to provide its Ethernet wholesale access products on the basis of equivalence of inputs

<sup>1027</sup> See *BT Group plc Annual Report & Form 20-F2012*, page 45, at <http://www.btplc.com/Sharesandperformance/Annualreportandreview/pdf/BTAnnualReport2012.pdf>

<sup>1028</sup> See [http://www.mbnl.co.uk/newsPdf/MBNL\\_finaldraft\\_media\\_22072011.pdf](http://www.mbnl.co.uk/newsPdf/MBNL_finaldraft_media_22072011.pdf)

<sup>1029</sup> See for example announcement on CWW website: <http://cw.com/investors/vodafone-acquisition/>

<sup>1030</sup> See for example slide 7 of Vodafone's presentation *Recommended offer for Cable & Wireless Worldwide* at: [http://www.vodafone.com/content/dam/vodafone/media/group\\_press\\_releases/cww/120423\\_presentation\\_final.pdf](http://www.vodafone.com/content/dam/vodafone/media/group_press_releases/cww/120423_presentation_final.pdf)

<sup>1031</sup> [X]



so that CPs will have a high level of assurance of access to BT's wholesale Ethernet leased lines on strict non-discriminatory terms to achieve ubiquitous coverage.

### *Innovation*

- 8.101 Some CPs argued that access to passive inputs could provide scope for innovation and competition at the active layer, and that passive remedies would allow them to differentiate in their product offerings. We recognise that, in principle, the active layer offers the potential for technological innovation and service differentiation. We also recognise that innovation could reduce the cost of the "active" electronic equipments that are used over the passive layer.
- 8.102 TalkTalk estimated, using BT's regulatory financial statements, that 30% of the total cost can be attributed to the active layer, and argued that this could be exposed to competition through passive remedies. We consider, however, that there is material competition based on alternative infrastructure in the leased line markets, particularly in the WECLA and over trunk routes, in which the entire cost base is open to competition. We consider that this could be undermined by passive remedies.
- 8.103 Further, we consider that the market has kept pace with significant technical developments such as PDH, SDH, Ethernet and WDM, increasing bandwidth capabilities and reducing costs per unit of bandwidth.
- 8.104 We recognise that access to the passive infrastructure could, in some cases, give a CP an advantage through more control over the characteristics of the end-to-end service it offers. However, the evidence we have seen about the impact of such control in the case of leased lines is not conclusive. The difference in performance attributes between the UK and countries where passive remedies are available, as shown in the diagrams provided by Vodafone, could be due to a number of variables apart from the availability of passive remedies, such as the planning of the radio network, the penetration of mobile broadband use, or the choice of the mobile device used for the measurements, among others.
- 8.105 We acknowledge nevertheless the concerns raised by stakeholders over delays in Openreach's development of some products, in particular the SyncE and the high density handover solutions. We discuss in detail our views on these issues in Section 12. We are not persuaded that it would be appropriate or proportionate to impose passive remedies in order to address the concerns raised by the respondents about these developments.

### *Conclusion on whether passive remedies would lead to better outcomes*

- 8.106 Overall, it is not clear that imposing passive remedies would lead to better market outcomes in the round than the package of remedies we have decided to impose in this review. We recognise that passive remedies could bring some benefits in the leased lines markets. In particular, imposing passive remedies could:
- stimulate competition in a greater part of the value chain in regions where full infrastructure competition is unlikely to emerge by lowering barriers to entry; and
  - provide more scope for product innovation and service differentiation in some cases.
- 8.107 We consider, however, that the package of remedies which we have decided to impose could achieve similar outcomes, and that passive remedies could also:

- lead to inefficient duplication of investment adding to the overall costs in the industry;
- encourage inefficient investments;
- undermine existing, and discourage future, infrastructure investments; and
- lead to changes in the way BT recovers its common costs which may not necessarily be more efficient and could lead to higher end-user prices where services are not exposed to competition.

### **Likelihood that passive remedies will be used**

8.108 As discussed above, imposition of passive remedies would require significant regulatory changes and intervention, and, before we could impose them, we would need to have compelling evidence that passive remedies would lead to a better overall outcome for competition in the leased lines markets.

8.109 In this subsection we consider evidence showing the degree to which stakeholders are likely to invest in using passive remedies in leased lines markets.

### **Comments in response to the CFI**

8.110 Fujitsu argued that current exclusions of leased lines and other services from the allowed uses of PIA have a significant impact on the business case of CPs bidding against BT for public funds available from BDUK. It explained, for example, that the current exclusions would not allow a CP to use the same duct to backhaul services from neighbouring residential, business premises and mobile base stations to the CP's point of presence, whereas BT could do so without restriction.

8.111 Geo argued that the current restrictions on the allowed uses of PIA undermine the business case for, and design of, any new next-generation access network because all relevant service revenue opportunities are critical to generating the long-term cash flows needed to justify investment. In Geo's view, extending the allowed uses of PIA is also important to create a level playing field between BT and other CPs, allowing CPs to use their deployed networks for a complete range of products on the same basis that BT currently enjoys.

8.112 Fujitsu acknowledged that extending the allowed uses of PIA could carry a risk of "cherry picking" in which companies would use PIA to only offer more lucrative services, such as high-bandwidth leased lines for businesses or mobile backhaul. It suggested that this risk might be addressed by allowing PIA to be used in an unrestricted manner only where an operator uses its network to provide a full range of services.

8.113 Sky considered that there could be a case for operators to invest and innovate by installing their own fibre and equipment in BT's ducts for certain backhaul routes. For example, while digging to provide some [X] links of about [X] km between its LLU exchanges and its PoPs would not be worthwhile, pulling its own fibre through BT's ducts to provide the same links could be viable, especially in the context of (i) the current bandwidth-related gradient in BT's prices for backhaul and (ii) Sky's expectation that demand for backhaul bandwidth will increase. It considered that dark fibre could potentially be viable over much longer distances than pulling new fibre using PIA, and hence could potentially provide options for connecting to Sky's infrastructure in a larger number of exchanges.

## Comments in response to the June BCMR Consultation

- 8.114 CWW said that it had not attached a high priority to passive remedies in this market review because, while maintaining an open mind, it saw limited opportunity to use a PIA remedy in the short term. Nevertheless, CWW did not support our proposal not to impose passive remedies.
- 8.115 CWW thought that a PIA remedy needed to be available for leased lines if it was to be useful in supporting investment in fixed NGA networks.
- 8.116 Geo argued that the current restrictions on PIA are fatal to any competitor trying to attract investment in NGA in competition with BT. In its view, this is because BT captures, at the wholesale level as a minimum, revenue streams from markets outside the residential market. In Geo's view, we should not require evidence showing that NGA investment could be unlocked before deciding to remove the restrictions on PIA. It argued that CPs' appetite to invest in the NGA market was demonstrated by the fact that there were originally nine companies bidding for BDUK's funds and that it was largely due to the restrictions on PIA that that number dwindled to two. It suggested that if we removed unnecessary barriers to investment, potential investors would be in a position to consider market entry.
- 8.117 NEN also claimed that due to the restrictions in PIA, BDUK contestants have withdrawn their bids.
- 8.118 Vtesse argued that the combination of residential and business FTTP, together with mobile backhaul can be economic and can lead to reduction in NGA and mobile not-spots. In a similar spirit, NEN argued that widening the range of assets that can be shared could help to address the broadband slow- and not- spots.
- 8.119 Telefónica and EE together with MBNL said that PIA could offer the opportunity for alternative mobile backhaul deployments by other operators than BT.
- 8.120 Vodafone provided information on the use of passive remedies in [3<]. In particular, Vodafone said [3<].
- 8.121 Vodafone argued that we should impose passive remedies now, even though it did not foresee needing significant quantities of PIA within the period of the leased lines charge control imposed in this review, because various technical and practical issues would need to be resolved before PIA deployment could begin.
- 8.122 Vtesse said that passive remedies offer it the opportunity to reduce its costs for deploying mobile backhaul. It claimed that its estimated cost of £300m could be halved if access to BT's passive infrastructure was allowed.
- 8.123 Colt [3<<sup>1032</sup>1033].
- 8.124 In its formal response, TalkTalk argued that we do not need to see evidence demonstrating material demand for passive remedies before we impose them for use in leased lines. It considered that the risks to market outcomes that we had identified in the June BCMR Consultation (summarised in paragraph 8.15 above) would not together provide a good reason to not mandate passive remedies. In its view, Ofcom's role is to give competitors the options and opportunities and let them invest

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<sup>1032</sup> [3<]

<sup>1033</sup> [3<]

in a competitive market as they see fit. While it accepted that no robust business/economic case was available from any CP that showed demand for large volumes of PIA and/or dark fibre, it thought that the uncertainty was not, in this case, any reason for inaction. Particularly in the case of PIA, where a product is already available (but restricted in use to fixed NGA networks), TalkTalk saw no downside in allowing PIA to be an option for leased lines and seeing how it is used. Similarly, Geo argued that the cost of removing the restrictions would be minimal and that, since we are not certain that competition based on PIA would not be sustainable, we should remove the restrictions on PIA.

### Ofcom's considerations

- 8.125 Responses we received to the CFI and to the June BCMR Consultation, and our engagement with the industry, revealed no evidence that any CP would invest substantially in infrastructure based on passive remedies over the forward looking period of the review if we were to impose them in leased lines markets.
- 8.126 In addition, while we acknowledge that the business case for investment in fixed NGA infrastructure for consumer superfast broadband using PIA may be challenging, we were not provided with any evidence by any CP showing that extending the allowed uses of PIA to leased lines would unlock significant new investments in NGA infrastructure for consumer superfast broadband.
- 8.127 [REDACTED].
- 8.128 Imposition of passive remedies would be a significant intervention, entailing a transition period in which we would need to manage the co-existence of active and passive remedies as explained in previous paragraphs and significant changes to the regulatory model. We would therefore need to be persuaded by compelling evidence that CPs are prepared to invest substantially in passive remedies and that they would lead to better outcomes in the round if we were to impose them.

## Conclusions

- 8.129 Introducing passive remedies in the leased lines markets would represent a major departure from the current regulatory model, which promotes both infrastructure-based competition and competition using BT's regulated wholesale products, to a model which includes regulated access to BT's passive infrastructure.
- 8.130 Facilitating the transition from the current regulatory regime to one where competition based on passive remedies is sustainable and effective would require a significant degree of regulatory support and intervention and, potentially, changes to the definition of the regulatory boundaries and role of Openreach.
- 8.131 While it may be appropriate to consider making these changes, the case for doing so would depend on there being concrete evidence that the transition would lead to a better overall outcome for competition in the market along with evidence that CPs would invest substantially in competition using passive remedies.
- 8.132 After due consideration, we have decided not to impose passive remedies. This is because:
- While we recognise that competition based on passive remedies may deliver some benefits, we believe that similar benefits could also be delivered by imposing active remedies and price controls. It is also not clear that imposition of

passive remedies would lead to better market outcomes in the round than the remedies we are imposing in this review.

- There is no evidence that CPs would invest substantially in competition based on passive remedies if they were available in the forward-looking period of this review.
- At the same time, imposing passive remedies in leased lines markets could carry significant risks of worse outcomes than continuing to impose active remedies alone, including:
  - adding significantly to the cost of competition in leased lines markets;
  - encouraging inefficient entry;
  - raising end-user prices of services other than high-bandwidth products and/or of services other than those provided in areas containing dense clusters of businesses (such as urban centres);
  - rebalancing the charges paid by the end-users of leased lines services – so that some end-users would pay less while potentially many others would pay more – without necessarily achieving greater efficiency; and
  - undermining investments that have already been made in alternative infrastructure.

## Section 9

# Network access pricing remedies other than charge controls

## Introduction

- 9.1 We set out in Sections 17 to 24 of this Statement, our decision to impose several charge control obligations on BT. These are designed, in part, to address the risk of excessive pricing for products or services in relevant wholesale leased lines markets. This risk forms part of the competition problems that we have identified in our analyses of the affected markets.
- 9.2 In reaching our conclusions on charge control obligations, we have also considered whether other obligations such as fair and reasonable charges and/or cost orientation might be additionally required to address the competition problems we have identified,<sup>1034</sup> including whether such obligations would be proportionate and justified in light of the objectives to be furthered or secured in sections 3 and 4 of the Act.
- 9.3 In the June BCMR Consultation, we proposed not to impose any such additional pricing obligations. Some stakeholders have responded arguing that we should impose them alongside the charge control obligations. We have considered the responses and the appropriateness of imposing any such obligations for the relevant wholesale leased lines markets in light of the particular competition concerns identified in these markets, their characteristics and specific circumstances, and the policy objectives that we are seeking to secure over the three-year forward look period.
- 9.4 We have concluded that we should impose an obligation for all charges to be fair and reasonable as part of the general network access obligation.<sup>1035</sup> However, given the package of remedies imposed in this Statement, including the particular design of the charge control obligations we are imposing, we have concluded not to impose any cost orientation obligations. We set out our reasons and considerations of the responses in this Section.

## Fair and reasonable charges

### Our proposals

- 9.5 As part of the general obligation to provide network access, we sometimes consider imposing a requirement on a dominant provider to provide such access on fair and reasonable charges. In discussing our proposals to impose a general network access obligation in relevant leased lines markets in the June BCMR Consultation, we referred to the way in which Ofcom might assess reasonable demands for access as

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<sup>1034</sup> Additionally to excessive pricing, we have identified concerns about (among others) price discrimination, predatory pricing and margin squeeze.

<sup>1035</sup> We set out in Sections 11 to 13 of this Statement our conclusions on the need for such general network access obligations in each of the relevant wholesale TI, AI and MI markets to deal with any refusal to supply by BT.

set out in the Access Guidelines,<sup>1036</sup> which refer to fair and reasonable charges in the context of the dominant provider meeting its network access obligation.

- 9.6 In the 2007/8 Review, we imposed on BT an obligation to provide retail leased lines on fair and reasonable terms, conditions and charges. In relation to relevant wholesale leased lines markets, BT is under an obligation to provide wholesale leased lines on fair and reasonable terms and conditions, but does not have a specific obligation in relation to fair and reasonable charges.<sup>1037</sup> In the June BCMR Consultation, we did not identify from our market analyses any need to depart from that approach.
- 9.7 Our proposals not to include obligations with regard to fair and reasonable charges on BT in the relevant wholesale leased lines markets were made expressly clear from our notification specifying the proposed SMP conditions at Annex 14 to the June BCMR Consultation.<sup>1038</sup> Our proposal to maintain an obligation on BT to provide retail leased lines on fair and reasonable terms, conditions and charges was also set out in that notification.<sup>1039</sup>

## Consultation responses

### Fair and reasonable charges in wholesale leased line markets

- 9.8 UKCTA, TalkTalk and Virgin commented on the terms of the proposed network access condition, in particular the apparent inconsistency between the discussion about the network access condition (at paragraph 10.65 of the June BCMR Consultation) where a requirement for BT's charges to be 'fair and reasonable' was discussed and our proposed draft condition which did not include this provision.
- 9.9 They also argued that:
- the absence of the requirement concerning fair and reasonable charges would, in effect, exclude charges for network access from the scope of the proposed no undue discrimination obligation;
  - that absence would also weaken the constraint on BT's pricing behaviour;

<sup>1036</sup> See paragraphs 10.65 (for wholesale TI markets), 11.127 (for wholesale AI markets), 12.91 (for wholesale MI markets), and 14.106 (for remedies in the Hull area) of the June BCMR Consultation.

<sup>1037</sup> See: **SMP condition G1** (which applies to the market for the provision of traditional interface symmetric broadband origination with a bandwidth capacity up to and including eight megabits per second within the United Kingdom but not including the Hull Area and shall also apply to the provision of Interconnection and Accommodation Services); **SMP condition GG1** (which applies to the market for the provision of traditional interface symmetric broadband origination with a bandwidth capacity above eight megabits per second and up to and including forty five megabits per second, within the United Kingdom but not including the Hull Area and the Central and East London Area and shall also apply to Interconnection and Accommodation Services); **SMP condition GH1** (which applies to the market for the provision of traditional interface symmetric broadband origination with a bandwidth capacity above forty five megabits per second and up to and including one hundred and fifty five megabits per second, within the United Kingdom but not including the Hull Area and the Central and East London Area and shall also apply to Interconnection and Accommodation Services); **SMP condition HH1** (which applies to the market for the provision of alternative interface symmetric broadband origination with a bandwidth capacity up to and including one gigabit per second within the United Kingdom but not including the Hull Area and shall also apply to Interconnection and Accommodation Services); and **SMP condition H1** (applies to the market for the provision of wholesale trunk segments at all bandwidths within the United Kingdom and shall also apply to Interconnection and Accommodation Services).

<sup>1038</sup> See Condition 1 in Part 3 of the Schedule to the notification published at Annex 14.

<sup>1039</sup> See Condition 11 in Part 3 of the Schedule to the notification published at Annex 14.

- alternatively, the case for Ofcom to impose cost orientation obligations to constrain BT's pricing behaviour would be strengthened if it proceeded with its proposal not to impose the requirement concerning fair and reasonable charges;
- Ofcom's approach was inconsistent with that adopted in other market reviews. In particular, they noted that in relation to the ISDN30 charge control Ofcom had exceptionally decided not to apply cost orientation obligations, but we had relied on the additional protection afforded by the requirement concerning fair and reasonable charges.

## Our response and conclusions

- 9.10 It is apparent from consultation responses that our reference in the June BCMR Consultation to the way in which Ofcom might assess reasonable demands for access as set out in the Access Guidelines<sup>1040</sup> led some stakeholders to believe that we had made an error in our proposals. They correctly observed, however, that our proposed SMP condition in the statutory notification excluded a requirement concerning fair and reasonable charges as part of the general network access obligation. We have clarified to these stakeholders that our SMP condition was correctly drafted in proposing not to impose a requirement concerning fair and reasonable charges.
- 9.11 We have considered the merits of imposing a fair and reasonable pricing obligation as an appropriate remedy to address the competition concerns that we have identified in these wholesale leased lines markets.<sup>1041</sup> In doing so, we have also taken into account arguments made by stakeholders that additional constraints on BT are required to address other competition concerns, such as margin squeeze, and the need for some control on prices of newly introduced services – stakeholders have raised these matters in relation to our proposal not to impose cost orientation obligations, which we address further below. We have, in particular, considered the merits of imposing a fair and reasonable charges obligation in light of our conclusions on the appropriate charge controls, including whether these controls, together with the non-discrimination obligations we have concluded to impose on BT,<sup>1042</sup> would be effective on their own in dealing with the concerns we have identified.
- 9.12 We have now reached the view that, for the wholesale leased line markets in question, the general network access obligations should be supported not just by the non-discrimination obligations but also by fair and reasonable charge obligations. Our reasoning is set out below.
- 9.13 Firstly, we consider that these obligations are needed to complement the charge controls and non-discrimination obligations to address effectively the risk that BT may seek to impose a margin squeeze, or to otherwise act anti-competitively in setting its prices. In this respect, we would not consider that such prices are 'fair and reasonable'. This approach is consistent with the Access Guidelines, which note that:

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<sup>1040</sup> *Imposing access obligations under the EU Directives*, Ofcom, 13 September 2002  
[http://www.ofcom.org.uk/static/archive/oftel/publications/ind\\_guidelines/acce0902.pdf](http://www.ofcom.org.uk/static/archive/oftel/publications/ind_guidelines/acce0902.pdf).

<sup>1041</sup> Our conclusion with regard to a similar obligation as part of the remedies needed for the retail low bandwidth TI leased lines market is set out in Section 10 of this Statement.

<sup>1042</sup> We set out in Sections 11 to 13 of this Statement our conclusions on the need for such non-discrimination obligations in each of the relevant wholesale TI, AI and MI markets to deal with price discrimination, non-price discrimination, predatory pricing and margin squeeze.



“...‘fair and reasonable’ [would require], amongst other things, that terms and conditions under which products are offered are consistent with those which would be offered in a competitive market, sensible, practical, and do not impose a margin squeeze on competitors.”<sup>1043</sup>

9.14 In relation to margin (or price) squeeze, the Access Guidelines note, in particular, that a vertically integrated operator may have an incentive to put pressure on competitors by reducing the margin between the wholesale and the retail price to the point where it is not sufficient to cover the relevant measure of retail costs.<sup>1044</sup> They further note that protection against that type of behaviour may be achieved by imposing a non-discrimination obligation and that charges which created a margin squeeze would not be fair and reasonable. In the light of this, we consider that a fair and reasonable pricing obligation would address stakeholder concerns that BT could set charges for these wholesale leased lines services in a way that may raise doubt as to whether these charges would be unduly discriminatory, but which pricing behaviour nonetheless amounts to (or has similar effects to) margin squeeze.<sup>1045</sup>

9.15 In reaching this view, we have also taken utmost account of the BEREC Common Position. In seeking to achieve the objective of “[fair and coherent access pricing]” one of the competition issues which the BEREC Common Position identifies as arising frequently is that “SMP operators may margin squeeze”. The best practice remedies, amongst other things, include the following:

**“BP36 NRAs should put in place obligations preventing SMP operators from engaging in margin squeeze.**

[...]

**BP36e** Where cost-based access pricing is imposed, this should help address concerns about downstream margin squeeze.

**BP 36f** The imposition of cost-based access prices does however not remove the concern for margin squeeze.”

9.16 Secondly, we agree with stakeholders that imposing fair and reasonable pricing obligations would also serve the purpose of providing appropriate protection in relation to products or services, both existing and new, falling outside the scope of the charge controls we have decided to impose.<sup>1046</sup>

9.17 We recognise that our conclusion to impose these fair and reasonable pricing obligations represents a change compared to BT’s current obligations in relevant wholesale leased lines markets. However, we consider that they are now required for the above-mentioned reasons.

9.18 In reaching this conclusion, we have also had regard to our objective of providing certainty in the charge controls we have imposed. We do not consider that the

<sup>1043</sup> See paragraph 3.39.

<sup>1044</sup> See paragraph 3.34.

<sup>1045</sup> It is arguable that, even if BT’s internal operations would pay the same price as CPs, this pricing behaviour may still lead to discriminatory effects as the price paid by BT is simply a ‘transfer price’.

<sup>1046</sup> An example of existing products and services falling outside the scope of the charge controls would be wholesale high bandwidth WDM MISBO services outside the WECLA and the Hull Area.

attainment of that objective is jeopardised by imposing fair and reasonable pricing obligations on BT. In this regard, we should note that these fair and reasonable pricing obligations are not intended to impose any additional constraint on the maximum charges that BT may levy, such as a lower ceiling than those permitted by the charge controls.

## Cost orientation

### Our proposals

- 9.19 We noted in our consultation that a price control can take a variety of forms, including but not limited to a charge control, cost orientation and/or safeguard cap. We also noted that BT is currently subject to a package of remedies in relevant wholesale TISBO and AISBO markets, which remedies include obligations to provide network access (but excluding fair and reasonable charges), not to unduly discriminate, cost orientation and charge controls.
- 9.20 We explained that these remedies have been applied in broadly their current form since the 2003/4 Review and that the cost orientation obligations were intended to complement the charge controls by providing an additional safeguard about the level of individual charge. Specifically, BT is currently required to ensure that each and every charge is reasonably derived from the costs of provision based on a forward looking long run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.
- 9.21 However, we proposed not to impose any cost orientation obligations. We considered the appropriateness of such obligations in relation to prices of products or services falling both *within* and *outside* the scope of the proposed charge controls. We further considered whether to impose a cost orientation obligation for AISBO services in the WECLA. Our proposals are summarised below.

### Proposal not to impose cost orientation for services *within* the controls

- 9.22 We explained in the July LLCC Consultation that we were guided by three principles in designing the charge control baskets for the leased lines services in question, namely:
- ensuring relative prices are set at efficient levels and allowing for efficient cost recovery;
  - safeguarding against the risk of adverse effects arising from price distortion, particularly excessive pricing or unduly discriminatory pricing; and
  - giving the flexibility to allow for efficient migration when appropriate.<sup>1047</sup>
- 9.23 In applying those principles, we reached the view that a charge control consisting of two separate broad baskets – for TI and Ethernet services respectively – would be appropriate, with the TI basket encompassing low bandwidth TISBO services (inside and outside the WECLA), medium and high bandwidth TISBO services outside of the WECLA and regional trunk services, and the Ethernet basket encompassing both low bandwidths AI services and above 1 Gbit/s Ethernet services outside of the WECLA.

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<sup>1047</sup> See paragraph 4.8 of the July LLCC Consultation.

We noted for both baskets that the flexibility available to BT under the charge controls is conducive to efficient pricing and cost recovery.<sup>1048</sup>

9.24 We considered that the flexibility provided by these two broad baskets would be important to achieve, in particular, the following goals and advantages for these wholesale leased lines markets:<sup>1049</sup>

- It would give BT some pricing freedom to determine the structure of prices which meet the charge control. This pricing freedom may be more likely to result in charges which recover costs, particularly fixed and common costs, in an efficient way. We noted this is important in the case of wholesale leased lines because their provision is characterised by high fixed and common costs and low marginal costs.
- It would allow BT to respond to changes in demand and costs by changing relative prices and re-optimising charges for new patterns of demand, in these markets which are changing rapidly.
- It would allow BT to set prices to encourage efficient migration between an old service and/or technology and a new replacement alternative.

9.25 However, we also noted that this flexibility could be used by BT to its strategic advantage, for example by targeting price reductions/increases at particular services. We proposed to address the risk of BT exploiting this flexibility to its advantage in three ways.<sup>1050</sup>

- **The overall basket cap** is designed to bring BT's aggregate level of charges for both TI and Ethernet services into line with our forecast of their costs of provision (including the cost of capital) by the end of the charge control period. This would address the risk of excessive pricing at an overall level for TI and Ethernet services.
- We proposed **sub-baskets and sub-caps** for those services where, in light of our market analyses, we considered that additional specific constraints were necessary to provide an adequate constraint against excessive pricing.
- We proposed a **sub-cap on each and every charge not covered by specific sub-baskets and sub-caps**. This was intended to reduce the risk of excessive pricing for these individual services by preventing BT from rebalancing charges unduly, and which would benefit end-users by restricting BT's ability to increase any given charge too quickly.

9.26 As a result, we considered that the particular design, structure and scope of the proposed charge controls would provide the most proportionate means of addressing the risk, identified as a result of our market analyses, of excessive pricing. We consequently considered that imposing an additional constraint on BT's prices via cost orientation obligations would be disproportionate.<sup>1051</sup> We noted, in particular, that:

<sup>1048</sup> See paragraphs 5.72 and 6.113 of the July LLCC Consultation.

<sup>1049</sup> See paragraphs 4.10 to 4.14 of the July LLCC Consultation.

<sup>1050</sup> See paragraphs 5.71 and 6.112 of the July LLCC Consultation.

<sup>1051</sup> See paragraphs 5.72 and 6.113 of the July LLCC Consultation.

- First, given the context of the TI and Ethernet markets, we considered that the charge control and sub-caps would give a greater degree of certainty to stakeholders in this market than cost orientation. Under the charge control, the overall level of X would be known in advance, and our proposed sub-caps and sub-baskets would provide stakeholders with certainty regarding the limits of any change in charges. We considered that cost orientation would give stakeholders relatively less certainty, as the levels of DSACs and DLRICs would be known to BT's customers only with a lag.<sup>1052</sup> We explained that, over the course of the charge control, we had forecasted that TI services would decline by over 70% in volume terms, while the number of Ethernet circuits would increase by over 75% (also in volume). In addition, within the Ethernet services, we had forecasted that there would be a shift from low capacity to high capacity circuits. We also proposed to reallocate £101m in costs from the TI to the Ethernet basket.
- Secondly, our proposed overall basket caps sought to bring BT's prices into line with its costs of provision (including a return on capital) by the end of the charge control. In contrast, with regard to cost orientation, the DSAC ceilings were, for most services we proposed to include in the TI and Ethernet baskets, significantly above prevailing price levels. Consequently, if BT were to set all charges to just under DSAC levels, it would earn a return substantially above its cost of capital.
- Thirdly, we also proposed sub-caps and sub-baskets to constrain individual charges for certain services. In doing so, we designed the proposed charge controls to take into account where, in light of our market analyses, we considered the risk of excessive pricing was greater and thus where additional specific pricing constraints were warranted. We considered that the proposed overall basket cap and further sub-baskets and sub-caps, were an effective means of addressing the varying risks of excessive pricing for the services we proposed to include in the charge controls. As such, we considered the imposition of additional cost orientation obligations would be disproportionate. We considered that, in our regulatory judgement, the most proportionate way of providing certainty to BT, and to stakeholders in general, in the markets in question would be through appropriate charge control proposals that addressed the risk of excessive pricing rather than through general cost orientation obligations.

### Proposal not to impose cost orientation for services *outside* the controls

9.27 We considered whether it would be appropriate to impose cost orientation obligations in relation to prices of products or services falling outside the scope of our proposed charge controls.<sup>1053</sup> We noted that the scope of the proposed charge controls encompass all services BT provides that fall in the markets to which the charge controls are proposed to apply, except for the following services:

- TI retail low bandwidth ( $\leq 8\text{Mbit/s}$ ) digital leased lines services<sup>1054</sup>;
- Symmetric Digital Subscriber Line (SDSL) services;

<sup>1052</sup> DSAC stands for Distributed Stand Alone Costs and DLRIC stands for Distributed Long Run Incremental Costs. These have been used by Ofcom as ceilings and floors when assessing whether charges comply with cost orientation.

<sup>1053</sup> See paragraphs 2.30 to 2.37 of the July LLCC Consultation.

<sup>1054</sup> In Section 3 of this Statement we explain that, since the June BCMR Consultation, we have revised our retail market definition and now define a retail market for very low bandwidth TI services at bandwidths below 2Mbit/s.

- Wholesale high bandwidth WDM MISBO services outside the WECLA and the Hull Area; and
  - Time Related Charges (TRCs).
- 9.28 We proposed not to impose cost orientation obligations in relation to those services.
- 9.29 For TI retail low bandwidth ( $\leq 8\text{Mbit/s}$ ) digital leased lines services, we noted that under section 91(2) of the Act we may only impose retail regulation where wholesale regulation in the upstream market would not suffice to achieve our duties and objectives with regards to the relevant downstream market. We noted that, unlike the retail analogue services, BT provides upstream wholesale inputs for retail low bandwidth digital leased lines services. In light of our market analysis, we explained that we had set out in the June BCMR Consultation that we considered it appropriate:
- in relation to retail sub 2Mbit/s digital services, to rely on our proposals regarding the regulated provision, including a proposed charge control, of the relevant wholesale inputs to address the risk of BT pricing these services excessively;
  - in relation to retail 2Mbit/s services, that our proposals regarding the regulated provision, including a proposed charge control, of the relevant wholesale inputs are sufficient and that BT should not be subject to any SMP obligations; and
  - in relation to retail 8Mbit/s services, that our proposals regarding the regulated provision, including a proposed charge control, of the relevant wholesale inputs are sufficient and that it would be disproportionate to maintain retail regulation for these services.
- 9.30 For SDSL services, we noted that we had proposed in the June BCMR Consultation that these services should fall within the proposed TI retail leased lines market<sup>1055</sup> and that we had further proposed to apply charge controls only to analogue services in this market. We also noted that SDSL services are legacy services which BT does not intend to support beyond spring 2014 and, consequently, we considered it would be disproportionate to subject SDSL services to a cost orientation obligation.
- 9.31 For wholesale high bandwidth WDM MISBO services outside the WECLA and the Hull Area, we took account of a number of factors we had identified in the June BCMR Consultation<sup>1056</sup>, in particular:
- the technology and the services offered using this technology are still developing rapidly, so imposing a price control (including a cost orientation obligation) directly on these services could be too intrusive and prove harmful to the emergence of competition;
  - the proposed price control (in the form of a charge control) on single-service Ethernet MISBO services would constrain BT's pricing for WDM MISBO services;
  - our view that the combination of the limited competition from other CPs to provide MISBO products with WDM at customers' premises and our proposed obligations requiring BT to publish a reference offer and to provide its products on the basis

<sup>1055</sup> That is to say, the proposed retail market for low bandwidth traditional interface leased lines in the UK excluding the Hull Area, at bandwidths up to and including 8Mbit/s.

<sup>1056</sup> See paragraphs 12.73 to 12.81 of the June BCMR Consultation.

of equivalence of inputs, together with the proposed charge control on single-service Ethernet products, would be likely to constrain BT's incentives to raise its prices for all MISBO products to an appreciable extent.

- 9.32 For TRCs, we explained that we did not propose to impose a cost orientation obligation for the same reason that we do not propose to include these services within the scope of the relevant charge control. In Section 6 of the July LLCC Consultation, we explained that TRCs relate to the provision of services (such as faults repair, providing or rearranging services) where the work is not covered within Openreach's terms of service. TRCs are provided across different markets and not just for Ethernet services. TRCs can be charged on a per-hour or per-engineer visit basis and/or per items used to provide or repair services. TRC charges can also vary depending on when the work takes place. The majority of TRC revenue comes from services other than Ethernet. The TRC revenue associated with Ethernet services constitutes less than 1% of the overall Ethernet revenues. Currently, Openreach applies the same price regardless of whether the work is carried out for WLR, LLU or Ethernet services. We also noted that TRCs are already subject to a cost orientation obligation as set out in the WLR/LLU Statement. We therefore considered that any further regulation would not be proportionate, as the pricing of TRCs related to services within the scope of the LLCC will already be constrained by regulation within the other markets in which Openreach offers TRCs.
- 9.33 We also noted that, under our proposed method of charge control regulation, we make provision for new services that substitute, wholly or substantially, existing services in a charge control basket to be added to the basket. If, however, BT were to subsequently introduce new services that fall outside the scope of the proposed charge controls, we proposed to assess the introduction of any such new leased lines services in order to determine whether there may be a relevant risk of adverse effects arising from the pricing of such services and, therefore, whether it would be appropriate to subject their provision to a form of price control.

### Proposal not to impose cost orientation for AISBO services in the WECLA

- 9.34 We proposed not to impose a cost orientation obligation on BT for AISBO services in the WECLA.<sup>1057</sup> We considered that the competition problems we are seeking to address in this market with regard to pricing could be addressed by our proposed safeguard cap and, consequently, we considered that an additional cost orientation obligation would be unnecessary and disproportionate.
- 9.35 We considered, in particular, that the proposed safeguard cap gives a greater degree of certainty to stakeholders than cost orientation. Under the proposed safeguard cap, BT's customers and competitors know that prices will not increase in nominal terms. This provides stakeholders certainty over the limits of any change in charges. We considered that cost orientation gives stakeholders relatively less certainty, as the levels of DSACs and DLRICs are known only with a lag to BT's customers and competitors.

### **Consultation responses**

- 9.36 Most respondents commented on our proposal not to impose cost orientation obligations for services *within* the scope of our proposed charge controls. We received no specific responses in relation to our proposal not to impose cost orientation obligations for AISBO services in the WECLA.

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<sup>1057</sup> See paragraphs 8.20 to 8.22 of the July LLCC Consultation.

- 9.37 Only BT supported our proposals, arguing that they would make price regulation clearer. It also agreed that the risk of excessive pricing could be effectively addressed by the charge controls alone.
- 9.38 Colt, CWW, Everything Everywhere, MBNL, Exponential-e, Level 3, O2, Sky, TalkTalk, UKCTA, Verizon and Virgin expressed concern about our proposals. In their view, cost orientation obligations should be retained. We have grouped below their responses into the following points:
- whether the charge controls would sufficiently constrain BT's ability to price excessively and to price strategically to its own advantage;
  - the advantages of the linkage with actual costs provided by cost orientation obligations;
  - level of certainty provided by charge controls in comparison to cost orientation obligations;
  - the DSAC ceiling as a constraint against excessive pricing;
  - the proportionality of cost orientation obligations; and
  - there is a greater imperative to impose cost orientation if there is no requirement concerning fair and reasonable charges.
- 9.39 Colt, CWW, EE/MBNL, Exponential-e, Level 3, O2, Sky, TalkTalk, UKCTA, Verizon and Virgin argued that cost orientation obligations are necessary for other reasons:
- to ensure there is some control on prices of newly introduced services;
  - to ensure there is some control on prices if Ofcom is unable to implement a new charge control before an existing control expires;
  - to address other competition concerns such as predatory pricing, margin squeeze and anti-competitive cross-subsidisation; and
  - to help CPs make efficient make/buy decisions by ensuring that individual charges for BT's services remain aligned with costs.
- 9.40 Most respondents were also critical of our change in approach and considered that we had provided insufficient justification for such a major change from the established approach of applying cost orientation in conjunction with charge controls. There was also a general view that we should not have changed our approach prior to concluding our project examining our approach to cost orientation. UKCTA argued that this amounted to a breach of our consultation guidelines and poor regulatory practice. In a similar vein, some respondents argued that we had not had sufficient regard to our duty of consistency.

The overall basket cap and sub-baskets/sub-caps would not be a sufficient constraint against the risk of excessive pricing for individual services

- 9.41 Many of the respondents expressed concern that, without a cost orientation obligation, our proposed basket design gave BT too much flexibility on charge control services, which it would use to advantage its own operations and to penalise other CPs.

- 9.42 Colt was concerned about BT's ability to raise prices for services which were proportionately used to a greater extent by its competitors, whilst being able to set lower prices for those services which BT's own retail business used proportionately more than its competitors.<sup>1058</sup> TalkTalk was concerned that BT could use the flexibility of the charge control baskets to charge higher prices for less competitive products and to external customers.<sup>1059</sup>
- 9.43 Virgin was concerned that BT may be able to offset excessively high prices on some services within the baskets with excessively low prices on other services within the baskets. It suggested that BT would have an incentive to do this in relation to different generational products, such as WES and EAD, and services that are consumed mainly internally versus services that are mainly sold to external customers. Virgin also pointed out that our reasoning for not imposing a cost orientation obligation in the ISDN30 Charge Control seemed to be based on the narrowness of the basket, which would not seem to apply to the proposed LLCC.<sup>1060</sup>
- 9.44 EE/MBNL claimed that the removal of the cost orientation obligations was not appropriate. This claim was also supported by Exponential-e, UKCTA, Level 3 and Verizon.<sup>1061</sup> They believed that the proposed sub-caps would not provide sufficient protection to ensure that individual charges are not adjusted to inappropriate levels. They also said that there were no specific changes of circumstances which warranted this de-regulatory change.<sup>1062</sup>
- 9.45 EE/MBNL said that, where the caps were applied to baskets of average charges and much more permissive caps were set on individual charges (e.g. Ethernet basket controls), there was considerable scope for relative charges to change over the course of the charge control period. The range of products, and their differing relative impact on the competitive position of the various parts of BT compared to its competitors, suggested that BT would have incentives to change such relative prices to its own benefit. They argued that it is not clear that all individual charges would remain cost orientated for the duration of the charge control period, even if they started off so.<sup>1063</sup>
- 9.46 UKCTA commissioned a report from Alix Partners which focussed primarily on the proposal to remove cost orientation.<sup>1064</sup> Alix Partners noted that BT had incentives to distort its relative prices to enhance its position in wholesale or retail markets.<sup>1065</sup> Alix Partners noted that "BT could also have an incentive to reduce the EAD prices relative to WES to the disadvantage of competing CPs who have extensive WES estates, which, even where migration is possible, will take time to migrate."<sup>1066</sup>

<sup>1058</sup> See Colt response to the July LLCC Consultation, section 3, pages 6-7.

<sup>1059</sup> See TalkTalk response to the July LLCC Consultation, paragraphs 3.6-3.9.

<sup>1060</sup> See Virgin response to the July LLCC Consultation, paragraphs 3-13.

<sup>1061</sup> See Exponential-e response to the July LLCC Consultation, paragraph 5.1, page 11, and Level 3 response to the July LLCC Consultation (6 September 2012), page 6, section "Price Setting at Wholesale Level".

<sup>1062</sup> See EE and MBNL (response to the July LLCC Consultation, executive summary, page 2.

<sup>1063</sup> See EE and MBNL response to the July LLCC Consultation, page 15.

<sup>1064</sup> See Alix Partners, response to the July LLCC Consultation, attached as an annex to the UKCTA response.

<sup>1065</sup> See Alix Partners, response to the July LLCC Consultation, paragraph 1.8, page 4.

<sup>1066</sup> See Alix Partners, response to the July LLCC Consultation, paragraph 1.15, page 6.



- 9.47 Verizon argued that the baskets proposed by us were not materially different from those of the previous price control, when we considered cost orientation was necessary. Further, the sub-baskets on the whole dealt only with comparatively small parts of the control and prices could fluctuate significantly within the basket. Verizon referred an example where, the overall Ethernet control is RPI-12%, but the Ethernet “all other services” sub-basket is RPI-RPI. This leaves a potential 12% differential between some Ethernet services.<sup>1067</sup>
- 9.48 Telefónica UK was concerned with our proposals to remove cost orientation requirements. They believed this was inconsistent with our decision in the previous BCMR and that there was clear evidence that cost orientation was justified given the history of pricing well beyond inputs.<sup>1068</sup>

### Cost orientation links prices to actual rather than forecast costs

- 9.49 Several stakeholders considered that one of the benefits of a cost orientation obligation was that it was based on actual costs rather than forecast costs. Colt argued that taking into account actual costs would be superior from an allocative efficiency perspective.<sup>1069</sup>
- 9.50 EE/MBNL said that charge controls were based on a regulatory forecast of costs at the time of the market review, while cost orientation obligations were based on an annual assessment of current costs. Where markets, volumes and technology were evolving rapidly this provided more up-to-date and flexible regulatory protection. Regulatory forecasting errors in a charge control can be corrected in a subsequent charge control. However, in relation to the markets in question here the potential damage which could be done to competition or investment incentives would be significant. EE/MBNL argued that given the speed of technological and market change an adjustment at a subsequent market review may not be capable of correcting such damage. Also, EE/MBNL argued that a charge control may not protect against anti-competitively low charges which a cost orientation obligation can.<sup>1070</sup>
- 9.51 Alix Partners noted that sub-baskets and sub-caps only provide a limit to the extent of rebalancing and do not ensure that charges are related to actual costs. Therefore even if a charge control were to protect against an overall pattern of excessive pricing, it could fail to ensure that the interests of end users are protected.
- 9.52 Colt noted that we were experiencing two important technology changes: a change in access markets, with the development of NGA and FttX and a change as Ethernet replaces SDH as the dominant technology for business connectivity. Colt argued that this meant that there was significant uncertainty about how relative volumes (and hence costs) will shift over the next three years, with the possibility that prices would be out of line with costs. Colt suggested that a cost orientation obligation would allow a smoother adjustment of prices in line with movements in costs.
- 9.53 They also believed that we should consider the impact of cost orientation on efficiency. TalkTalk argued that cost orientation can improve allocative efficiency without weakening the incentives for cost minimisation, which was the normal

<sup>1067</sup> See Verizon response to the July LLCC Consultation, last paragraph on page 10.

<sup>1068</sup> See Telefónica UK response to the July LLCC Consultation, paragraph 14, page 6.

<sup>1069</sup> See Colt response to the July LLCC Consultation, section 3, page 7.

<sup>1070</sup> See EE and MBNL response to the July LLCC Consultation, second and third paragraph, page 16.

downside of linking prices to actual costs. They pointed out that cost orientation is different to rate of return regulation, since cost orientation does not require a reduction in costs to be passed on through a reduction in prices unless prices go above the cost ceiling.<sup>1071</sup>

### Cost orientation and uncertainty

- 9.54 Virgin argued that it was an oversimplification to say that a charge control provided a greater degree of certainty for stakeholders than a cost orientation obligation. It noted that we said in the June BCMR Consultation that the two remedies can be complementary and argued that cost orientation has provided more certainty over the regulation of new services introduced within a charge control period and the application of cost orientation has been made clear by judgments from the CAT and Court of Appeal.
- 9.55 Virgin argued that DSAC is not applied mechanistically to test for cost orientation, so its predictability should not be considered determinative as to the efficacy of the remedy. It also pointed out that market uncertainties affect the charge control too, which in their view provided another reason for a complementary cost orientation obligation based on actual, rather than forecasted costs.
- 9.56 Colt argued that our proposals provide BT with broad freedom to set and change individual charges and believed that this would substantially reduce regulatory certainty, rather than increase it, as we claimed.<sup>1072</sup>
- 9.57 In response to our view about the unpredictability of the cost orientation benchmarks, TalkTalk argued that:
- BT can reasonably estimate the figures in advance to within a few percentage points;
  - there were alternative interpretations of cost orientation, such as the ceiling being based on FAC+30%, which would be more predictable than DSAC;
  - cost orientation provided a level of reassurance to CPs that prices would move reasonably in relation to costs.<sup>1073</sup>
- 9.58 EE/MBNL claimed that volatility had been registered in some of the DSAC measures and that we had previously found charge controlled products not to be cost orientated.<sup>1074</sup> Thus, they concluded that it was not clear that the sub-caps proposed would ensure that prices would not become excessive and therefore remain cost orientated. Furthermore, EE/MBNL said that when products were being regulated for the first time it was not clear that there was sufficient information available to be sure that the starting position was such that cost orientation will be maintained through-out the charge control period by the application of the safeguard caps.<sup>1075</sup>

<sup>1071</sup> See TalkTalk response to the July LLCC Consultation, paragraph 3.34.

<sup>1072</sup> See Colt response to the July LLCC Consultation, section 3, pages 7-8.

<sup>1073</sup> See TalkTalk response to the July LLCC Consultation, paragraph 3.29.

<sup>1074</sup> See EE and MBNL Confidential response to the July LLCC Consultation, footnote 20.

<sup>1075</sup> See EE and MBNL response to the July LLCC Consultation, last paragraph, page 15.

- 9.59 Alix Partners claimed that “[i]n the absence of a cost orientation obligation, rival CPs would face significant uncertainty over their input costs, since BT would be under no obligation to relate its individual charges to costs.”<sup>1076</sup>

### The DSAC ceiling as a constraint against excessive pricing

- 9.60 TalkTalk argued that the DSAC ceiling was better than no constraint at all, but that a tighter constraint should be considered. They also noted that the type of constraint that cost orientation entailed was being considered by a separate policy project.<sup>1077</sup>
- 9.61 Virgin agreed that a cost orientation obligation may not be as effective as a charge control in bringing charges for an overall basket of services down to their costs, but they drew a distinction between this and the control provided by a cost orientation on individual services.

### The proportionality of a cost orientation obligation

- 9.62 In response to our view that having a cost orientation obligation in addition to a charge control would not be proportionate, TalkTalk said that it was not clear what we meant by this. It argued that, if we considered whether the benefits would outweigh the costs, the benefits would be significant whereas the costs would be small or zero. It believed that, since we should be aiming to ensure that BT does not adopt anti-competitive pricing, the only way to achieve this would be to impose a cost orientation obligation because sub-caps alone cannot prevent excessive pricing of individual products.<sup>1078</sup>
- 9.63 Virgin argued that our concern that a cost orientation obligation would be disproportionate to deal with the risk of excessive pricing was flawed, since it ignores the other competition concerns that we identified, such as predatory pricing, margin squeeze and anti-competitive cross-subsidisation. Moreover, even if excessive pricing was the only competitive concern, it believed that a cost orientation obligation would not be disproportionate because it can be applied to the introduction of new services, it provides a check against actual, rather than forecasted costs and because BT does not need to apply new systems to comply with a cost accounting obligation.
- 9.64 TalkTalk argued that the Ethernet disputes, which took place even though the products were charge controlled, showed that cost orientation was necessary to guard against excessive (and predatory) pricing, even when BT was subject to a charge control.<sup>1079</sup>
- 9.65 TalkTalk also believed that a cost orientation obligation was necessary due to the heterogeneity of the Ethernet basket and the risk of anti-competitive pricing.<sup>1080</sup>
- 9.66 TalkTalk suggested that it was wrong for us to base our decision on whether to impose a cost orientation obligation on an interpretation that was developed 15 years ago for voice interconnect services, particularly as there was a separate project

<sup>1076</sup> See Alix Partners, response to the July LLCC Consultation, paragraph 4.26, page 38.

<sup>1077</sup> See TalkTalk response to the July LLCC Consultation, paragraph 3.30.

<sup>1078</sup> See TalkTalk response to the July LLCC Consultation, paragraph 3.32.

<sup>1079</sup> See TalkTalk response to the July LLCC Consultation, paragraph 3.25.

<sup>1080</sup> See TalkTalk response to the July LLCC Consultation, paragraph 3.31.

considering what the appropriate interpretation of cost orientation should be in future.<sup>1081</sup>

- 9.67 Alix Partners (acting for UCKTA), claimed that “Ofcom should consider whether the imposition of cost orientation enhances regulatory certainty and assists in preventing BT from making excess returns.”<sup>1082</sup>

### Greater imperative for cost orientation if there is no fair and reasonable charges obligation

- 9.68 As already mentioned above, Virgin argued that, if we were to remove the requirement that charges are fair and reasonable, there is a greater imperative to impose cost orientation. It observed that where, exceptionally, we had decided not to impose cost orientation alongside a charge control, Ofcom had relied upon the alternative protection afforded by a fair and reasonable charges obligation. Virgin referred to our position on the ISDN 30 Charge Control.

### **Our response and conclusions**

- 9.69 Having carefully considered these responses, we have concluded overall that it would be inappropriate and disproportionate to impose cost orientation obligations for:
- products or services falling inside the scope of our proposed charge controls;
  - products or services falling outside the scope of our proposed charge controls; and
  - AISBO services in the WECLA.
- 9.70 We recognise that this approach departs from BT’s current obligations in relevant leased lines markets, which include both cost orientation and charge control obligations. We always have regard to taking consistent regulatory approaches where appropriate. This goal forms part of our own regulatory principles and is also reflected in our statutory duties under sections 3 and 4 of the Act.
- 9.71 But that goal does not take priority over other objectives and considerations relevant to our responsibility in regulating these wholesale leased lines markets. In Sections 17 to 24, we set out our assessment and conclusions on the appropriate charge controls we have imposed on BT, including why we consider that they meet the requirements in section 88 of the Act and the principle of proportionality.
- 9.72 We have specifically designed the charge controls in a way to provide appropriate incentives for BT to make efficiency improvements and to achieve other objectives pursued. We consider that the competition problems we have identified in these wholesale leased lines markets in relation to pricing aspects are effectively addressed by the charge controls, the non-discrimination and fair and reasonable pricing obligations. In our view, imposing any cost orientation obligations for these wholesale leased lines markets would therefore result in more onerous remedies than is required to achieve our aims. As such, we consider that cost orientation obligations would be inappropriate and disproportionate remedies.

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<sup>1081</sup> See TalkTalk response to the July LLCC Consultation, paragraph 3.33.

<sup>1082</sup> See Alix Partners response to the July LLCC Consultation, paragraph 4.25, page 37.

- 9.73 We set out below our reasoning on more fully in relation to the points raised by stakeholders.

#### Products or services falling inside the scope of our proposed charge controls

- 9.74 We have considered carefully the stakeholder responses. Stakeholders have argued that the charge control is an insufficient constraint to achieve the aim for which it is imposed, which is to address the risk of BT realising its ability and incentive to engage in excessive pricing. Consequently, stakeholders have argued that an additional cost orientation obligation – in particular that the DSAC ceiling imposed by a cost orientation obligation – is necessary to achieve this aim.
- 9.75 In summary, having considered consultation responses, we have concluded the charge control is the most proportionate remedy to achieve the aim of addressing the risk of BT engaging in excessive pricing. In dealing with stakeholder responses on cost orientation, we explain below our consideration of the specific points they have raised and why we consider that the charge controls are overall effective in achieving the legitimate aims pursued.

#### *The basket controls are sufficient to prevent excessive pricing for individual charges*

- 9.76 The charge control comprises basket controls, together with sub-basket and sub-cap controls. The baskets, by their very nature, afford BT a degree of pricing flexibility in achieving compliance and we set out the reasons for which we consider it is appropriate to allow this flexibility in Sections 19 and 20. However, we recognise that the degree of risk of excessive pricing is not uniform for all services within the scope of the charge control. We consider that, if we did not impose additional constraints such as sub-caps and sub-baskets, BT would be able to act on its incentive to exploit the basket flexibility to its strategic advantage whilst at the same time achieving compliance with the basket controls.<sup>1083</sup>
- 9.77 We set out below the criteria we have considered, based on the evidence, that are relevant both in identifying those services for which additional sub-caps and sub-basket constraints are warranted to constrain BT's flexibility, and in determining what the appropriate additional constraints should be. No individual criterion is determinative, rather we consider the cumulative effect of these criteria.

#### *The different levels of competition*

- 9.78 Our charge control baskets include services in different relevant wholesale leased lines markets. Although we have found that BT has SMP in each market, we have also found differing levels of competition in the relevant markets.<sup>1084</sup> If a basket includes services with materially different levels of competition, BT may face an incentive to increase prices on the less competitive services and reduce them on the more competitive services in order to gain a competitive advantage, while complying with the overall charge control.
- 9.79 We have considered this criterion when setting constraints for each of TI and Ethernet services. For both sets of services, we considered the differences in competition conditions between different markets did not justify an additional

<sup>1083</sup> By engaging in excessive pricing.

<sup>1084</sup> See Section 7.

constraint.<sup>1085</sup> Nor, therefore, do we consider that cost orientation obligations would be justified for this purpose.

*The variation of the split of internal and external customers between services.*

- 9.80 As stakeholders have noted, a broad basket may give BT the ability to raise prices for services which are proportionately used to a greater extent by its competitors, whilst allowing it to set lower prices for those which its own retail business used proportionately more than its competitors. Although BT would comply overall with the charge control it could do so in a way which would advantage its own retail business over that of its competitors. As a result, we recognised that an additional constraint on BT's pricing would be required.
- 9.81 To address this risk, we have identified which services have a high proportion of external sales, and where appropriate imposed additional constraints on those services. We have imposed sub-baskets on interconnection products for both TI (POH) and Ethernet (BTL) services<sup>1086</sup>. Both of these services are purchased purely by external customers giving BT an increased incentive to engage in excessive pricing for these services. We have also imposed a sub-basket for RBS Backhaul, Netstream 16 Longline and Siteconnect services as these are purchased by mobile operators, whose networks compete in some measure with BT's fixed network.<sup>1087</sup>
- 9.82 In each of the cases cited here, these constraints have been set at the same level as the overall basket cap. This is because, we considered that given the high share of external sales, there would be significant risks in giving BT pricing flexibility for these services. We consider that cost orientation obligations would not be more effective in dealing with this risk.

*The need to ensure we afford BT sufficient flexibility to be able to provide for migration incentives*

- 9.83 As described in Section 18, within a basket, we consider that BT may need some flexibility to set prices which are consistent with efficient migration signals. As set out in Section 20, we have considered this when setting constraints for Ethernet services. For BES and WES services, we considered that the need to afford BT sufficient flexibility to provide for migration incentives meant that a sub-cap tighter than RPI-RPI was not justified, despite BES being predominantly purchased by external customers.
- 9.84 In our view, a cost orientation obligation would not provide a tougher constraint on BT in exercising the flexibility afforded to it under the charge controls and, as such, we consider it would be an unnecessary obligation; we refer to our discussion below on how we have forecast DSAC for individual services.

*The need for a constraint on each and every individual charge*

- 9.85 We recognise that, while the charge control will constrain BT's overall level of prices, there are limits to the benefits of allowing BT flexibility, such that constraints on individual charges are appropriate. To this end, we have imposed sub-caps on each and every charge in the TI and Ethernet baskets, to address the risk of excessive

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<sup>1085</sup> See Sections 19 and 20.

<sup>1086</sup> See Sections 19 and 20.

<sup>1087</sup> See Section 19.

pricing for individual services.<sup>1088</sup> We have verified that these sub-caps are sufficient to keep each charge for which we have DSAC data below our forecast DSAC throughout the charge control.

9.86 As described in Sections 19 and 20, we forecast DSAC for each of the services for which DSAC data is available, and verified that the sub-caps are sufficient to keep those charges below forecast DSAC throughout the charge control. This analysis was taken into account when we were considering whether to set sub-baskets, including the sub-basket for EAD 1Gbit/s services.<sup>1089</sup> In the light of this analysis, we decided to impose a sub-basket for EAD 1Gbit/s services within the Ethernet basket.

9.87 Some stakeholders have noted that the overall charge control and sub-baskets design is not dissimilar to that of the LLCC 2009. At a broader level, we recognise this observation. However, in contrast to the LLCC 2009, it does not reflect the more important factor that the design and construction of these charge controls were undertaken after a more extensive analysis of individual service prices and their relationship with the DSAC ceiling. In particular, in these charge controls, we have given a greater prominence to DSAC when setting the constraints for individual charges under the charge controls. This can be seen by two differences in our approach to individual charges in this charge control compared to the LLCC 2009:

- First, our analysis finds that no charges for which we have DSAC data are above DSAC at the start of the control.<sup>1090</sup>
- Second, in respect of each service for which BT reports DSAC and for each year of the charge control, we have compared both forecast DSAC and charges. This analysis has guided us in the construction of our sub-caps and sub-baskets. These sub-caps and sub-baskets have been constructed so as to ensure that, within the TI and Ethernet baskets, the charges for these services are below our forecast DSAC throughout the charge control period.<sup>1091</sup> We explain this further in Section 19 and 20.

9.88 We therefore consider that the concerns raised with regard to individual charges as justification for imposing cost orientation obligations have been effectively taken into account in our charge controls: cost orientation obligations would therefore result in more onerous remedies than is required to achieve our aims in respect of these wholesale leased lines markets.

9.89 We have also considered whether a cost orientation obligation would be appropriate for ECCs and accommodation services. A cost orientation obligation would seek to limit BT's flexibility on individual charges. For both ECCs and accommodation charges, we have imposed controls on each individual charge. We therefore consider that the obligations in this control are sufficient to address the risk of excessive pricing for these services.

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<sup>1088</sup> See Section 19 and 20.

<sup>1089</sup> See Section 20.

<sup>1090</sup> See Section 19 and 20.

<sup>1091</sup> When forecasting prices for the purposes of this analysis we have used the maximum theoretical price BT could charge given the constraints of the charge control. For Ethernet services, this means that we forecast that each charge would remain constant in nominal terms, with the exception of BTL and EAD 1 Gbit/s which would decline by RPI-11.5%.

- 9.90 In light of the above considerations, it is appropriate to further summarise<sup>1092</sup> firstly, why we consider that, in determining the proportionality of the charge control, it is effective in addressing the risk of BT acting on its ability and incentive to engage in excessive pricing in the relevant markets. The overall effect of the charge control is to bring BT's aggregate prices into line with its aggregate forecast costs by the end of the charge control period. As noted above, the basket design affords BT a degree of flexibility in relation to individual charges it may apply during the three year period of the charge control, but this flexibility is constrained to an appropriate degree by the imposition of additional constraints in the form of sub-baskets and sub-caps. The cumulative effect of these additional constraints is to address the risk of BT raising the prices of those services to an excessive level which, in the absence of such constraints, it might otherwise do, in light of its strategic incentives.<sup>1093</sup>
- 9.91 Secondly, we have assessed whether the charge control is necessary in the sense that it is no more onerous than is required to address the risk of BT realising its ability and incentive to engage in excessive pricing in the relevant markets. Again, in our view, we consider it is. The charge control is designed to bring BT's aggregate prices into line with its aggregate forecast costs (including an appropriate return on capital) by the end of the charge control period. In designing the charge control, we have used wide baskets to give BT flexibility to design prices to recover its common costs and give appropriate migration incentives to customers. However, as described above, the risk of excessive pricing is not uniform for all services within the scope of the charge control. We have proposed sub-caps and sub-basket constraints to prevent BT from realising its incentive to exploit the basket flexibility in relation to the charges it could apply for certain services to its strategic advantage.<sup>1094</sup>
- 9.92 Thirdly, we are confident that the charge control does not produce adverse effects which are disproportionate to the aim of addressing the risk of BT realising its ability and incentive to engage in excessive pricing in the relevant markets. In our view, we consider it does not for the same reasons that we consider the charge control is no more onerous than is required.
- 9.93 Based on this cumulative assessment, we have concluded that the charge control is the most proportionate remedy to achieve the aim of addressing the risk of BT realising its ability and incentive to engage in excessive pricing in the relevant markets.
- 9.94 We now turn to the additional arguments raised by stakeholders in support of the imposition of an additional cost orientation obligation for charge controlled products.
- We consider the benefit deriving from cost orientation being assessed against actual, rather than forecast, costs is limited*
- 9.95 We have explained above why we have concluded that the charge control is the most proportionate remedy to achieve the aim of addressing the risk of BT acting on its ability and incentive to engage in excessive pricing in the relevant markets.

<sup>1092</sup> Our detailed assessment on this matter is set out in Sections 17 to 24 of this Statement.

<sup>1093</sup> See Sections 19 and 20 where we set out our conclusions, and supporting reasoning, with regard to both the imposition of baskets, and sub-baskets and sub-caps, in detail.

<sup>1094</sup> By engaging in excessive pricing.



- 9.96 Consequently, we consider that imposing an additional cost orientation obligation solely for the reason that it is assessed against actual, rather than forecast, costs would not add a necessary or proportionate constraint to achieve this aim.
- 9.97 In addition, for the reasons set out below, we consider that in the context of the charge control we are imposing, the purported benefit of the linkage between a cost orientation obligation and actual, rather than forecast, costs is limited.
- 9.98 First, in relation to our forecasts, we have set out in Annex 12 how we arrived at these forecasts. For both TI and Ethernet services, we received volume forecasts from BT, other CPs and industry analysts. We have analysed all these sources when arriving at our volume forecasts. We have also been able to compare our forecast for 11/12 volumes, as set out in the July LLCC Consultation, with the 11/12 outturn. We are confident that our forecasts are reasonable.
- 9.99 Secondly, it is important to emphasise that the duration of the charge control is limited to three years. We have set out in Section 17 the reasons for choosing a period of three years, one of which is to mitigate the potential impact of any forecast error.
- 9.100 Thirdly, with regard to the levels of prices at the beginning of the charge control, we have assessed BT's pricing structure to determine whether it is necessary to make any starting charge adjustments to the prices of services within the scope of the charge controls. This assessment involves comparing prices with an appropriate measure of costs,<sup>1095</sup> and in carrying it out we have had particular regard to the competition problem identified by our market analyses – and one which the charge control is designed to address – of excessive pricing. As set out in the July LLCC Consultation, and consistent with Ofcom's approach in determining starting charge adjustments for charge controls, we have used the DRLIC and DSAC data provided in BT's RFS as the measurement of costs.<sup>1096</sup>
- 9.101 Fourthly, we have forecast DSACs for each year of the charge control, using the data in the RFS, and our forecasting model.<sup>1097</sup> Our model predicts that in 2012/13 none of BT's charges for TI and Ethernet services to which the DSAC data relates would exceed the DSAC ceiling. In the case of TI services, some services were forecast to be below the DLRIC floor in 2012/13.<sup>1098</sup> However, we did not identify any competitive distortions which could arise from this pricing. Consequently, we have concluded it is not necessary to make any starting charge adjustments.<sup>1099</sup>
- 9.102 Fifthly, with regard to how the charge control will operate over the three year period, for the reasons set out in Sections 19 and 20 the charge control includes a cap on each and every charge, as well as sub-caps and sub-baskets on particular services. We consider the cumulative effect of these constraints limits to a sufficient degree the potential for individual charges to move significantly out of line with forecast costs. In particular, we have calculated that the charge control, together with the relevant sub-

<sup>1095</sup> As noted in the July LLCC Consultation, if prices of individual services are out of line with costs they could give rise to distortions to competition (see, for example, paragraphs 5.128 to 5.131).

<sup>1096</sup> We calculated DSAC for the base year, given the data in the RFS and our base year adjustments, which are described in Sections 19 and 20 of this Statement.

<sup>1097</sup> We forecast DSAC for the charge control period, using our forecasting model on the assumption that DSAC moves in line with FAC throughout the charge control.

<sup>1098</sup> See Sections 19 and 20.

<sup>1099</sup> With the exception of ECCs (see Section 24).

caps and sub-baskets are sufficient to ensure that the prices of all services for which DSAC data are available are below forecast DSAC throughout the charge control.

9.103 Finally, we acknowledge that although prices are set in advance, compliance with a cost orientation obligation is assessed in retrospect, looking at the actual outturn of costs. As set out in Sections 19 and 20, in setting the constraints for our charge control, we have taken into account forecast DSAC, such that we forecast that no charge for which DSAC data is available will be above DSAC throughout the charge control period. We consider that these forecasts are reasonable. In the event of an unforeseen, material deviation of actual volumes and costs from our forecast, it is possible that one or more charges may rise above actual DSAC. Even in this event, it is not clear that such a circumstance would constitute a breach of any cost orientation obligation, were such an obligation to have been imposed. As the Competition Appeals Tribunal has ruled, compliance with cost orientation is not assessed mechanistically.<sup>1100</sup>

9.104 We consider that to impose a requirement for charges to be assessed in retrospect against outturn costs, in addition to requiring compliance with the sub-caps, would introduce an unnecessary level of uncertainty in the nature and scope of the package of ex ante remedies we have imposed for the leased lines markets. It is our view that the benefits of imposing this type of obligation to deal with the consequences arising in the limited circumstances of an unforeseen, material deviation of actual volumes and costs from our forecast, amount to insufficient justification to add to the regulatory burden which we have imposed in light of our market analysis in order to address the competition problems.

*The charge control provides certainty and transparency to stakeholders*

9.105 Virgin argued that because a cost orientation is assessed on actual, rather than forecast, costs, it will by definition provide greater certainty than an assessment based on the latter.

9.106 We have explained above why we have concluded that the charge control is the most proportionate remedy to achieve the aim of addressing the risk of BT realising its ability and incentive to engage in excessive pricing in the relevant markets. We have also explained above why, in the context of this charge control, we consider the benefit of the linkage between a cost orientation obligation and actual costs is limited.

9.107 In addition, we consider the charge control provides greater certainty and transparency than a cost orientation obligation with regard to prices over the course of the charge control period. First, BT and all other stakeholders know that the charge control will bring BT's aggregate prices in line with its forecasted aggregate costs of provision by the end of the charge control period. Further, we consider that the caps and sub-caps provide certainty and transparency to stakeholders with regard to likely individual price movements over the course of the charge control period:

- For TI services, the sub-cap on each and every charge means the maximum percentage individual prices can increase by in any year is limited to RPI+10%;

<sup>1100</sup> "Accordingly, when retrospectively seeking to determine compliance with Condition H3.1, it would not be right for OFCOM to apply DSAC (or, no doubt, any test for the allocation of common costs) in a mechanistic way. That would overlook the fact that it is hard in practice for the regulated firm to comply absolutely with whatever test is being used to determine the appropriate allocation of common costs." See, in this respect the judgment of the Competition Appeal Tribunal, *British Telecommunications v Office of Communications*, Case number 1146/3/3/09, 22 March 2011: [www.catribunal.org.uk/files/1146\\_BT\\_Judgment\\_CAT5\\_220311.pdf](http://www.catribunal.org.uk/files/1146_BT_Judgment_CAT5_220311.pdf) in particular paragraphs 304 and 305.

- For Ethernet services, the sub-cap on each and every charge of RPI-RPI means in any year no individual price can rise in nominal terms.

*In light of the proportionality of the charge control, the additional imposition of alternative cost orientation measures would be unnecessary and disproportionate*

- 9.108 TalkTalk considered that the way Ofcom has calculated DSAC and DLRIC in the past has given BT too much flexibility. In particular, in its consultation response TalkTalk stated:

“DLRIC and DSAC costs/prices are not indicative of competitive distortions. They have little or no economic relevance. They are in essence arbitrary cost figures that lie between (in the case of DSAC) LRIC+EPMU costs and SAC costs. They have no logical link to competitive effects. For Ethernet services, DSACs are typically two to three times FAC”<sup>1101</sup>

- 9.109 Whilst we do not agree with TalkTalk’s characterisation of the DSAC and DLRIC cost measures, we do not consider the relevant question is whether an alternative cost orientation measure is warranted.<sup>1102</sup> Instead, we consider the relevant question is whether the charge control is the most proportionate remedy to achieve the aim of addressing the risk of BT realising its ability and incentive to engage in excessive pricing in the relevant markets. As explained above, we have concluded it is.

#### Other stakeholder issues on cost orientation

- 9.110 As explained above, we consider that the charge control is sufficient to address the risk of excessive pricing for charge controlled services. We note that stakeholders have raised some other specific points in arguing for the need of a cost orientation obligation to deal with other aspects of possible anti-competitive pricing of services, as well as services outside the scope of the charge controls.

#### *Low prices and cross-subsidy*

- 9.111 Some respondents have argued that we should impose a cost orientation obligation to prevent anti-competitively low prices or cross-subsidy.
- 9.112 We understand that respondents here use the term “cross-subsidy” to mean the use of profits earned on one service, or by selling to one group of customers, to finance below-cost prices for another service or set of customers. We deal with cross-subsidy here because, if cross-subsidy is a concern, it is likely to be because the subsidised prices are alleged to be anti-competitively low. A separate concern may arise if other prices are raised to excessive levels in order to finance a cross-subsidy. We have discussed our approach to preventing excessive pricing above.
- 9.113 In markets where competition might potentially emerge, it may be necessary to protect against the SMP operator damaging emerging competition by pricing at anti-competitively low levels. In principle, therefore, concerns about anti-competitive pricing are relevant to wholesale leased lines markets.

<sup>1101</sup> See TalkTalk response to the July LLCC Consultation, paragraph 5.75, page 50.

<sup>1102</sup> We note that TalkTalk has proposed FAC+30% but has not given a clear reasoning as to why 30% is an appropriate degree of flexibility.

- 9.114 To address concerns that BT would price anti-competitively in markets covered by this review, we could put *ex ante* regulation in place to address it, or we could rely on *ex post* competition law. A cost-orientation obligation is one option for *ex ante* regulation. In the past, we have interpreted the cost-orientation obligation as imposing a price floor as a first-order test for anti-competitive pricing, the term “first-order test” indicating that the floor is not to be applied in a mechanistic way.
- 9.115 We have concluded that we should not impose a cost orientation obligation to require prices to be above a predetermined floor in this review.
- 9.116 We have designed our charge controls so as to discourage the setting of anti-competitively low prices. Within a standard charge control basket, large reductions in some prices can be offset by smaller reductions or even increases elsewhere. If relatively competitive and uncompetitive services were included in a single basket, there could be an incentive to concentrate the reductions needed for compliance with the control on the most competitive services. We have imposed sub-caps which limit price increases on individual services to prevent this. As noted above we have made changes to the controls in response to stakeholders’ comments.<sup>1103</sup>
- 9.117 The AISBO market in the WECLA is a market for which, beyond the three year period and over the medium to long-term, we consider the prospects that competition will become effective are more favourable than in the rest of the UK.<sup>1104</sup> It is possible that, within the WECLA, competition in the AISBO market will develop at an uneven rate. This could lead to the emergence of some differences in competition within the market. With this in mind, we want to avoid creating an incentive to make selective price cuts which could restrict competition. The proposed safeguard control on AISBO prices in the WECLA applies to each charge individually. This means that reductions in some prices cannot be offset by increases in other charges: the maximum increase is the same whatever the reductions made elsewhere. This ensures that the price control does not create an additional incentive to cut prices in areas where competition is developing most quickly.
- 9.118 However, whilst we consider *ex ante* regulation is appropriate to address the risk of anti-competitive pricing in the markets covered by this review, we consider also that a cost-orientation obligation is not the most appropriate form for it to take. One reason is that an *ex ante* price floor could prevent BT offering low prices which would be beneficial to customers. In some cases, prices as low as LRIC or marginal costs may be beneficial, provided there is no harm to competition. In addition, setting a floor which is above BT’s forward-looking costs could encourage entry into the wholesale market by competitors with higher costs than BT. This would be inefficient and undesirable unless higher costs in the short-run were offset by the likely benefits of greater competition.
- 9.119 There are other options that we believe will be less burdensome. In particular, we use non-discrimination obligations to ensure that any low prices that BT offers are made generally available. The non-discrimination rule will prevent BT offering low prices targeted at individual users, for example strategic discounts aimed at winning rivals’ key customers. BT would be forced to make those prices generally available to other customers, raising the cost to it of offering those low prices – potentially high enough to deter anti-competitive pricing. However, stakeholders may understandably be concerned that to rely on an incentive mechanism may be insufficient to deter

<sup>1103</sup> See Sections 19 and 20 for a more detailed discussion.

<sup>1104</sup> See our assessment in Section 7, in particular paragraphs 7.399 to 7.411, where we also note that this will depend, in part, on the type of *ex ante* regulation in place.

anti-competitive pricing in all cases and hence, in our view, it is appropriate to impose the fair and reasonable pricing obligation to provide protection to deal with anti-competitive low pricing. We consider that these obligations, combined with the design of the control, will address the risks of anti-competitive pricing identified as a result of our market analysis.

#### *Margin squeeze*

- 9.120 Some respondents have suggested that a cost orientation obligation may be needed to address concerns about margin squeeze which would drive out downstream competitors. This could happen if BT set a margin between its wholesale and retail charges which was below an appropriate measure of retail costs.
- 9.121 Margin squeeze is a form of discrimination. If BT charges a wholesale price to other CPs which, given the relevant retail prices, results in a margin squeeze, then the implicit wholesale price charged to BT's downstream operations must be lower than that charged to external customers. As already noted above, the Access Guidelines note that protection against that type of behaviour may be achieved by imposing a non-discrimination obligation. We have also concluded above to impose on BT fair and reasonable pricing obligations as a complementary remedy to deal with (among other things) margin squeeze or other anti-competitive behaviour in setting its charges. We therefore consider that a cost orientation obligation would result in more onerous remedies than is required to achieve our aims to deal with margin squeeze.

#### *Make/buy decisions*

- 9.122 The underlying concern here is that, absent cost orientation obligations, BT's charges will not be adequately constrained, potentially leading CPs to make inefficient decisions about whether to buy from BT or to build their own services. Although we are using a different approach, the charge controls are designed to perform essentially the same function as the price controls implemented in the 2007/8 Review, i.e. to require BT to bring its prices into line with forecast costs over the period of the control, whilst leaving it some flexibility to adjust individual charges within the charge control baskets. As noted above, having considered stakeholders responses, we remain of the view that the charge controls will adequately constrain BT's charges.

#### *Control of prices for services outside the charge controls*

- 9.123 The scope of the charge controls are such that they cover all of the major services that BT offers in these markets. It is likely that most new services that BT introduces during the period covered by this review would wholly or substantially replace existing services. We have made provision in the charge controls for such services to be incorporated into the charge control baskets in order to ensure the continuity of the charge controls and to provide BT with an incentive to ensure that substitute services are at least as efficient as the ones they replace.
- 9.124 If BT were to introduce a new service that does not wholly or substantially replace an existing service, it would by definition be significantly different to the charge controlled services. Such a service could well be an innovative service for which the demand, costs and level of competition are uncertain. We would therefore want to consider whether a price control would be appropriate and what form it should take rather than automatically apply a cost orientation obligation. Depending on the circumstances, we might decide to apply an alternative mechanism (at least initially) such as a retail-minus or to rely on an anchor pricing approach.

- 9.125 It is also likely that most new services will fall within the AISBO or MISBO markets and would also be consumed by BT's downstream businesses. The requirement to offer services on an EOI basis would therefore provide an additional constraint on its pricing behaviour.
- 9.126 Meanwhile, we consider that the fair and reasonable pricing obligations discussed above would provide a sufficient constraint on BT's pricing behaviour in relation to new services.

*Control of prices following expiry of charge controls*

- 9.127 Whilst cost orientation obligations could provide some constraint on charges after charge controls expire, it is unlikely they would constrain BT's prices as effectively as charge controls.
- 9.128 Therefore, in our view, it is preferable to align the implementation of new charge controls with the expiry of existing controls or, to agree alternative arrangements for the interim period if necessary. If the controls expire and if there would be an unexpected delay for any new controls, we will consider to what extent the fair and reasonable pricing obligations could constrain BT's pricing behaviour in relation to prices that are no longer charge controlled.

*Change in approach*

- 9.129 We recognise that some respondents would have preferred us to complete our project examining our approach to cost orientation before proposing a change to our approach in relation to cost orientation obligations.
- 9.130 We took account of our work on cost orientation when developing our proposals. We then set out the evidence and rationale for the proposals in full in the June BCMR Consultation and the July LLCC Consultation. In particular, we explained the reasons why we had proposed not to apply cost orientation obligations and why we considered that the identified competition problems could be adequately addressed by the proposed charge controls.
- 9.131 As already noted above, whilst we have a duty to have regard to the need for consistency in our regulatory decisions where appropriate, we need to review the remedies we impose for the specific markets under consideration (here, wholesale leased lines) to ensure that they remain relevant, appropriate and proportionate to the competition problems now identified.

AISBO services in the WECLA

- 9.132 We have considered whether it is necessary to have an additional cost orientation obligation to address the risk of excessive pricing for AISBO services in the WECLA. As set out in Section 21, our intention in setting a safeguard cap is to allow developing competition to become the main source of downward pressure on prices.
- 9.133 As explained in Section 12, we consider that the risk of an adverse effect arising from price distortion by BT through its incentive and ability to charge excessive prices for AISBO services in the WECLA should be addressed by the imposition of an appropriate charge control. However, we have recognised in Section 7 that the existence of alternative access infrastructure in the WECLA and strong growth should be taken into account in our specific proposal for the appropriate charge control.

- 9.134 In Section 21, we explain that we are imposing a safeguard cap of RPI-RPI on each relevant AI service in the WECLA. We consider a control based on a safeguard cap is the most appropriate way of addressing our concerns for the AISBO services in the WECLA. This is because it would provide a sufficient protection against excessive pricing, while also giving appropriate incentives for the further development of competition and innovation in light of the economic characteristics of this market.
- 9.135 In considering whether an additional cost orientation obligation is required, we have considered both the likelihood and consequences of prices rising above DSAC for AISBO services in the WECLA. As described in Section 21, we anticipate that competition rather than the safeguard cap will become the main source of downward pressure on charges for AISBO services in the WECLA. We anticipate that this is also the case in relation to cost orientation obligations. Given the presence of other networks in the WECLA and strong forecast growth, we would expect competitive pressure to lead to reductions in BT's charges, or otherwise for BT to lose business, and consequently market share to other CPs.
- 9.136 In addition to the safeguard cap, BT will be subject to other SMP obligations such as non-discrimination and the requirement to provide services on an equivalence of input basis as well as on fair and reasonable terms and conditions including charges. We consider that these remedies, in combination with a safeguard cap, will provide a proportionate set of remedies taking into account our SMP assessment in this market.<sup>1105</sup>

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<sup>1105</sup> See Section 7, in particular paragraphs 7.399 to 7.411.

## Section 10

# Remedies for the retail very low bandwidth TI leased lines market

## Introduction

- 10.1 In this Section, we set out the remedies that we have decided to impose on BT in the retail market for very low bandwidth Traditional Interface (TI) leased lines in the UK, excluding the Hull area, at bandwidths below 2Mbit/s. We refer to this market as the retail very low TI market.
- 10.2 These remedies we have imposed are those which we conclude are appropriate to address the competition problems we have identified in this market as a result of our market analysis, in particular our assessment set out in Section 7, and which we conclude reliance on upstream wholesale regulation and on national and Community competition law alone would be insufficient to address. We set out the competition problems further below in this Section.
- 10.3 The retail very low TI market comprises retail analogue and digital services of bandwidths below 2Mbit/s, provided with a traditional interface. In the 2007/8 Review, we defined a retail market that was wider in its product scope,<sup>1106</sup> comprising low bandwidth TI leased lines at bandwidths up to and including 8Mbit/s. That market was the only retail market in which we found BT to have SMP in the 2007/8 Review, and it was the only market in which retail ex-ante regulation was applied to BT.
- 10.4 Competition in digital services in the retail very low TI market depends to a significant extent on PPCs which are the wholesale services that BT provides in the upstream low bandwidth TISBO market. Unlike the AISBO products, PPCs are not provided on an EOI<sup>1107</sup> basis. Consequently, the extent to which these services allow CPs technically and commercially to replicate BT's retail services is a significant factor in our assessment of the need for regulation at the retail level.
- 10.5 Unlike the position of digital services in this market, there is no underlying analogue wholesale service from BT.
- 10.6 As previously discussed in Section 7, the size of this market is declining, however, it is still the largest retail market by circuit volume.

## Summary of our conclusions

- 10.7 Figure 10.1 below summarises the competition problems we have identified in this market and the remedies we have concluded are appropriate to address them.

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<sup>1106</sup> As with the retail very low TI market, the geographic scope of the market was the UK excluding the Hull area.

<sup>1107</sup> Equivalence of Inputs. See, in this respect, Section 12.



**Figure 10.1: Summary of competition problems and remedies for BT**

Competition problems	Remedies
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	<ul style="list-style-type: none"> <li>Obligation to supply existing retail services and to give no less than one year's notice of withdrawal</li> </ul>
<ul style="list-style-type: none"> <li>Price discrimination</li> <li>Non price discrimination</li> </ul>	<ul style="list-style-type: none"> <li>Obligation not to discriminate unduly;</li> <li>Obligation to publish a reference offer; and</li> <li>Cost accounting obligations.</li> </ul>
<ul style="list-style-type: none"> <li>Excessive pricing</li> </ul>	<ul style="list-style-type: none"> <li>In relation to analogue leased lines, safeguard cap on retail prices</li> </ul>

### Safeguard cap remedy

10.8 In this Section, we set out our reasons why, at a high level, we remain of the view that a safeguard cap on retail prices in relation to analogue leased lines, should be imposed. Our conclusions, together with our reasons, consultation responses and considerations of those responses, with regard to the detail of the safeguard cap we are imposing, are set out in Section 23.

### Other pricing remedies

10.9 As part of our assessment of the appropriate package of pricing remedies, together with the non-pricing remedies, to address the competition problems we have identified in the retail very low TI market, we have decided, as per our proposal in the November BCMR Consultation, to impose cost accounting obligations. Our reasons, consultation responses and considerations of those responses, relating to this decision are set out Section 16.

### Remedies as a whole in the retail very low TI market

10.10 We consider these remedies would secure or further our statutory duties and would satisfy the relevant legal tests. In reaching our conclusions we have taken account of our regulatory experience from two previous market reviews, recent developments in this market and the relevant upstream wholesale market, consultation responses, and expected developments over the three year review period.

10.11 We have also taken due account of all applicable guidelines and recommendations issued by the European Commission (EC), and we have taken utmost account of the BEREC Common Position.<sup>1108</sup> We have also had regard to relevant guidance from the European Regulators' Group (ERG), Oftel and ourselves.

### Structure of this Section

This Section is structured as follows:

<sup>1108</sup> BEREC Common Position on best practices in remedies imposed as a consequence of a position of significant market power in the relevant markets for wholesale lease lines, BoR (12) 83.

Sub-section	Content
Assessment of competition problems in the retail very low TI market	Assessment of competition problems, including insufficiency of national and Community competition law remedies.
Approach in the June BCMR Consultation and the remedies we proposed	Summary of the assessment we carried out in the June BCMR Consultation and our proposed remedies.
Consultation responses and Ofcom's considerations	Summary of stakeholders' comments to the June BCMR Consultation and our considerations in respect of those comments.
Ofcom's conclusions on the appropriate remedies	Details of the remedies we have decided to impose and in relation to each, a statement of their aim and the legal tests we have applied to them.

## Assessment of competition problems in the retail very low TI market

10.12 We summarise below our assessment of the competition problems in this retail market before setting out the remedies we have concluded, having considered consultation responses, are appropriate to address those problems.

### Competition problems identified in the retail very low TI market

10.13 In light of our market analysis, in particular our assessment in Section 7, we summarise below the competition problems we have identified in the retail very low TI market and which behaviour, in the absence of ex-ante regulation and despite the existence of upstream wholesale regulation, we have concluded BT would have the incentive, and its market power would afford it the ability to engage in. These include, in particular:

- refusal to supply retail TI very low bandwidth leased lines;
- charging excessively high prices;
- engaging in unduly discriminatory pricing practices – e.g. by charging certain groups of end users more than others; and
- engaging in unduly discriminatory non-pricing practices – e.g. by offering certain groups of end users different terms/conditions from others, different quality of service or different provision or repair timescales.

10.14 We note, in this respect, that BT has been subject to ex ante regulation and voluntary undertakings to address the risks of engaging in these practices at the retail level since 2004.<sup>1109</sup> Our market analysis in this review has led us to conclude that BT would continue to have an incentive to engage in these practices in order to restrict retail competition or oblige end users to use alternative products, thereby preventing end users from deriving maximum benefit in terms of choice, price and quality.<sup>1110</sup>

<sup>1109</sup> See also, by analogy, footnote 74 to paragraph 72 of the SMP Guidelines.

<sup>1110</sup> One of the tasks required of national regulatory authorities, such as ourselves, by the Framework Directive is the promotion of “competition in the provision of electronic communications networks, electronic communications services and associated facilities and services by *inter alia* ensuring that users...derive maximum benefit in terms

## Insufficiency of national and Community competition law remedies

- 10.15 For the reasons set out at the end of this Section, including by reference to the package of remedies we are imposing, we have concluded that national and Community competition law remedies would be insufficient to address the competition problems we have identified.
- 10.16 This has led us to conclude that over the three year review period, competition would be ineffective in the retail very low TI market.
- 10.17 We now turn to the approach we adopted in the June BCMR Consultation which followed on from our assessment of the competition problems.

## Approach in the June BCMR Consultation

- 10.18 In the June BCMR Consultation we proposed to define a retail leased lines market for low bandwidth TI leased lines in the UK excluding the Hull area at bandwidths up to and including 8Mbit/s. As discussed in Section 3, after further consideration we have revised our market definition such that we now define a retail leased line market for very low bandwidth TI leased lines in the UK excluding the Hull area at bandwidths below 2Mbit/s.
- 10.19 Below we set out:
- those parts of the assessment that we carried out in the June BCMR Consultation that are relevant to our revised market definition in light of our view that, over the course of the review period of three years, competition would be ineffective in the TI very low bandwidth retail market; and
  - our proposed remedies.
- 10.20 In the June BCMR Consultation we considered separately the case for remedies for four product segments in this market, namely analogue circuits, sub 2Mbit/s digital circuits, 2Mbit/s digital circuits and 8Mbit/s digital circuits. Consequently our assessment of the appropriate remedies for the revised market definition has not been materially altered by our decision to change the market definition.

## Assessment of appropriate remedies

- 10.21 Under section 91(2) of the Act<sup>1111</sup> we may only impose retail regulation where wholesale regulation in the upstream market would not suffice to achieve our duties and objectives in the relevant downstream – i.e. retail – market. Consequently, an important aspect of our assessment was whether the upstream wholesale remedies allow CPs effectively to replicate BT's retail services using wholesale inputs and whether retail competition had become sufficiently strong for us to relax retail regulation partially or wholly.
- 10.22 We first set out developments since the 2007/8 Review that we considered were relevant to informing our assessment of appropriate remedies.

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of choice, price and quality" (see Article 8(2)). See also, in this respect, Ofcom's statutory duties under the Act, in particular sections 3(5) and 4(3).

<sup>1111</sup> Implementing Article 17(1) of the Universal Service Directive.

### Withdrawal of analogue and sub 2Mbit/s digital services

- 10.23 Since the 2007/8 Review BT has delayed the withdrawal of analogue and sub 2Mbit/s digital services to give users such as the energy utilities more time to migrate to other services. Where demand remains commercially viable BT now intends to support these services until March 2018 and has also committed to give at least three years notice if it decides to bring the withdrawal date forward for individual services.<sup>1112</sup>
- 10.24 Recognising the critical nature of the utilities' telemetry applications, BT has also established a regular dialogue with the electricity utilities via the Energy Networks Association. The utilities have made arrangements to migrate their telemetry applications away from the analogue and sub 2Mbit/s digital services and are keeping BT informed of the progress of their migration programmes.

### New voluntary undertakings for sub 2Mbit/s services

- 10.25 In April 2011, we accepted new voluntary undertakings from BT<sup>1113</sup> in which BT undertook to:
- continue to supply new analogue retail circuits until December 2013 or earlier if, subject to industry agreement and our consent, the underlying platform is closed at an earlier date; and
  - continue to supply new sub 2Mbit/s digital retail circuits until December 2013 or earlier if, subject to industry agreement and our consent, the underlying platform is closed at an earlier date.
- 10.26 At the same time, we were unable to agree a new price cap with BT for analogue leased lines for the years 2011-12, so a cost orientation obligation came into effect, as envisaged for such circumstances in the 2007/8 Review.

### Replicability

- 10.27 An important element of our approach as set out in the Telecoms Strategic Review<sup>1114</sup> was that we anticipated that once 'replicability' had been achieved for BT's retail services it would be possible for us to concentrate our regulatory intervention at the wholesale level and ultimately withdraw ex-ante regulation at the retail level.
- 10.28 Replicability is an important regulatory threshold. It reflects the availability of fit-for-purpose wholesale inputs from BT which allow its competitors to replicate BT's retail products effectively, both technically and commercially. Therefore, once replicability is achieved, we would expect competition downstream to improve significantly, with benefits for customers in terms of lower prices and more choice of services and providers.

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<sup>1112</sup> [http://www.globalservices.bt.com/uk/en/campaign/tdm\\_services](http://www.globalservices.bt.com/uk/en/campaign/tdm_services)

<sup>1113</sup> <http://stakeholders.ofcom.org.uk/consultations/bcmr08/renewal/>

<sup>1114</sup> [http://stakeholders.ofcom.org.uk/consultations/statement\\_tsr/](http://stakeholders.ofcom.org.uk/consultations/statement_tsr/)

- 10.29 The technical and commercial issues that we considered to be barriers to replicability of low bandwidth retail leased lines were set out in the Replicability Statement, published in 2006.<sup>1115</sup>
- 10.30 In the 2007/8 Review we concluded that BT had not fully addressed the replicability issues. We therefore maintained the pricing obligations and non-discrimination obligations and encouraged BT to address these issues.
- 10.31 We proposed that once BT had addressed the impediments to competitors effectively replicating BT's retail digital circuits at bandwidths up to 2Mbit/s from BT's wholesale inputs, we would consider relaxing retail pricing restrictions applied to BT as a result of its SMP. In particular we said that, once replicability had been achieved, we would consider granting BT the freedom to set bespoke prices for these services and relaxing the presumption that bundles of SMP and non SMP products are anti-competitive.
- 10.32 In November 2008, BT wrote to us setting out how it considered it had addressed the replicability issues identified in the Replicability Statement. Consequently, in June 2009 we published the 2009 Replicability Consultation.<sup>1116</sup> This set out our provisional view that replicability had been achieved and therefore BT's low bandwidth digital leased lines could be replicated by its competitors. Consequently we proposed that BT should be given greater pricing freedom.
- 10.33 We subsequently suspended work pending the outcome of the Leased Lines Charge Control Appeal (LLCC Appeal).<sup>1117</sup> In light of the delay and subsequent developments in the market, in 2011 we decided to defer consideration of the replicability proposals to this market review.
- 10.34 In the June BCMR Consultation we reviewed the responses to the 2009 Replicability Consultation and reported that we remained of the view that BT's competitors can replicate BT's sub 2Mbit/s and 2Mbit/s digital products using wholesale inputs.<sup>1118</sup> Consequently in the June BCMR Consultation we considered whether there was scope to relax retail regulation.
- 10.35 Taking these developments into account, we then set out our assessment of appropriate remedies for, respectively:
- analogue services; and
  - sub 2Mbit/s services.

### Analogue services

- 10.36 We noted that, according to our SMP assessment, BT had a 96% share of retail sales of analogue services, almost unchanged since the 2007/8 Review, and that volumes have been in steady decline as end users migrate to more modern services.

<sup>1115</sup> Entitled "The replicability of BT's regulated business services and the regulation of business markets" (<http://www.ofcom.org.uk/consult/condocs/busretail/statement/>). Annex 9 of the June BCMR Consultation provides further background and lists the replicability issues.

<sup>1116</sup> Entitled "Replicability and the regulation of BT's low bandwidth leased lines" ([http://stakeholders.ofcom.org.uk/consultations/low\\_bandwidth/](http://stakeholders.ofcom.org.uk/consultations/low_bandwidth/)).

<sup>1117</sup> <http://www.catribunal.org.uk/237-4334/1112-3-3-09-Cable--Wireless-UK.html>.

<sup>1118</sup> See paragraphs 9.41 to 9.43, and Annex 9, of the June BCMR Consultation.

- 10.37 We also noted there are currently no upstream wholesale services available to CPs and, given the legacy nature of these services and their impending withdrawal, we considered there is little prospect retail competition would increase even if we were to require BT to offer wholesale services to CPs. We therefore considered that wholesale regulation would be insufficient to perform our duties in relation to these services.
- 10.38 Due to the virtual absence of retail competition for these services, we considered competition is unlikely to constrain BT's conduct during the period covered by our review and consequently we considered that *ex-ante* retail regulation was needed to address the competition problems we identified.

*Refusal to supply*

- 10.39 We remained of the view that these services should be regarded as legacy services that are approaching the end of their life. Our main concern in relation to refusal to supply related to the withdrawal arrangements and in particular the need to ensure that end users were provided with adequate notice of service withdrawal.
- 10.40 We noted that in order to address the concerns of the utility companies and other users with critical applications, BT had significantly delayed the withdrawal of analogue circuits and had given a public commitment to give end users at least three years' notice of the withdrawal of analogue circuits and to consult key stakeholders should it decide to bring forward the withdrawal date from March 2018.
- 10.41 Given the critical nature of some of the services that use these leased lines we considered it was appropriate to retain regulatory oversight of their withdrawal. We proposed that BT should be subject to an obligation to supply retail analogue leased lines that would:
- not require BT to supply new analogue circuits;
  - require BT to supply existing analogue services until it gives end users and us notice of at least one year of their withdrawal; and
  - require BT to comply with directions we may make in relation to the condition.

- 10.42 We considered it was appropriate to impose a minimum notice period for service withdrawal as a backstop, in order to provide additional assurance to end users that sufficient notice would be given to allow them to migrate critical applications to alternative services. On balance, we considered that a one year notice period would be adequate as a backstop for this purpose and would not interfere with the commercial arrangements that BT had proposed.

*Excessive pricing*

- 10.43 In light of our SMP assessment, we noted BT's entrenched position of SMP which arose, in particular, as a result of the absence of a wholesale input product, the legacy nature of analogue services and their impending withdrawal. We also identified that BT's profitability was high. We therefore considered there was a risk that BT might use its position to charge excessive prices. Given the circumstances, we considered that a specific charging constraint in the form of a safeguard cap was appropriate, and that setting the cap at the same level as the basket cap on wholesale TISBO and trunk charges would both provide an appropriate level of protection and allow BT to recover a reasonable level of retail and network costs.

*Undue discrimination*

- 10.44 In order to address the risk that BT might engage in unduly discriminatory conduct we considered it appropriate that BT should be subject to an obligation not to do so. In the absence of such a requirement we considered that BT would have the incentive to discriminate against particular groups of retail customers (such as those least able to switch to AI services) by charging excessive prices, imposing unfair terms or offering inadequate quality of service.
- 10.45 To provide transparency and to support this obligation we considered that BT should also be subject to a requirement to publish a reference offer specifying prices and other terms and conditions.

Sub 2Mbit/s digital services

- 10.46 This segment of the market has some similarities to the analogue circuits assessed above. As noted in Section 7, BT retains a high share of retail sales of these services and volumes are in steady decline. These services are provided on the same platform as some of the analogue services (BT's DPCN platform) and BT announced the withdrawal of these services in conjunction with the analogue services – i.e. by March 2018 at the latest. An important difference is that, unlike the analogue services, BT provides upstream wholesale inputs in the form of PPCs.
- 10.47 The approach that we adopted in the 2007/08 was partially successful. BT addressed the barriers to replicability and responded positively to stakeholder concerns about the withdrawal of these services by delaying their withdrawal. However, competition did not develop as expected. In the presence of replicability we had expected retail competition to improve significantly with benefits for customers in terms of lower prices and more choice of services and providers.
- 10.48 In the June BCMR Consultation, we reported that although BT's share of this product segment fell from 79% in 2007 to 73%, it remained significantly higher than its share of 2Mbit/s services, which fell from 60% to 45% over the same period. We have since revised our service share calculations and now estimate that BT's share of sub 2Mbit/s services has fallen to 53% and its share of 2Mbit/s services has fallen to 34%.
- 10.49 The reason for these differences may be that sub 2Mbit/s services are declining more rapidly than 2Mbit/s services. Sub 2Mbit/s services are increasingly regarded as legacy services by both CPs and end users. CPs told us that most of the remaining activity in this segment is related to migrating users to more modern services where possible. We were also told that consolidation is occurring as CPs with lower volumes find it unprofitable to continue to support them. Given the circumstances, the prospects for increased competition appeared weak and there was some prospect of further consolidation of supply.
- 10.50 As set out above, under section 91(2) of the Act we have an obligation to consider whether the imposing of wholesale regulation in the upstream market suffices to achieve our duties and objectives in the relevant downstream market. Therefore, with replicability achieved, we considered whether we could take steps to relax retail regulation either by removing it or by implementing the replicability proposals set out in the TSR. However:

- in relation to removing ex-ante retail regulation, we considered relying on wholesale regulation for sub 2Mbit/s would not address the competition problems we identified.
- in relation to implementing the replicability proposals, we considered this would also not address the competition problems we identified.

10.51 Consequently, we considered some form of ex-ante retail regulation was required.

*Refusal to supply*

10.52 We remained of the view that these services should be regarded as legacy services that are approaching the end of their life. It would have been inappropriate for us to seek to extend the availability of these services artificially. We therefore considered that it would be disproportionate to require BT to supply new services and we proposed not to seek a further voluntary undertaking from BT in relation to the supply of new services beyond December 2013 as provided for in the existing voluntary undertaking.

10.53 Thus our main concern in relation to refusal to supply related to the withdrawal arrangements and in particular the need to ensure that end users were provided with adequate notice of service withdrawal.

10.54 We noted that, in order to address the concerns of the utility companies and other users with critical applications, BT had delayed significantly the withdrawal of sub 2Mbit/s digital circuits and gave a public commitment to give end users at least three years' notice of the withdrawal of sub 2Mbit/s digital circuits and to consult key stakeholders should it decide to bring forward the withdrawal date from March 2018.

10.55 Given the critical nature of some of the services that use these leased lines we considered that it was appropriate to retain regulatory oversight of their withdrawal. We proposed that BT should be subject to an obligation to supply retail sub 2Mbit/s digital leased lines that would:

- not require BT to supply new sub 2Mbit/s digital circuits;
- require BT to supply existing sub 2Mbit/s digital services until it gives end users and us notice of at least one year of their withdrawal; and
- require BT to comply with directions we may make in relation to the condition.

10.56 We considered it was appropriate to impose a minimum notice period for service withdrawal as a backstop to provide additional assurance to end users that sufficient notice would be given to allow end users to migrate critical applications to alternative services. On balance, a one year notice period was in our view adequate as a backstop for this purpose and would not interfere with the commercial arrangements that BT had proposed.

10.57 We considered that this obligation in conjunction with BT's public commitment should provide end users with sufficient assurance about the withdrawal arrangements and give them sufficient notice to migrate the remaining critical applications to other services.



*Excessive pricing*

- 10.58 We were less concerned about the risk of excessive pricing of sub 2Mbit/s digital services than of analogue services because retail competition based on upstream wholesale inputs is possible and, in addition, some users may be able to switch to 2Mbit/s services. We considered that as in the 2007/8 Review we could rely on competition to provide a constraint on BT's retail prices and we therefore did not propose to apply price controls to these services.

*Undue discrimination*

- 10.59 In order to address the risk that BT might engage in unduly discriminatory conduct we considered that it would be appropriate that BT be subject to an obligation not to discriminate unduly. In the absence of such a requirement BT would have the incentive to discriminate against particular groups of retail customers (such as those least able to switch to AI services) by charging excessive prices, imposing unfair terms or offering inadequate quality of service.
- 10.60 To provide transparency and to support this obligation we considered that BT should also be required to publish a reference offer specifying charges, terms and conditions.

**Remedies proposed in the June BCMR Consultation**

- 10.61 The table below summarises the competition problems we identified and the remedies we proposed to address them:

**Summary of competition problems and remedies for BT**

Competition problems	Remedies
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	<ul style="list-style-type: none"> <li>Obligation to supply existing retail services and to give no less than one year's notice of withdrawal</li> </ul>
<ul style="list-style-type: none"> <li>Price discrimination</li> <li>Non price discrimination</li> </ul>	<ul style="list-style-type: none"> <li>Obligation not to discriminate unduly; and</li> <li>Obligation to publish a reference offer</li> </ul>
<ul style="list-style-type: none"> <li>Excessive pricing</li> </ul>	<ul style="list-style-type: none"> <li>In relation to analogue leased lines, safeguard cap on retail prices</li> </ul>

**Consultation responses**

- 10.62 We received few responses to our proposed retail remedies, but those that we did receive were generally supportive of our proposals.
- 10.63 BT said that the remedies were generally appropriate and properly reflective of the legacy nature of the services concerned, noting nevertheless that it disagreed with our market power assessment. BT also noted that it did not consider that remedies are required at all because its existing commercial commitments provided protection to users of residual services, and that at least the obligation to send a copy of the reference offer to Ofcom should be removed on the basis that it is an unnecessary administrative burden given the requirement to publish the offer on the website as well.

- 10.64 SSE welcomed BT's commercial commitment both to support services until 2018 and to provide a three-year notice period prior to withdrawal, but nonetheless endorsed our regulatory proposals as an ultimate protection.
- 10.65 For completeness, we also note that Level 3 commented about 2Mbit/s services which fell within the scope of our original market definition but which fall outside its scope under the revised market definition. Level 3 Communications opposed the removal of supply obligations on 2Mbit/s services, as some existing retail customers require security-accredited products, and commercial or operational risk would arise for some of Level 3's key customers if such a product, or an appropriate alternative, were not available.

## Our consideration of consultation responses

- 10.66 We have addressed BT's concerns with our market power assessment in Section 7. As a result of our analysis of this retail market, we have concluded BT has both the ability and incentive to behave to an appreciable extent independently of competitors and ultimately consumers, in particular to refuse to supply, to price excessively and to engage in unduly discriminatory pricing and non-pricing practices. These competition problems exist despite the existence of BT's commercial commitments, given they arise as a result of BT's continued SMP which, by definition, means BT enjoys a position of economic strength affording it the power to behave to an appreciable extent independently of, amongst others, ultimately consumers.<sup>1119</sup>
- 10.67 More importantly, these problems also remain despite the existence of the remedies that we are imposing in the wholesale TI markets. In this respect, we rely on our assessment set out in Section 7, and also on our assessment of the appropriate remedies set out in this Section, to support our conclusion as to the insufficiency of upstream wholesale regulation to address the competition problems in this retail market. Here we consider our assessment of the appropriate remedies in the June BCMR Consultation remains valid, in particular:
- BT's very large market share (comprising very large service shares for analogue services and sub 2Mbit/s digital circuits);
  - the legacy nature of both analogue services and sub 2Mbit/s digital circuits;
  - the absence of wholesale inputs for retail analogues services;
  - the critical nature of some of the services that use these retail leased lines and also those groups of retail customers least able to switch to AI services, for example utility companies;
  - weak prospects for increased retail competition over the three year review period.
- 10.68 Consequently, we are obliged to impose appropriate remedies to address these competition problems and, in doing so, have taken into account both the fact that this market is declining, and that it is still the largest retail market by circuit volume. As a result, our decision to impose remedies also reflects the need, revealed by our market analysis, to provide appropriate certainty to both BT and the market in general over the course of the review period. Lastly, we do not consider the obligation to send a copy of the reference offer as unduly onerous since the

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<sup>1119</sup> See, for example, section 78 of the Act.

alternative is for us to continuously monitor BT's website for changes; it is more efficient for them, as the originators of the document, to notify us of changes.

10.69 Level 3's concern is focused on the IL2 security accreditation which will be uniquely held by 2Mbit/s TI leased lines in the period between BT Wholesale's withdrawal of its Datastream service, and the accreditation of its Wholesale Broadband Connect service and Openreach's Ethernet services. If BT then chose to withdraw 2Mbit/s retail TI leased lines there would be no retail alternative available for Level 3 to offer to those elements of its client base which require this level of security accreditation. We consider, however, that:

- large volumes of 2Mbit/s services are still in use and there is no realistic prospect of BT withdrawing them in the short term;
- in the medium term, IL2 accreditation is likely to be awarded to the newer services; and
- ultimately, wholesale supply obligations we are applying to 2Mbit/s leased lines do provide a further, and sufficient, assurance of availability.

### **Ofcom's conclusions on the appropriate remedies**

10.70 We have concluded that wholesale regulation in the relevant upstream market would not suffice to achieve our duties and objectives with regard to this retail market. Consequently, pursuant to section 91(1) of the Act, the sorts of SMP conditions authorised or required by sections 87 to 89 should be set in this retail market.

10.71 We have concluded that the most appropriate remedies to address the competition problems identified remain those that we proposed in the June BCMR Consultation.

10.72 Our conclusions are the result of our cumulative consideration of:

- our assessment of the appropriate remedies, as set out in the June BCMR Consultation and set out above;
- our considerations of consultation responses; and
- all the evidence available to us.

10.73 Below we set out:

- the aim of the remedies that we have concluded should be imposed on BT in the retail very low TI market;
- the obligations imposed on BT by the remedies; and
- the reasons why we consider the remedies comply with the relevant legal tests in the Act.

10.74 The SMP conditions which give effect to our conclusions are set out in Annex 7.

## **Requirement to supply retail leased lines**

### Aim of regulation

10.75 As discussed above, given the critical nature of some of the services that use analogue and sub 2Mbit/s digital leased lines, it is important that end users are given adequate notice of their withdrawal. BT has given a public commitment that it will give end users three years notice of their withdrawal (subject to certain conditions); we consider this should give end users sufficient notice, particularly as BT has already significantly extended the availability of these services in response to end user concerns. However, given the critical nature of some of the services that use leased lines we consider it would be appropriate to retain regulatory oversight of their supply.

### SMP Condition

10.76 We have concluded that BT should be subject to an obligation to supply retail analogue leased lines and retail T1 digital leased lines at bandwidths below 2Mbit/s. This obligation:

- does not require BT to supply new circuits;
- requires BT to supply existing services until it gives end users and us notice of at least one year of their withdrawal;
- requires such supply to be on fair and reasonable terms, conditions and charges; and
- requires BT to comply with directions we may make under the SMP condition in relation to the requirement to supply retail leased lines.

10.77 We consider that this obligation should provide end users with sufficient assurance about the withdrawal arrangements and give them sufficient notice to migrate the remaining critical applications to other services. We note that BT's public commitment about service withdrawal provides some additional assurance to existing end users.

### Legal tests

10.78 We are satisfied that the SMP condition in relation to analogue and sub 2Mbit/s digital services meets the various tests set out in the Act.

10.79 First, section 87(3) of the Act authorises the setting of an SMP condition requiring the dominant provider – i.e. in this case BT – to:

- provide network access to its network;
- allow the use of its network; and
- to make available relevant facilities.

10.80 These conditions may, pursuant to section 87(5) of the Act, include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the

conditions are complied with within periods and at times required by or under the conditions.

10.81 When considering the imposition of such conditions in a particular case, we must take into account six factors set out in section 87(4) of the Act, including, *inter alia*:

- the technical and economic viability of installing and using other facilities, including the viability of other network access products whether provided by the dominant provider or another person,<sup>1120</sup> that would make the proposed network access unnecessary;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed (taking account of any public investment); and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

10.82 We have taken all six factors into account in reaching our conclusion that BT should be subject to an obligation to supply retail leased lines.

10.83 Secondly, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP condition furthers the interests of citizens and consumers in relation to communications matters by ensuring that analogue and sub 2Mbit/s services are not withdrawn prematurely.

10.84 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that, absent this obligation, there is a risk BT might withdraw these services with insufficient notice for some end users to install alternative circuits to support critical applications such as electricity network telemetry circuits. This would not be in the interests of such end users and their customers. We have recognised that this concern relates specifically to existing customers, and have therefore limited the obligation accordingly;
- not unduly discriminatory, in that only BT and no other operator has been found to hold a position of SMP in this market and would therefore have the ability and incentive to exploit customers by withdrawing analogue and sub 2Mbit/s digital services with inadequate notice to end users;
- proportionate, in that it is the least onerous obligation which addresses this particular risk of harm to end users and citizens and will otherwise allow BT to withdraw these legacy services with insufficient notice. In particular, reliance on wholesale remedies alone would be insufficient in relation to these particular services in the UK because the rapidly declining and legacy nature of the services means there is little prospect that alternative suppliers would step in using wholesale inputs were such services withdrawn by BT with insufficient notice; and

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<sup>1120</sup> i.e. a CP other than BT.

- transparent, in that the SMP condition is clear in its intention, and in that the purpose and meaning of the obligation and the reasons for imposing it are clearly explained in this Statement.

10.85 Regarding the obligation to supply on fair and reasonable terms, conditions and charges, we consider this is appropriate in order to address sufficiently the competition problems we have identified in this retail market and ensure end-users derive maximum benefit in terms of price and quality. In this respect, we have also taken into account the extent of investment of BT in the matters to which the scope of the fair and reasonable obligation would relate.<sup>1121</sup>

## **Requirement not to discriminate unduly**

### Aim of regulation

10.86 In light of our analysis, particularly in relation to the replicability of BT's retail very low bandwidth leased lines from wholesale inputs and in relation to the strength of competition in this market, we consider that it is appropriate that BT should be subject to an obligation not to discriminate unduly in the provision of services at bandwidths below 2Mbit/s. We consider that in the absence of such a requirement, BT would have an incentive to distort competition by discriminating against particular groups of retail customers (e.g. through charging higher prices where competition is weak and lower prices where it is stronger). BT would also have an incentive to charge excessive prices, impose unfair terms or offer inadequate quality of service to particular groups of customers.

### SMP condition

- 10.87 We have concluded that BT should be subject to an obligation not to discriminate unduly against particular persons or against a particular description of persons, in relation to matters connected with the supply of retail analogue leased lines and retail TI digital leased lines at bandwidths below 2Mbit/s.
- 10.88 Although we do not consider this requires specific provision in the condition, we note that there is a particular risk in relation to saw-tooth discounts which will often be unduly discriminatory, in view of their potentially anti-competitive effects. Saw-tooth discounts are discounts which can lead to a decline in the overall level of charges following an increase in the level of consumption. To give a simple example, a supplier may offer a 10% discount if pre-discount expenditure exceeds £100. If the discount applies to all expenditure, rather than just the incremental expenditure in excess of £100, an increase in volumes, which just triggers the pre-discount expenditure threshold, could lead to a reduction in post-discount spending.
- 10.89 We consider that saw-tooth discounts may often act as a barrier to market entry or expansion and, in a market characterised by SMP, may restrict the development of competition.
- 10.90 We consider that application of a non-discrimination condition should not prevent BT from setting geographically de-averaged tariffs – i.e. charging different prices for retail leased lines at different locations – provided that in doing so it does not discriminate unduly between customers.

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<sup>1121</sup> In this respect, we consider the extent of investment – if required at all – would not be significant given the strictly behavioural nature of this specific remedy – i.e. it serves to impose an *ex ante* qualification on the manner in which BT must comply with the requirement to supply leased lines on reasonable request.

## Legal tests

- 10.91 We are satisfied that the SMP condition in relation to analogue and sub 2Mbit/s digital services meets the various tests set out in the Act.
- 10.92 First, section 87(6)(a) of the Act authorises the setting of an SMP condition requiring the dominant provider not to unduly discriminate against particular persons, or against a particular description of persons, in relation to matters connected with network access relevant network or with the availability of the relevant facilities.
- 10.93 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the condition is aimed at preventing the distortion of competition and harm to particular groups of end users in the form of high prices, unfair terms or inadequate service that might occur if BT had the freedom to unduly discriminate in the provision of services at bandwidths below 2Mbit/s.
- 10.94 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, proportionate and transparent. The SMP condition is:
- objectively justifiable, in that BT would otherwise be able to distort competition by discriminating against particular groups of retail customers – e.g. through charging high prices where competition is weak and lower prices where it is stronger and/or engaging in unduly discriminatory non-pricing practices (such as imposing unfair terms or offering inadequate quality of service to particular groups of customers). The requirement therefore promotes competition and furthers the interests of consumers;
  - not unduly discriminatory, in that only BT and no other operator has been found to hold a position of SMP in this market and would therefore have the ability and incentive to exploit customers by engaging in unduly discriminatory pricing and non-pricing practices. Indeed, in relation to analogue services, BT is the only supplier of such services in the UK, and competition remains weak in sub 2Mbit/s digital services. Therefore, no other operator would have the incentive and ability to distort competition by setting discriminatory prices, terms or conditions;
  - proportionate, in that it is the least onerous obligation which addresses this particular risk of harm to competition and also because we have limited the scope of the obligation to those services which we consider most susceptible to this type of harm – i.e. analogue and sub 2Mbit/s digital services. As noted in relation to the obligation to supply, we do not consider wholesale remedies (which we have not, anyway, implemented) would be sufficient because there is little prospect that alternative suppliers would step in using wholesale inputs; and
  - transparent, in that the condition is clear in its intention, and in that the purpose and meaning of the obligation and the reasons for imposing it are clearly explained in this Statement.

## **Requirement to publish a reference offer (setting out prices, terms and conditions) and same day price notification**

### Aim of regulation

- 10.95 The publication provision has an important role in the regulation of BT's activities in this market because it provides transparency over pricing. In conjunction with the

non-discrimination obligation, the effect is to prevent BT from bundling very low bandwidth leased lines together with other, non-SMP, services and from offering bespoke prices in order to secure business contracts against competition from other CPs.

- 10.96 In light of our analysis discussed above, particularly in relation to the replicability of BT's retail low bandwidth leased lines from wholesale inputs and about the strength of competition in this market, we consider that it is appropriate to retain a requirement for BT to publish a reference offer for analogue and sub 2Mbit/s retail leased lines. This is because wholesale inputs are not available for analogue services and although we consider that sub 2Mbit/s services are fully replicable from wholesale inputs, given the relative weakness of competition we consider the risk of adverse consequences of relaxing these obligations to be greater than the potential benefits.

### SMP condition

- 10.97 We have concluded that BT should be subject to an obligation requiring it to publish a reference offer for retail TI leased lines services at bandwidths below 2Mbit/s that includes at least the following:

- the technical characteristics of the services including the physical and electrical characteristics as well as the detailed technical and performance specifications which apply at the network termination point;
- charges, including the initial connection charges, the periodic rental charges and other charges;
- information concerning the ordering procedure;
- contractual details; and
- any refund procedure.

- 10.98 The obligation also prevents BT from departing from the terms specified in the reference offer except with our permission, and it also obliges BT to comply with any directions we may make under the SMP condition in relation to its reference offer.

### Legal tests

- 10.99 We are satisfied that the SMP condition in relation to analogue and sub 2Mbit/s digital TI services meets the various tests set out in the Act.

- 10.100 First, section 87(6) of the Act authorises the setting of SMP conditions that require the dominant provider to publish information about network access to ensure transparency and to publish terms and conditions.

- 10.101 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP condition is aimed at preventing BT from using bundling or bespoke (hidden) discounts in a way which could harm competition and consequently the interests of citizens and consumers.

- 10.102 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, proportionate and transparent. The SMP condition is:



- objectively justifiable, in that it provides certainty to operators and prevents BT from withholding information from customers and competitors, or misusing information in a way which could harm competition, which would be a real risk in the absence of the condition. In addition it facilitates monitoring of compliance with the other obligations, notably the obligation not to unduly discriminate;
- not unduly discriminatory, in that BT and no other operator has been found to hold a position of SMP in this market and would therefore have the ability and incentive to exploit customers by withholding or misusing information;
- proportionate, in that it is targeted at addressing the market power that BT holds in this market, and in that the information which BT is obliged to publish is necessary to prevent it from using bundling or bespoke (hidden) discounts in a way which could harm competition. This is necessary because wholesale remedies have not been fully effective in removing BT's retail market power (there is, moreover, no wholesale analogue product). The transparency obligations support the other conditions imposed to address BT's SMP in this market. Without this information CPs would be unable to compete fairly with BT. As noted in relation to the obligation to supply, we do not consider wholesale remedies would be sufficient because there little prospect that alternative suppliers would step in using wholesale inputs. Additionally, a wholesale remedy would not be capable of supporting the other obligations at the retail level referred to above; and
- transparent, in that the SMP condition is clear in its intention, and in that the purpose and meaning of the obligation and the reasons for imposing it are clearly explained in this Statement.

## **Safeguard cap charge control**

### Aim of regulation

10.103 We have decided, in relation to retail analogue services, to impose a safeguard price cap to address BT's ability and incentive to charge excessive prices for these services.

10.104 Section 87(9) of the Act authorises the setting of SMP conditions imposing, amongst other things, price controls<sup>1122</sup> in relation to matters connected with the provision of network access to the relevant network, or with the availability of the relevant facilities. Section 88 of the Act specifies that Ofcom are not to set a price control unless it appears to Ofcom that there is a risk of adverse effects arising from price distortions, and it appears to Ofcom that setting a price control would promote efficiency, sustainable competition and confer the greatest benefits on end-users.

10.105 In light of our market analysis, in particular our assessment set out in Section 7 and our assessment set out above in this Section, we have concluded there is a risk that BT might use its ability and incentive to charge excessive prices<sup>1123</sup> for retail analogue services. We have further concluded, again in light of our market analysis and consistent with our proposal in the June BCMR Consultation, that a safeguard

<sup>1122</sup> A price control can take a variety of forms, including but not limited to a charge control, cost orientation and/or safeguard cap.

<sup>1123</sup> Within the meaning of section 88(3) of the Act.

cap is the appropriate form of price control to impose. We consider a safeguard cap is appropriate for the purposes of:

- promoting efficiency;
- promoting sustainable competition; and
- conferring the greatest possible benefits on end-users.<sup>1124</sup>

10.106 We have also taken account of the extent of the investment of BT in the matters to which the safeguard cap relates.

10.107 Our conclusions, together with our reasons, consultation responses and considerations of those responses, with regard to the detail of the safeguard cap we are imposing, and the reasons why we consider this remedy complies with the relevant legal tests in the Act, are set out in Section 23.

## **Insufficiency of national and Community competition law remedies**

10.108 At the beginning of this Section we set out our conclusion that national and Community competition law remedies would be insufficient to address the competition problems we have identified in the retail very low TI market.

10.109 We set out below, by reference to the package of remedies we have decided to impose, our reasons supporting this conclusion, and which reasons lead us to conclude that competition would be ineffective in the retail very low TI market over the course of the three year review period.

10.110 First, we do not consider appropriate remedies could be imposed under competition law. In this respect, we refer to the nature and scope of the remedies we are imposing to address the competition problems – e.g. a requirement to supply existing retail services, cost accounting obligations, and a charge control in the form of a safeguard cap. In addition, the SMP conditions we are imposing have been designed specifically to be able to effectively address the competition problems we have identified over the three year review period – e.g. the direction-making power in Condition 11.3 which allows us “from time to time” to direct BT as to the terms, conditions and charges on which it is to supply existing retail services (in accordance with the obligation imposed under Condition 11.1).

10.111 Secondly, we consider the requirements of intervening are extensive – e.g. the time and resources required not only to investigate whether national or Community competition law has indeed been breached, but also to determine an appropriate remedy and then the need to monitor any imposed terms and conditions as part of the appropriate remedy.

10.112 Thirdly, based on our regulatory experience from two previous market reviews, consultation responses and expected developments over the three year review period, we remain of the view that continuing to provide certainty in this retail market is of paramount concern, both to BT and to OCPs and also to end-users. We consider this is best achieved through ex-ante regulation which, in comparison to competition law remedies and in light of our analysis of the this market, would:

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<sup>1124</sup> Within the meaning of section 88(1)(b) of the Act.

- provide greater certainty over the course of the three year period on the types of behaviour that are/are not allowed; and
- allow for timely intervention – proactively by us and/or by parties bringing regulatory disputes to us for swift resolution<sup>1125</sup> – and consequently timely enforcement using the considerable powers accorded us under the Act to secure compliance,<sup>1126</sup> through a process with which the market in general is familiar and which is also set out in the Act.

## Removal of regulation

10.113 As set out above, the remedies we are imposing are those which we conclude are appropriate to address the competition problems we have identified in the retail very low TI market as a result of our market analysis, despite the existence of upstream wholesale regulation, and which we conclude reliance on national and Community competition law alone would be insufficient to address.

10.114 Accordingly, we are imposing the SMP conditions explained above. As a result of this, we are revoking all of the SMP conditions imposed on BT in the 2007/8 Review in the relevant retail market as defined in the 2007/8 Review.

10.115 We set out the notice revoking those SMP conditions, together with the new SMP conditions we are imposing in the retail very low TI market, in the statutory notification which is in Annex 7 to this Statement.

## Conclusions regarding the remedies we are imposing in the retail very low TI market

10.116 We have concluded that the following remedies should be imposed on BT in the retail very low TI market:

- an obligation to supply existing retail services and to give no less than one year's notice of their withdrawal;
- an obligation not to unduly discriminate;
- an obligation to publish a reference offer;
- a safeguard cap on retail prices in relation to analogue leased lines; and
- cost accounting obligations.<sup>1127</sup>

<sup>1125</sup> See sections 185 to 191 of the Act, in particular section 185(1A).

<sup>1126</sup> See sections 94 to 104 of the Act.

<sup>1127</sup> In relation to cost accounting obligations, see Section 16.

## Section 11

# Remedies for the wholesale TI markets

## Introduction

11.1 In this Section we set out the remedies that we have decided to impose on BT in the following markets:

- Wholesale market for low bandwidth Traditional Interface Symmetric Broadband Origination (TISBO) in the UK excluding the Hull area at bandwidths up to and including 8Mbit/s;
- Wholesale market for medium bandwidth Traditional Interface Symmetric Broadband Origination (TISBO) in the UK excluding the Hull area and the WECLA at bandwidths above 8Mbit/s and up to and including 45Mbit/s;
- Wholesale market for high bandwidth Traditional Interface Symmetric Broadband Origination (TISBO) in the UK excluding the Hull area and the WECLA at bandwidths above 45Mbit/s and up to and including 155Mbit/s; and
- Wholesale market for TI regional trunk segments.

11.2 The remedies we have imposed are those which we conclude are appropriate to address the competition problems we have identified in the markets set out above as a result of our market analysis, in particular our respective SMP assessments, and which we conclude national and Community competition law alone would be insufficient to address. We set out the competition problems further below in this Section.

11.3 The competition problems we have identified, and our assessment of the appropriate remedies, in each of the markets set out above, are very similar. Therefore we have considered them together. Unless stated otherwise, we refer to the markets set out above collectively as the wholesale TI markets, and the remedies that we set out apply to all of the wholesale TI markets.

11.4 The wholesale TI markets are now in long-term decline as many customers who do not have specific latency/jitter or other requirements switch to alternative services such as AI and MI leased lines. The wholesale TI markets nevertheless remain considerably larger by circuit volume than the AI and MI markets.

11.5 Our SMP analysis indicates that significant entry barriers continue to exist in these markets. In the low bandwidth TISBO market where BT maintains a market share of 88% the main barriers are the low value of low bandwidth leased lines compared to the costs which must be sunk to enter the market, combined with the scale and ubiquity of BT's network and the fact that the market is declining. In the medium bandwidth TISBO market where BT has market share of 77% we do not expect to see any material demand for new circuits and due to the decline in the market, in all but exceptional circumstances we do not expect CPs to make investments to contest BT's current or future supply over the course of this review period of three years. Similarly, in the high bandwidth TISBO market which is declining rapidly and where BT has a market share of 51%, CPs are unlikely to make investments to contest BT's supply over the course of this review period.

- 11.6 Apart from the enlargement of the London geographic market to include West London and Slough, our SMP findings for the wholesale TI markets closely mirror those of the 2007/8 Review.
- 11.7 To date, our approach to regulating the wholesale TI markets has been focused on encouraging competition based on access to BT's PPC products. We have required BT to provide PPCs on a non-discriminatory basis and have applied charge controls. We consider that this approach continues to be appropriate for the period of this market review to address the competition problems we have identified.

### **Summary of our conclusions**

- 11.8 Figure 11.1 below summarises the competition problems we have identified in this market and the remedies we have concluded are appropriate to address them.

**Figure 11.1 Summary of competition problems and remedies**

Competition problems	Remedies for the wholesale TI markets
<ul style="list-style-type: none"> <li>Refusal to supply</li> <li>Predatory pricing</li> <li>Margin squeeze</li> <li>Cross-subsidisation</li> </ul>	Requirement to provide Network Access on reasonable request including an obligation to offer fair and reasonable charges, terms and conditions
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	PPC direction and RBS Backhaul direction
<ul style="list-style-type: none"> <li>Price discrimination;</li> <li>Non-price discrimination, e.g. different terms and conditions, delaying tactics (different delivery timescales for provision and fault repair); strategic design of products; exclusive dealing; quality discrimination; different SLAs and SLGs;</li> <li>Predatory pricing;</li> <li>Margin squeeze.</li> </ul>	Obligation not to unduly discriminate
	Publication of reference offer
	Requirement to notify changes to charges and T&Cs
	Publication of quality of service as required by Ofcom
	Notification of technical information
<ul style="list-style-type: none"> <li>Price and non-price discrimination;</li> <li>Excessive pricing;</li> <li>Predatory pricing;</li> <li>Margin squeeze.</li> </ul>	Accounting separation and cost accounting obligations
<ul style="list-style-type: none"> <li>Cross-subsidisation;</li> <li>Excessive pricing;</li> <li>Over investments;</li> <li>Excessive costs/inefficiencies.</li> </ul>	Charge control
<ul style="list-style-type: none"> <li>Refusal to supply new network access;</li> <li>Price discrimination;</li> <li>Non-price discrimination, e.g. delaying tactics, strategic product design.</li> </ul>	Requests for new Network Access

### Charge control remedy

11.9 In this Section, we set out our reasons why, at a high level, we remain of the view that a charge control in the wholesale TI markets should be imposed. Our conclusions, together with our reasons, consultation responses and considerations of those responses, with regard to the detail of the charge control we are imposing, are set out in Section 19.

### Other pricing remedies

11.10 As part of our assessment of the appropriate package of pricing remedies, together with the non-pricing remedies, to address the competition problems we have

identified in the wholesale TI markets, we have considered the following, set out below. Our conclusions, together with our reasons, consultation responses and considerations of those responses, in relation to i) and ii) are set out in Section 9, and in relation to iii) are set out in Section 16.

- i) the imposition of a cost orientation obligation;
- ii) the scope of the fair and reasonable obligation according to which BT must provide general network access; and
- iii) the imposition of accounting separation and cost accounting obligations.

- 11.11 In relation to i), we have decided, as per our proposal in the June BCMR consultation, not to impose a cost orientation obligation on BT in the wholesale TI markets.
- 11.12 In relation to ii), we have decided to broaden the scope of the obligation requiring the provision of network access by BT in the wholesale TI markets to be on fair and reasonable terms and conditions, to include also fair and reasonable charges.
- 11.13 In relation to iii), we have decided, as per our proposals in the June BCMR consultation and the November BCMR consultation, to impose accounting separation and cost accounting obligations on BT in the wholesale TI markets.

### **Remedies as a whole in the wholesale TI markets**

- 11.14 We consider the remedies as a whole in the wholesale TI markets would secure or further our statutory duties and would satisfy the relevant legal tests. In reaching our conclusions, we have taken account of our regulatory experience from two previous market reviews, recent developments in the wholesale TI markets, consultation responses, and expected developments over the review period of three years.
- 11.15 In reaching our conclusions on the appropriate remedies, we have taken due account of all applicable guidelines and recommendations issued by the European Commission (EC), and we have taken utmost account of the BEREC Common Position.<sup>1128</sup> We have also had regard to relevant guidance from the European Regulators' Group (ERG), Oftel and ourselves.

### **Structure of this Section**

- 11.16 This Section is structured as follows:

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<sup>1128</sup> BEREC Common Position on best practices in remedies imposed as a consequence of a position of significant market power in the relevant markets for wholesale lease lines, BoR (12) 83.

Sub-section	Content
Assessment of competition problems in the wholesale TI markets	Assessment of competition problems, including insufficiency of national and Community competition law remedies.
Approach in the June BCMR Consultation and the remedies we proposed	Summary of the assessment we carried out in the June BCMR Consultation and our proposed remedies.
Consultation responses and Ofcom's considerations	Summary of stakeholders' comments to the June BCMR Consultation and our considerations in respect of those comments.
Ofcom's conclusions on the appropriate remedies	Details of the remedies we have decided to impose and in relation to each, a statement of their aim and the legal tests we have applied to them.

## Assessment of the competition problems in the wholesale TI markets

11.17 We summarise below our assessment of the competition problems in the Wholesale TI markets before setting out the remedies we have concluded, having considered consultation responses, are appropriate to address those problems.

### Competition problems identified in the wholesale TI markets

11.18 In light of our market analysis, in particular our SMP assessment, we summarise below the competition problems we have identified in the wholesale TI markets and which behaviour, in the absence of ex-ante regulation, we have concluded BT would have the incentive, and its market power would afford it the ability, to engage in. These include, in particular:

- refusal to supply access at the wholesale level and monopolise the provision of services in the TI retail leased lines markets. In addition, a refusal to supply wholesale TISBO services or wholesale TI regional trunk services would adversely affect the provision of downstream mobile services as wholesale TI services are used for the supply of backhaul connectivity in mobile networks;
- leveraging of its position of SMP from the TI regional trunk market into the adjacent TI markets for example by charging excessive prices or by discriminating unduly;
- engaging in undue price discriminatory practices – e.g. by charging its competing providers more than the amount charged to its downstream divisions;
- engaging in undue non-price discriminatory practices – e.g. by supplying the same products on different terms and conditions, different timescales for provision and fault repair, quality discrimination, different SLAs and SLGs, creating new variants to fulfil the requirements of its downstream division and taking longer to address, or avoiding addressing the requirements of its competitors;
- charging excessively high prices, margin squeeze, engaging in predatory pricing and/or anti-competitive cross subsidisation; and
- refusal to supply, or engage in delaying tactics in the provision of, new network access services requested by its competitors.



- 11.19 We have concluded that BT would have the incentive to engage in these practices in order to adversely affect the development of competition in the related downstream retail markets and thus enable it to act independently of competitors, customers and ultimately of consumers in those markets.

### **Insufficiency of national and Community competition law remedies**

- 11.20 For the reasons set out at the end of this Section, and by reference to the package of remedies we are imposing, we have concluded that national and Community law remedies would be insufficient to address the competition problems we have identified.
- 11.21 This has led us to conclude, as per our view in the June BCMR Consultation, that over the course of the review period of three years, competition would be ineffective in the wholesale TI markets.
- 11.22 We now turn to the approach we adopted in the June BCMR Consultation which followed on from our assessment of the competition problems.

## **Approach in the June BCMR Consultation**

### **Assessment of appropriate remedies**

- 11.23 We first set out developments since the 2007/8 Review that we considered were relevant to informing our assessment of appropriate remedies.

### Role of the Undertakings in the wholesale TI markets

- 11.24 BT's Undertakings, given to Ofcom under Section 155 of the Enterprise Act in lieu of a market reference to the Competition Commission, require BT to comply with a series of regulatory obligations to apply to some of its wholesale access and backhaul services.
- 11.25 The Undertakings were designed to ensure that BT does not discriminate between its own downstream divisions (BT Retail and BTGS) and competitors when offering access services. The set of remedies set out in the Undertakings were particularly engineered to address non price discrimination for example in relation to service quality or through inferior terms of conditions of service.
- 11.26 Most of the Undertakings obligations that relate to wholesale terminating segments relate to the AI & MI markets and are discussed in more detail in Section 12 and 13. However, in relation to the wholesale TI markets, the Undertakings commit BT to make available to any CP within a reasonable period of time new disaggregated TI local access and backhaul products. Existing wholesale TI services, however, do not have to be provided on an EOI basis.
- 11.27 We did not consider the Undertakings were sufficient to address the competition problems we have identified in the wholesale markets as a whole in which we proposed to find BT has SMP.

### Wholesale products that BT provides in these markets

- 11.28 We described the PPC and RBS Backhaul services that BT is required to provide in these markets.

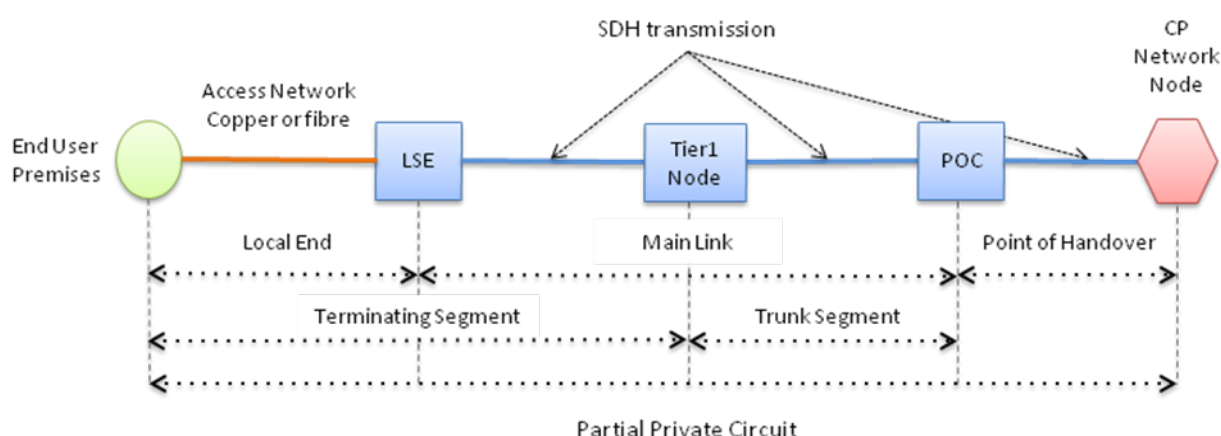
### Partial Private Circuits

11.29 PPCs provide dedicated symmetric transmission using PDH or SDH technologies between an end-user's premises and a CP's network via a Point of Connection (POC).

11.30 There are three main elements to a PPC:

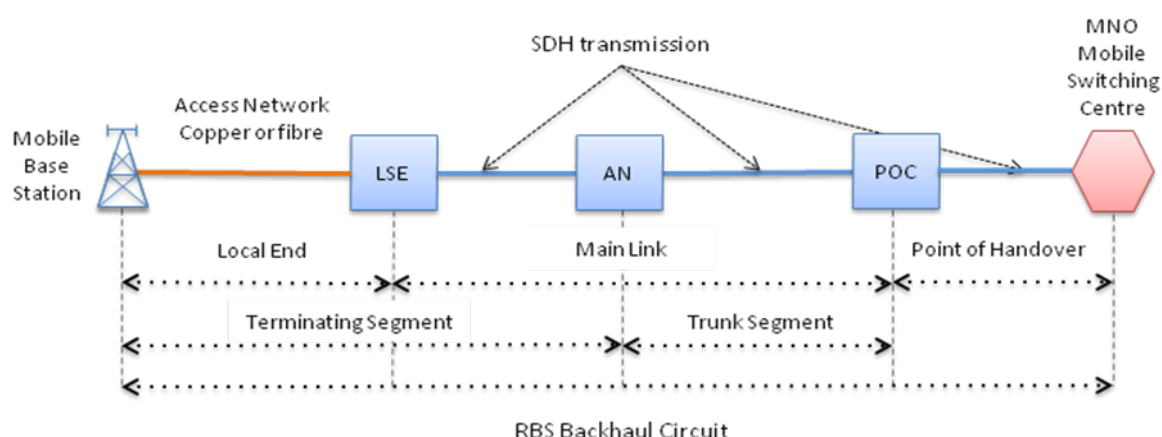
- The 'Local End' is a dedicated link between the third party customer premise and the BT serving exchange generally using BT's copper or fibre access network or exceptionally a point-to-point microwave link.
- The 'Main Link' provides dedicated transmission capacity between the BT serving exchange and the CP's POC with BT's network. This Main Link can have a mixture of backhaul and trunk network transmission. The boundary between the backhaul and trunk element of a PPC is currently drawn at 46 aggregation nodes corresponding to major population and business centres.
- The Point of Handover (POH) is a high capacity link that connects the CP's network with BT's network. A POH can deliver multiple PPC circuits. BT is required to provide three different types of handover configuration:
  - In-Span Handover (ISH): interconnection is provided at a joint-box or man-hole adjacent to the BT POC exchange;
  - In-Span Handover Extension (ISH Extn): interconnection is provided at a joint-box or manhole further from the BT POC exchange; and
  - Customer Sited Handover (CSH): interconnection is provided at the CPs network node.

**Figure 11.2 Partial Private Circuit**



### Radio Base Station Backhaul

11.31 An RBS backhaul circuit is a PPC that provides dedicated symmetric transmission at bandwidths up to 2Mbit/s between a Mobile Network Operator (MNO) radio base station and the MNO Mobile Switching Centre (MSC). The base station is linked to BT's local serving exchange using BT's copper or fibre access network or point-to-point microwave links.

**Figure 11.3: Radio Base Station Backhaul**

## Developments since the 2007/8 Review

### *The 2009 Replicability Consultation*

- 11.32 In the 2009 Replicability Consultation we proposed that BT had addressed the barriers to replicability identified in the Replicability Statement and consequently we proposed to relax certain SMP obligations in the downstream retail market.
- 11.33 We subsequently suspended work pending the outcome of the Leased Lines Charge Control Appeal (LLCC Appeal).<sup>1129</sup> In light of the delay and subsequent developments in the market, in 2011 we decided to defer consideration of the replicability proposals to this market review.

### *Development of disaggregated TI wholesale products*

- 11.34 Our proposal in the 2007/8 Review to engage with BT in connection with requests for disaggregated products was related to a commitment that BT made in the Undertakings, in which it committed that Openreach would offer disaggregated access and backhaul TI products within a reasonable period following a request from a CP.<sup>1130</sup> The purpose of these products was to enable CPs to replicate commercially PPCs from disaggregated components and to promote competition in backhaul by enabling CPs to combine traffic from TI access segments at BT local exchanges with traffic for other services such as LLU backhaul.
- 11.35 When Openreach consulted CPs in 2007 on the supply of disaggregated access and backhaul components of PPCs, there was limited interest because the TDM equipment used for PPCs was regarded as legacy technology. Respondents felt that Openreach should instead dedicate resources to developing 'next generation' TDM interface products based on WDM technology. As a result, this was one of the product developments that CPs asked Openreach to prioritise in the Openreach Industry Commitments (OIC) that were agreed in May 2009.<sup>1131</sup> This development, which Openreach committed to deliver by September 2010, took longer to develop

<sup>1129</sup> <http://www.catribunal.org.uk/237-4334/1112-3-3-09-Cable--Wireless-UK.html>

<sup>1130</sup> These were described as Traditional Interface Leased Line Access Product (TILLAP) and Traditional Interface Leased Line Backhaul Product (TILLBP) in the Undertakings.

<sup>1131</sup> The Openreach Industry Commitments are a set of product and systems developments that BT committed to undertake when some of its Undertakings commitments relating to support systems functional separation were relaxed. <http://stakeholders.ofcom.org.uk/consultations/btundertakings/statement/>

than anticipated. Openreach trialled the access product called TDM Access Bearer with STM-1, STM-4 and STM-16 SDH interfaces (155Mbit/s, 622Mbit/s & 2.488Gbit/s) in autumn 2011 and launched it in June 2012.

### Responses to the CFI about wholesale TI remedies

11.36 We set out responses to the CFI relating to wholesale TI remedies and provided our comments to the points raised. The main points raised by respondents were:

- TI services would continue to play an important role during the period covered by this review. UKCTA expected a gradual decline in volumes and noted that previous forecasts of a rapid decline had proved incorrect.
- UKCTA considered that given the legacy status of TI services, Ofcom should try to avoid further upheaval in the market.
- UKCTA urged Ofcom to maintain its focus on the remedies in the TI markets, particularly the cost base and barriers to replicability.
- CWW said that a new regulatory focus on migration/switching arrangements is required.
- BT suggested that we should make several changes to the wholesale TI remedies, including changes to the PPC directions, to the notification periods for price changes and finally to withdraw cost orientation obligations.

11.37 We gave our initial views on these points and took the comments into account when developing our proposals.<sup>1132</sup>

### Ofcom's assessment in June BCMR Consultation

11.38 As noted above, BT is currently subject to a package of remedies in each of the wholesale TI markets comprising an obligation to provide network access, an obligation not to unduly discriminate, cost orientation and accounting separation obligations, and a set of transparency obligations.<sup>1133</sup> These remedies have been applied in broadly their current form since the 2003/4 Review.

11.39 Our analysis of these markets indicated that all of the wholesale TI markets are now in long-term decline as many customers who do not have specific latency / jitter and other requirements switch to alternative services such as AI and MI leased lines. Our analysis indicated that the wholesale TI markets nevertheless remain considerably larger by circuit volume than the AI and MI markets.

11.40 Our SMP analysis indicated that significant entry barriers continue to exist in these markets. Our analysis indicated that in the low bandwidth TISBO market where BT was found to have a market share of 86% the main barriers are the low value of low bandwidth leased lines compared to the costs which must be sunk to enter the market, combined with the scale and ubiquity of BT's network and the fact that the market is declining. In the medium bandwidth TISBO market where BT was found to have a market share of 74% we did not expect to see any material demand for new

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<sup>1132</sup> See paragraphs 10.39 to 10.51 and 10.188 of the June BCMR Consultation for a more detailed description of stakeholders' responses to the CFI and our comments on them.

<sup>1133</sup> The charge control that formed part of this package of remedies expired on 30 September 2012.

circuits and due to the decline in the market, in all but exceptional circumstances we did not expect CPs to make investments to contest BT's current or future supply over the course of this review period of three years. Similarly, in the high bandwidth TISBO market which is declining rapidly and where BT was found to have a market share of 49%, CPs are unlikely to make investments to contest BT's supply over the course of this review period.

- 11.41 Apart from the enlargement of the CELA into the WECLA, our SMP findings closely mirrored those of the 2007/8 Review.
- 11.42 We noted that CFI respondents favoured an approach to the wholesale TI markets that minimised disruption. The main points made by respondents were in relation to PPC charges and barriers to replicability. As noted in Section 9 of the June BCMR Consultation, in our view BT had addressed the barriers to replicability.
- 11.43 In light of our analysis and stakeholders' views, we considered that it would be appropriate to maintain broadly the current set of SMP conditions and the PPC directions. Below we discuss the rationale for each of the proposed remedies.

#### *Trunk segments*

- 11.44 Our SMP analysis indicated that there are relatively high barriers to entry and expansion in the TI regional trunk segment market and BT retained a share of 88%. We found demand for regional trunk services is falling and we believed that competition is unlikely to provide an effective constraint on BT over the review period.
- 11.45 Our analysis indicated that in many respects the regional TI trunk market is more like a terminating segment market in character. CPs will continue to purchase PPCs from BT, some of which will require trunk segments. The main difference compared with the 2007/8 Review is that only regional trunk segments will fall within the scope of the regulated market and the much longer national trunk segments will not be regulated.

### **Remedies proposed in the June BCMR Consultation**

- 11.46 In light of all of the above, we then set out our assessment of the appropriate remedies for the wholesale TI markets. Figure 11.4 below summarises the competition problems we identified in the wholesale TI markets and the remedies we proposed to address them:

**Figure 11.4 Summary of competition problems and remedies proposed in the June BCMR Consultation**

Competition problems	Remedies for the wholesale TI markets
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	Requirement to provide Network Access on reasonable request
	PPC direction and RBS Backhaul direction
<ul style="list-style-type: none"> <li>Price discrimination;</li> <li>Non-price discrimination, e.g. different terms and conditions, delaying tactics (different delivery timescales for provision and fault repair); strategic design of products; exclusive dealing; quality discrimination; different SLAs and SLGs;</li> <li>Predatory pricing;</li> <li>Margin squeeze.</li> </ul>	Obligation not to unduly discriminate
	Publication of reference offer
	Requirement to notify changes to charges and T&Cs
	Publication of quality of service as required by Ofcom
	Notification of technical information
<ul style="list-style-type: none"> <li>Price and non-price discrimination;</li> <li>Excessive pricing;</li> <li>Predatory pricing;</li> <li>Margin squeeze.</li> </ul>	Accounting separation obligations
<ul style="list-style-type: none"> <li>Cross-subsidisation</li> <li>Excessive pricing</li> <li>Over investments</li> <li>Excessive costs/inefficiencies</li> </ul>	Price control
<ul style="list-style-type: none"> <li>Refusal to supply new network access;</li> <li>Price discrimination;</li> <li>Non-price discrimination, e.g. delaying tactics, strategic product design.</li> </ul>	Requests for new Network Access

#### Summary of the remedies proposed for the wholesale TI markets in the June BCMR Consultation

11.47 Below we summarise the key elements of our proposed remedies for the wholesale TI markets.

##### *Requirement to provide network access*

11.48 In proposing that BT is required to meet reasonable requests for network access, we aimed to address BT's incentive to deny such access and monopolise the provision of services in the downstream markets.

11.49 We did not, however, propose that the fair and reasonable obligation, according to which this general network access requirement must be provided, should include fair and reasonable charges. This is discussed further in Section 9, including our consideration of responses received.

11.50 We also proposed that BT should be subject to a direction under the general access condition to provide Partial Private Circuits (PPCs) in each of the markets, and in the low bandwidth TISBO market only a direction requiring it to provide Radio Base Station backhaul (RBS backhaul). These directions specify detailed requirements for the provision and repair of PPCs and RBS backhaul including:

- Migration arrangements (for migration of retail private circuits to PPCs);
- Forecasting arrangements for capacity ordering; and
- Service level agreements including provision and repair performance targets and Service level guarantee payments.

11.51 These directions are designed to ensure that BT provides PPC and RBS Backhaul services in a non-discriminatory manner and with a level of performance that meets CPs requirements.

*Requirement not to unduly discriminate*

11.52 In proposing a non discrimination obligation we sought to prevent BT from discriminating in favour of its own downstream divisions and to ensure that competing providers are placed in an equivalent position.

11.53 Non discrimination obligations can have different forms of implementation. In the case of wholesale TISBO markets, we did not consider it proportionate to require Equivalence of Inputs (EOI) since BT's current wholesale services for TI are PPCs and an EOI requirement over PPCs would entail a major re-engineering of BT provisioning systems and processes.

11.54 We proposed a less strict interpretation for TISBO markets under which BT would be required to ensure that any discrimination is not undue and proposed to interpret this obligation in accordance with our guidelines of November 2005.

*Transparency*

11.55 In order to ensure that BT is complying with obligations to provide network access and not to unduly discriminate, we proposed additional obligations related to ensuring transparency. Such obligations provide third parties with access to information they need to make informed decisions about purchasing BT's wholesale products.

11.56 We proposed the following obligations on BT:

- a requirement to publish a reference offer;
- an obligation to give 28 days' notice of price reductions and to give 90 days' notice of all other changes to prices, terms and conditions for existing wholesale TI services;
- an obligation to give 28 days' notice of the introduction of prices, terms and conditions for new wholesale TI services;
- a requirement to notify technical information with 90 days' notice; and
- an obligation to publish quality of service information, as directed by Ofcom.

*Requests for new network access*

11.57 In order to ensure that BT does not discriminate in favour of its own downstream business in relation to the handling of requests for new types of network access, we proposed obligations which included:

- a requirement for BT to publish reasonable guidelines specifying the required content and form of requests for new network access and how they will be handled;
- a requirement for BT to provide sufficient technical information to CPs to allow them to draft product specifications that are efficient and which satisfy the reasonable requirements; and
- timescales within which BT must acknowledge and process requests.

*Price controls*

11.58 We proposed to impose a charge control to address BT's ability and incentive to charge excessive prices. We proposed that the charge control should encompass, with a few exceptions, charges for all of the services BT currently offers in the wholesale TI markets and would therefore include:

- charges for low bandwidth TISBOs in the UK excluding the Hull area;
- charges for medium and high bandwidth TISBOs in the UK excluding the WECLA and the Hull area;
- the interconnection and accommodations services that BT provides in connection with wholesale TISBO services in these markets; and
- ancillary services including excess construction charges.

11.59 We did not, however, propose to impose on BT a cost orientation obligation in the wholesale TI markets. This is discussed further in Section 9, including our consideration of responses received.

TI regional trunk segment market

11.60 We considered that in many respects the regional TI trunk market is like a terminating segment market in character. Consequently we proposed that the remedies proposed to the adjacent TISBO markets, including the charge control would also be suitable for the TI regional trunk market. We also proposed to maintain the PPC Direction.

Interconnection and accommodation services

11.61 In order to use the wholesale TISBO and TI regional trunk segment services that BT provides in these markets CPs also require certain interconnection and accommodation services. To achieve an overall solution we considered that it was necessary to regulate the provision of these ancillary services, in the absence of which, we considered BT would have an incentive to refuse to supply or to supply in a discriminatory manner, for example by charging excessive prices.



- 11.62 Network access is defined in sections 151(3) and (4) of the Act and includes interconnection services and/or any services or facilities that would enable another CP to provide electronic communications services or electronic communication networks. We considered that a requirement to provide network access would, therefore, include any ancillary services as may be reasonably necessary for a third party to use the services. Consequently, each of the obligations that we proposed in relation to the wholesale TISBO and TI regional trunk segment markets also applied to the provision of accommodation and interconnection services that are reasonably required by CPs in connection with the provision of the regulated services.

## **Consultation responses to proposed wholesale TI remedies and Ofcom's response**

### **Consultation responses in relation to requirement to provide network access**

- 11.63 Zen Internet agreed with our proposal that BT should be required to provide network access.

#### Consistency with the retail supply obligations for analogue and low bandwidth digital services

- 11.64 BT noted that it has already announced its intention to withdraw its sub 2Mbit/s TI retail services (with the aim of platform closure by 2018). BT considered that Ofcom should align the wholesale network access obligation with the supply obligation proposed for the retail market and should not impose a requirement to supply new PPCs.

#### Ofcom's response

- 11.65 The retail remedy to which BT refers (Condition 11) reflects our conclusion that wholesale regulation alone would be insufficient in the context of certain legacy services (i.e. that there is little practical prospect of retail competition arising as a result of the wholesale regulation and in particular Condition 1). It is limited in that it allows BT to withdraw a product reaching the end of its life, on adequate notice. We do not agree, however, that the fact that we consider Condition 1 insufficient in one particular case implies we should limit the generality of its application. The network access obligation in Condition 1, which requires BT to provide network access on "reasonable request" is, in any event, sufficiently flexible to accommodate the withdrawal of products by BT in response to changing patterns of demand.

### **Consultation responses in relation to transparency and notification obligations**

- 11.66 BT supported our proposal to reduce the notice period to 28 days for price reductions but was disappointed that we had proposed to maintain a 90 day notice period for price increases.
- 11.67 BT argued that since it is required to comply with a charge control which also contains sub-caps restricting price increases, the industry will have clear understanding of what a potential price increase could be over a three year period of the control. BT argued that PPCs are long-term investments and CPs will (and should) use the structure of the controls rather than a price at a given moment in time as a buying guide. Therefore, Ofcom's concern (regarding the financial exposure to CPs from reducing the notification period from 90 days to 28 days) was unfounded.

- 11.68 BT argued that when setting prices it has the flexibility to adjust individual prices to meet the overall basket controls. Flexibility in this context means increasing some prices while decreasing others. Having different notice periods for price increases and decreases brings an additional level of complexity to price setting which is likely to lead to more price changes within a charge control year. BT argued that the notice period for price increases should be reduced to 28 days in line with price increases.
- 11.69 BT considered that the wording of Condition 7.4 should be clarified so that it is clear that price increases at the end of special offers would also only require 28 days' notice.
- 11.70 Zen Internet agreed with our proposals.

### Ofcom's response

- 11.71 Charge controls give CPs visibility of the overall trend in prices generally for baskets of BT's services. However they give BT flexibility to vary individual charges within the confines of charge control baskets and to decide when to vary charges. Thus the movement of individual charges and consequently the impact on CPs of price revisions is uncertain. Given the level of investment in leased line services we consider that CPs need time to assess the impact of BT's pricing revisions and if necessary to take action such as revising prices for their own downstream services. We remain of the view that there is a risk with a 28 day notice period that CPs would have insufficient time to react to BT price rises and could be left financially exposed.
- 11.72 Conversely, where prices are being reduced we do not consider there should be a risk of financial exposure for CPs. We therefore consider there is scope to reduce the notification period for price reductions to 28 days.
- 11.73 We are not persuaded that having different notice periods for price increases (90 days) and price reductions (28 days) has any material impact on the complexity of price setting. We also note that it remains open to BT to notify price reductions with a longer notice period should it consider that this reduces the complexity for itself and the market.
- 11.74 We confirm that the 28 day notice period will apply to special offers by which we mean price notifications that specify a limited term price reduction and where the price immediately following the special offer is no higher than immediately before the special offer commenced. We have re-worded Condition 7.4 to clarify this position.

### **Consultation responses about the inclusion of SLAs and SLGs in the PPC directions**

- 11.75 In its response to the June BCMR Consultation BT reiterated and expanded on the comments it made in response to the CFI about the inclusion of SLA and SLGs in the PPC directions. BT argued that the SLA and SLG provisions should be removed from the PPC directions for several reasons:
- BT would not have an incentive to restrict the supply of PPCs or degrade their performance as the resultant migration to Ethernet services would be likely to lose BT business.
  - CPs are adequately protected by the provisions of the PPC contracts that prevent BT from changing the SLA/SLG arrangements without CPs consent.

- Ofcom would retain powers under Condition 1 (requirement to provide network access) to issue further directions concerning SLAs and SLGs if required.

### Ofcom's response

- 11.76 We are not persuaded that the risk of accelerated migration to Ethernet services would necessarily dissuade BT from proposing discriminatory changes to PPC SLA/SLG arrangements. BT could for instance have an incentive to propose inferior SLA or SLG terms that would reduce its compensation payments and could, in our view, do so without accelerating migration.
- 11.77 Whilst the contractual arrangements between BT and CPs provide CPs with some protection they permit BT to propose changes. Given BT's SMP, negotiations would be likely to be unequal, leaving the possibility that BT could effectively impose new terms on CPs.
- 11.78 The current SLA/SLG arrangements reflect the findings of an industry review led by the OTA and as far as we are aware they are regarded as satisfactory by CPs. Furthermore, no other consultation respondents indicated a desire for change. Given the mature nature of the PPC product it seem unlikely there will be a need for significant change.
- 11.79 We therefore remain of the view that ex-ante obligations provide CPs with greater certainty and are likely to provide a more efficient outcome than relying solely on contractual arrangements.

### **Consultation responses about notification requirements**

- 11.80 BT proposed that Ofcom should modify the proposed SMP conditions to remove the following obligations that require it to notify Ofcom of changes to its services:
- to send Ofcom a copy of Access Charge Change Notices (Condition 7.2); and
  - to send Ofcom a copy of notices of changes to technical features of its services (Condition 9.4(b)).
- 11.81 BT argued that these requirements place an unnecessary administrative burden on BT given that the information is routinely published on BT websites. BT further argued that Ofcom needs to demonstrate that it makes sufficient use of the notifications to justify BT's administrative effort.
- 11.82 BT also proposed that Ofcom should remove Condition 9.4(c) which requires it to notify wholesale customers about technical changes to existing wholesale services arguing that publication on its website should be sufficient.

### Ofcom's response

- 11.83 In the exercise of our duties, we monitor developments in the supply of BT's wholesale leased lines services. To facilitate this we consider it appropriate that BT should be required to send to Ofcom, copies of the notices that it sends to its wholesale customers about changes to these SMP services. Absent these requirements it would be necessary for us to monitor BT's website for changes, placing an additional administrative burden on Ofcom. In our view, these obligations place only a very small burden on BT. In practice BT needs only to ensure that it

includes Ofcom on its email distribution lists for these notices. We have therefore decided to maintain these obligations.

- 11.84 It is clearly important that BT's wholesale customers are made aware of technical changes to BT's wholesale services. In our view, the most efficient approach is for BT as originator of the changes to notify proactively its wholesale customers. We have therefore decided to maintain this obligation.

### **Consultation responses in relation to inclusion of usage factors in ACCNs**

- 11.85 BT proposed that Condition 7.5 (d) relating to the content of Access Charge Change Notices (ACCNs) should be removed. In BT's view this goes further than is necessary by requiring the publication of the network usage factors of the components reconciled to the new charge. BT argues that usage factors are relevant when calculating the price of an individual PPC circuit – but not relevant when determining the price of an individual service (i.e. Local End and Main Link including the distance of trunk and terminating kilometres included in the main link). As prices are set at a service level and not component level, this information is of no value to CPs.
- 11.86 BT suggest that Condition 7.5(d) should be amended to “(d) the current and proposed new charge” with the remainder of the sentence (“and the relevant Usage Factors applied to each Network Component comprised in that network access, reconciled in each case with the current or proposed new charge”) deleted.

### **Ofcom's response**

- 11.87 The provisions of Condition 7.5 and similar provisions in Condition 6 (requirement to publish a reference offer) provide that Ofcom may specify a set of network components and require BT to specify the usage of those components. They are designed to reduce the risk of discriminatory pricing by providing transparency about the usage of network components that are common to multiple products.
- 11.88 Moreover, the terms of Condition 7.5, together with terms contained in Condition 7 as a whole and the terms in Conditions 6, 8 and 9, operate cumulatively to address the risk we have identified of BT engaging in unduly discriminatory pricing and non-pricing practices. Reducing the scope of these Conditions would reduce their cumulative effectiveness in addressing the competition problems. Consequently, we have concluded it would not be appropriate to remove or amend Condition 7.5(d).

### **Consultation responses in relation to requests for new network access**

- 11.89 BT proposed several changes to the proposed new network access condition.

### **Requirement to use best endeavours to complete feasibility studies**

- 11.90 BT proposed that Conditions 10.10(a) and 10.13(a) should be modified such that BT would be required to use “reasonable endeavours” rather than “best endeavours” to complete feasibility studies within the specified timescales.
- 11.91 BT argued that in the context of Condition 10, the obligation for BT to use its best endeavours goes against the principle that BT should be allowed to act as a commercial business when considering requests for new network access. This is something which is explicitly recognised in section 5.11 of BT's Undertakings, which states that Openreach is entitled to accept or reject SORs on the basis of “(a) *fit with*

*the assets, skills and resources and terms of reference of Openreach; (b) commercial attractiveness to Openreach; and (c) opportunity cost to Openreach."*

- 11.92 BT argued that requiring it to use its best endeavours would impose a disproportionate and unjustified, burden, in that it could very well lead to BT having to act in a way that goes against its commercial interests, which should not be the purpose of Condition 10. Consequently, the condition as drafted goes further than required and should be amended to reasonable endeavours.

#### Ofcom's response

- 11.93 We do not consider section 5.11 of the Undertakings to be relevant in this context as it relates to product development requests that fall outside markets in which BT has SMP.
- 11.94 In these markets in which we have found BT to have SMP, we have concluded that it would have an incentive to refuse to supply new forms of network access and also to treat requests in a discriminatory fashion. Given this, there is clearly a risk that BT might consider it to be in its commercial interests to delay feasibility studies. We therefore consider that it is appropriate to require BT to use its 'best endeavours' to complete the feasibility studies within the specified timescales rather than 'reasonable endeavours' which would allow BT to take greater account of its commercial interests.

#### Timescales for feasibility studies

- 11.95 BT proposed that Condition 10 should be amended to allow for changes to the SOR process to be agreed with industry. This change was made to Condition AAA1(b) of the last wholesale narrowband market review (Ofcom statement on the review of the fixed narrowband services wholesale markets of 15 September 2009) and Condition FAA2 in the wholesale local access market in relation to LLU (Ofcom statement on the review of the wholesale local access market of 7 October 2010). In both cases, the timescales for responding to SORs have been totally removed. BT encourages Ofcom to align this SMP condition across all relevant market reviews to ensure a consistent approach to addressing SORs. If Ofcom does not make this change, the Condition should be amended to acknowledge that BT is free to reject SORs on commercial grounds. This is explicitly acknowledged in section 5.11 of the Undertakings (see above).<sup>1134</sup>

#### Ofcom's response

- 11.96 We do not consider it would be appropriate to make changes to the new network access conditions in light of BT's suggestions.
- 11.97 Given the CP concerns about the time that BT takes to progress requests for new forms of network access in these markets we consider it appropriate to continue to specify these timescales to ensure that requests are processed in a timely manner.
- 11.98 One of the competition problems that we have identified in these markets is that BT would be likely to have an incentive to refuse requests for new forms of network access. We therefore do not consider that it would be appropriate to give BT greater commercial freedom to reject such requests. We remain of the view that the obligation (as set out in the requirement to provide network access (Condition 1)) to

<sup>1134</sup> BT response to June BCMR Consultation, page 254.

meet reasonable requests for network access is appropriate. We do not consider section 5.11 of the Undertakings to be relevant in this context as it relates to product development requests that fall outside markets in which BT has SMP.

#### Initial notification of processes to Ofcom

11.99 BT considered that the requirement in Condition 10.15 to provide Ofcom within two months of a description of the processes BT has put in place to ensure compliance with Condition 10 is superfluous. This information is routinely published on Openreach's and BT Wholesale's websites and as such is available to Ofcom.

#### Ofcom's response

11.100 It is unlikely that BT will need to change its SOR processes as a result of the imposition of this obligation as it is not materially different from the obligation implemented in the 2007/8 Review. Given this, an obligation for BT to provide us with details of its SOR processes seems unnecessary. We have therefore removed this provision from Condition 10.

11.101 We note that under Condition 10.2 BT is obliged to publish its SOR processes and to consult Ofcom and CPs before making any changes to the processes.

#### **Consultation responses in relation to the practical implementation of remedies across the relevant markets that make up the wholesale TI markets**

11.102 BT requested that we specify how PPCs that cross the boundary of the WECLA geographic market should be classified.

11.103 BT argued that any circuit with a customer end in WECLA should be treated as being in WECLA even if the CP chooses a hand-over point outside WECLA. WECLA has a competitive supply of access infrastructure and CP presence at BT nodes. Thus if a CP chooses a hand-over point outside WECLA it would be a commercial decision and BT should not be regulated as a result.

11.104 Level 3 considered the wording of the proposed remedy in relation to circuits between WECLA and non-WECLA locations appeared to raise some questions of interpretation and invited Ofcom to ensure that the final wording of the relevant SMP condition was absolutely clear and explicit.

#### Ofcom's response

11.105 We understand that the classification arrangements described by BT have been applied by BT to PPCs with customer ends in the CELA since the 2007/8 Review and are generally accepted by CPs. These arrangements are also consistent with our view of competitive conditions in the WECLA (i.e. CPs should be able to serve premises within the WECLA from network nodes/hand-over points located in the WECLA). We therefore consider that BT should continue to apply this interpretation.

11.106 Respondents also made similar comments about the practical implementation of the AISBO remedies. We discuss these in Section 12.

## Ofcom's conclusions on the appropriate remedies in wholesale TI markets

11.107 In order to address the competition problems we have identified in the wholesale TI markets, we have concluded it is appropriate to:

- adopt the remedies proposed in the June and November<sup>1135</sup> BCMR Consultations; and
- broaden the scope of the obligation requiring the provision of network access by BT to be on fair and reasonable terms and conditions, to include also fair and reasonable charges.

11.108 Our conclusions are the result of our cumulative consideration of:

- our assessment of the appropriate remedies, as set out in the June BCMR Consultation, the November BCMR Consultation and set out above;
- our considerations of consultation responses; and
- all the evidence available to us.

11.109 Below we set out:

- the aim of the remedies that we have concluded should be imposed on BT in the Wholesale TI markets;
- the obligations imposed on BT by the remedies; and
- the reasons why we consider the remedies comply with the relevant legal tests in the Act.

11.110 The SMP conditions, and accompanying directions made under those SMP conditions, which give effect to our conclusions are set out in Annexes 7 and 8.

### Requirement to provide network access

#### Aim of regulation

##### *General requirement to provide network access*

11.111 We have concluded that it is appropriate to impose a requirement for BT to meet reasonable requests for network access.

11.112 We consider that, in the absence of the nature of the network access obligation we are imposing, BT would have the ability and incentive to refuse to provide network access or to supply on such terms that amount to a refusal to supply, which would otherwise prevent or restrict competition in the wholesale TI markets and enable BT to monopolise the provision of services in the downstream markets.<sup>1136</sup>

<sup>1135</sup> Our conclusions regarding accounting separation and cost accounting, together with our considerations of responses received, are set out in Section 16.

<sup>1136</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of assurance of access.

11.113 Further, in light of consultation responses, which we set out together with our considerations of those responses and our reasons in Section 9, we have concluded that the scope of the fair and reasonable obligation according to which BT must provide network access, should be broadened to include fair and reasonable charges.<sup>1137</sup>

11.114 The way in which Ofcom might assess reasonable demands for access is set out in the Access Guidelines. We consider that it is appropriate in cases where a CP has SMP to impose an access obligation on that provider requiring it to meet all reasonable requests for network access within the relevant wholesale market, irrespective of the technology required, on fair and reasonable charges, terms and conditions.<sup>1138</sup>

11.115 Our analysis in Section 7 has shown that the lack of competition in the wholesale TI markets stems primarily from entry barriers, particularly the magnitude of sunk costs, BT's scale within these markets and the ubiquity of BT's access network. All these factors mean that BT's cost of supply are significantly lower than its competitors and that, as a consequence, it is unlikely to be economically viable for BT's competitors to invest in the provision of network facilities on a sufficient scale to provide effective constraint on BT's SMP in these markets. Further, competitors are unlikely to be willing to make the necessary investments as each of these markets is declining. Also, relative to BT, its competitors face higher costs which in light of a declining market and low value contracts in the low bandwidth TISBO market are likely to present an additional barrier to investment.

11.116 Given these entry barriers, we consider that an obligation for BT to meet reasonable requests for access to its network will assist in promoting competition in the wholesale TI markets. Such an obligation will overcome the entry barriers by allowing CPs to provide services using network components rented from BT.

*Requirement to provide PPC and RBS Backhaul*

11.117 Section 45(10)(a) of the Act authorises the giving of directions with respect to the matters to which SMP conditions relate. In addition to the obligation to provide network access upon reasonable request, BT is currently required to provide two network access products in the wholesale TI markets under the existing directions:

- PPCs: an obligation to provide PPC terminating segments in the UK, excluding the Hull area (and excluding the CELA for the medium and high bandwidth markets); and
- RBS Backhaul: an obligation to provide RBS Backhaul traditional interface circuits at bandwidths up to and including 2Mbit/s to mobile network operators in the UK, excluding the Hull area.

11.118 BT is also subject to the PPC direction in the wholesale regional trunk market. Collectively these directions require BT to provide PPCs including both terminating and regional trunk segments. Regional trunk segments are components of PPCs and are not provided in isolation. Thus a 45Mbit/s regional trunk segment is only ever provided as part of a 45Mbit/s PPC. In practice this means that BT will not have to

<sup>1137</sup> As set out in Section 9, in reaching this conclusion we have taken utmost account of the BEREC Common Position.

<sup>1138</sup> We also discuss in Section 9 how the fair and reasonable charges obligation complements other pricing remedies.



provide regional trunk segments where it does not have SMP in the corresponding TISBO market. So BT will not have to provide:

- TI regional trunk segments at bandwidths above 155Mbit/s anywhere in the UK; and
- TI regional trunk segments at bandwidths above 8Mbit/s in the WECLA.

11.119 These directions specify detailed requirements for the provision and repair of PPCs and RBS backhaul including:

- Migration arrangements (for migration of retail private circuits to PPCs);
- Forecasting arrangements for capacity ordering; and
- Service level agreements including provision and repair performance targets and Service level guarantee payments.

11.120 These directions are designed to ensure that BT provides PPC and RBS Backhaul services in a non-discriminatory manner and with a level of performance that meets CPs' requirements. The SLGs are designed to incentivise BT to ensure that performance meets the specified targets and also to compensate CPs when performance does not meet the targets. If we were to lift these directions, in the absence of other suitable substitute products from BT, BT could change the product terms and conditions and technical specification in order to restrict or disrupt competition.

11.121 PPCs account for the vast majority of terminating segments provided in this market and we expect this to continue to be the case, particularly given the mature nature of this market and the gradual transition to AI services. Although the migration of mobile backhaul circuits to AI services is now well under way, MNOs are likely to continue to require TI RBS backhaul for the duration of this review.

11.122 We therefore consider that PPCs and RBS Backhaul remain the relevant products for fostering competition in downstream markets and that their specific access should be required to promote infrastructure competition.<sup>1139</sup> We therefore consider it appropriate to reapply these directions, modified to take account of the enlarged London geographic market where appropriate. The specification of the service that BT is required to provide is detailed in the PPC/RBS Backhaul Direction in Annex 8.

### SMP Condition

11.123 We have concluded that BT should be subject to a general requirement to meet reasonable requests for network access.

### Legal tests

11.124 We are satisfied that that the SMP conditions (as set out in Annex 7) and directions (at Annex 8) meet the relevant tests set out in the Act.

11.125 First, section 87(3) of the Act authorises the setting of an SMP services condition requiring the dominant provider to provide such network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include

<sup>1139</sup> See, in this respect, **BP3a** from the BEREC Common Position.

provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

11.126 When considering the imposition of such conditions in a particular case, we must take into account six factors set out in section 87(4) of the Act, including inter alia:

- the technical and economic viability of installing and using other facilities, including the viability if other network access products whether provided by the dominant provider<sup>1140</sup> or another person<sup>1141</sup>, that would make the proposed network access unnecessary;
- the feasibility of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed (taking account of any public investment made); and
- the need to secure effective competition, including where it appears to us to be appropriate, economically efficient infrastructure based competition, in the long term.

11.127 In imposing the general requirement for the provision of network access, and for the provision of PPC and RBS backhaul via direction, we have taken all these six factors into account. In particular, we consider these requirements are necessary for securing effective competition, including economically efficient infrastructure based competition, in the long term. The requirements for BT only to meet reasonable network access requests also ensures that due account is taken of the technical and economic viability of installing and using other facilities, the feasibility of the proposed network access, and of the investment made by BT initially in providing the network.

11.128 Secondly, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. In particular, the conditions and directions are aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by facilitating the development of competition in downstream markets.

11.129 Thirdly, sections 47 and 49 of the Act require conditions and directions respectively to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP conditions and directions are:

- objectively justifiable, in that they facilitate and encourage access to BT's network and therefore promote competition to the benefit of consumers;
- not unduly discriminatory, as they are imposed only on BT and no other operator has been found to hold a position of SMP in the wholesale TI markets;
- proportionate, since they are targeted at addressing the market power that we have found BT holds in the wholesale TI markets and does not require it to provide access if it is not technically feasible or reasonable; and

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<sup>1140</sup> i.e. in this instance BT.

<sup>1141</sup> i.e. other CPs.

- transparent in that the condition is clear in its intention to ensure that BT provides access to its networks in order to facilitate effective competition.

11.130 In relation to our conclusion that the scope of the fair and reasonable obligation according to which BT must provide network access should be broadened to include fair and reasonable charges, we consider this is appropriate in order to promote efficiency and sustainable competition in the wholesale TI markets and to provide the greatest possible benefits to end-users by enabling OCPs to purchase network access at levels that should be expected in a competitive wholesale market. In this respect, we have also taken into account the extent of investment of BT in the matters to which the broadened scope of the fair and reasonable obligation would relate.<sup>1142</sup>

11.131 For all the reasons set out above, we consider that the SMP conditions and directions respectively are appropriate to address the competition concerns identified, in line with section 87(1) of the Act.

## **Requirement not to unduly discriminate**

### Aim of regulation

11.132 We have concluded it is appropriate to impose a requirement on BT not to discriminate unduly in the provision of network access in the wholesale TI markets. In light of stakeholder responses,<sup>1143</sup> we confirm that this obligation applies to both non-pricing *and* pricing practices.

11.133 A non discrimination obligation is intended as a complementary remedy to the network access obligation, principally to prevent the dominant provider from discriminating in favour of its own downstream divisions and to ensure that competing providers are placed in an equivalent position. Without such an obligation, the dominant provider is incentivised to provide the requested wholesale network access service on terms and conditions that discriminate in favour of its own downstream divisions. For example, BT may decide to charge its competing providers more than the amount charged to its own downstream units or it might strategically provide the same services but within different delivery timescales. Both these behaviours could have an adverse effect on competition.<sup>1144</sup>

11.134 Non discrimination obligations can however have different forms of implementation. A strict form of non discrimination – i.e. a complete prohibition of discrimination – would result in the SMP operator providing exactly the same products and services to all CPs (including its own downstream divisions) on the same timescales, terms and conditions (including price and service levels), by means of the same systems and processes and by providing the same information. Essentially, the inputs available to all CPs (including the SMP operators' own downstream divisions) would be provided on a truly equivalent basis, an arrangement which has become known as

<sup>1142</sup> In this respect, we consider the extent of investment – if required at all – would not be significant given the strictly behavioural nature of this specific remedy – i.e. it serves to impose an *ex ante* qualification on the manner in which BT must comply with the main obligation which is to meet reasonable requests for network access.

<sup>1143</sup> See Section 9 for further discussion.

<sup>1144</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of a level playing field.

Equivalence of Inputs (EoI).<sup>1145</sup> The concept of EoI was first identified in the Strategic Review of Telecoms in 2004/5<sup>1146</sup> as one of our key policy principles to ensure that regulation of the telecommunication markets is effective. Following on from this review, a specific form of EoI was implemented in 2005 by means of the BT Undertakings.

11.135 On the other hand, a less strict interpretation of non discrimination may allow for flexibility and result in a more practical and cost-effective implementation of wholesale inputs in cases where it is economically justified.

11.136 As part of this review, we have considered what form of non discrimination obligation would be appropriate. In the case of wholesale TI markets, we do not consider it proportionate to require EoI. BT's current wholesale services for TI are Partial Private Circuits. An EoI requirement over PPCs would entail a major re-engineering of BT provisioning systems and processes and would be disproportionate, given that the TI market is declining and on a forward-looking basis that PPCs will be replaced by Ethernet-based leased lines.

11.137 We therefore consider that a less strict interpretation is appropriate for the wholesale TI markets under which BT would be required to ensure that any discrimination is not undue and we propose to interpret this obligation in accordance with our guidelines of November 2005 on Undue discrimination by SMP providers (the Discrimination Guidelines).<sup>1147</sup> We consider that undue discrimination in particular would occur where, in the absence of objective justification:

- BT was to refuse to reflect relevant differences between (or was to refuse to reflect relevant similarities in) the circumstances of customers in the transaction conditions it offers; and
- BT was to discriminate between internal and external wholesale customers.

11.138 We have also considered our stance in relation to various types of discount that BT might offer and whether any changes are required in the obligation in relation to undue discrimination are appropriate to address particular types of discount.

#### *Volume discounts*

11.139 First in relation to volume discounts, we recognise that these would very often in practice constitute undue discrimination since BT's retail arm would almost inevitably be the main beneficiary and there is therefore a strong potential for anti-competitive effects. However, we believe that this point is well understood by CPs and do not consider a change in the obligation is required specifically to reflect this.

#### *Geographic discounts*

11.140 As discussed in Section 5, we have conducted a detailed analysis of the geographic scope of each of the relevant retail and wholesale product markets. In summary, and as set out in more detail in Section 5, geographic areas can comprise a single relevant geographic market to the extent that:

<sup>1145</sup> See also, in this respect, **BP10a** from the BEREC Common Position. EoI is relevant to the form of non-discrimination remedy we have concluded it is appropriate to impose to address the competition problems we have identified in the AISBO and MISBO markets (see Sections 12 and 13).

<sup>1146</sup> <http://stakeholders.ofcom.org.uk/binaries/consultations/752417/statement/statement.pdf>

<sup>1147</sup> <http://stakeholders.ofcom.org.uk/consultations/undsm/contraventions/>

- competitive conditions in the geographic area are sufficiently homogeneous; and
- the areas can be distinguished from neighbouring areas where the competitive conditions are appreciably different.

11.141 We note that for the geographic markets where we have found SMP, the underlying costs and competitive conditions will not be completely homogeneous throughout the UK (even outside the WECLA).

11.142 This suggests that some freedom to charge in a way that reflects more accurately the costs incurred and to respond to the local characteristics of competition that exist in these markets would be efficient. Moreover, given the level of cost differences that may exist and the extent of competition in some areas, BT's ability to compete could be limited if it were required to maintain nationally uniform prices. Hence, geographically differentiated prices may reflect BT responding legitimately to cost differences in the face of competition.

11.143 We therefore consider that geographic discounts may or may not be unduly discriminatory depending on the circumstances. In the event of an allegation of offering unduly discriminatory geographic discounts, we would judge each alleged breach of the no undue discrimination obligation on a case by case basis.

11.144 In Section 19 of this statement we have considered how geographic discounts should be treated in the specific price control remedy we have imposed.

#### *Term discounts*

11.145 In principle, we consider this form of discount could raise competition concerns, for example:

- if BT's downstream operations were at an advantage compared to downstream competitors. In principle, the largest beneficiary of term discounts could be BT's downstream operations, as they may see no commercial disadvantage in being contractually tied to BT's wholesale services for a lengthy period of time. If so, it could provide BT with the ability to undercut downstream competitors in ways that they could not match (where those competitors rely on wholesale services from BT, but do not wish to sign up to the discounts).
- term discounts may increase the barriers to entry/growth for upstream competitors to Openreach, if purchasers of wholesale services are tied into longer term contracts (and so increasing the switching costs).

11.146 It is not necessarily the case, however, that we should automatically view all forms of term discount as harmful to consumers.

11.147 We therefore consider term discounts may or may not be unduly discriminatory depending on the circumstances. In the event of an alleged breach we would judge each alleged breach on a case by case basis.

11.148 In Section 19 of this statement we have considered whether there should be any restrictions on the term discounts that BT may offer and how they might be taken into account in the specific price control remedy we have imposed.

## SMP Condition

11.149 We have concluded that BT should be subject to a general requirement not to unduly discriminate.

## Legal tests

11.150 We are satisfied that the SMP conditions (as set out in Annex 7) meet the relevant tests set out in the Act.

11.151 First, we consider section 87(6)(a) of the Act authorises the setting of an SMP condition requiring the dominant provider not to unduly discriminate against particular persons, or against a particular description of persons, in relation to matters connected with the provision of network access.

11.152 Secondly, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by preventing BT from leveraging its SMP into downstream markets.

11.153 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it provides safeguards to ensure that competitors, and hence consumers, are not disadvantaged by BT discriminating unduly in favour of its own downstream activities or between different competing providers;
- not unduly discriminatory in that it is only imposed on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate in that it only seeks to prevent undue discrimination; and
- is transparent in that the SMP condition is clear in what it is intended to achieve.

## **Charge controls**

### Aim of regulation

11.154 We are imposing a charge control remedy to address the competition problems we have identified, in particular the risk of excessive pricing.

11.155 Section 87(9) of the Act authorises the setting of an SMP services condition setting price controls for network access and relevant facilities. Section 88 of the Act specifies that Ofcom are not to set a price control unless it appears to Ofcom that there is a risk of adverse effects due to pricing distortions and it appears to Ofcom that setting a price control would promote efficiency, sustainable competition and confer the greatest benefits on the end users.

11.156 A price control can take a variety of forms,<sup>1148</sup> including but not limited to a charge control, cost orientation and/or safeguard cap.

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<sup>1148</sup> As suggested by Recital 20 of the Access Directive.

11.157 In a competitive market, the charges for services would be set on the basis of the commercial judgements of individual companies and could be expected to deliver cost reflective prices. However, as discussed above, one of the competition problems we have identified as a result of our market analysis of the wholesale TI markets, in particular our assessment in Section 7 and the unlikelihood of new entry, is the risk of BT engaging in excessive pricing. Excessive prices at the wholesale level could make it difficult for third party CPs to compete at the retail level with BT and in the long term, may result in market exit. Unjustifiably high wholesale charges are also likely to result in high retail prices – i.e. consumers would be paying more for a service than they should expect if wholesale prices were constrained by effective competition.<sup>1149</sup>

11.158 Having identified this relevant risk of an adverse effect arising from price distortion in our market analysis,<sup>1150</sup> we have concluded that this risk should be addressed by the imposition of an appropriate price control remedy in the wholesale TI markets. We have concluded that the price control remedy also appears appropriate for the purposes of:

- promoting efficiency;
- promoting sustainable competition; and
- conferring the greatest possible benefits on end-users.<sup>1151</sup>

11.159 We have also taken account of the extent of the investment of BT in the matters to which the price control remedy relates.

11.160 Our conclusions, together with our reasons, consultation responses and considerations of those responses, with regard to the detail of the price control we are imposing, and the reasons why we consider this remedy complies with the relevant legal tests in the Act, are set out in Section 19.

## Transparency and notification obligations

### Aim of regulation

11.161 We have concluded that BT should be subject to a set of obligations, aimed at promoting transparency and ensuring non-discrimination.<sup>1152</sup> The obligations which we discuss in more detail below are:

- an obligation to publish a reference offer, including terms and conditions of provisioning and repair;
- an obligation to give 28 days' notice of price reductions and to give 90 days' notice of all other changes to prices, terms and conditions for existing wholesale TI services;

<sup>1149</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of fair and coherent access pricing.

<sup>1150</sup> Within the meaning of section 88(3) of the Act. See Section 19 of this Statement for further detail.

<sup>1151</sup> Within the meaning of section 88(1)(b) of the Act. See Section 19 of this Statement for further detail.

<sup>1152</sup> In this respect, we consider the set out obligations aimed at promoting transparency and ensuring non-discrimination are consistent with the relevant best practices identified in the BEREC Common Position.

- an obligation to give 28 days' notice of the introduction of prices, terms and conditions for new wholesale TI services;
- a requirement to notify technical information with 90 days notice;
- an obligation to publish quality of service information, as directed by Ofcom; and
- obligations relating to requests for new network access.

11.162 These requirements are designed to support the general, and specific, network access and non-discrimination obligations. These forms of discrimination are particularly relevant when dealing with a vertically integrated incumbent, as in BT's case. They are designed to ensure that BT does not use non-price discrimination to restrict competition in downstream markets.

11.163 In our view, since their imposition as a result of the 2007/8 Review, these SMP obligations have been on the whole effective in supporting the non-discrimination obligation to address BT's ability and incentive to engage in anti-competitive discriminatory practices.

11.164 We therefore consider it appropriate to apply these obligations to BT.

### Legal test

11.165 Section 87(6) of the Act authorises the setting of SMP services conditions that require the dominant provider to publish information about network access to ensure transparency and to publish terms and conditions.

11.166 We discuss each of the transparency obligations in more detail in the sub sections below.

## **Requirement to publish a Reference Offer**

### Aim of regulation

11.167 We have concluded that BT should be required to publish a Reference Offer (RO) for products in these markets.

11.168 A requirement to publish an RO has two main roles, namely:

- to assist transparency for the monitoring of potential anti-competitive behaviour; and
- to give visibility to the terms and conditions on which other providers will purchase wholesale services.

11.169 This helps to ensure stability in markets without which we consider incentives to invest might be undermined and market entry less likely.

11.170 The publication of a RO has an additional role in potentially allowing for speedier negotiations, avoiding possible disputes and giving confidence to those purchasing wholesale services that they are being provided on non-discriminatory terms. Without this, market entry might be deterred to the detriment of the long-term development of competition and hence consumers.



11.171 We consider the requirement to publish an RO imposed as a result of the 2007/8 Review has been effective in carrying out the three roles explained above. Therefore we consider it appropriate to impose the same requirement on BT in this market review.

11.172 The condition requires the publication of a RO and specifies the information to be included in that RO (set out below) and how the RO should be published. It prohibits the dominant provider from departing from the charges, terms and conditions in the RO and requires it to comply with any directions Ofcom may make from time to time under the condition. The published RO must set out (at a minimum) such matters as:

- a clear description of the services on offer including technical characteristics and operational process for service establishment, ordering and repair;
- the locations of points of network access and the technical standards for network access;
- conditions for access to ancillary and supplementary services associated with the network access including operational support systems and databases etc;
- contractual terms and conditions, including dispute resolution and contract negotiation/renegotiation arrangements;
- charges, terms and payment procedures;
- service level agreements and service level guarantees; and
- to the extent that BT uses the service in a different manner to CPs or uses a similar service, BT is required to publish a reference offer for in relation to those services.

### SMP Condition

11.173 We have concluded that BT should be subject to a requirement to publish a reference offer.

### Legal tests

11.174 We are satisfied that the SMP condition (as set out in Annex 7) meets the relevant tests set out in the Act.

11.175 First, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. In particular, the SMP condition is aimed at promoting competition firstly by ensuring that providers have the necessary information to allow them to make informed decisions about purchasing wholesale TI services in order to compete in downstream markets and by providing transparency in order to assist in the monitoring of anticompetitive behaviour.

11.176 Secondly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it requires that terms and conditions are published in order to encourage competition, provide stability in markets and allow monitoring of anti-competitive behaviour;

- not unduly discriminatory in that it is imposed only on BT and no other operator has been found to hold a position of SMP in the wholesale TI markets;
- proportionate in that only information that is considered necessary to allow providers to make informed decisions about competing in downstream markets, is required to be provided; and
- transparent in that it is clear in its intention to ensure that BT publishes details of its service offerings.

## **Requirement to notify charges and terms and conditions**

### **Aim of regulation**

11.177 We have concluded that BT should be subject to an obligation to notify changes to its charges, terms and conditions.

11.178 Notification of changes to services at the wholesale level can assist competition by giving advanced warning to CPs purchasing wholesale services that also compete with the dominant provider in downstream markets. It also supports the non-discrimination obligation by ensuring that BT does not notify changes in a discriminatory manner. Notification of changes to charges therefore helps to ensure stability in markets and without which we consider incentives to invest might be undermined and market entry made less likely. However, there may be some disadvantages to notifications, particularly in markets where there is some competition. It can lead to a 'chilling' effect where CPs follow BT's prices rather than act dynamically to set competitive prices.

11.179 Currently the notification period for changes to prices, terms and conditions of existing products and services in these markets is 90 days. We need to ensure that the regulatory approach that we adopt in each market adequately addresses the competition issues which we have identified. In the WBA market we concluded that a 28 day notice period was appropriate but in other markets such as the WLA market, we concluded that the competition issues warranted maintaining a 90 day notice period for LLU services.

11.180 The investment required to use wholesale TI services is significantly greater and requires CPs to build more complex networks than for most of the services to which we have applied a 28 day notice period. Wholesale TI services also support multiple downstream services. This means that changes to wholesale TI services are likely to have a greater impact on CPs than changes to downstream services where we apply a 28-day notice period and will also be more complex to assess. Typically this might involve modelling the impact of the new charges on the cost of providing downstream services, securing internal approval for a pricing revision and finally notifying end-users (which may be subject to a minimum notice period, typically 28 days). With a shorter notification period, there is a risk that CPs would have insufficient time to react to changes to wholesale terms and could for instance be left financially exposed by changes to wholesale prices. For these reasons we consider that the advantages of a 90 day notice period outweigh the disadvantages and that a 90 day notice period is therefore still generally appropriate.

11.181 However, when prices are being reduced there should not be a risk of financial exposure for CPs and we therefore consider there is scope to reduce the notification period for price reductions to 28 days. Often price reductions are given as part of a

special offer to which conditions are attached, so the shorter notice period would also need to apply to such conditions.

11.182 We could maintain the 90 day notice period and grant waivers if we receive similar requests in future. However, in our view, there is a likelihood that such requests would be granted, and we therefore consider that it would be more proportionate and less administratively burdensome to reduce the notice period for price reductions to 28 days.

11.183 We have therefore concluded that the following notification periods should apply:

- 28 day notice for prices, terms and conditions relating to new service introductions;
- 28 days notice for price reductions and associated conditions (for example conditions applied to special offers); and
- 90 days notice for all other changes to prices terms and conditions.

### SMP Condition

11.184 We have concluded that BT should be subject to a requirement to notify charges, terms and conditions.

### Legal tests

11.185 We are satisfied that the SMP condition (as set out in Annex 7) meets the relevant tests set out in the Act.

11.186 First, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that CPs have the necessary information about changes to terms, conditions and charges sufficiently in advance to allow them to make informed decisions about competing in downstream markets.

11.187 Secondly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that there are clear benefits from the notification of changes in terms of ensuring that providers are able to make informed decisions within an appropriate time frame about competing in downstream markets;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate, as 90 days is considered the minimum period necessary to allow competing providers to plan for changes to existing network access, and 28 days would be sufficient for new network access and price reductions; and
- transparent in that it is clear in its intention to ensure that BT provides notification of changes to their charges and terms and conditions.

## **Requirement to notify technical information**

### Aim of regulation

- 11.188 We have concluded that changes to technical information should be published in advance, so that competing providers have sufficient time to prepare for them.
- 11.189 Under the requirement to publish a RO, BT is required to publish technical information. Advance notification of changes to technical information is important to ensure that providers who compete in downstream markets are able to make effective use of the wholesale services provided by BT.
- 11.190 For example, a competing provider may have to introduce new equipment or modify existing equipment to support a new or changed technical interface. Similarly, a competing provider may need to make changes to their network in order to support changes to wholesale services offered by BT.
- 11.191 Technical information includes new or amended technical characteristics, including information on network configuration, locations of the points of network access and technical standards (including any usage restrictions and other security issues).
- 11.192 We consider the requirement to notify technical information imposed as a result of the 2007/8 Review has been effective in allowing providers sufficient time to prepare for such changes. Therefore we consider it is appropriate to impose the same requirement in this market review.
- 11.193 The condition requires the notification of new technical information within a reasonable time period but not less than 90 days in advance of providing new wholesale services or amending existing technical terms and conditions. We consider that 90 days is the minimum time that competing providers need to modify their network to support a new or changed technical interface or support a new point of access or network configuration.
- 11.194 Longer periods of notification may also be appropriate in certain circumstances. For example, if BT were to make a major change to its technical terms and conditions, a period of more than the 90 day minimum notification period may be necessary. We consider that regulations are not necessary to address such circumstances, because they are likely to be sufficiently rare for us to address them on a case-by-case basis.

### SMP Condition

- 11.195 We have concluded that BT should be subject to notify technical information.

### Legal tests

- 11.196 We are satisfied that the SMP condition (as set out in Annex 7) meets the relevant tests set out in the Act.
- 11.197 First, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that providers have sufficient notification of technical changes to wholesale TI services to enable them to compete in downstream markets.

11.198 Secondly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it enables providers to make full and effective use of network access to be able to compete in downstream markets;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate in that 90 days is the minimum period that Ofcom considers is necessary to allow competing providers to modify their networks; and
- transparent in that it is clear in its intention that BT notify changes to technical information in advance.

## **Quality of service information**

### Aim of regulation

11.199 We have concluded that BT should be required to publish specific quality of service information.

11.200 Vertically integrated operators have the ability to favour their own downstream business over third party CPs by differentiating on price or terms and conditions. This discrimination could also take the form of variations in quality of service (either in service provision and maintenance or in the quality of network service provided by the dominant provider to external providers compared to its own retail operations). This has the potential to distort competition at the retail level by placing third party CPs at a disadvantage in terms of the services they can offer consumers to compete with the downstream retail business of the vertically integrated operator.

11.201 We consider the requirement to publish quality of service information imposed as a result of the 2007/8 Review has been effective in mitigating the risk of this type of discrimination. Therefore we consider it is appropriate to impose the same requirement on BT in this market review.

11.202 We have concluded that for each of the wholesale TI markets, BT should be subject to an obligation to publish information about the quality of service of the network access it provides. The obligation requires BT to publish information as directed by Ofcom, rather than requiring BT to publish specific information from the date of the imposition of the obligation.

11.203 The main benefit of this obligation is that BT can be required to publish information that would enable other CPs to determine whether the service they receive from BT is equivalent to that provided by BT to its own retail divisions.

11.204 BT already publishes a set of Key Performance Indicators (KPIs) that have been agreed with industry and the OTA. Given this agreement we do not consider it necessary to issue a direction specifying the quality of service information that BT should publish. This obligation will therefore function as a backstop that would allow Ofcom to require BT to publish specific information if satisfactory agreements cannot be reached in future.

## SMP Condition

11.205 We have concluded that BT should be subject to publish quality of service information.

## Legal tests

11.206 We are satisfied that the SMP condition (as set out in Annex 7) meets the relevant tests set out in the Act.

11.207 First, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that providers have visibility of the quality of service that BT provides to itself and to other providers.

11.208 Secondly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it aims to support the non discrimination obligation in the provision of service by requiring BT to publish quality of service information about the service it provides to itself and to other providers;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate because it only requires BT to publish information as directed by Ofcom in the event we consider such information is required to monitor BT's compliance with its other obligations, which is the minimum condition to ensure the desired objective; and
- transparent in that it is clear in its intention that BT is required to publish quality of service information.

## **Requests for new network access**

### Aim of regulation

11.209 We have concluded that BT should be subject to obligations that determine how requests for new types of network access should be handled.

11.210 Section 87(3) of the Act authorises the setting of SMP services conditions in relation to the provision of network services. Under section 87(5)(a) such conditions may include conditions that secure fairness and reasonableness in the way in which requests for new network access are made and responded to.

11.211 Vertically integrated operators have the ability to favour their own downstream business over third party CPs by differentiating on price or terms and conditions. One form of discrimination is in relation to the handling of requests for new types of network access. This has the potential to distort competition at the retail level by placing third party CPs at a disadvantage compared with the downstream retail business of the vertically integrated operator in terms of their ability to introduce new services to meet their customer needs and in terms of their ability to offer innovative services in order to compete more effectively.

11.212 In order to ensure that BT does not discriminate in this way, we consider that BT should be subject to a set of obligations that specify how it should handle requests for new types of network access. These obligations would support the obligation not to unduly discriminate by specifying how requests should be handled.

11.213 We consider that the obligations which are currently applied in these markets are fit for purpose and should be retained. These obligations include:

- a requirement for BT to publish reasonable guidelines specifying the required content and form of requests for new network access and how they will be handled;
- a requirement for BT to provide sufficient technical information to CPs to allow them to draft product specifications that are efficient and which satisfy the reasonable requirements; and
- timescales within which BT must acknowledge and process requests.

### SMP Condition

11.214 We have concluded that BT should be subject to a requirement to determine how it responds to requests for new network access.

### Legal tests

11.215 We are satisfied that the SMP condition (as set out in Annex 7) meets the relevant tests set out in the Act.

11.216 First, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by facilitating the development of competition in downstream markets.

11.217 Secondly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that its purpose is to support the non discrimination obligation in the processing of requests for new network access;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate as it continues to provide a SOR process based on the currently implemented process, while allowing scope for industry to be involved in agreeing process improvements; and
- transparent in that the condition is clear in its intention to set requirements for the processing of requests for new network access.

### **Disaggregated wholesale products**

11.218 Although it is likely that over the next few years many end users will migrate from TI to AI leased lines, there is likely to be ongoing demand for TI services, particularly

from end-users whose applications have very demanding latency and jitter performance requirements.

11.219 We note that, in line with its OIC commitments, BT has launched disaggregated TI interface products..

## Insufficiency of national and Community competition law remedies

11.220 At the beginning of this Section we set out our conclusion that national and Community law remedies would be insufficient to address the competition problems we have identified in the wholesale TI markets.

11.221 We set out below, by reference to the remedies we have decided to impose, our reasons supporting this conclusion, and which reasons lead us to conclude that competition would be ineffective in the wholesale TI markets over the course of the three year review period.

11.222 First, we do not consider that the nature and scope of the remedies we are imposing to address the competition problems we have identified could be imposed equally effectively under competition law. This includes reliance on the BT Undertakings which are, in essence, a remedy under national competition law.<sup>1153</sup> As we explained in 2005 when we accepted them in lieu of a reference to the Competition Commission, the BT Undertakings are intended to complement *ex ante* regulation under the Act. They seek to deploy a variety of mechanisms aimed at defining equivalent treatment, and at preventing and detecting discriminatory conduct by BT when supplying wholesale network access and backhaul services to its downstream competitors. In contrast, the SMP remedies we are imposing are needed to address the competition problems we have identified in this market review and which we consider will pervade over the course of the three year review period. For example:

- we are imposing a general network access obligation, in the manner and form set out in Condition 1, that applies in all of the wholesale TI markets – i.e. not just in one relevant market;
- Condition 1 provides, amongst other things, that the provision of general network access “shall also include such associated facilities as are reasonably necessary for the provision of network access and such other entitlements as Ofcom may from time to time direct.”<sup>1154</sup> In this respect, under Condition 1.3, we are imposing two directions on BT setting out detailed terms according to which BT must provide two network access products – PPC and RBS Backhaul – and these are relevant to all the wholesale TI markets. This direction-making power is important since it allows us to direct BT as to the application of the general network access obligation – whether that should be in one or all of the wholesale TI markets – and so ensure its application can be specifically tailored to address the competition problem(s) we have identified, both now and over the course of the three year review period;
- we are imposing specific cost accounting obligations;
- the *ex ante* remedies we are imposing provide, amongst other things, that new products and services provided in the wholesale TI markets are captured by the

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<sup>1153</sup> Enterprise Act 2002.

<sup>1154</sup> Condition 1.3.



relevant SMP obligations,<sup>1155</sup> thus ensuring their continued effectiveness to address the competition problems over the course of the three year review period.

11.223 Secondly, as evidenced by the suite of remedies we are imposing, the requirements of intervening to address the competition problems in the wholesale TI markets are extensive. We list the remedies below:

- a requirement to provide network access including an obligation to offer fair and reasonable charges, terms and conditions;
- a requirement to provide cost accounting information;
- a requirement not to unduly discriminate;
- a charge control;
- a requirement to publish a reference offer;
- a requirement to give notice of changes to prices terms and conditions:
  - 28 days notice for the introduction of prices, terms and conditions for new services;
  - 28 days notice for price reductions for existing services; and
  - 90 days notice for all other changes to prices, terms and conditions.
- a requirement to publish quality of service information;
- a requirement to notify technical information with 90 days notice;
- obligations relating to requests for new network access; and
- accounting separation and cost accounting obligations.

11.224 Thirdly, based on our regulatory experience from two previous market reviews, recent developments in the wholesale TI markets, consultation responses and expected developments over the three year review period, we remain of the view that providing continued certainty in the wholesale TI markets is of paramount concern – both to BT and OCPs, and to end-users. We consider this is best achieved through *ex ante* regulation which, in comparison to competition law remedies and in light of our analysis of the relevant markets, will:

- provide greater certainty over the course of the three year review period on the types of behaviour that are/are not allowed;
- allow for timely intervention – proactively by us and/or by parties bringing regulatory disputes to us for swift resolution<sup>1156</sup> – and consequently timely enforcement using the considerable enforcement powers accorded us under the

<sup>1155</sup> See for example, Condition 1 which provides that the provision of network access – i.e. both existing and new – is on fair and reasonable terms, conditions and charges.

<sup>1156</sup> See sections 185 to 191 of the Act, in particular section 185(1A).

Act to secure compliance,<sup>1157</sup> through a process with which the market in general is familiar and which is also set out in the Act.

## Removal of regulation

11.225 As set out above, the remedies we are imposing are those which we conclude are appropriate to address the competition problems we have identified in the wholesale TI markets as a result of our market analysis, and which we conclude reliance on national and Community competition law alone would be insufficient to address.

11.226 Accordingly, we are imposing the SMP conditions explained above. As a result of this, we are revoking all of the SMP conditions imposed on BT in the 2007/8 Review in the relevant wholesale markets as defined in the 2007/8 Review.

11.227 We set out the notice revoking those SMP conditions, together with the new SMP conditions we are imposing in the wholesale TI markets, in the statutory notification which is in Annex 7 to this Statement.

## Conclusions regarding the remedies we are imposing in the wholesale TI markets

11.228 We have concluded that the following remedies should be imposed on BT in the wholesale TI markets:

- a requirement to provide network access, including an obligation to offer fair and reasonable charges,<sup>1158</sup> terms and conditions;
- a requirement to provide cost accounting information;
- a requirement not to unduly discriminate;
- a charge control;
- a requirement to publish a reference offer;
- a requirement to give notice of changes to prices terms and conditions:
  - 28 days notice for the introduction of prices, terms and conditions for new services;
  - 28 days notice for price reductions for existing services; and
  - 90 days notice for all other changes to prices, terms and conditions.
- a requirement to publish quality of service information;
- a requirement to notify technical information with 90 days notice;
- obligations relating to requests for new network access; and
- accounting separation and cost accounting obligations.<sup>1159</sup>

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<sup>1157</sup> See sections 94 to 104 of the Act.

<sup>1158</sup> In relation to fair and reasonable charges, see Section 9.

- 11.229 We have concluded that BT is also be subject to a direction under the general access condition to provide Partial Private Circuits (PPCs) in each of the markets, and in the low bandwidth TISBO market only a direction requiring it to provide Radio Base Station backhaul (RBS backhaul).
- 11.230 As explained above we have concluded that these remedies also apply to interconnection and accommodation services that BT provides in connection with wholesale TI services.

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<sup>1159</sup> In relation to accounting separation and cost accounting obligations, see Section 16.

## Section 12

# Remedies for the wholesale AI markets

## Introduction

- 12.1 In this Section we set out the remedies that we have decided to impose on BT in the following markets:
- wholesale market for low bandwidth Alternative Interface Symmetric Broadband Origination (AISBO) in the WECLA at bandwidths up to and including 1Gbit/s; and
  - wholesale markets for low bandwidth Alternative Interface Symmetric Broadband Origination (AISBO) in the UK excluding the WECLA and the Hull area at bandwidths up to and including 1Gbit/s.
- 12.2 Unless stated otherwise, we refer to the markets set out above as the AISBO markets.
- 12.3 The remedies we have imposed are those which we conclude are appropriate to address the competition problems we have identified in the markets set out above as a result of our market analysis, in particular our respective SMP assessments, and which we conclude national and Community competition law alone would be insufficient to address. We set out the competition problems further below in this Section.
- 12.4 The wholesale low bandwidth AISBO markets have grown significantly since the 2007/8 Review. Ethernet services have become established as the preferred option for new installations at bandwidths up to 1Gbit/s for all but a minority of customers. Since the 2007/8 Review, BT's Openreach division has launched a second generation of Ethernet services based on significant investments in new backhaul infrastructure.
- 12.5 Current regulation in these markets is focused on promoting competition by regulating BT's provision of disaggregated wholesale Ethernet access and backhaul products on a non-discriminatory basis in conjunction with charge controls. We consider that this approach to regulating these markets continues to be appropriate for the period of this market review.

## Summary of our conclusions

- 12.6 Figure 12.1 below summarises the competition problems we have identified in these markets and the remedies we have concluded are appropriate to address them.

**Figure 12.1: Summary of the competition problems and remedies**

Competition problems	Remedies for the wholesale low bandwidth AISBO market in the UK excluding the WECLA and the Hull area	Remedies for the wholesale low bandwidth AISBO market in the WECLA
<ul style="list-style-type: none"> <li>Refusal to supply</li> <li>Predatory pricing</li> <li>Margin Squeeze</li> <li>Cross subsidisation</li> </ul>	Requirement to provide network access on reasonable request including an obligation to offer fair and reasonable charges, terms and conditions	Requirement to provide network access on reasonable request including an obligation to offer fair and reasonable charges, terms and conditions
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	Requirement to provide Ethernet services on reasonable request <ul style="list-style-type: none"> <li>disaggregated Ethernet access and backhaul; and</li> <li>end-to-end Ethernet products</li> </ul>	Requirement to provide Ethernet services on reasonable request <ul style="list-style-type: none"> <li>disaggregated Ethernet access and backhaul; and</li> <li>end-to-end Ethernet products</li> </ul>
<ul style="list-style-type: none"> <li>Price discrimination;</li> <li>Non-price discrimination, e.g. different terms and conditions, delaying tactics (different delivery timescales for provision and fault repair); strategic design of products; exclusive dealing; quality discrimination; different SLAs and SLGs;</li> <li>Predatory pricing;</li> <li>Margin squeeze.</li> </ul>	Requirement to provide network access on Equivalence of Input basis	Requirement to provide network access on Equivalence of Input basis
	Obligation not to discriminate unduly	Obligation not to discriminate unduly
	Publication of reference offer	Publication of reference offer
	Requirement to notify changes to charges and T&Cs	Requirement to notify changes to charges and T&Cs
	Publication of quality of service as required by Ofcom	Publication of quality of service as required by Ofcom
<ul style="list-style-type: none"> <li>Price and non-price discrimination;</li> <li>Excessive pricing;</li> <li>Predatory pricing;</li> <li>Margin squeeze.</li> </ul>	Notification of technical information	Notification of technical information
	Accounting separation and cost accounting obligations	Accounting separation and cost accounting obligations
<ul style="list-style-type: none"> <li>Cross-subsidisation</li> <li>Excessive pricing</li> <li>Over investments</li> <li>Excessive costs/inefficiencies</li> </ul>	Charge control	Less strict form of charge control
<ul style="list-style-type: none"> <li>Refusal to supply new network access;</li> <li>Non-price discrimination, e.g. delaying tactics, strategic product design, etc.</li> </ul>	Requests for new network access	Requests for new network access

## Charge control remedy

- 12.7 In this Section, we set out our reasons why, at a high level, we remain of the view that charge controls in the AISBO markets should be imposed. Our conclusions, together with our reasons, consultation responses and considerations of those responses, with regard to the detail of the charge control we are imposing in each of the AISBO markets, are set out in Section 20 in respect of Ethernet services, and in Section 21 in respect of AISBO in the WECLA.

## Other pricing remedies

- 12.8 As part of our assessment of the appropriate package of pricing remedies, together with the non-pricing remedies, to address the competition problems we have identified in the AISBO markets, we have considered the following, set out below. Our conclusions, together with our reasons, consultation responses and considerations of those responses, in relation to i) and ii) are set out in Section 9, and in relation to iii) are set out in Section 16.
- i) cost orientation;
  - ii) the scope of the fair and reasonable obligation according to which, amongst other things, BT must provide general network access; and
  - iii) accounting separation and cost accounting obligations.
- 12.9 In relation to i), we have decided, as per our proposal in the June BCMR Consultation, not to impose a cost orientation obligation on BT in the AISBO markets.
- 12.10 In relation to ii), we have decided to broaden the scope of the obligation requiring the provision of network access by BT in the AISBO markets to be on fair and reasonable terms and conditions, to include also fair and reasonable charges.
- 12.11 In relation to iii), we have decided, as per our proposals in the June and November BCMR Consultations, to impose accounting separation and cost accounting obligations on BT in the AISBO markets.

## Remedies as a whole in the AISBO markets

- 12.12 We have decided to make some changes relative to the 2007/8 Review.
- First, we are introducing obligations in the SMP conditions requiring BT to provide Ethernet services on the basis of Equivalence of Input (EOI). In particular, we require BT to provide network access in the AISBO markets (except where we have said otherwise) on the basis of EOI.
  - Secondly, we provide more clarity around the routing arrangements that we expect should apply between areas served by different Trunk Aggregation Nodes (TANs). In the 2007/8 Review we relied on general access obligations and did not specify product-related obligations explicitly. This has at times led to a difference in view between BT and CPs with regard to the implementation of BT's general network access obligations, particularly in relation to circuit routing. We therefore consider it important to provide greater clarity as to what BT's obligations are.
  - Thirdly, we consider it important that BT continues to work with the industry to develop In Span Handover (ISH) interconnection and the 'high density handover' Ethernet aggregation capability requested by CPs. These developments have the potential to make interconnection more efficient and to reduce the pressure on co-location space (which is often in short supply). An ISH option would also be better suited to the needs of larger CPs with network infrastructure, enabling them to avoid co-locating in BT exchanges. In light of the potential benefits, we consider it important that Openreach works with CPs to develop these new forms of interconnection as soon as reasonably practicable so that deployment can proceed and CPs, and ultimately end-users, could begin to benefit from these enhancements.

- Lastly, we note that the only difference between the remedies imposed inside and outside the WECLA is the charge control remedy (reflecting our SMP assessment).

12.13 We consider that the remedies as a whole in the AISBO markets would secure or further our statutory duties and would satisfy the relevant legal tests. In reaching our conclusions we have taken account of our regulatory experience from two previous market reviews, recent developments in the AISBO markets, consultation responses, and expected developments over the review period of three years.

12.14 In reaching our conclusions on the appropriate remedies to impose, we have taken due account of all applicable guidelines and recommendations issued by the European Commission (EC), and we have taken utmost account of the BEREC Common Position.<sup>1160</sup> We have also had regard to relevant guidance from the European Regulators' Group (ERG), Ofcom and ourselves.

## Structure of this Section

12.15 This Section is structured as follows:

Sub-section	Content
Assessment of competition problems the AISBO markets	Assessment of competition problems, including insufficiency of national and Community competition law remedies.
Approach in the June and November BCMR Consultations and the remedies we proposed	Summary of the assessment we carried out in the June and November BCMR Consultations and our proposed remedies.
Consultation responses and Ofcom's considerations	Summary of stakeholders' comments on our June and November BCMR Consultations and our considerations in respect of those comments.
Ofcom's conclusions on the appropriate remedies	Details of the remedies we have decided to impose and, in relation to each, a statement of its aim and the legal tests we have applied to it.

## Assessment of competition problems in the wholesale AISBO markets

12.16 We summarise below our assessment of the competition problems in the wholesale AISBO markets before setting out the remedies<sup>1161</sup> we have concluded are appropriate to address those problems.

### Competition problems identified in the wholesale AISBO markets

12.17 In light of our market analysis, in particular our SMP assessment, we summarise below the competition problems we identified in the AISBO markets and the behaviour in which, in the absence of *ex ante* regulation, we have concluded BT would have the incentive, and its market power would afford it the ability, to engage in. These include, in particular:

- refusal to supply access at the wholesale level and thus restrict competition in the provision of services in the retail AI leased lines markets, the residential fixed broadband market and mobile market;

<sup>1160</sup> BEREC Common Position on best practices in remedies imposed as a consequence of a position of significant market power in the relevant markets for wholesale lease lines, BoR (12) 83.

<sup>1161</sup> This approach is consistent with our approach in the June BCMR Consultation.

- unduly discriminatory pricing practices – e.g. by charging its competing providers more than the amount charged to its downstream divisions;
- unduly discriminatory non-pricing practices – e.g. by supplying the same products on different terms and conditions, different timescales for provision and repair, quality discrimination, different SLAs and SLGs, creating new variants to fulfil the requirements of its downstream division and taking longer to address, or avoiding addressing, the requirements of its competitors;
- charging excessively high prices, margin squeeze, predatory pricing and/or anti-competitive cross subsidisation; and
- refusal to supply and/or delaying tactics in the provision of new network access services requested by its competitors.

12.18 We have concluded that BT would have the incentive and ability to engage in these practices in order to adversely affect the development of competition in the related downstream retail markets and thus enable it to act independently of competitors, customers and ultimately of consumers in those markets.

### **Insufficiency of national and Community competition law remedies**

12.19 For the reasons set out at the end of this Section, and by reference to the remedies we are imposing, we have concluded that national and Community law remedies would be insufficient to address the competition problems we have identified.

12.20 This has led us to conclude, as per our view in the June BCMR Consultation, that over the course of the review period of three years, competition would be ineffective in the AISBO markets.

12.21 We now turn to the approach we adopted in the June BCMR Consultation which followed on from our assessment of the competition problems.

## **Approach in the June BCMR Consultation**

### **Assessment of appropriate remedies**

12.22 We set out below our initial assessment of appropriate remedies based on our analysis of how competition operates in the regulated AISBO markets taking into account stakeholder responses to our CFI. We published this initial assessment in the June BCMR Consultation.

12.23 In the June BCMR Consultation we proposed remedies which would require BT to provide its competitors with wholesale access to its network and would define the rules that would apply to its provision of such access. To assess the appropriate form of the remedies we proposed, we carried out an analysis of how competition operates in the AISBO markets, and took into account views expressed by stakeholders in response to the CFI. We summarise below the following specific issues we identified as a result of this provisional analysis.

- in relation to refusal to supply:
  - provision of Ethernet access, Ethernet backhaul and Ethernet end-to-end specific products;
  - provision of integrated Ethernet access and backhaul;



- provision of new forms of Ethernet interconnection (a high-density handover product);
- provision of specific backhaul products for mobile networks, e.g. SyncE; and
- availability of space and power available in BT's exchanges.
- in relation to non-price discrimination:
  - potential restriction of circuit routing rules so that CPs are forced to adopt inefficient network topologies;
  - design of adequate switching and migrations processes;
  - potential adoption of delaying tactics during the Statement of Requirement process; and
  - potential discriminatory behaviour through Openreach Project Services.
- in relation to pricing:
  - concerns about excess construction charges.

### Analysis of how competition operates in the AISBO markets

12.24 We set out below the analysis we carried out of how competition operates based on BT's regulated AISBO services.

#### *BT's current AISBO products*

12.25 BT currently provides both wholesale access and backhaul services in the AISBO markets.

12.26 Since the 2007/8 Review, BT has withdrawn most WES, WEES and BES products from new supply.<sup>1162</sup> These first-generation products are being replaced by a second generation of Ethernet access and backhaul products, Ethernet Access Direct (EAD) and Ethernet Backhaul Direct (EBD).

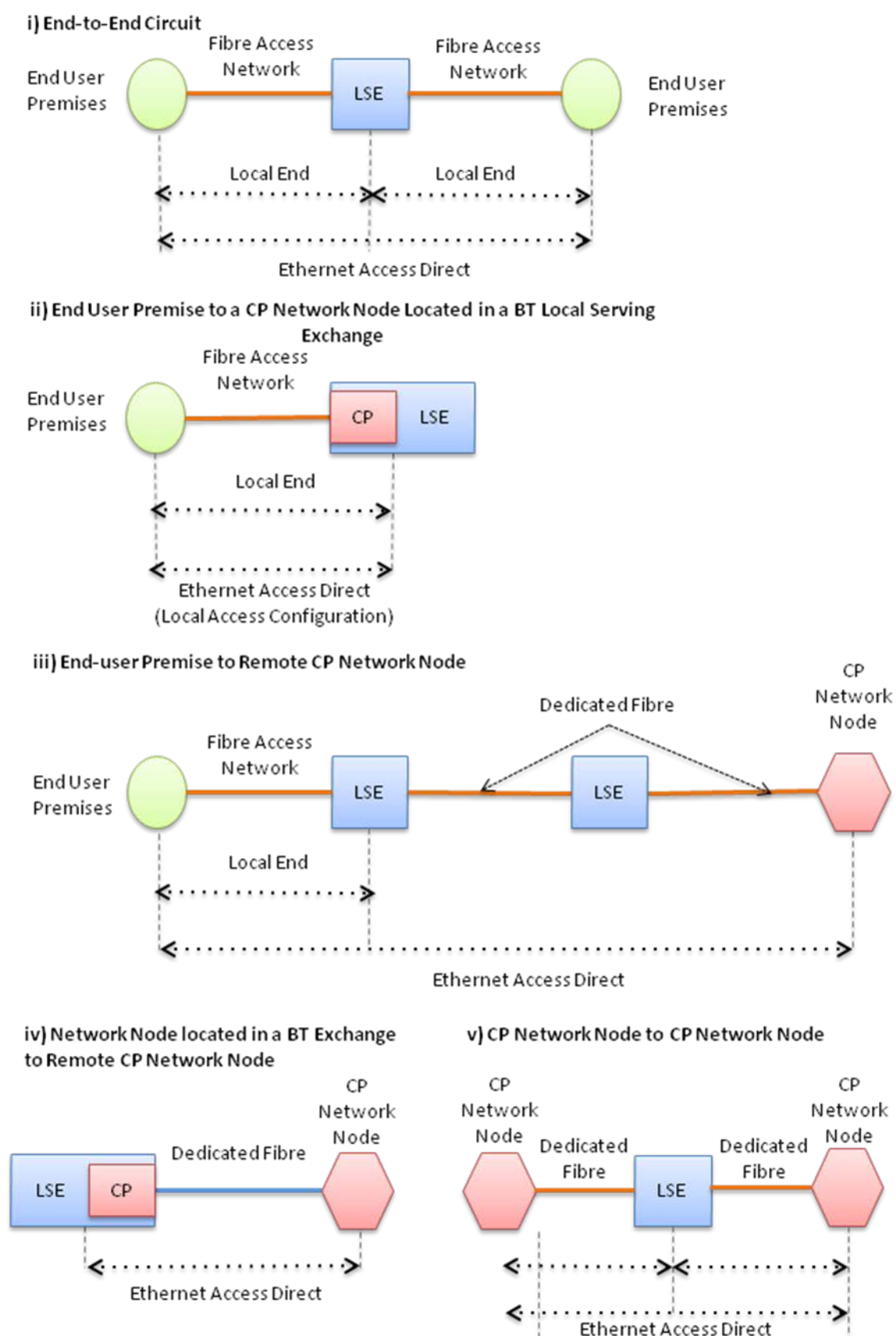
12.27 Wholesale access Ethernet services such as BT's EAD service are used to provide short-range services, typically up to 25 km (up to 35km in the case of EAD 1Gbit/s), and include:

- i) end-to-end services between two of the end-users' premises;
- ii) terminating segments between an end-user's site and a CP's network node (which could be located in the CP's building or in co-location space rented by the CP in a BT exchange); and
- iii) terminating segments between CP's network nodes (which could be located in co-location facilities in a BT exchange or in the CP's own premises).

12.28 Figure 12.2 below illustrates selected examples of these configurations for EAD.

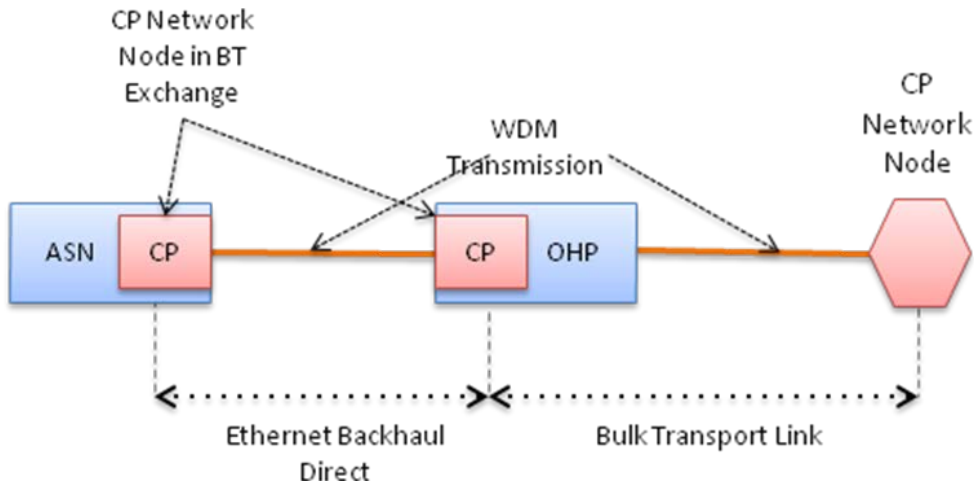
<sup>1162</sup> The WES Aggregation product and the 2.5Gbit/s and 10Gbit/s versions of WES, WEES and BES are still available for new supply although BT has subsequently notified industry of its intention to withdraw these remaining services from new supply in 2013.

**Figure 12.2: Wholesale Ethernet access services**



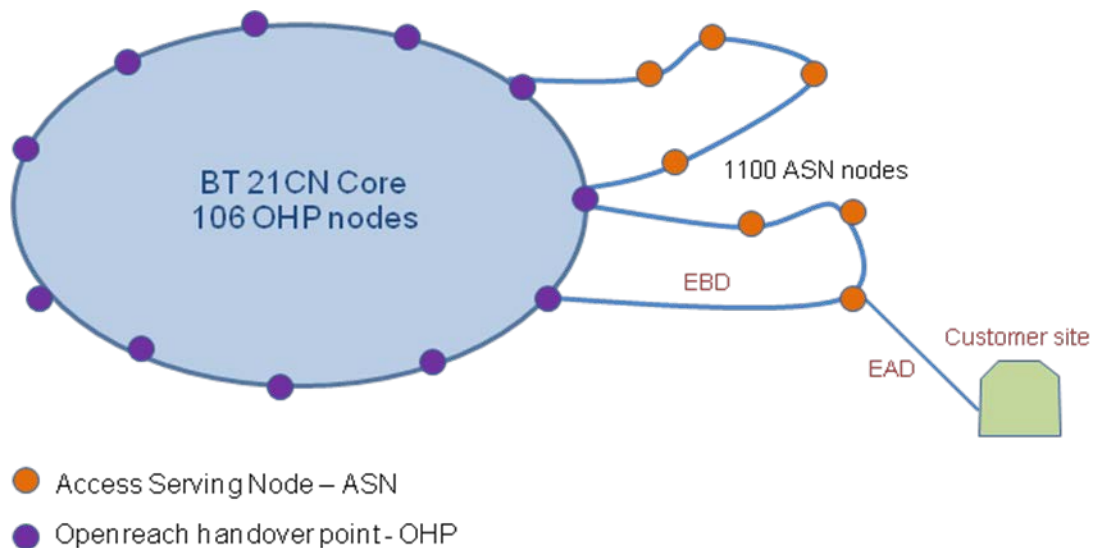
- 12.29 Wholesale access services generally use dedicated fibre circuits between their end-points and therefore do not make use of CPs' backhaul transmission systems.
- 12.30 Wholesale backhaul services are used to provide high capacity backhaul links between an operator's network nodes. These circuits generally make use of CPs' backhaul transmission systems and aggregate multiple individual circuits into higher capacity links. Figure 12.3 below illustrates the BT backhaul products EBD and Bulk Transport Link (BTL).

**Figure 12.3: Wholesale Ethernet backhaul services**



- 12.31 BT introduced EBD in 2009, a backhaul product based on its Orchid network.<sup>1163</sup> EBD provides backhaul connectivity from around 1,100 BT exchanges designated as Access Serving Nodes (ASNs), typically located in larger towns and cities, to corresponding major exchanges designated as Openreach Handover Points (OHPs), which are co-located in major urban centres with BT's 21CN core network nodes. Below is a schematic of the Orchid infrastructure.

**Figure 12.4: Orchid network architecture**



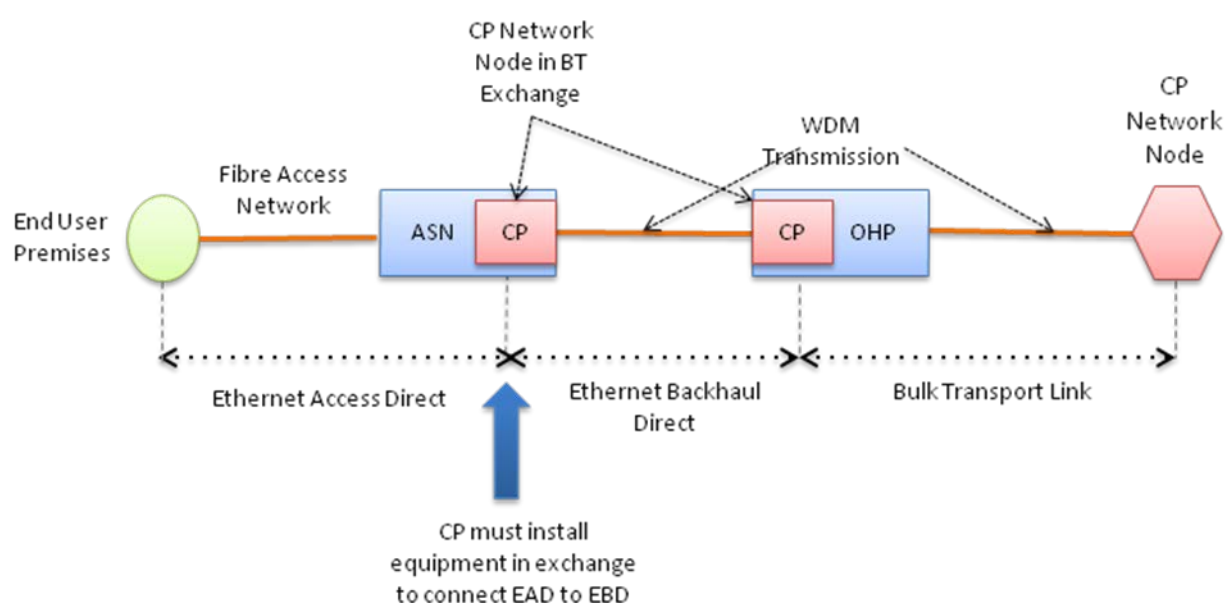
<sup>1163</sup> The industry normally refers to the Openreach EBD architecture as the Orchid network, from the original name of Openreach' network design project.

12.32 The EBD service only provides connectivity from ASNs to their parent OHPs, therefore it is only available to purchase from the 1,100 ASNs. It is currently available with bandwidths of 10Mbit/s, 100Mbit/s, 1Gbit/s and 10Gbit/s.<sup>1164</sup>

#### *Comparison of PPCs and wholesale Ethernet services*

12.33 Figure 12.5 below illustrates how the BT wholesale access and backhaul Ethernet products may be used together to provide longer distance terminating segments for retail leased lines.

**Figure 12.5: BT Ethernet portfolio**



12.34 There are similarities between the network topologies of BT's wholesale Ethernet services and TI PPCs but several significant differences:

- the wholesale Ethernet services are only supplied on a disaggregated basis (i.e. access and backhaul services are sold separately and cannot be purchased as complete terminating segments comprising both access and backhaul);
- in order to connect EAD circuits to EBD circuits, CPs must rent co-location space in the BT ASN exchange and install their own multiplexing equipment; and
- there is no ISH option, so CPs must either rent co-location space at the OHP exchange where the circuit can be terminated and provide their own onward transmission or use a BTL to have the circuit terminated at their own network node.

#### *CPs' consumption of BT's regulated products*

12.35 Since the 2007/8 Review the volumes of TI services have been in sustained long-term decline and AI services, particularly Ethernet services, have become

<sup>1164</sup> Openreach has introduced higher speeds gradually according to customer demand and technical availability. In the future, higher speeds such as 40Gbit/s and 100Gbit/s may be introduced.

established as the preferred option for new installations. These trends have been driven mainly by the following factors:

- demand for higher bandwidth leased lines has increased significantly in the last few years. This is driven by many organisations which require dedicated services at higher bandwidth, as well as by increased take-up and speed of consumer broadband services, both fixed and mobile, which drives demand for high bandwidth backhaul. At the end of 2011, the total take-up of broadband services has reached 76% of UK households, with 20.4 million households using fixed broadband lines and over 5 million using mobile broadband;<sup>1165</sup> and
- the cost per unit of bandwidth of Ethernet technology is lower than that of legacy TDM-based technology.

12.36 As a consequence, take-up of Ethernet-related leased lines has increased significantly since the last market review; our estimates indicate that compared to 2007/8, volumes of Ethernet services operating at speeds up to and including 1Gbit/s have grown by approximately 45%.

12.37 CPs have adopted a wide range of network architectures and patterns of consumption of Ethernet services. Nevertheless the following trends are evident:

- aggregation – CPs, including BT, generally purchase individual wholesale services and aggregate them using their own equipment which is typically located in Points of Presence (PoPs) in BT exchanges. This differs from the approach used with PPCs for TI services in which BT aggregates circuits for handover on high capacity interconnection links;
- network architecture – For its own downstream services BT has adopted a 'backhaul and core' network architecture which involves aggregating traffic at ASNs for transmission over EBD circuits to OHPs for interconnection with its 21CN core network. In contrast, some CPs have adopted a mesh architecture for backhaul, linking aggregation nodes typically located in BT exchanges to each other. Sometimes this arrangement does not have a clearly defined core network;
- consumption of access-only products - CPs are increasingly establishing PoPs at larger BT local exchanges so that they can consume 'access only' products such as EAD Local Access; and
- usage of EBD for backhaul – BT and LLU operators are the main users of BT's WDM-based EBD backhaul service. Most other CPs continue to use point-to-point fibre Ethernet services such as EAD, BES and WES for backhaul.

12.38 These trends point to significant differences in the approach adopted by BT and CPs, particularly in relation to network architecture and usage of EBD services. A number of factors may have contributed to these differences:

- early network deployments were on a small scale so a mesh structure may have made more sense initially;
- EBD was not introduced until BT launched its second generation of Ethernet products while its first generation products all had distance limitations initially,

<sup>1165</sup> "Communication Market Report 2012" a Research Document published by Ofcom on 18 July 2012 and available at [http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr12/CMR\\_UK\\_2012.pdf](http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr12/CMR_UK_2012.pdf).

and this may have encouraged CPs to build networks using short links between BT local exchanges;

- EBD aggregates traffic efficiently by using WDM technology over pre-defined routes between ASNs and their parent OHPs. Its efficiency, however, may not serve the needs of CPs as well as it serves those of BT. For example, CPs may have established PoPs in different locations and may not need to convey traffic along BT's predefined EBD routes;
- point-to-point Ethernet services are less resilient than SDH services which are based on a self-healing ring architecture. Although resilient options of Ethernet services are available, a mesh architecture may be a more cost-effective way of introducing resilience;
- BT has not offered a product which combines access and backhaul, which would enable CPs connected only to BT's OHP nodes to reach all end-users. In order to reach end-users located beyond the maximum range of an EAD circuit from an OHP, a CP needs currently to purchase a high bandwidth EBD circuit and install aggregation equipment at the appropriate ASN to connect EAD circuits serving end-users to the EBD circuit. This may not be a cost-effective proposition for a CP which serves a low volume of circuits, and connection to BT's OHP nodes may have limited benefit for such CPs;
- siting Ethernet switches in BT local exchanges provides CPs with an opportunity to reduce backhaul costs by aggregating traffic at these local exchanges. This may have further increased their incentive to use local exchanges as hubs for their networks; and
- CPs are incentivised to locate their PoPs in BT's fibre-serving exchanges because BT's EAD Local Access service can offer significantly lower tariffs than other EAD services.

12.39 It is currently unclear whether the differences between the approach adopted by BT and CPs are due to enduring factors such as differences in scale and scope or whether they are primarily a function of strategies adopted by CPs during the early stages of market development. Several of the factors discussed above suggest the latter may be the case. Also, as discussed in more detail below, CPs' approach is evolving as evidenced by the product development requests that have been submitted to BT.

#### *Relevance of the Undertakings to the AISBO markets*

12.40 BT's Undertakings, given to Ofcom under Section 155 of the Enterprise Act in lieu of a market reference to the Competition Commission, require BT to comply with a series of regulatory obligations to apply to some of its wholesale access and backhaul services. Some of BT's commitments in its Undertakings relate to specific products in the AISBO markets, including:

- to provide WES and BES services on the basis of EOI; and
- to provide new WES Access, WES Backhaul and WEES products on the basis of EOI.<sup>1166</sup>

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<sup>1166</sup> Section 3.1 of the Undertakings.

- 12.41 The Undertakings established the principle of EOI, which means that BT provides, in respect of a particular product or service, the same product or service to all CPs (including BT) on the same timescales, terms and conditions (including price and service levels) by means of the same systems and processes, and includes the provision to all CPs (including BT) of the same commercial information about such products, services, systems and processes. In particular, it includes the use by BT of such systems and processes in the same way as other CPs and with the same degree of reliability and performance as experienced by other CPs.<sup>1167</sup>
- 12.42 The Undertakings were designed to ensure that BT does not discriminate between its own downstream divisions (including, for example, BT Retail, BT Wholesale and BT Global Services) and competitors when offering access services. The set of remedies set out in the Undertakings were particularly designed to address non-price discrimination.
- 12.43 As set out further below, as part of the suite of SMP remedies, we proposed including an obligation on BT to provide Ethernet services on an EOI basis.

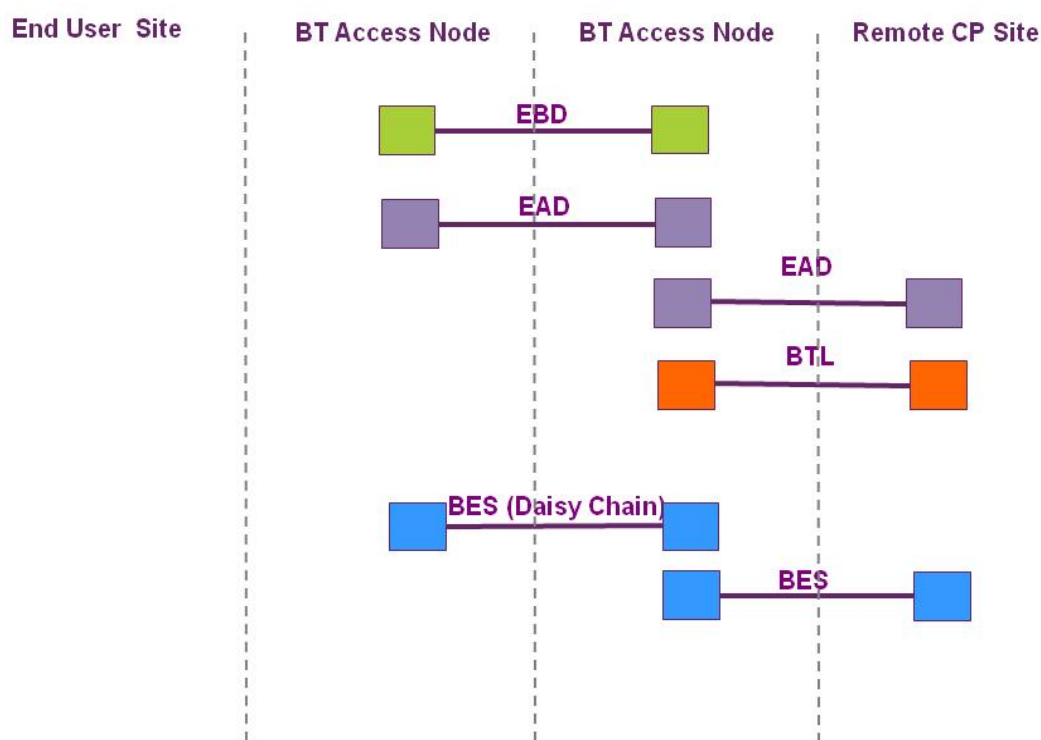
### Development of AISBO products

#### *Developments in LLU backhaul*

- 12.44 In relation to LLU backhaul services, the main development since the 2007/8 Review has been the launch by BT of the second generation of Ethernet products and the partial withdrawal from new supply of the first generation of products. Particularly for LLU backhaul, BT has withdrawn BES products at bandwidths lower than 2.5Gbit/s.
- 12.45 We also noted that bandwidth requirements for LLU backhaul are growing steadily. The increased take-up of fixed broadband combined with increasing consumers' demand for higher speed broadband connectivity has driven demand for higher bandwidth backhaul services.
- 12.46 With the introduction of the new Ethernet products, LLU providers now use both EAD and EBD for LLU backhaul. Figure 12.6 below provides an overview of the Openreach products most commonly used and their possible combinations.

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<sup>1167</sup> Section 2.1 of the Undertakings.

**Figure 12.6: Openreach LLU backhaul solutions**

- 12.47 Typically, if an LLU operator requires backhaul connectivity of at least 1Gbit/s bandwidth from an ASN (i.e. a BT exchange which supports EBD) it would consider buying a 1Gbit/s EBD. EBDs, however, are only provided between specific BT nodes (ASNs and OHPs) and cannot reach out to the CP's remote site. Therefore, in addition to the EBD, the LLU provider must provide or purchase a point-to-point Ethernet connection from the OHP to its remote site. Depending on the capacity requirement, the point-to-point connection, if purchased from BT, can be either an EAD (available at 1Gbit/s and 10Gbit/s) or a BTL (only available at 10Gbit/s). BTL would be purchased where the CP aggregates several 1Gbit/s connections.
- 12.48 If, on the other hand, the serving Local Exchange is not an ASN, the LLU operator would purchase a point-to-point Ethernet connection at 1Gbit/s, i.e. 1Gbit/s EAD. In the old product portfolio, the main product used for Ethernet-based backhaul was BES, also available in its daisy chain version to connect two or more BT Local Exchanges in a chain.

#### *Developments in mobile backhaul*

- 12.49 Since the 2007/8 Review, MNOs have witnessed strong growth in the demand for mobile data services. The growth has been fuelled by advances in mobile devices and applications (e.g. the introduction of smart phones) and the development of advanced radio access technologies which provide higher capacities. MNOs predict the increase to continue at a similar rate with additional cell capacity becoming available through the use of 900MHz and 1800MHz spectrum for 3G data services and the deployment of 4G (LTE) services using the additional 800 MHz and 2.6 GHz spectrum that was auctioned this year.<sup>1168</sup>

<sup>1168</sup> Everything Everywhere Ltd, Hutchison 3G UK Ltd, Niche Spectrum Ventures Ltd (a subsidiary of BT Group plc), Telefónica UK Ltd and Vodafone Ltd all won spectrum.



- 12.50 In response to the traffic growth, MNOs are gradually replacing TI backhaul links with Ethernet based backhaul links to benefit from the higher capacity and the lower unit cost of bandwidth.
- 12.51 In addition to carrying voice and data traffic, mobile backhaul services also perform another function which is essential to the operation of mobile networks. This is to distribute timing information to keep mobile base stations in accurate synchronisation with each other and with other network elements. TI mobile backhaul circuits can perform this function because they operate on synchronous networks that are synchronised to a highly stable common reference clock. As a result, timing information is present in the synchronous data stream carrying the traffic on every circuit. This capability is not available with generic carrier Ethernet services as the transmission technology is asynchronous in nature.
- 12.52 In the short term, MNOs are likely to retain some TI circuits at each mobile base station for synchronisation purposes or use TI circuit emulation techniques over Ethernet services, but in order to complete the transition to Ethernet backhaul, MNOs are also making alternative arrangements for synchronisation.
- 12.53 The two technologies preferred by MNOs for synchronisation over carrier Ethernet services are the IEEE 1588 and SyncE protocols. It is currently unclear whether a single solution will prevail or whether both protocols will be required.
- 12.54 SyncE requires a variant of carrier Ethernet but IEEE 1588 uses a packet layer approach that can operate over generic carrier Ethernet services. Both technologies are designed to transmit timing information over carrier Ethernet services. Unlike TI services, the timing information is not already present in the network and must be derived from an external reference clock specifically for mobile backhaul and distributed across the network.
- 12.55 At the time we published the June BCMR Consultation, we understood Openreach was about to introduce a SyncE variant of its EAD product in response to a request from BT Wholesale and other CPs.

### Ofcom's considerations of the issues

- 12.56 In Section 11 (paragraphs 11.59 to 11.64) of the June BCMR Consultation we summarised the responses we received to the CFI. We have not reproduced that summary in this Statement but detail below the specific issues that we considered needed to be addressed in relation to AISBO remedies based on the operation of competition in AISBO markets set out above, the responses we received to our CFI and our discussions with stakeholders. These issues were:

- in relation to refusal to supply:
  - provision of Ethernet access, Ethernet backhaul and Ethernet end-to-end specific products;
  - provision of integrated Ethernet access and backhaul;
  - provision of new forms of Ethernet interconnection (high-density handover product);
  - provision of specific backhaul products for mobile networks, e.g. SyncE;

- availability of space and power available in BT's exchanges.
- in relation to non-price discrimination:
  - potential restriction of circuit routing rules so that CPs are forced to adopt inefficient network topologies;
  - design of adequate switching and migrations processes;
  - potential adoption of delaying tactics in product development processes;
  - potential discriminatory behaviour through Openreach Project Services.
- in relation to pricing:
  - concerns about excess construction charges.

12.57 In the June BCMR Consultation we discussed these points in turn as set out below.

*Whether specific remedies for Ethernet access, backhaul and end-to-end are required*

12.58 At the time of Ofcom's Telecoms Strategic Review (TSR)<sup>1169</sup>, there was a prospect that convergence brought about by deployment of next-generation networks (NGNs) might in future generate additional opportunities for competition in backhaul, since CPs would be able to aggregate different types of traffic, hitherto carried on service specific platforms, onto common backhaul circuits from BT local exchanges. In particular, we envisaged that by combining LLU backhaul with backhaul for other services, CPs might gain sufficient scale to support sustainable investment in competing infrastructure to provide backhaul circuits to BT exchanges.

12.59 We sought to promote such investment, and, therefore, BT's Undertakings committed BT to introduce separate Ethernet access and backhaul services to allow CPs to aggregate leased lines and broadband traffic at BT's local exchanges. We continued to support investment in competing backhaul infrastructure in the 2007/8 Review, although we did not require BT to provide specific forms of network access in this respect.

12.60 Our analysis in this current review indicated that convergence had not developed to the extent envisaged. This was because most CPs, with the notable exception of BT, tended to specialise in either the consumer or the business markets and thus have fewer opportunities to aggregate different types of traffic.<sup>1170</sup>

12.61 In the TSR we also set out our intention to promote infrastructure competition where it is effective and sustainable. On this basis our regulations have favoured the provision of separate regulated access and backhaul products so that CPs have the possibility to exploit economies of scale of their networks and, where sustainable, invest in their own backhaul.

12.62 In light of the above, we considered it to be appropriate to require BT to provide Ethernet access and Ethernet backhaul and we therefore proposed introducing

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<sup>1169</sup> See, for example, Ofcom final statement of the Strategic review of Telecommunications <http://stakeholders.ofcom.org.uk/binaries/consultations/752417/statement/statement.pdf>

<sup>1170</sup> We gave an overview of the CPs active in this market in Section 2 of the June BCMR Consultation.

specific SMP conditions in this regard. The aim of these requirements would be to ensure that BT continues to supply disaggregated Ethernet access and backhaul. Due to pre-existing regulation, CPs have developed their business models around the availability of disaggregated Ethernet services, and their withdrawal would be extremely disruptive to CPs and consumers.

- 12.63 For similar reasons, we also considered it appropriate to require BT to provide short range end-to-end wholesale services. BT already supplies such services, subject to a 25km radial distance limit (as set out in the Undertakings). Such services provide a more efficient solution for short range services than constructing services using terminating segments and consequently their withdrawal would be disruptive for CPs. We considered that the 25km limit is reasonable as CPs can use other access products efficiently to deliver longer range services.

*Whether an integrated access and backhaul Ethernet product is required*

- 12.64 One of the concerns about BT's current low-bandwidth AISBO product set cited by CFI respondents was that Openreach has not provided an integrated access and backhaul product that would allow CPs to achieve national coverage by interconnecting with BT only at the 56 Trunk Aggregation Nodes (TANs). Currently, CPs must establish PoPs at ASN exchanges and install aggregation equipment in order to use EBD circuits.
- 12.65 The unit cost of EBD backhaul is significantly lower than point-to-point fibre based services such as EAD so we would be concerned if the lack of an integrated product created a scale barrier that prevented CPs from making use of EBD services to the same extent as BT should they wish to do so. However, this did not appear to be the case. For example, EBD 1Gbit/s rental charges are either lower or are comparable with EAD 10Mbit/s and 100Mbit/s rental charges in typical deployment scenarios. This suggested that there is a strong case for using EBD services for backhaul rather than EAD services.
- 12.66 On this basis, it was not clear to us that there was a significant scale barrier that would prevent CPs using the disaggregated products to achieve national coverage and therefore there did not seem to be a strong case for requiring BT to introduce one, particularly as CPs were likely to prefer to deploy their own aggregation equipment as it gives them additional flexibility to define service characteristics. More generally, since all of the regulated products in this market are currently available on the basis of EOI, there did not appear to be any other barriers to CPs making greater use of EBD services with the exception of the accommodation and circuit routing issues, which we discussed further in Section 11 of the June BCMR Consultation and below.

*New forms of Ethernet Interconnection (high-density handover)*

- 12.67 CPs have submitted several requests to BT for new forms of Ethernet interconnection. These include the Ethernet aggregation development that was part of Openreach's Industry Commitments<sup>1171</sup>, a more recent development request

<sup>1171</sup> In 2009, we agreed to relax some of BT's commitments in its Undertakings which related to operational support systems separation which had been affected by Openreach resource constraints in product development. In conjunction with this change, Openreach gave a firm commitment as part of the Undertakings to deliver a set of important product and systems developments that it had agreed with the industry to prioritise. These developments, which became known as the 'Openreach Industry Commitments' (OICs), included several developments relating to AI services. One of these AI developments was the deployment of aggregation functionality at larger exchanges to allow multiple circuits to be multiplexed onto higher bandwidth circuits for

known as ‘high density handover’<sup>1172</sup> for In Building Handover (IBH) interconnection<sup>1173</sup> and also a request for an ISH interconnection<sup>1174</sup> option. All of these requests have a common theme which is a requirement for aggregation of Ethernet circuits for handover. This would enable multiple Ethernet circuits to be handed over to CPs on a single high bandwidth handover link rather than as individual circuits. This functionality is the standard method of handover for TI services but is not currently available for BT’s AISBO services.

- 12.68 Aggregated handover has the potential to make interconnection more efficient by reducing the overall amount of equipment required (and as a result reduce the amount of space and power consumed) and therefore to reduce costs. It could also help reduce pressure on space in BT exchanges which is a concern for CPs. An aggregated ISH handover option would be better suited to CPs with extensive network infrastructure and would enable CPs to interconnect at BT exchanges where no space is available.
- 12.69 Two of the three solutions analysed in the Openreach feasibility study proposed to aggregate multiple CPs’ EAD circuits by means of an Ethernet switch deployed and managed by Openreach. Openreach would then deliver multiple EADs to each CP aggregated onto high bandwidth links.
- 12.70 Given the potential benefits we considered it important that Openreach works with CPs to develop these new forms of interconnection as soon as reasonably possible so that deployment could proceed and CPs could begin to benefit from these enhancements.

*Whether there is a need for any further intervention to support mobile backhaul*

- 12.71 We did not consider it necessary to introduce a specific obligation requiring BT to provide mobile backhaul. As discussed above, MNOs will use either generic carrier Ethernet services or variants that support synchronisation capabilities, both of which fall within the scope of the wholesale low bandwidth AISBO markets. We considered that the proposed Ethernet access and backhaul obligations together with the obligation for BT to provide services on an EOI basis will be sufficient to address any competitive concerns. At the time we noted that Openreach was preparing to launch a SyncE variant of EAD that will be available to other CPs on an EOI basis.
- 12.72 Some CPs expressed concern that BT had refused them access to reference clock sources at local exchanges. They argued that they should also have access to these timing sources from which BT derives the timing information that it adds to mobile backhaul services (at BT local exchanges) for onward transmission to mobile base stations for synchronisation purposes.
- 12.73 We would be concerned if CPs were unable to self-provide timing information in a manner that would allow them to compete effectively with BT. However, from the information available to us it was not clear why CPs could not reasonably self-provide

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handover. In February 2012, Openreach closed this commitment to Ethernet aggregation on the basis that a feasibility study was conducted and concluded. At the time BT proposed to proceed with revised proposal from industry called High Density Handover (see footnote below) subject to industry supplying evidence of commercial demand.

<sup>1172</sup> Statement of Requirements 8166.

<sup>1173</sup> i.e. for interconnection at collocation space rented by a CP in a BT exchange.

<sup>1174</sup> i.e. interconnection in a manhole adjacent to a BT exchange.

timing information at their PoPs at BT local exchanges (for example by distributing timing information across their own backhaul networks). We also noted that Openreach was working with CPs to resolve any contractual issues with co-location space that may impede timing distribution. Consequently there did not seem to be a strong case for requiring BT to provide access to timing information.

*Availability of space and power in BT's local exchanges*

- 12.74 We acknowledged that accommodation services such as space and power in BT's local exchanges are an important element of the regulated services that BT provides in the AISBO market. In Section 13 of the June BCMR Consultation we discussed stakeholders' concerns about the availability and allocation of accommodation services in more detail.

*Circuit routing restrictions*

- 12.75 In defining remedies to address BT's market power in the 2007/8 Review, we reflected on how competition downstream of the AISBO market could develop further.
- 12.76 We considered that operators could benefit from economies of scale by building networks in a manner designed to exploit opportunities to aggregate traffic. In our view, CPs could realise economies of scale in the core of their networks to a much greater extent than in the access segments.
- 12.77 A number of CPs had built core networks by establishing PoPs in main population centres and had connected them with high-capacity resilient links. We considered that a CP's choice of location for a PoP would be driven by the number and concentration of customers it served in the area. Similarly, the design of a core network connecting those PoPs would be driven by the scale of traffic to be transmitted between the different areas. We observed that BT's network design had then established 106 main core nodes, which aggregated traffic from all the different services.
- 12.78 Our inference on how competition would work in the AI market was mainly based on the observations of the TI market. For the TI market, we noted that, in most circumstances, a CP would not locate (i.e. interconnect with BT) at more than one Tier 1 node in close proximity to another Tier 1 node within the same urban area. A CP would do so only if there was a sufficient volume of traffic within a particular urban centre to justify additional interconnection and therefore opportunities to exploit the economies of scale.
- 12.79 Therefore, our decision on the boundary between trunk and terminating segments in AI services was based on CPs' typical choice of interconnection, rather than on the location of core nodes in BT's network. In particular, we considered that it would be sustainable for a CP to reach national coverage in the AI market by interconnecting its core network with BT at just 56 different points, rather than at all 106 of BT's core nodes. For this purpose we grouped BT's 106 core nodes into 56 regional groups known as TANs.
- 12.80 When BT subsequently introduced its EAD service we understood that it had defined geographic catchment areas for each TAN based on the exchanges 'served' by each ASN (strictly those exchanges that can be reached from each ASN by EAD circuits subject to the distance limits imposed by BT). It then initially barred EAD circuit routings that crossed the boundaries of these TAN areas except for end-to-end

circuits (i.e. those between two end-user premises). Following discussions with CPs, these restrictions were subsequently suspended. However, CPs regard them as unduly restrictive and remain concerned that BT may reintroduce them.

- 12.81 The basis for the restrictions applied by BT is that EAD circuit routings that cross one of the TAN boundaries, as defined by BT, contain a trunk segment, which BT is not obliged to provide.
- 12.82 Having carefully considered this issue, we thought we should clarify the rules concerning routing of AI services between TANs.
- 12.83 For AI services, we define trunk segments as circuits between aggregation nodes rather than circuits routed between the catchment areas served by those aggregation nodes. Thus circuits that cross a catchment area boundary do not necessarily contain a trunk element. This differs from the approach in TI markets (as discussed in Section 6 of the June BCMR Consultation). On this basis, we believed it to be inappropriate to bar EAD circuits or other point-to-point circuits such as WES & BES from crossing the TAN boundaries. These are indeed point-to-point circuits that do not use any trunk element.
- 12.84 Furthermore, restrictions on point-to-point Ethernet circuits crossing catchment areas are likely to limit CPs' freedom to aggregate circuits in locations other than the ASN exchanges that BT has chosen for its own backhaul network and may therefore limit their ability to utilise their own network assets for backhaul. Such an outcome would be contrary to our objective of encouraging competition in backhaul. Therefore in our view, the TAN crossing restrictions should not be reintroduced in their current form.
- 12.85 In our view, the technical transmission limits which limit circuit radial distances (currently to 25km for the standard products and 35km for the extended reach products) should be sufficient to ensure that those products are not used to provide trunk connections. However we considered that it may be unnecessarily restrictive to specify distances limits in the SMP conditions since the technical capabilities of the equipment may change from time to time. We therefore proposed to adopt a more flexible approach and to require BT to provide circuits within TAN areas and between adjacent TAN areas.
- 12.86 In the interest of transparency, we clarified the circuit routing rules in the proposed SMP conditions. In particular we:
- i) defined access segments, backhaul segments, end-to-end segments and trunk segments;
  - ii) specified that BT is required to provide access segments, backhaul segments, end-to-end segments but not trunk segments; and
  - iii) specified that BT is required to provide access segments and backhaul segments that cross boundaries between adjacent TAN areas.

#### *Migration and switching processes*

- 12.87 Given the likely volume of migration from TI to AI services over the next few years, we considered whether migration arrangements could smooth this transition by minimising service interruptions and migration costs. However it appeared to us that the opportunities to do this may be fairly limited. Firstly, many businesses were likely to prefer the conventional approach, whereby a new service is installed alongside the

existing service as it provides the greatest assurance that the service interruption will be kept to a minimum. Secondly, whilst some aspects of migration arrangements might offer savings (for example through reuse of access network fibre) other aspects might be more costly than standard provision/cessation arrangements (for example simultaneous intervention at multiple points in a circuit to minimise service interruption).

- 12.88 We considered that Openreach should continue to explore opportunities for TI to AI migration processes in conjunction with CPs, and that it should provide further explanation about its reasons for rejecting the PPC/RBS to Ethernet upgrade path development that was part of the OICs.

*Openreach's product development process*

- 12.89 Several CPs told us that they are concerned about the operation of Openreach's product development process for AISBO services. They have the following specific concerns:
- CPs considered that Openreach has been slow to develop its product set to meet CPs' requirements and, in particular, had not delivered Ethernet aggregation and TI migration products as originally requested by industry as part of the OICs;
  - there is a widespread view amongst CPs that Openreach operates the product development process in a discriminatory manner, favouring the developments required by BT's downstream divisions over those required by other CPs;
  - the product development process, and particularly the initial evaluation of product development requests, is regarded as too slow. CPs considered that Openreach incorrectly classifies requests as commercial requests and consequently does not process them in accordance with the timetable and notification requirements specified in its regulatory obligations;
  - CPs considered that Openreach unreasonably refuses product development requests on the grounds that forecast product volumes would be insufficient or that developments would not be financially viable; and
  - CPs considered that Openreach unreasonably refuses product developments on grounds that BT Wholesale already provides unregulated services with similar functionality.
- 12.90 During the last few years, the industry, in cooperation with the OTA, had made significant improvements to the operational aspects of the product development process, particularly in relation to the coordination of requests by CPs to develop a shared vision of the developments that industry requires. For example, the SoR process had recently become more transparent: authorised CPs are now able to access the SoRs submitted by other CPs, decide to support them or simply follow Openreach's progress on each requirement. Under current arrangements, the industry discusses SoRs related to Ethernet products and systems in industry fora where CPs can engage with Openreach, articulate the rationale and details of their requirements and follow up on Openreach progress and conclusions. The OTA attends these meetings to facilitate discussion among industry stakeholders and help find solutions where issues arise.
- 12.91 The OTA has completed a review of Openreach's SoR process, covering all SoRs submitted in 2010 and 2011 across all products managed by Openreach (i.e.

including products outside the business connectivity markets such as WLR as well as Ethernet products). In relation to Ethernet-related SoRs, the OTA noted that there were similarities in the number of SoRs submitted by BT and CPs. However, there were differences in the time taken to process requests. In particular the OTA noted that SoRs from CPs that are still open, i.e. either being discussed or 'in development', had been in this state for an average of 479 days compared with an average of 365 days for those from BT's downstream businesses. To some extent, the differences appear to relate to the subject matter of the requests; however, the OTA has recommended that Openreach make some changes to improve the SoR process.

- 12.92 Whilst we acknowledged that there were concerns about the operation of the product development process for AISBO services, the concerns appeared to be mostly operational in nature, relating to how individual requests are processed. We therefore considered that generally these concerns could not easily be addressed by changes to the SMP conditions. In our view, the new network access obligations together with the obligation not to discriminate unduly (which we proposed to change to require EOI) would provide a clear framework under which BT must operate.
- 12.93 We therefore considered these concerns were best addressed at an operational level in the industry fora and in cooperation with the OTA. In cases where this proved unsuccessful, concerns could be escalated to Ofcom either informally or formally through the disputes and complaints processes.
- 12.94 However, we considered that it would be useful to clarify that we did not regard it as appropriate for Openreach to process some product development requests in accordance with its commercial process which has a more flexible timetable than that specified in the new network access SMP conditions. We noted that this condition, both in its existing and proposed forms, relates generally to requests for new product developments in the low-bandwidth AISBO markets and we would therefore expect that all requests relating to services within these markets (such as an Ethernet access or backhaul service or an associated interconnection/handover service at bandwidths up to and including 1Gbit/s) to be processed in accordance with this obligation, even where there may be some overlap with unregulated services provided by other parts of BT. We would therefore expect Openreach to process requests in accordance with the timetable specified in the condition. In particular, if there is no need to carry out a feasibility study, BT must respond within 15 working days. If a feasibility study is required BT must provide a response within 60 working days or exceptionally 85 working days. BT may only extend the timescale beyond 85 working days with agreement of the requestor or Ofcom.<sup>1175</sup>

#### *Openreach Project Services*

- 12.95 Project Services is a project coordination and management service provided by Openreach. It can be used to coordinate the provision of business connectivity services and also other Openreach services including projects containing a mix of services.
- 12.96 As Project Services is available to BT and CPs on an EOI basis, it seemed unlikely that the current arrangements were discriminatory. We noted that in 2011, in response to a request from CPs, the Equivalence of Access Office (EAO) investigated Project Services, concluding that BT had complied with its EOI obligations in the Undertakings in respect of Project Services.

<sup>1175</sup> As noted in the June BCMR Consultation, the condition provides for an extended timeline in cases where the need for a feasibility study is identified later in the process.



- 12.97 Although some aspects of Project Services are generic project management and coordination activities, it is unlikely that CPs could fully replicate the service as they would not have the internal knowledge of Openreach processes or have access to Openreach systems and personnel which Project Services is able to draw on. We therefore considered that when purchased in conjunction with regulated business connectivity services, Project Services should be regarded as a provisioning option for the service being purchased rather than as a downstream activity. Consequently when Project Services are provided in such circumstances they would be subject to the SMP conditions that we proposed for this market, including the EOI requirement that we proposed as part of the obligation for BT not to discriminate unduly.

*Excess construction charges*

- 12.98 UKCTA, CWW and Verizon raised concerns in the CFI about Excess Construction Charges (ECCs) which are levied by BT whenever customer-specific network construction work is required in association with an order. The issues fall into four categories:
- i) level of ECCs – CPs are concerned that ECCs may be overpriced as ECCs are higher than commercial construction rates;
  - ii) accounting treatment – CPs are concerned there may be an element of double counting if BT capitalises the assets which have been charged to CPs in ECCs;
  - iii) efficient design – CPs argue that BT's current practice of serving business sites from remote fibre flexibility points is inefficient and BT should install internal fibre flexibility points in business sites as a matter of course; and
  - iv) unequal treatment – One CP was concerned that BT may not treat internal orders in the same manner as external orders.

- 12.99 The first two points were addressed in the LLCC Consultation.

*Efficient design*

- 12.100 BT levies ECCs for access network extensions that are specific to an individual customer. In the case of fibre based services such as Ethernet services this generally equates to network extensions between the serving fibre flexibility point (analogous to a Distribution Point in BT's copper access network) and the customer's premises. Fibre flexibility points may be external (located in underground structures in the access network) or internal (located within business premises). Extensions to the common parts of BT's network, such as the installation of a new fibre flexibility point, are not charged as ECCs even when undertaken to fulfil a customer order.
- 12.101 We sought information from BT about its network design policy. BT explained that it extends its fibre access network on a reactive basis (i.e. in response to customers' orders) and that its design policy is to adopt an efficient design that maximises the common parts of the network. Thus, a new flexibility point would be considered where there is likely to be future demand for fibre based services in a particular locality. In practice, when deciding whether a new fibre flexibility point is warranted, planners are expected to exercise their judgment about future demand for fibre based services.
- 12.102 Until recently, BT had not routinely installed internal fibre flexibility points in multi-floor and multi-tenant buildings. CPs argued that it would be more efficient for BT to install

fibre flexibility points as further orders are likely in such buildings. BT supplied us with analysis which appeared to demonstrate that, historically at least, it was uncommon for BT to receive orders from more than one customer at business sites.<sup>1176</sup>

12.103 BT had recently changed its policy about internal fibre flexibility points. This now specifies that they should be installed at multi-floor and multi-tenanted buildings where a secure common area is available to site the flexibility point and permission can be obtained from the building's owner to use it.<sup>1177,1178</sup>

12.104 We welcomed the changes that BT has made to its network design policy which we considered should go some way to addressing CPs' concerns.

### *Unequal treatment*

12.105 We sought further information from BT about the incidence of ECCs and focused our analysis on Ethernet services as they account for the bulk of new orders. Information provided by BT for the period April to September 2011 shows that 30% of EAD orders incurred ECCs and that both the incidence and average value of ECCs incurred by BT are slightly higher than for CPs. This does not suggest that ECCs are being applied in a discriminatory manner.

## **Remedies proposed in the June BCMR Consultation**

12.106 In light of all of the above, we then set out our assessment of the appropriate remedies for the AISBO markets. Figure 12.7 below summarises the competition problems we identified in the AISBO markets and the remedies we proposed to address them:

**Figure 12.7: Summary of the competition problems and proposed remedies**

Competition problems	Proposed remedies for the wholesale low bandwidth AISBO market in the UK excluding the WECLA and the Hull area	Proposed remedies for the wholesale low bandwidth AISBO market in the WECLA
Refusal to supply	Requirement to provide network access on reasonable request	Requirement to provide network access on reasonable request
	Requirement to provide Ethernet services on reasonable request (disaggregated Ethernet access and backhaul)	Requirement to provide Ethernet services on reasonable request (disaggregated Ethernet access and backhaul)
<ul style="list-style-type: none"> <li>Price discrimination;</li> <li>Non-price discrimination, e.g. different terms and conditions, delaying tactics</li> </ul>	Requirement to provide all network access on Equivalence of Input basis	Requirement to provide all network access on Equivalence of Input basis
	Obligation not to discriminate unduly	Obligation not to discriminate unduly

<sup>1176</sup> This analysis examined a sample of sites where a fibre bundle was installed in 2005. In the following 5 years a further fibre bundle was installed in only around 10% of these sites.

<sup>1177</sup> This policy applies to all multi-floor/multi-tenant buildings, including those already served with fibre without a flexibility point. New flexibility points are installed when an order is received.

<sup>1178</sup> BT has provided us with a copy of its planning policy for reactive provision of access network fibre for point-to-point services which appears consistent with this approach.

Competition problems	Proposed remedies for the wholesale low bandwidth AISBO market in the UK excluding the WECLA and the Hull area	Proposed remedies for the wholesale low bandwidth AISBO market in the WECLA
(different delivery timescales for provision and fault repair); strategic design of products; exclusive dealing; quality discrimination; different SLAs and SLGs; <ul style="list-style-type: none"> <li>• Predatory pricing;</li> <li>• Margin squeeze.</li> </ul>	Publication of reference offer	Publication of reference offer
	Requirement to notify changes to charges and T&Cs	Requirement to notify changes to charges and T&Cs
	Publication of quality of service as required by Ofcom	Publication of quality of service as required by Ofcom
	Notification of technical information	Notification of technical information
<ul style="list-style-type: none"> <li>• Price and non-price discrimination;</li> <li>• Excessive pricing;</li> <li>• Predatory pricing;</li> <li>• Margin squeeze.</li> </ul>	Accounting and accounting separation obligations	Accounting and accounting separation obligations
<ul style="list-style-type: none"> <li>• Cross-subsidisation</li> <li>• Excessive pricing</li> <li>• Over investments</li> <li>• Excessive costs/inefficiencies</li> </ul>	Price control	Less strict form of price control
<ul style="list-style-type: none"> <li>• Refusal to supply new network access;</li> <li>• Non-price discrimination, e.g. delaying tactics, strategic product design, etc.</li> </ul>	Requests for new network access	Requests for new network access

### Summary of the remedies proposed in the June BCMR Consultation

12.107 Below we summarise the key elements of our proposed remedies.

#### *Interconnection and accommodation services*

12.108 We explained that in order to use the wholesale AISBO services that BT provides in these markets, CPs also require certain interconnection and accommodation services. We proposed that it was necessary to regulate the provision of such ancillary services, in the absence of which, we considered BT would have an incentive to refuse to supply or supply in a discriminatory manner such as by charging excessive prices. We therefore proposed that for each of the obligations we proposed (set out below) for these markets also applies to the provision of accommodation and interconnection services that are reasonably required by CPs in connection with the provision of the regulated services. The specific types of services we proposed BT should be required to provide were detailed in Section 13 of the June BCMR Consultation and our conclusions following consultation are discussed in Section 14 of this Statement.

#### *Requirement to provide network access*

12.109 As a result of its SMP, we considered that it is appropriate to impose a requirement on BT to meet reasonable requests for network access. We considered that, in the absence of such a requirement, BT would have an incentive not to provide such access and would be able to monopolise the provision of services in the downstream markets.

*Specific remedies for the provision of Ethernet access, backhaul and end-to-end services*

12.110 We proposed that, in order to further our policy of supporting investment in competing backhaul infrastructure, we would require BT to provide Ethernet access and Ethernet backhaul by introducing specific SMP conditions to this effect. The aim of these requirements being to ensure that BT continues to supply disaggregated Ethernet access and backhaul and guard against the withdrawal of such services which would be extremely disruptive to CPs and consumers. For similar reasons, we proposed that BT be required to provide short range (up to 25km) wholesale end-to-end services which provide for a more efficient solution for short range AI services than constructing services using terminating segments.

*Requirement not to unduly discriminate and Equivalence of Input*

12.111 We proposed requiring BT not to discriminate unduly in the provision of network access in response to our provisional finding of SMP in the AISBO markets. Such an obligation is intended as a complementary remedy to the network access obligations, principally to prevent BT from unduly discriminating in favour of its own downstream divisions and to ensure that competing providers are placed in an equivalent position. We further proposed that BT should be specifically required to provide Ethernet services on an EOI basis in order to prevent BT from engaging in forms of price or non-price discriminatory practices (which may or may not be undue) that could adversely affect competition. As Openreach continues to develop Ethernet products and services, we considered that EOI provides the right incentives on BT to continue to make such products and services available to both its downstream divisions and competitors.

12.112 We also proposed that the obligation not to discriminate unduly should also apply to pricing discounts. In relation to volume discounts we explained that these would very often constitute undue discrimination in practice since BT's downstream divisions would almost inevitably be the main beneficiary giving rise to a strong potential for ant-competitive effects. With regard to geographic and term discounts we considered that these may or may not be unduly discriminatory depending on the circumstances and that we would judge any alleged breach on a case by case basis.

*Direction relating to service level guarantees*

12.113 CPs are dependent on BT for the provision of wholesale services. Whilst the proposed EOI requirements provide some incentive on BT to deliver efficient and reliable services to CPs (as BT's own downstream divisions must also use them) we proposed that, based on conclusions reached in previous work which we considered remain valid, further measures are required to incentivise good performance.

12.114 We proposed that contractual arrangements need to include:

- a set of Service Level Agreements (SLAs) which reflects the commercial SLAs provided to end users of AI leased lines; and
- a set of Service Level Guarantees (SLGs) which sets out fair and reasonable compensations for delays in delivery and repair of such services.

12.115 We proposed to retain the direction issued under the network access obligation in the 2007/8 Review. The direction would require BT to:

- pay compensation for orders not delivered by the Contractual Delivery Date (CDD) or the Customer Requirements Date (whichever is later);
- pay compensation for faults not repaired within 5 hours;
- pay SLG compensation payments proactively;
- not apply any limits to compensation payments; and
- make compensation payments without prejudice to any right of CPs to claim for additional losses.

#### *Price controls*

12.116 We proposed to impose a charge control to address BT's ability and incentive to charge excessive prices.

12.117 As we proposed defining two distinct geographic markets outside the Hull area for wholesale low bandwidth AISBO services: the WECLA and the rest of the UK, in which we proposed that BT has SMP in both markets, we considered that some form of price control is appropriate in both geographic markets. However, we also considered it was appropriate to take account of the different competitive conditions in determining what form of charge control to impose in each of these geographic markets.

12.118 We set out our proposals on the form, scope and level of the charge control in our LLCC Consultation.

#### *Transparency and notification obligations*

12.119 We proposed that BT should remain subject to the following SMP obligations aimed at promoting transparency and ensuring non-discrimination:

- An obligation to publish a reference offer, including terms and conditions of provisioning and repair. The published reference offer must set out (at a minimum) such matters as:
  - a clear description of the services on offer including technical characteristics and operational process for service establishment, ordering and repair;
  - the locations of points of network access and the technical standards for network access;
  - conditions for access to ancillary and supplementary services associated with the network access including operational support systems and databases etc;
  - contractual terms and conditions, including dispute resolution and contract negotiation/renegotiation arrangements;
  - charges, terms and payment procedures;
  - service level agreements and service level guarantees; and

- to the extent that BT uses the service in a different manner to CPs or uses similar services, BT is required to publish a reference offer in relation to those services.
- An obligation to give 28 days' notice of price reductions and to give 90 days' notice of all other changes to prices, terms and conditions for existing AISBO services.
- An obligation to give 28 days' notice of the introduction of prices, terms and conditions for new AISBO services.
- A requirement to notify technical information with 90 days notice.
- An obligation to publish quality of service information, as directed by Ofcom.
- Obligations relating to requests for new network access including:
  - a requirement for BT to publish reasonable guidelines specifying the required content and form of requests for new network access and how they will be handled;
  - a requirement for BT to provide sufficient technical information to CPs to allow them to draft product specifications that are efficient and which satisfy the reasonable requirements; and
  - timescales within which BT must acknowledge and process requests.

## Revisions to AISBO remedies proposed in the November BCMR Consultation

12.120 Below we set out:

- the further assessment we carried out in the November BCMR Consultation<sup>1179</sup> in which we consulted *inter alia* on revised proposals which are relevant to our consideration of remedies for the AISBO markets, in particular:
  - Service level guarantees; and
  - AISBO Trunk Aggregation Nodes and circuit routing rules.

### Revised proposals in respect of service level guarantees

12.121 In Section 3 of the November BCMR Consultation, we explained that we had made a drafting error in the June BCMR Consultation in that we had unintentionally proposed a service level guarantee (SLG) Direction which omitted compensation caps, whereas we had intended to propose an SLG Direction which directed, amongst other things, that there should be caps of 60 working days for late provision compensation payments and of 200 hours for compensation payments for late repairs. We had not intended in the June BCMR Consultation to make any change to these compensation caps which we had originally imposed in our 2008 SLG

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<sup>1179</sup> 'Business Connectivity Market Review, Further consultation' published by Ofcom on 15 November 2012 and is at [http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr-reconsultation/summary/BCMR\\_Nov\\_2012.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/bcmr-reconsultation/summary/BCMR_Nov_2012.pdf)

Statement, which we considered remained appropriate to address the competition problems we had identified in this market review.<sup>1180</sup>

12.122 Taking into account the correction described above, our proposed SLG Directions would therefore require BT to:

- pay compensation for orders not delivered by the Contractual Delivery Date (CDD) or the Customer Requirements Date (whichever is later), subject to specified compensation limits;
- pay compensation for faults not repaired within 5 hours, subject to specified compensation limits;
- pay SLG compensation payments proactively; and
- make compensation payments without prejudice to any right of CPs to claim for additional losses.

12.123 Specifically in relation to the proposal to apply compensation caps, we considered the reasoning as set out in the 2008 SLG Statement for the imposition of the original SLG Direction<sup>1181</sup> remained valid and supported our revised proposal, in particular that:

- we continued to consider that the absence of caps could expose BT to unlimited financial risk; and
- in recognising there is a balance to be struck between, on the one hand, ensuring that appropriate compensation is paid in such a way to incentivise performance, and on the other, ensuring we are not introducing unreasonable burdens on BT, we considered that the proposed level for the compensation caps continued to achieve that balance.

### **Revised proposals in respect of AISBO Trunk Aggregation Nodes and circuit routing rules**

12.124 In Section 5 of the November BCMR Consultation, in light of stakeholders' responses to the June BCMR Consultation, we proposed changes to the rules we proposed in the June BCMR Consultation, specifically:

- changes to the proposed definition of TAN, as used for the purposes of the proposed SMP services conditions. In particular, we proposed changes to the list of BT operational buildings which we assigned to each of the TANs;
- changes to our proposals in relation to circuit routing restrictions. To give effect to this proposal, we proposed to remove certain wording from proposed SMP services condition 2 entitled "Specific forms of network access"; and
- changes to the proposed definition of Backhaul Segment, as used for the purposes of the proposed SMP services conditions.

<sup>1180</sup> 'Service level guarantees; incentivising performance, Statement and Directions' published by Ofcom on 20 March 2008, <http://stakeholders.ofcom.org.uk/binaries/consultations/slq/statement/statement.pdf>

<sup>1181</sup> Annex 3 of the above 2008 SLG Statement. This Direction was imposed under SMP services condition HH1 which itself was imposed as a result of the 2004 BCMR.

## Changes to the assignment of BT's operational buildings to AISBO TANs

12.125 In light of BT's response to the June BCMR Consultation, we acknowledged that we had unintentionally modified the TAN definition by including some OHPs that were previously not assigned to TANs. In fact, our view remained that the conclusions of the 2007/8 Review in relation to the TAN definition were valid.

12.126 To correct this, we proposed to change the definition of TAN by changing Column 2 (BT operational buildings) of Table 2 as shown below.

**"Trunk Aggregation Node"** means a node listed in Column 1 of Table 2 below consisting of any one or more of the Dominant Provider's operational buildings as listed in Column 2 of Table 2 below;

**Table 2: Trunk Aggregation Nodes**

<b>Column 1: Trunk Aggregation Nodes</b>	<b>Column 2: BT operational buildings</b>
Aberdeen	Aberdeen Central; <del>Inverness Macdhui</del>
Basingstoke	Basingstoke/Bounty
Belfast	Belfast/City; Belfast/Seymour; <del>Portadown</del>
Birmingham	Birmingham Central; Birmingham Midland Birmingham Perryfields (Bromsgrove); Erdington
Bishops Stortford	Bishops Stortford
Brighton	Brighton Hove
Bristol	Bedminster, Bristol Redcliffe; <del>Yeovil</del>
Cambridge	Cambridge Trunks
Cardiff/Newport	<del>Aberystwyth; Bridgwater;</del> Cardiff; Newport (Gwent); <del>Swansea</del>
Carlisle	Carlisle
Chelmsford	Chelmsford Town; <del>Southend-On-Sea</del>
Coventry	Coventry Greyfriar; Leamington Spa
Crawley	Crawley
Croydon	Croydon
Darlington	Darlington
Derby	Derby
Doncaster	Doncaster; <del>Lincoln</del>
Edinburgh	Edinburgh Donaldson
Exeter	Exeter Castle; <del>Truro;</del> Plymouth
Falkirk	<del>Dundee Tay;</del> Falkirk
Glasgow/Clyde Valley	Glasgow Central; Glasgow Douglas
Gloucester	Gloucester
Guildford	Guildford/Martyr
Ipswich	Colchester Town; Ipswich Town; <del>Norwich City</del>
Irvine	Irvine
Kendal	Kendal
Kingston	Kingston
Leeds	Bradford (2); Leeds (3); <del>Pontefract</del>
Leicester	Leicester Montfort
Liverpool	Liverpool Central; <del>Wrexham Grosvenor;</del> Bangor (Wales)
London Central	BT Tower (West Block); Covent Garden, Faraday Te (Moorgate), South Kensington; Southbank



London Docklands	Bermondsey; Stepney Green
London East	Hornchurch, Kidbrooke, Upton Park; Woodford
London North	Potters Bar
London West	Colindale; Ealing; Southall
Luton	Luton Ate/Tower Block
Maidstone	<del>Ashford</del> ; Maidstone; <del>Tunbridge Wells</del>
Manchester	Bolton; Dial House (Manchester); Oldham; Pendleton
Milton Keynes	<del>Bedford Town</del> ; Milton Keynes
Newcastle	Newcastle Central; South Shields
Northampton	Northampton
Nottingham	Nottingham Longbow
Oxford	Oxford City
Peterborough	Peterborough Wentw
Portsmouth/Southampton	<del>Bournemouth</del> ; Cosham; Southampton
Preston	Preston (Lancs)
Reading	Bracknell
Salisbury	Salisbury
Sheffield	Chesterfield; Sheffield Cutler
Slough	High Wycombe; Slough
Stoke	Stoke Trinity/Pott
Swindon	Swindon
Warrington	Ashton In Makerfield; Northwich
Watford	<del>Hemel Hempstead</del> ; Watford
Wolverhampton	Walsall Central, Wolverhampton Central; <del>Shrewsbury</del>
York	Malton

### Changes to our proposals in relation to circuit routing restrictions

- 12.127 In the June BCMR Consultation, we sought to clarify the rules concerning routing between TANs in the proposed AISBO markets in response to concerns expressed by stakeholders about restrictions which BT had initially imposed (but subsequently suspended) for the provision of certain EAD circuits that crossed the boundaries between TAN areas.
- 12.128 Predicated on our understanding that BT had defined catchment areas for each TAN, we set out our reasoning and proposals which, amongst other things, specified that BT was required to provide access and backhaul segments that cross boundaries between adjacent TANs. We proposed to give effect to this in proposed SMP services condition 2.1.
- 12.129 In its response to the June BCMR Consultation, BT pointed out that we were incorrect to suggest that BT or anyone else had defined the catchment area of the TANs in terms of geographical boundaries, although BT noted that the industry had discussed such a definition but had not reached any agreement.
- 12.130 In the November BCMR Consultation, we explained that we accepted that the industry had not reached agreement on the definition of TAN catchment areas. It was clear therefore that the circuit routing proposals in the June BCMR Consultation would not provide the clarification we intended because they were predicated on the existence of such an agreed definition.

12.131 Having reviewed the matter further, we considered that a simpler set of rules should suffice. In essence, our revised proposals would codify the current arrangements whereby Openreach would:

- provide wholesale end-to-end services, such as EAD, between any two end-user premises up to 25km;
- provide terminating segments, such as EAD, between two points subject only to the distance limits specified for the products;
- provide EBD backhaul services between ASNs and one of the OHPs in the TANs to which they are connected; and
- provide customer sited handover of EBD services by means of a BTL circuit; but
- not have to provide circuits between OHPs in different TANs.

12.132 As set out in the June BCMR Consultation<sup>1182</sup>, we considered that the maximum radial range of BT's wholesale AISBO access products, currently 25km for standard products and 35km for extended reach products, would limit sufficiently the extent to which those products are used to provide trunk connections.

12.133 We therefore changed our proposed circuit routing rules in proposed SMP services condition 2.1(a) such that terminating segments and wholesale end-to-end segments are not restricted to circumstances in which the ends of each service lie either in the same or adjacent TANs. The circuits which we define as trunk segments, and which are therefore excluded from the wholesale AISBO markets, are services connecting any two of BT's operational buildings which are assigned to different TANs.

#### Minor amendment to the definition of Backhaul Segment

12.134 In the November BCMR Consultation we proposed a minor amendment to the definition of Backhaul Segment to clarify that backhaul segments include circuits between two CP network nodes as well as those between BT network nodes and between BT network nodes and CP network nodes. This was omitted from the proposed definition of Backhaul Segment as set out in the June BCMR Consultation.

## **Responses to the June and November BCMR Consultations and Ofcom's considerations**

### **Consultation responses in relation to interconnection and accommodation services**

#### High density handover

12.135 Three respondents commented about the high density handover development requested by CPs. The main points made were:

- BT agreed that there may be potential benefits to CPs from the introduction of new forms of handover but argued that the potential feasibility of any solutions needed to be considered against the need for commercial viability.

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<sup>1182</sup> See paragraphs 11.92 to 11.94.

- Level 3 noted that BT has not yet delivered aggregated handover products despite repeated requests from CPs dating back several years. It argued that absent a specific obligation a satisfactory outcome would not be achieved.
- Exponential-e urged Ofcom to focus on the delivery of a 'high density handover' solution in view of the shortage of exchange space.
- Exponential-e also argued that BT had unreasonably rejected the 'Direct Connect' solution preferred by CPs as an alternative to the aggregated handover options being considered by BT.<sup>1183</sup> It noted that Openreach had rejected earlier aggregated handover developments on cost grounds. It argued that Direct Connect would be cheaper than aggregated handover, consume less exchange space and give CPs greater control of the Operations, Maintenance and Administration functionality of EAD circuits.

### Ofcom's considerations

12.136 We consider that aggregated handover could make Ethernet interconnection more efficient and reduce the pressure on accommodation space in BT exchanges. We therefore remain of the view that Openreach should work with CPs to develop detailed proposals as soon as reasonably possible.

12.137 We acknowledge that there is some frustration amongst CPs that Openreach has not delivered an aggregated handover product or an alternative such as 'Direct Connect'. Ultimately if CPs are unable to reach agreement with Openreach about these developments and consider that BT has not complied with its obligation to provide network access upon reasonable request they have recourse to the dispute process.

### Allocation of space and power

12.138 Telefónica, CWW and Exponential-e specifically welcomed our proposal to impose SMP conditions requiring BT to allocate space and power on the basis of EOI.

12.139 Telefónica sought clarification that our proposed EOI obligations in respect of space and power allocation would apply to both fixed and mobile deployments.

### Ofcom's considerations

12.140 We consider that fixed and mobile backhaul falls within the scope of the markets which would be subject to Condition 4.2(a). Consequently the EOI obligations for space and power allocation would apply in connection with the provision of network access for fixed and mobile backhaul.

## **Consultation responses in relation to specific remedies for the provision of Ethernet access, backhaul and end-to-end services**

### Depth of interconnection

12.141 In its response to the June BCMR Consultation, CWW argued that CPs find it difficult to compete effectively with BT using the disaggregated wholesale products that BT currently provides. CWW noted that since the last review there has been a great increase in the use of the EAD LA product because it offers the most cost effective

<sup>1183</sup> With this form of handover, Openreach would provide the terminal equipment at customers' premises and connect EAD circuits directly to CPs' equipment in BT exchanges without any intermediate equipment.

method of provision where volumes justify the deployment of aggregation equipment at a BT local exchange. BT's scale and scope enable it to deploy aggregation equipment at more local exchanges than other CPs. This disparity in the 'depth of interconnection' makes it difficult for CPs to compete effectively with BT as they have to use less cost effective methods of provision than BT at exchanges where they cannot justify a PoP.

12.142 CWW subsequently made a further submission to Ofcom in which it provided a worked example illustrating how BT would be able to achieve a lower unit cost of provision than CWW. [REDACTED]:

- [REDACTED];
- [REDACTED]; and
- [REDACTED].

12.143 CWW argued that the number of points of interconnection at which disaggregated wholesale products are available should be limited to a smaller set of exchanges so that CPs are able to achieve comparable economies of scale and scope as BT. CWW proposed the 1090 exchanges nominated by BT for NGA handover as suitable candidates on ground that these represent the economic boundary for efficient handover for CPs. CWW foresaw that without such a constraint we will need to intervene to regulate BT Wholesale geographically in order to maintain competition in downstream retail markets.

12.144 Under this approach smaller exchanges would be parented to larger exchanges from which services would be available at EAD LA prices. CWW noted that this would result in a proportion of EAD LA circuits being longer than at present as they would serve sites outside the serving exchange area and as a result, the average price may need to rise marginally.

12.145 As an alternative, CWW proposed that the EAD LA product be enhanced to include a per-meter additional charge payable between the serving exchange and handover exchange.

12.146 CWW asked whether, in future, the OTA might have a mediation role in order to secure a common agreement on the location and number of handover points for a given service.

### Ofcom's considerations

12.147 In imposing remedies on BT in the AISBO markets, our approach is designed to promote effective competition in downstream markets by specifying forms of access to promote economically efficient infrastructure-based competition. Specifically, our aim in requiring BT to provide disaggregated access and backhaul is to provide incentives for CPs to invest in alternative backhaul infrastructure to BT's.<sup>1184</sup>

12.148 CWW proposed that we limit the number of exchanges at which BT should make disaggregated products available, and that 1,090 such exchanges represent, in effect, the economic boundary for effective and sustainable investment in alternative infrastructure to BT's. However, we do not consider that it would be appropriate for

<sup>1184</sup> This approach is consistent with the BEREC Common Position. See, in this respect, **BP3** and **BP3a** and footnote 5 to **BP3a**.

us to determine such a boundary. Since the AISBO markets are growing it seems likely that CPs will have opportunities to expand the coverage of their AI networks in future and also to achieve greater scale economies as volumes increase, and if we were to intervene in the manner that CWW has proposed we would risk curtailing competing investment at an arbitrary level.

- 12.149 We consider that the appropriate economic boundary should be determined by CPs' economic considerations rather than by regulatory intervention. We have therefore decided not to intervene in the manner that CWW has proposed.

#### Mobile backhaul remedies

- 12.150 BT agreed with our view that it is not necessary to introduce a specific obligation requiring BT to provide mobile backhaul. In its view the existing products offered by Openreach together with the new SyncE product to be launched imminently, adequately meet the requirements of MNOs. BT also considered that it is not necessary to require BT to provide CPs with access to reference clock sources and confirmed that the SyncE variant of EAD will allow CPs to transport their own timing signals.

- 12.151 EE/MBNL disagreed with our assessment. In their view the competition problems associated with mobile backhaul warrant the definition of a separate market for mobile backhaul and/or imposition of specific mobile backhaul remedies.

- 12.152 Whilst accepting that the MEAS product which MNOs purchase from BT for mobile backhaul uses the generic wholesale Ethernet services, EE/MBNL argued that the nature of this bundled product and the competitive conditions in which it is purchased are very different from the rest of the AISBO market from which inputs to the MEAS product are sourced. In particular, the requirement for connectivity between a large number of geographically dispersed base station sites and mobile core networks means that MNOs effectively have no choice but to fulfil significant proportions of their backhaul requirements from BT.

- 12.153 [REDACTED]

- 12.154 [REDACTED]

- 12.155 Telefónica generally welcomed our proposals in relation to the price control on SyncE. It expressed concern, however, that the introduction by BT of a SyncE variant of EAD represented a risk to its business, because as it intends to deploy Ethernet in large volumes in support of the rollout of LTE networks, it could face remedial upgrade costs, paying BT once to provide or upgrade to 1Gbit/s EADs and then again to upgrade to SyncE. Telefónica asked us to consider protective measures and some regulatory encouragement to BT to make its SyncE product available sooner.

#### Ofcom's considerations

##### *Need for a specific mobile backhaul remedies*

- 12.156 We have considered EE/MBNL's comments about the nature of mobile backhaul demand and competitive conditions in the supply of mobile backhaul in Section 4. We have concluded that Ethernet mobile backhaul should be included in the wholesale AISBO markets. Our decision, set out in this Section, to require BT to meet reasonable requests for network access, provide Ethernet access and backhaul and to provide network access on an EOI basis is sufficient to address the competition

concerns we have identified in the wholesale AISBO markets. The scope of the network access obligation related to AISBO markets therefore includes an obligation to meet reasonable requests for forms of network access such as generic carrier Ethernet services or variants that support synchronisation capabilities which are inputs to Ethernet based mobile backhaul products. Given this we do not see a need for additional mobile backhaul remedies.

12.157 We discuss our conclusions on the application of the price control remedy to SyncE variants of BT's wholesale Ethernet products in Section 20.

#### *SyncE products*

12.158 In the June BCMR Consultation, we reported that Openreach was preparing to launch a SyncE variant of EAD in support of CP's requirements. In January 2013 Openreach announced that it has decided to delay launch of its SyncE product citing uncertainty about near-term demand.

12.159 Openreach has told us that it has delayed the launch because customer feedback indicates that whilst demand is expected in future, in the short term customers plan to use alternative solutions for mobile backhaul synchronisation.<sup>1185</sup> Also discussions with customers indicate that there may not be demand at current cost levels. Openreach has told us that it has completed most of the development work for its SyncE product and remains committed to providing it. It therefore plans to continue its dialogue with interested CPs in order to determine the right approach to deploy this product.

12.160 However, it is not clear to us that CPs share Openreach's understanding of the current position and, in particular, some CPs believe there is an immediate requirement for a SyncE variant of EAD in order to provide mobile backhaul solutions to the growing backhaul capacity requirements of MNOs.

12.161 We would therefore encourage interested CPs to make their requirements known to Openreach and, to the extent it is necessary and appropriate, we are prepared to facilitate progress on this matter.

### **Consultation responses in relation to a requirement not to unduly discriminate and Equivalence of Input**

#### **Requirement to provide Ethernet services on an Equivalence of Input basis**

12.162 CWW and TalkTalk welcomed our proposal to impose a requirement on BT not to discriminate unduly in the provision of network access and, specifically, to require that Ethernet services are supplied to competitors on an EOI basis. Other respondents did not comment specifically on our proposals.

12.163 BT did not disagree with the imposition of an obligation not to unduly discriminate, but strongly disagreed with our proposal to impose an EOI SMP remedy in the AISBO markets.

12.164 In summary, BT's position was that:

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<sup>1185</sup> In the June BCMR Consultation we noted that two technologies are preferred by MNOs for synchronisation over carrier Ethernet services – IEEE 1588 and SyncE protocols.

- a) EOI is the most onerous form of non-discrimination obligation. If it is to be imposed, we must be able to identify clearly the market failures which this remedy is intended to address, and articulate why no lesser form of non-discrimination obligation will suffice.
- b) We had listed the specific concerns that we considered might need to be addressed in relation to non-price discrimination and in relation to pricing (paragraph 11.65 of the June BCMR Consultation). In BT's view, none of these (by our own assessment) support the conclusion that all AISBO products need to be made subject to EOI.
- c) Our assessment of the reasons why it is appropriate to impose an EOI obligation (as set out in paragraph 11.143 and paragraph 11.144 of the June BCMR Consultation) do not, in BT's view, provide an adequate justification for the imposition of such an onerous obligation and is flawed in a number of respects. In particular:
  - We have focused solely on the potential for harm on the market downstream of the wholesale AISBO market.
  - In looking at the potential for harm downstream, BT says that we make only the most sweeping of generalisations, which hold true in any upstream/downstream market, that competition downstream may be affected by discriminatory behaviour. BT argues that these generalised assertions are insufficient to justify imposition of EOI over and above an undue discrimination obligation.
  - BT believes that our conclusion that there is a need for EOI is based on an incorrect assessment of the distinction between what would be required of BT (as a vertically integrated operator) under a no undue discrimination obligation as compared with what would be required under an EOI obligation.
  - BT further suggests that we have had no, or insufficient, regard as to how the imposition of such an onerous obligation would impact on BT in relation to its position as one of a number of competitors in the upstream market which is, at the very least, prospectively competitive and where BT is not an enduring monopolist (bottleneck) supplier, and has undertaken no balancing exercise of potential benefits on the downstream market versus potential disbenefits on the upstream market (e.g. the potential for such a remedy to increase barriers to entry or expansion for other competitors in the upstream market). When weighed correctly in the regulatory balance, the risks of regulatory disbenefit upstream if an SMP EOI obligation is applied outweigh the risks that will arise downstream if BT is subject only to the normal undue discrimination obligation (as that applies to a vertically integrated operator).
- d) BT argues that when these factors are correctly assessed, it leads to the conclusion that EOI is a disproportionate remedy and that the normal undue discrimination remedy (as that applies to a vertically integrated operator) will suffice. Accordingly, our proposed Condition 4 does not pass the relevant Communications Act legal tests in relation to wholesale AISBO services.

## Ofcom's considerations

### *Our aims and conclusions relevant to the principle of proportionality*

- 12.165 We recognise that an EOI obligation should be imposed only when the cost is proportionate. We have therefore carefully re-examined whether it would be proportionate to impose on BT an EOI obligation in the wholesale AISBO market in the WECLA, the wholesale AISBO market outside the WECLA and the wholesale MISBO market outside the WECLA (together, the Relevant Modern Markets).
- 12.166 Our conclusion is that, in balancing the aim pursued in this regard, and set out below, with associated costs and benefits, the imposition of an EOI obligation for the provision of Ethernet and WDM-based services in these markets is the necessary form of non-discrimination obligation required to effectively address the relevant competition problems we have identified, in particular BT's ability and incentive to engage in discriminatory pricing and non-pricing practices in favour of its downstream divisions in the provision of services in the Relevant Modern Markets.
- 12.167 In reaching this conclusion, we have had regard to a number of relevant considerations looking at the characteristics specific to the provision of Ethernet and WDM-based services in the Relevant Modern Markets. Our considerations include not only the above-mentioned particular competition problems, but also the need to secure our duties to further the interests of citizens and consumers in these markets by promoting competition in respect of choice, price, quality of service and value for money. We are required, in particular, to secure the availability throughout the UK of a wide range of electronic communications services. This duty also means that the desirability of encouraging the availability and use of high speed data transfer services throughout the UK is a particularly important objective to bear in mind in relation to Ethernet and WDM-based services and the effectiveness of this non-discrimination remedy.

### *The importance of creating a level playing field on the related downstream retail markets to the Relevant Modern Markets*

- 12.168 BT argues that we must be able to identify clearly the market failures which EOI is intended to address, and articulate why no lesser form of non-discrimination obligation will suffice.
- 12.169 First, for the reasons set out in Section 7, the thorough and overall analysis we have undertaken of the economic characteristics of each of these markets, based on existing market conditions, has led us to conclude that BT has SMP in the Relevant Modern Markets.
- 12.170 Secondly, the "market failures" to which BT refers, and which EOI is intended to address, arise as a result of the SMP in these wholesale markets and manifest themselves in the related downstream retail markets, as we explain below.
- 12.171 Leased lines are essential components for many downstream applications used by business customers. They also play an important role for CPs in delivering their own services to consumers, particularly as the majority of CPs remain reliant on BT's network in doing so. Specifically, Ethernet access and backhaul services are important inputs to major downstream retail markets which are important to the UK economy – including the market for fixed broadband services, the retail AI and MI leased lines markets and the mobile market.



12.172 By their nature, leased lines provide dedicated symmetric transmission capacity between fixed locations. The impact of any poor performance in developing, delivering, maintaining or repairing relevant products is therefore likely to be much larger than the price of the leased line itself, because of the detriments such failures are likely to have on downstream applications. Therefore, a buyer of a leased line is likely to choose a supplier that it is reliable in delivering them, for example, on time (including for any repairs required), consistently at the quality needed, using reliable systems and scalable processes.

12.173 This issue is particularly significant for Ethernet and WDM-based services, because they are now preferred in most new installations for higher bandwidths and demands for such bandwidths are expected to grow in the future. The rapid growth in the wholesale AISBO and MISBO markets is a significant development since the 2007/8 Review.

12.174 Despite the rapid growth in the Relevant Modern Markets, our market analysis, in particular our SMP assessment, has shown that:

- in the wholesale AISBO market outside the WECLA, BT's market share has remained consistently large since 2007;<sup>1186</sup>
- in the wholesale MISBO market outside the WECLA BT's market share is above 50%;<sup>1187</sup> and
- in the wholesale AISBO market in the WECLA, we have found that competitive conditions do not yet appear to have changed materially since the 2007/8 Review, with BT maintaining its position.<sup>1188</sup> We have found that the growth observed in certain OCPs' market share in the WECLA has come not at the expense of BT's market share but at the expense of other CPs'.

12.175 Our market analysis has also revealed that the Relevant Modern Markets are characterised by significant product development, and we do not consider this will change over the course of the forward-look review period. In this respect, we remain of the view expressed in the June BCMR Consultation that, in the absence of appropriate *ex ante* regulation, BT has the ability and incentive to favour meeting the requirements of its downstream divisions over those of other CPs in developing wholesale products. As a result, the products it provides to its downstream divisions may therefore be superior to those it provides to other CPs in respect of quality, performance and features, and may well involve superior processes and systems for their development, delivery, maintenance and repair. Equally, we remain of the view that BT has the ability and incentive to supply products with different levels of quality – e.g. different SLAs and SLGs, providing fault repair of products on different timescales, creating new variants to fulfil the requirements of its downstream division, prioritising the needs of its downstream divisions in developing improvements and enhancements, and taking longer to address, or avoiding addressing, the requirements of its competitors.

12.176 We consider such behaviour by BT could act as an impediment to improved products being made available equally promptly to both BT and OCPs and undermine a level playing field in the related downstream retail markets. The need for an effective non-

<sup>1186</sup> Our base case market share estimate for BT is 74%.

<sup>1187</sup> Our base case market share estimate for BT is 57%.

<sup>1188</sup> Our base case market share estimate for BT is 51%.

discrimination remedy (as part of a wider package of remedies) to address the impact of BT's SMP in the Relevant Modern Markets downstream is crucial to maintaining a level playing field between BT's downstream businesses and CPs over the course of the forward-look period of our review.

12.177 In this respect, Openreach Ethernet and WDM-based services are still subject to continuing product development and quality enhancements, and we consider EOI consumption provides the right incentives on BT to implement the changes and make better product variants available equally and simultaneously to both its downstream divisions and to its competitors.

*The effectiveness of the remedy to achieve the aim of a level playing field*

12.178 As part of our proportionality assessment, our first consideration is to determine what form the non-discrimination remedy should take to be effective in achieving our above-mentioned aim.

12.179 BT argues that the normal undue discrimination remedy will suffice. We disagree.

12.180 In our view, the normal undue discrimination remedy would, by its very nature, allow for certain discriminatory conduct – compliance with that obligation needs to establish in particular whether the discrimination in question is undue. However, whether the conduct in question is such as to amount to a breach of the undue discrimination obligation can only be determined on a case-by-case basis.

12.181 Conversely, an EOI obligation removes any degree of discretion accorded to the nature of the conduct. The distinction between these two forms of non-discrimination is that, in the case of the former, both the ability and the incentive on the part of the SMP operator may still exist to engage in the relevant conduct – however, in the case of the latter, the ability is removed *ex ante* altogether.

12.182 For the remedy to be effective – with regard to both price and non-price aspects – in achieving our aim of a level playing field on the related downstream retail markets to the Relevant Modern Markets, we consider that an EOI obligation is required, in particular to:

- prevent BT from discriminating against OCPs in favour of its downstream divisions; and
- actively promote effective competition in the related downstream retail markets, by ensuring a level playing field in them on which OCPs can compete with BT.

12.183 In contrast, we consider that the normal undue discrimination remedy would not remove the ability and incentive on BT to discriminate against OCPs in favour of its downstream divisions, and so could undermine a level playing field in the related downstream retail markets on which OCPs can compete with BT. As such, we consider that there is no choice of remedy as effective as EOI because the normal undue discrimination remedy would not achieve this aim.

12.184 Consequently, contrary to BT's arguments, we consider our conclusion in this respect that there is a need for EOI, is based on a correct assessment of the distinction between what would be required of BT (as a vertically integrated operator) under a no undue discrimination obligation as compared with what would be required under an EOI obligation.

*Our assessment of the effects on BT and in the Relevant Modern Markets in imposing an EOI obligation*

- 12.185 BT argues we have had no, or insufficient, regard as to how the imposition of such an onerous obligation would impact on BT in relation to its position as one of a number of competitors in the Relevant Modern Markets which is, in its view, at the very least, “prospectively competitive” and where, again in BT’s view, it is not an “enduring monopolist (bottleneck) supplier”.
- 12.186 We disagree. As summarised above, and as set out in more detail in Section 7, our SMP assessment has found that BT’s position over the three year review period as BT puts it, as one of a number of competitors in the Relevant Modern Markets, is one of SMP.
- 12.187 In the wholesale AISBO market in the WECLA, for the reasons set out in our SMP assessment,<sup>1189</sup> we do not believe that OCPs will be able to compete effectively across the WECLA over the course of the three year review period. In this respect, BT’s position as, in its words, a bottleneck supplier, has endured since the 2007/8 Review and, as a result, we are imposing a package of SMP remedies that we consider is appropriate to address the competition problems we have identified in this market. The imposition of EOI is part of this package of SMP remedies, and which, for the reasons set out here, we have concluded it is proportionate to impose.
- 12.188 Equally though, we have, contrary to BT’s arguments, had regard to the potentially competitive<sup>1190</sup> nature of the wholesale AISBO market in the WECLA in imposing our charge control remedy. In comparison to the charge control remedy we are imposing in the wholesale AISBO market outside the WECLA, this charge control remedy affords BT greater pricing flexibility.
- 12.189 In relation to BT’s argument that we have not undertaken a balancing exercise of potential benefits on the downstream market versus potential disbenefits on the upstream market – e.g. the potential for such a remedy to increase barriers to entry or expansion for other competitors in the upstream market – we do not consider that such potential disbenefits to which BT refers, arise:
- we consider potential entrants or existing CPs in the Relevant Modern Markets will continue to invest in their infrastructure where they consider it economically efficient to do so, as evidenced by the extent of alternative infrastructure our market analysis has revealed in the WECLA. This has led us to conclude that, whilst BT will maintain a position of SMP in the wholesale AISBO market in the WECLA over the course of the three year review period, this market is potentially competitive.<sup>1191</sup> In this respect, as noted in the June BCMR Consultation, due to the current requirements in the Undertakings, it is BT’s current practice to supply services in the Relevant Modern Markets on an EOI basis.<sup>1192</sup> We do not consider EOI has adversely impacted upon OCPs’ ability and incentive to expand through infrastructure-build, again, as evidenced by the extent of alternative infrastructure our market analysis has revealed in the WECLA, and nor do we consider the impact will change over the course of the three year review period;

<sup>1189</sup> See Section 7, paragraphs 7.297 to 7.428 (in particular paragraphs 7.399 to 7.411).

<sup>1190</sup> We explain this further in paragraphs 7.399 to 7.411.

<sup>1191</sup> We explain this further in paragraphs 7.399 to 7.411.

<sup>1192</sup> See paragraphs 11.143 and 12.67. At paragraph 12.67 we noted that “BT’s services downstream of [the wholesale MISBO market] currently consume products provided by its Openreach division on the basis of EOI”.

- equally, where it is not economically efficient to build alternative infrastructure, CPs can continue to rely on the general, and specific, network access requirement we are imposing on BT in order to compete;
- to the extent that the wholesale product BT is offering on an EOI basis may be the one 'favoured' by wholesale customers over products offered by its wholesale competitors, then we would regard that as a reflection of the characteristics of BT's product that better meet the requirements of those wholesale customers. In this respect it would be incumbent on BT's competitors to produce a more competitive solution, for example by offering more attractive prices. In the WECLA, we have recognised the greater potential for OCPs to do so over the course of the three year review period and, consequently, we have imposed on BT a less stringent charge control remedy. We consider this should result in more competitive prices at the wholesale level and ultimately benefit end-users in the form of choice and competition in the related downstream retail markets. Conversely, outside the WECLA, our market analysis, in particular our SMP assessment, has revealed this potential to be less. As a result, the emphasis is more on ensuring that the wholesale service OCPs rely on in these wholesale markets from BT is equivalent to the service provided to BT's downstream divisions such that again, end-users enjoy the same benefit in the form of choice and competition in the related downstream retail markets.

12.190 Furthermore, contrary to BT's suggestion, in reaching our proposal in the June BCMR Consultation that it was appropriate to impose EOI, we assessed whether the EOI obligation is necessary, in the sense that it is no more onerous than is required to achieve our aims, and we did not consider that it would have adverse effects which might be disproportionate to these aims.

12.191 We stated, in particular, that:

"...due to the current requirements in the Undertakings, it is BT's current practice to supply Ethernet access and backhaul circuits on an EOI basis by means of its access division Openreach. We therefore consider that imposing a very similar requirement in the market review would not be onerous as it would not require BT to re-engineer existing systems and processes."<sup>1193</sup>

12.192 In doing so, we had specific regard to the fact that BT's compliance costs would not outweigh potential significant competition benefits and the potential disbenefits on the downstream markets if this EOI obligation was not imposed. We remain of this view.

12.193 We have also taken utmost account of the BEREC Common Position. In relation to achieving the objective of a level playing field,<sup>1194</sup> the BEREC Common Position identifies, amongst other things, as best practice that:

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<sup>1193</sup> Paragraph 11.143 of the June BCMR Consultation. As noted above, due to the current requirements of the Undertakings, it is also BT's current practice to supply services in the wholesale MISBO market on an EOI basis.

<sup>1194</sup> In this respect, the BEREC Common Position identifies the following competition issues which arise frequently: SMP players having an unfair advantage; having unmatched advantage, by virtue of their economies of scale and scope, especially if derived from a position of incumbency; discriminating in favour of their own group business (or between its own wholesale customers), either on price or non-price issues; exhibiting obstructive and foot-dragging behaviour.

“**BP10** NRAs should impose an obligation on SMP operators requiring equivalence, and justify the exact form of it, in light of the competition problems they have identified.

- **BP10a** NRAs are best placed to determine the exact application of the form of equivalence on a product-by-product basis. For example, a strict application of EOI is most likely to be justified in those cases where the incremental design and implementation costs of imposing it are very low (because equivalence can be built into the design of new processes) and for certain key legacy services (where the benefits are very high compared to the material costs of retro-fitting EOI into existing business processes. In other cases, EOO<sup>1195</sup> would still be a sufficient and proportionate approach to ensure non-discrimination (e.g. when the wholesale product already shares most of the infrastructure and services with the product used by the downstream arm of the SMP operator).”

12.194 We consider that our conclusion to impose an EOI obligation in the Relevant Modern Markets is consistent with that best practice. Our assessment is that this EOI obligation is proportionate when the combination of costs and benefits is balanced.

12.195 We have, however, decided to make some modifications of our proposal that appear to us appropriate to ensure that the EOI obligation does not produce any adverse effects which could be disproportionate to the aim we are pursuing of a level playing field in the related downstream retail markets on which OCPs can compete with BT. We discuss below, and in Section 13 for the wholesale MISBO market outside the WECLA, the detail of our modifications, but we consider in particular that our clarification to exclude from the scope of the EOI obligation network access which BT is not providing on an EOI basis as at 31 March 2013 means that this obligation does not add any material compliance costs for BT.

### Wording of the EOI SMP condition

12.196 BT also raised concerns about the wording of the EOI obligation which generally followed the wording of the EOI obligation in the Undertakings but which omitted a list of exclusions included in the Undertakings version. In BT's view this list should be added to the condition if Ofcom decided to confirm its proposals.

### Ofcom's considerations

12.197 The list that BT refers to excludes from the scope of the EOI obligation, trivial differences and differences relating to certain legal obligations, credit vetting, contract termination, physical network security and contractual provisions relating to safe working. We agree with BT that it would be appropriate to include these provisions and have made the following changes to SMP condition 4 (see Annex 7) to include them:

**“Equivalence of Inputs”** means that the Dominant Provider provides, in respect of a particular product or service, the same product or service to all Third Parties (including itself) on the same timescales, terms and conditions (including price and service levels) by means of the same systems and processes, and includes the provision to all Third Parties (including itself) of the same Commercial Information about such products, services, systems and processes as the Dominant Provider provides to its own divisions,

<sup>1195</sup> Equivalence Of Outputs (EOO).

subsidiaries or partners subject only to: (a) trivial differences; and (b) differences relating to; (i) credit vetting procedures, (ii) payment procedures, (iii) matters of national and crime-related security (which for the avoidance of doubt includes for purposes related to the Regulation of Investigatory Powers Act 2000), physical security, security required to protect the operational integrity of the network, (iv) provisions relating to the termination of a contract, or (v) contractual provisions relating to requirements for a safe working environment. For the avoidance of any doubt, unless seeking Ofcom's consent, the Dominant Provider may not show any other reasons in seeking to objectively justify the provision in a different manner. In particular, it includes the use by the Dominant Provider of such systems and processes in the same way as other Third Parties and with the same degree of reliability and performance as experienced by other Third Parties.

### Scope of the EOI Obligation

12.198 Openreach wrote to us on 7 December 2012<sup>1196</sup> raising concerns about the scope of the proposed EOI SMP obligation that in its view might be wider than envisaged by Ofcom in the June BCMR Consultation. BT believed that our intention was the EOI SMP obligation should be comparable in scope to the EOI obligation in the Undertakings. The proposed condition would apply to the whole AISBO market whereas the Undertakings obligation relates to specific types of wholesale leased line and there are a number of exclusions including products relating to core network, duct, fibre and transmission between core nodes.<sup>1197</sup> The practical impact of these differences in scope would be to apply an EOI non-discrimination obligation to:

- Components of BT's regulated wholesale services that are carried over BT's core network and which are not currently subject to an EOI obligation. In particular inter-OHP legs of EBD services which are carried over BT's core network.<sup>1198</sup>
- Transmission links for legacy networks that are not provided on an EOI basis.

12.199 Openreach argued that this would give rise to significant and intrusive regulatory constraints on BT's core network which are unjustified and disproportionate. Openreach observed that it was not apparent that Ofcom had envisaged or intended this tightening of regulation or considered the consequences of BT re-engineering its existing network to remove non-EOI transmission links and replace them with EOI components.

12.200 Without prejudice to BT's position on EOI more generally, Openreach suggested that we review the extent of the proposed EOI obligation and provide a mechanism which removes any requirement to impose constraints on BT's core network beyond that currently in practice.

<sup>1196</sup> BT Openreach letter to Ofcom dated 7 December 2012 entitled "Proposed SMP EOI conditions – impact on Core Networks".

<sup>1197</sup> Undertakings given to Ofcom by BT pursuant to the Enterprise Act 2002, paragraph 5.46.1

<sup>1198</sup> These include links between two OHPs in the same TAN and links between TANs and OHPs not defined as TANs.

## Ofcom's considerations

- 12.201 In deciding to impose an SMP condition on BT to provide network access on an EOI basis in respect of wholesale AISBO markets in this review, it is not our intention to retrospectively apply EOI to elements of BT's existing network above and beyond that which is currently provided for by reference to the EOI requirements set out in BT's Undertakings. Such a requirement would, in our view, be disproportionate since it would involve BT identifying and re-engineering existing network infrastructure which has been built in a manner broadly reflective of the EOI obligations now proposed. We have therefore modified SMP condition 4 to clarify the scope of the EOI obligation such that the obligation does not apply to such network access which BT was not providing on an EOI basis as at 31 March 2013.
- 12.202 SMP condition 4 (see Annex 7) makes specific provision for Ofcom to consent in writing to exclusions from the EOI requirement. Therefore we consider that BT is able to make representations at any time setting out the detail of the specific form of network access which it believes it provides in the wholesale AISBO markets and, with regard to which, it considers that the requirement to provide such network access on an EOI basis should be waived.
- 12.203 Turning to BT's specific concerns about the application of the EOI obligation to the core network components of AISBO services. The approach we adopted in the 2007/8 Review defined a network neutral core comprising 56 TANs – an approach we have retained in this review. However, whereas previously BT's obligations to provide services on the basis of EOI were defined in its Undertakings (which specifically excluded, *inter alia*, products relating to core network, duct, fibre and transmission between its core nodes<sup>1199</sup>), the SMP EOI condition which we proposed in the June BCMR Consultation would apply to elements of BT's core network unless specifically excluded.
- 12.204 We acknowledge BT's concerns about the costs and impacts of re-structuring affected links between certain OHPs using Openreach EOI inputs. We consider, on balance, that an exclusion from the SMP EOI obligation is warranted in these particular and limited circumstances and at this time. BT nevertheless remains subject to a no-undue discrimination requirement. We will re-consider the appropriateness of the exclusion in our next review of the relevant markets or at any time in circumstances where we find evidence to suggest that a no-undue discrimination provision is insufficient to address any adverse effects on competition.
- 12.205 We have modified SMP condition 4 at Annex 7 to exclude those connections between BT's OHPs, which are not Terminating Segments, from an obligation to provide these connections on an EOI basis under SMP Condition 4.

## Volume discounts

- 12.206 BT disagreed with our assessment of volume discounts and considered that these should be treated in the same way as term and geographic discounts – i.e. that there should be no presumption that they are discriminatory and that they should be assessed on a case-by-case basis. BT reasoned that there are several significant players, not just BT's downstream divisions, who are able to win contracts and place large orders for AISBO services and benefit from such discounts.

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<sup>1199</sup> Section 5.46.1 of the Undertakings.

## Ofcom's considerations

12.207 Whilst it would be a matter for us to determine on a case-by-case basis whether any volume discounts that BT chooses to offer are unduly discriminatory depending on the circumstances, we remain of the view that there is a strong potential for anti-competitive effects to arise while BT remains the single largest purchaser of Openreach's AISBO services and is therefore likely to be the largest beneficiary of a volume discount scheme. We therefore consider that BT's observation that other CPs, and not just its own downstream divisions, could benefit from volume discounts does not diminish the validity of the basis for our rebuttable presumption about volume discounts.

## **Revised proposals regarding AISBO TANs and circuit routing rules**

12.208 As summarised above, we published revised proposals in relation to circuit routing rules in the November BCMR Consultation in light of consultation responses received to our original proposals published in the June BCMR Consultation.

12.209 The responses we received to our proposals in the June BCMR Consultation, our consideration of those responses and our revised proposals (including our reasoning and our view on the application of the relevant legal tests) were published in the November BCMR Consultation. We therefore detail here the responses to the November BCMR Consultation about our revised proposals.

12.210 Most respondents either agreed with our revised proposals or otherwise considered them to be reasonable, including Easynet, TalkTalk, Verizon, Virgin and CWW.<sup>1200</sup>

12.211 [✂

✂]

12.212 BT supported the revised proposals but remained concerned that the proposed circuit routing rules were not sufficiently constrained to prevent some CPs from relying on regulated access circuits from Openreach to provide coverage across large areas (in particular more densely populated areas) between PoPs. BT considered that this would enable some CPs to bypass and undermine the investments in core networks made by other CPs. BT thought that we should, at least, restate our position that any CP intending to rely on regulated AISBO services requires a presence at each of the 56 TANs in order to give full national coverage.

12.213 BT suggested two solutions to address these concerns:

- for Ofcom to impose TAN catchment areas and associated routing rules; or
- to extend the list of TAN areas.

12.214 Similar to CWW, BT also observed (without prejudice to its position on the regulation of MISBO services) that the principles raised in relation to the distinction in AISBO between a competitive core and regulated terminating segments could also apply in relation to MISBO services. We address this point in Section 13.

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<sup>1200</sup> CWW considered that we should provide comparable clarity for MISBO services.



## Ofcom's considerations

12.215 We note that OCPs did not raise concerns with our revised proposals regarding AISBO TANs and circuit routing rules which we set out in the November BCMR Consultation.

12.216 [X]

12.217 With regard to BT's comments, we have reviewed and considered various options, including those proposed by BT, which might address the concerns made by, on the one hand, OCPs about BT's ability to impose restrictions on the circumstances in which Openreach will supply EAD circuits and, on the other, BT's concerns about the provision of trunk segments. We remain of the view (as set out in the November BCMR Consultation) that the combination of our clarification of non-regulated trunk segments and the technical transmission limits of Openreach's AISBO products (25km/35km) are sufficient to (a) ensure that the provision of EAD circuits by Openreach to OCPs is not unduly restricted; and (b) ensure that competition and investment in core infrastructure are not undermined to a material degree. We conclude that this approach is preferable to other options in that it is the least intrusive (as it does not add to regulation and complexity); is the least likely to give rise to unintended consequences; and does not require further development work by the industry such as seeking to agree definitions of TAN catchment areas.

## **Consultation responses in relation to service migration**

12.218 CWW, UKCTA and Level 3 raised concerns relating to the ability of customers to effectively migrate from legacy services in a properly managed way. The main points raised were:

- The current process was not considered to meet consumers needs and was descending into one where competitive distortion was a very real occurrence;
- BT was currently able to enjoy the benefits of lower cost services far faster than CPs are able to, largely as a result of the different requirements BT and CPs have for migration and that BT was actively impeding availability of the migration options that CPs need in order to pursue revenue maximising strategies<sup>1201</sup>;
- Specific reference was made for the need for migration solutions for:
  - Migration away from legacy WES to EAD and EAD LA<sup>1202</sup>; and
  - Migration away from TI.
- Openreach had notified its intent to withdraw all modify order types for WES circuits (Upgrades, Internal Shift, External Re-site and External Rearrange) from 1 June 2013 and the end of product support from 1 June 2015. Without the ability to either migrate like for like or incorporate the ability of CPs to perform a shift during migration, CPs WES circuits were likely to become stranded assets and

<sup>1201</sup> An example cited was the first WES migration offer. This involved a 'records only' reclassification of WES services to WES LA. It was argued that BT was the main beneficiary of this offer as its handover points are always located in BT exchanges. CPs more commonly have handover points outside BT exchanges which could not be reclassified in this manner.

<sup>1202</sup> CWW claimed that BT had responded to a SoR for 'same bandwidth' migration as not being commercially viable.

forced into a less than ideal provide and cease migration arrangement where CPs will be forced to incur new connection fees and be subject to a new 12 month term.

- In light of the large volume of customers that currently use TI services that will at some point require to be migrated to AI or other services there is a need for an effective process to be established which recognises both the old and new circuit, linking the provisioning and cease activities within a service wrap that minimises cost and maximises customer experience.
- Ofcom should carve out the issue of migration from this review and deal with it within the context of a self-contained consultation on the issue, ideally immediately following the conclusion of the BCMR. In addition, Ofcom should consider placing an obligation upon BT to offer fair and reasonable network access that can be enforced (with clear justification) to include a requirement to offer reasonable migration solutions.

### Ofcom's response

12.219 We acknowledge the concerns raised by respondents in relation to service migration.

12.220 Our view is that imposing a general obligation on BT in relation to migrations will not be an effective approach in resolving the concerns raised (or future concerns) since where there are issues, the most appropriate solution (or set of solutions) is likely to be dependent on the demands of CPs and the circumstances of each case.

12.221 In light of this, we consider that industry is better placed (with involvement of the OTA) to specify requirements for migration solutions that fit the circumstances of each case and the demands of industry. These should be delivered through the existing SoR processes. Where arrangements cannot be agreed, CPs can request that Ofcom intervenes to resolve the issue through its established Dispute Resolution Process.

12.222 We are aware that BT is intending to trial a migration process from TI services to Ethernet products from January 2013 to March 2013.<sup>1203</sup> We welcome this step and encourage the industry to fully engage in this process with the aim of developing and reaching an agreed migration solution.

### **Consultation responses in relation to transparency and notification obligations**

12.223 BT made several comments about the proposed transparency and notification obligations. The main points were:

- BT supported our proposal to reduce the notification period for price reductions to 28 days but asked us to clarify that it should also apply to price increases at the end of temporary special offers.
- BT did not support our proposal to keep the notification period for changes to existing products at 90 days instead of reducing it to 28 days. BT's reasoning was that 90 days is very long and burdensome and reduces its ability to respond quickly to customers' requirements and changing demands. BT argued that Openreach should be able to benefit from a level playing field with its competitors

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<sup>1203</sup> SoR 8078.

on price changes, arguing that its competitors are able to move much faster commercially than Openreach.

- BT also argued that we should not impose a price publication requirement for the wholesale market for low bandwidth AISBO in the WECLA on the grounds that, given the competitive conditions in this market, this requirement could encourage price-following, with the effect of dampening rather than encouraging competition. BT referred to the arguments we made in our statement on fixed narrowband retail services market review of 15 September 2009 in relation to deregulation in the retail ISDN2 market.

### Ofcom's considerations

12.224 We confirm that the 28 day notice period will apply to special offers by which we mean price notifications that specify a limited term price reduction and where the price immediately following the special offer is no higher than immediately before the special offer commenced. We have re-worded Condition 7.4 to clarify this.

12.225 In the June BCMR Consultation we carefully considered, amongst other things, BT's arguments for reducing the notification period for changes to existing products. We explained the reasons why changes to AISBO services were likely to have a greater impact on CPs than changes to services in other markets, including the investment required to use these services, network build complexity and the complexity of the supply chain supporting multiple downstream services. We remain of the view that there is a risk with a 28 day notice period that CPs would have insufficient time to react to BT price rises and could be left financially exposed. We therefore consider that on balance, a 90 day notice period is generally appropriate in AISBO markets where we have found BT to have SMP.

12.226 In relation to BT's comments about price publication obligations, we do not consider that our reasons for removing retail price publication obligations in the retail ISDN2 market are particularly relevant in the context of the low bandwidth AISBO markets. In the case of the ISDN2 retail market we concluded that the retail remedies were both ineffective and counterproductive in light of the presence of upstream wholesale remedies that allowed CPs to compete effectively with BT in the ISDN2 retail market. We were thus able to remove the retail remedies (including price publication obligations) to address the risk of price following.

12.227 We consider that a price publication requirement on BT, in response to its SMP in AISBO markets including the WECLA, facilitates downstream competition (where rivals compete with BT's downstream divisions) by providing transparency over wholesale prices and contributing to constrain BT's ability to behave in an unduly discriminatory manner. Moreover, it is the cumulative effect of the transparency and notification obligations, together with the requirement to provide network access on an EOI basis, which serves to address the relevant competition problems we have identified. In the absence of a price publication requirement we consider that the incentives on rivals to invest and enter the market for AISBO services in the WECLA might be undermined. We remain of the view, therefore, that in this wholesale market these benefits outweigh the risks of price following and hence of muted competition.

12.228 In conclusion, we consider that a price publication obligation on BT for AISBO in the WECLA is justifiable and necessary over the period considered in this market review for the reasons set out above.

## Consultation responses about notification requirements

12.229 In Section 11 we discuss BT's comments about the notification requirements in Condition 7 and 9. BT's comments and our consideration of them are also relevant to the wholesale AISBO markets.

## Consultation responses in relation to inclusion of usage factors in ACCNs

12.230 In Section 11 we discuss BT's comments about the content of Access Charge Change Notices in Condition 7.5. BT's comments and our consideration of them are also relevant to the wholesale AISBO markets.

## **Consultation responses in relation to a direction relating to service level guarantees**

12.231 Three CPs commented on the June BCMR Consultation proposal that BT should be subject to a direction specifying SLG compensation arrangements. The main points made were:

- BT disagreed with our proposal to apply the SLG direction arguing that mandatory SLGs do not produce the best product service level arrangements for its customers and that it should have the flexibility to agree appropriate SLGs with its customers.
- BT argued that the SLGs proposed in the draft Direction are significantly more onerous than the SLGs offered by its competitors and provided examples.
- BT argued that it would be unreasonable for Ofcom to remove the caps on SLG compensation payments included in the 2008 SLG Direction and welcomed our clarification that this was a drafting error.
- Exponential-e and Level 3 raised concerns about Openreach's service performance measures that support the SLGs, in particular the exclusion of certain activities from the SLG measurements and the use of 'deemed consent' to stop the SLG measurement clock. They suggested that we should task the OTA to undertake a full review of the effectiveness of the SLA/SLG Direction with a view to implementing changes where necessary.

12.232 We also received responses to the November BCMR Consultation in which we sought comments on our proposals to correct a drafting error in the June BCMR Consultation in which we had unintentionally omitted compensation caps from our proposed SLG Direction.

12.233 In summary, BT agreed with our proposal and, whereas most respondents did not dispute our proposal to correct our unintended omission of compensation caps, several stakeholders considered that we should investigate further whether SLGs (with or without compensation caps) are effective in incentivising Openreach's performance. Easynet and TalkTalk noted that Openreach was effectively able to deploy strategies (such as declaring MBORC<sup>1204</sup>) to mitigate the effect of SLGs when failing to meet service performance targets.

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<sup>1204</sup> Matters Beyond Our Reasonable Control (MBORC).

12.234 TalkTalk disagreed with the rationale we gave in the November BCMR Consultation<sup>1205</sup> as to why compensation caps are necessary. It argued that by removing compensation caps, BT is not exposed to an unlimited financial risk in any meaningful sense. TalkTalk argued that including a cap does have negative economic consequences in weakening the incentives on BT to perform to an acceptable quality level.

12.235 Some respondents noted that we are looking to review Openreach service performance issues in other market reviews. TalkTalk expressed disappointment that we were not apparently doing so in this review.

### Ofcom's considerations

#### *Appropriateness of the SLG compensation arrangements*

12.236 We consider that the conclusions of our previous work on SLGs in the 2008 SLG Statement<sup>1206</sup>, in which we originally specified the SLG compensation arrangements, remain valid. In particular, our decision then to impose SLG compensation arrangements was taken against a background of failed commercial negotiations and in light of our conclusion that the extant compensation arrangements were not fair and reasonable as they did not provide Openreach with a strong enough incentive to sustain service performance at an efficient level.

12.237 We consider it unlikely, absent specific obligations, that Openreach would set SLG compensation arrangements such that it would have a strong incentive to sustain service performance. In light of the opposing commercial interests, we also consider it likely that commercial negotiations would again be unsuccessful. We therefore remain of the view that this direction is appropriate.

#### *Level of SLG compensation payments*

12.238 We note BT's comments on the level of SLGs. We consider that reducing the compensation payments to achieve parity with lower SLG payments offered by other CPs would weaken Openreach's incentive to sustain service performance and undermine the effectiveness of the SLG compensation arrangements.

12.239 We consider that the conclusions of the 2008 SLG Direction in relation to compensation caps remain valid. In particular we remain of the view that the current level of compensation levels strikes an appropriate balance between incentivising performance and ensuring that we do not subject BT to an undue burden.

12.240 We have therefore decided to maintain the compensation payments and caps at the current levels (i.e. those that were subject to consultation prior to the 2008 SLG Direction), subject to our further comments below.

#### *Service performance measures*

12.241 We note that Openreach generally reports good performance against the contractual SLAs for Ethernet services. However, the reports we receive from CPs, end-users and industry fora suggest that these metrics do not fully reflect the performance experienced by CPs and end-users, particularly in relation to service delivery lead

<sup>1205</sup> In which we referred to the reasoning for our conclusions set out in our 2008 SLG Statement.

<sup>1206</sup> 'Service level guarantees: Statement and Directions' published by Ofcom on 20 March 2008. See <http://stakeholders.ofcom.org.uk/binaries/consultations/slg/statement/statement.pdf>

times. For example, there is no specific SLA covering activities which precede agreement of a service delivery date (e.g. time for surveys to be completed). Even when a delivery date is agreed between Openreach and CPs, some CPs perceive that Openreach invokes 'deemed consent' (a process that allows the clock to stop) too frequently and that, consequently, the service delivery lead times experienced by end customers is materially longer than the contractual SLA would suggest.

12.242 We consider that in the first instance Openreach, CPs and the OTA are best placed to take the necessary steps to improve performance and to review the suitability of the current SLAs. In this regard we note that following requests from Ofcom and CPs, the OTA is coordinating industry work to address these issues. The OTA is engaging with Openreach at a senior level and has also recently taken on the role of co-chair with Openreach of the Ethernet Product and Commercial Group, in which Ethernet service performance is discussed.

12.243 Consequently we consider that it is premature to consider formal intervention in this market review. However, we do not discount the need for formal regulatory intervention including reviewing the effectiveness of our direction on SLGs for the supply of Ethernet services in the AISBO markets, depending on the outcome of the activities that the OTA is coordinating.

## **Consultation responses in relation to requests for new network access**

### Openreach's product development process

12.244 BT noted the concerns raised by CPs in relation to Openreach's Statements of Requirements (SoR) process. It considered that there was a misconception that Openreach operates different processes for CPs and BT's downstream divisions. It emphasised that all development requests follow the same process. It also emphasised that all requests for access relating to AISBO services are processed in accordance with the timetable specified in the relevant SMP condition. BT also stated that it maintains a full audit trail and regularly supports enquiries regarding SoRs from the Equality of Access Office when CPs had questions regarding the progression of SoRs.

12.245 BT agreed with our proposal that the concerns raised by CPs are best dealt with at an operational level in industry fora and in cooperation with the OTA. BT also observed that Openreach's SoR process has continued to be developed, improved and enhanced in discussion with CPs.

12.246 BT also suggested that we should make two amendments to the new network access SMP condition:

- To align the text of the SMP condition with that used in the narrowband markets by removing the specified timescales for Openreach to process requests for new network access. This would allow Openreach to use a common SoR process across markets and to agree timescales with CPs.
- BT argued that any industry-agreed process must acknowledge that BT is free to accept or reject SoRs like any other commercial entity and noted that this is explicitly acknowledged in section 5.11 of the Undertakings. BT said that it should be made explicit in the condition that BT is able to refuse a request where it has initially confirmed the request could be met but where further assessment has determined that the request is not commercially viable or in BT's commercial interests.

### Ofcom's considerations

- 12.247 In light of the consultation responses we remain of the view that the concerns about the operation of the product development process for AISBO services are mostly operational in nature, relating to how individual requests are processed. We therefore consider that generally it would not be practicable to address these concerns with changes to the SMP conditions. In our view, the new network access obligations together with the obligation not to discriminate unduly (which we discuss above) already provide a clear framework under which BT must operate.
- 12.248 We therefore consider these concerns are best addressed at an operational level in the industry fora and in cooperation with the OTA. In cases where this proves unsuccessful, concerns can be escalated to Ofcom, either informally or formally through the disputes and complaints processes.
- 12.249 We do not consider that it would be appropriate to make changes to the new network access condition in light of BT's suggestions. First, in relation to aligning the conditions with those applied in the narrowband markets, the main difference is that the narrowband conditions do not specify timescales for the evaluation of new network access requests. Given the CPs' concerns about the time taken to progress network access requests we consider it appropriate to continue to specify these timescales. We welcome BT's confirmation that all requests for network access are handled in accordance with the specified timetable.
- 12.250 Secondly, we do not consider section 5.11 of the Undertakings to be relevant in this context because that section relates to product development requests that fall outside markets in which BT has SMP. In these markets where we have found BT to have SMP we have concluded that it would have an incentive to refuse to supply new forms of network access. Therefore we do not consider it appropriate to modify the condition to give BT more flexibility to take account of its commercial interests. We consider that the SMP conditions we proposed would impose both clear and practical obligations on BT. The network access condition requires BT to meet reasonable requests for network access and the new network access condition specifies a process for the evaluation of such requests and explicitly makes provision for BT to undertake a feasibility study before confirming that it will provide the requested network access.

### Consultation responses in relation to Condition 10

- 12.251 In Section 11 we discuss BT's proposed changes to the new network access obligations in Condition 10. BT's comments and our consideration of them are also relevant to the wholesale AISBO markets.

### **Consultation responses in relation to the practical implementation of remedies across boundaries between AISBO geographic markets**

- 12.252 BT disagreed with our proposal that terminating segments crossing the boundary of the WECLA geographic market (i.e. circuits with one end inside and one end outside the WECLA) should be classified as outside the WECLA for pricing purposes. In its view it would be more consistent with the approach adopted for PPCs and in other markets such as wholesale broadband access for most circuits to be classified based on the location of the customer end.
- 12.253 BT proposed that terminating segments should be classified according to the location of the customer site or in the case of a backhaul circuit the location of the remote

exchange being served by the circuit regardless of the location of the CP node at the other end of the circuit. BT reasoned that CPs should be able to establish network nodes in the WECLA to serve sites within the WECLA so BT should not be regulated when CPs make a commercial decision to do otherwise.

12.254 For wholesale end-to-end services (i.e. circuits serving one end-user site within the WECLA and another end-user site outside the WECLA), BT agreed with our proposal that price components specific to each end should be treated according to the regulations applicable within the geographic market relevant to each end, and that the non-location-specific price elements should be treated according to the regulation applying outside of the WECLA.

12.255 Level 3 expressed concern that the wording of the proposed remedy in relation to circuits between the WECLA and non-WECLA destinations raised questions of interpretation and invited us to ensure that the final wording of the relevant SMP condition is absolutely clear and explicit.

### Ofcom's considerations

12.256 Having considered BT's comments, we believe that the classification proposed by BT is more consistent with our view of competitive conditions in the WECLA than the approach we proposed in the June BCMR Consultation. In particular, CPs should be able to establish network nodes within the WECLA and serve sites within the WECLA from them. We have therefore decided that this classification should apply. On reflection we also think that it would be more straightforward to classify end-to-end circuits as a whole rather than by components. Thus wholesale AISBO circuits that cross the WECLA boundary should be classified as follows:

- Wholesale end to end services (i.e. circuits between two end-user sites) – should be classified as inside the WECLA only if both end-users sites are in the WECLA and other circuits should be classified as outside the WECLA (i.e. if one or more sites are outside the WECLA); and
- Other circuits (i.e. circuits between an end-user site and a network node or between network nodes) – should be classified as being in the WECLA if the end-user site is within the WECLA or in the case of backhaul circuits if the remote end of a backhaul circuit is within the WECLA.

12.257 We consider that the guidance we have provided in relation to this matter is sufficiently clear for the purposes for which it is intended and that it is not necessary to make this explicit on the face of the SMP Conditions as Level 3 appears to suggest.

### **Consultation responses in relation to Openreach Project Services**

12.258 BT was the only respondent to comment on our provisional view that insofar as Project Services are purchased and provided in conjunction with regulated business connectivity services, they are subject to the SMP conditions we are proposing for this market.

12.259 BT welcomed our recognition that it was unlikely that the current arrangements are discriminatory, since Project Services are available to BT and CPs on an EOI basis.



12.260 However, BT regarded as unjustified and inappropriate our view that Project Services should be regarded as a provisioning option and therefore subject to the same SMP Conditions that we propose for AISBO markets.

12.261 BT argued that Project Services would include a range of activities, some of which are clearly replicable and which CPs could choose to self-provide or outsource, and that imposing the full range of remedies would simply reduce innovation. Moreover it argued that since Project Services is available on products outside the business connectivity market review, imposing regulation in one market means, in effect, inappropriately imposing regulation on the product irrespective of the market in which it applies.

12.262 BT suggested that we amend our position in this area and simply state that in cases where Project Services activities are not replicable by CPs, we would likely consider whether the Project Services element raised questions as to whether the underlying regulated service was meeting the requirement for no-undue discrimination.

### Ofcom's considerations

12.263 BT appears to have misinterpreted our comments about Project Services. We would regard only those activities relating to the provision of business connectivity services as falling within the scope of the respective business connectivity market. Thus we would not regard unrelated activities, such as project management of orders for other types of service, as falling within the scope of a business connectivity market.

12.264 We remain of the view that it is unlikely that CPs would be able to fully replicate Project Services because they would not have internal knowledge of Openreach processes or have the access to Openreach systems and personnel which Project Services is able to draw on. On this basis, we consider there should be a rebuttable presumption that Project Services activities supporting the provision of business connectivity services will fall within the scope of the respective business connectivity market.

### **Ofcom's conclusions on the appropriate remedies**

12.265 In order to address the competition problems we have identified in the AISBO markets, we have concluded it is appropriate to:

- adopt the remedies proposed in the June and November<sup>1207</sup> BCMR Consultation; and
- to broaden the scope of the obligation requiring the provision of network access by BT to be on fair and reasonable terms and conditions, to include also fair and reasonable charges.

12.266 Our conclusions are the result of our cumulative consideration of:

- our assessment of the appropriate remedies, as set out in the June and November BCMR Consultations and set out above;
- our considerations of consultation responses; and

<sup>1207</sup> Our conclusions regarding accounting separation and cost accounting, together with our considerations of responses received, are set out in Section 16.

- all the evidence available to us.

12.267 Below we set out:

- the aim of the remedies that we have concluded should be imposed on BT in the wholesale AISBO markets;
- the obligations imposed on BT by the remedies; and
- the reasons why we consider the remedies comply with the relevant legal test in the Act.

12.268 The SMP Conditions which give effect to our conclusions are set out in Annex 7.

## **Interconnection and accommodation services**

12.269 In order to use the wholesale AISBO services that BT provides in these markets, CPs also require certain interconnection and accommodation services. To achieve an overall solution we consider that it is necessary to regulate the provision of those ancillary services,<sup>1208</sup> in the absence of which, we consider BT would have an incentive to refuse to supply or to supply in a discriminatory manner, for example by charging excessive prices.

12.270 Network access is defined in sections 151(3) and (4) of the Act and includes interconnection services and/or any services or facilities that would enable another CP to provide electronic communications services or electronic communication networks. We consider that a requirement to provide network access would, therefore, include any ancillary services as may be reasonably necessary for a third party to use the services. Consequently, each of the obligations that we have decided to impose below for these markets also applies to the provision of accommodation and interconnection services that are reasonably required by CPs in connection with the provision of the regulated services.

12.271 In Section 14 we set out our decisions on whether BT should be required to provide specific types of interconnection services.

## **Requirement to provide network access**

### Aim of regulation

12.272 We have concluded it is appropriate to impose a requirement for BT to meet reasonable requests for network access.

12.273 We consider that, in the absence of the nature of the network access obligation we are imposing, BT would have the ability and incentive to refuse to provide network access or to supply on such terms that amount to a refusal to supply, which would otherwise prevent or restrict competition in the AISBO markets and enable BT to monopolise the provision of services in related downstream markets.<sup>1209</sup>

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<sup>1208</sup> This is consistent with the BEREC Common Position **BP7** in relation to achieving the objective of assurance of co-location at delivery points and other facilities.

<sup>1209</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of assurance of access.

12.274 Further, in light of consultation responses, which we set out together with our considerations of those responses and our reasons in Section 9, we have concluded that the scope of the fair and reasonable obligation according to which BT must provide network access, should be broadened to include fair and reasonable charges.<sup>1210</sup>

### SMP Condition

12.275 We have concluded that BT should be subject to a general requirement to meet reasonable requests for network access.

### Legal tests

12.276 We are satisfied that we have met the relevant legal tests, both for the general requirement for providing network access and for the two further specific network access obligations we are imposing. Our reasoning is set out below under the proposed specific remedies for the provision of certain Ethernet services.

### **Specific remedies for the provision of Ethernet access, backhaul and end-to-end services**

#### Aim of regulation

12.277 In addition to the general requirement of providing network access, we have decided to introduce the following specific network access obligations:

- a requirement to provide Ethernet access;
- a requirement to provide Ethernet backhaul; and
- a requirement to provide short range end-to-end services.

12.278 We have concluded that introducing these new specific remedies as part of the SMP obligations will ensure that BT keeps supplying wholesale disaggregated access and backhaul Ethernet services and short range end-to-end services. In view of the concerns about the circuit routing restrictions (discussed above) we have also specified in more detail the circuits that BT should be required to provide.

12.279 In the absence of these requirements, we consider BT has an incentive to withdraw or no longer supply disaggregated products and make different products available under the general requirement of network access.<sup>1211</sup> In our view, this would be significantly disruptive to industry which, due to pre-existing regulation has developed its business models around the availability of disaggregated Ethernet access and backhaul.

### SMP Condition

12.280 We have concluded that BT should be subject to specific network access obligations to provide Ethernet access, backhaul and short range end-to-end services.

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<sup>1210</sup> As set out in Section 9, in reaching this conclusion we have taken utmost account of the BEREC Common Position.

<sup>1211</sup> This is consistent with the BEREC Common Position **BP3a** in relation to achieving the objective of assurance of access.

## Legal tests

### *Section 87 of the Act*

12.281 Section 87(3) of the Act authorises the setting of an SMP services condition requiring the dominant provider to provide such network access as we may, from time to time, direct. These conditions may, pursuant to Section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at the times required by or under the conditions.

12.282 When considering the imposition of such conditions in a particular case, we must take into account six factors set out in Section 87(4) of the Act, including *inter alia*:

- the technical and economic viability of installing and using other facilities, including the viability if other network access products whether provided by the dominant provider<sup>1212</sup> or another person<sup>1213</sup>, that would make the proposed network access unnecessary;
- the feasibility of the proposed network access; and
- the need to secure effective competition, including where it appears to us to be appropriate, economically efficient infrastructure based competition, in the long term.

12.283 In proposing the general, and specific, network access conditions set out above, together with the direction we have considered were necessary to impose, we have taken all these six factors into account.

12.284 The definition of access and the way in which we might assess reasonable demands for access are set out in our Access Guidelines.<sup>1214</sup> We consider it appropriate in cases where we find a CP has SMP (such as BT in this case) to impose an access obligation on that provider requiring it to meet all reasonable requests for network access within the relevant wholesale market, irrespective of the technology required, on fair and reasonable charges, terms and conditions.

12.285 As discussed in our SMP assessment there are considerable sunk costs associated with building networks to provide leased lines services. We consider it unlikely to be economically viable or efficient to build competing access networks on a sufficient scale to provide an effective constraint on BT's SMP.

12.286 Therefore, we have decided that requirements for BT to provide general and specific network access are appropriate. They facilitate competition in downstream markets by enabling CPs to compete without the need to invest in a national network, an investment which we considered, on the basis of our market analysis, represented a structural barrier to entry and expansion in the AISBO markets. Consequently, we consider these requirements to be necessary for securing effective competition

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<sup>1212</sup> i.e. in this instance BT.

<sup>1213</sup> i.e. other CPs.

<sup>1214</sup> *Imposing access obligations under the new EU directives*, Oftel, 13 September 2002, available at [http://www.ofcom.org.uk/static/archive/oftel/publications/ind\\_guidelines/acce0902.pdf](http://www.ofcom.org.uk/static/archive/oftel/publications/ind_guidelines/acce0902.pdf)

including economically efficient infrastructure based competition, in the long term.<sup>1215</sup> The requirements for BT only to meet reasonable network access requests also ensure that due account is taken of the technical and economic viability of installing and using other facilities, the feasibility of the proposed network access, and of the investment made by BT initially in providing the network.

*Statutory duties under sections 3 and 4 of the Act*

12.287 In addition to taking into account the six factors in section 87(4) of the Act, we consider that the general and specific network access obligations:

- further the interests of citizens in relation to communications matters and further the interests of consumers in the AISBO markets by promoting competition, in accordance with our general duty under section 3(1) of the Act;
- seek to achieve the objective of securing the availability throughout the UK of a wide range of electronic communications services, in accordance with our duty under section 3(2) of the Act;

12.288 In deciding on these network access obligations, in accordance with our duty under section 3(4) of the Act, we also had regard to:

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

12.289 We also consider that the required network access obligations accord with the six European Community requirements for regulation, in particular by:

- promoting competition in the provision of electronic communications networks and services, associated facilities and the supply of directories; and
- encouraging the provision of network access and service interoperability, namely securing efficient and sustainable competition, efficient investment and innovation, and the maximum benefit for customers of CPs.

*Statutory duties under sections 47 and 49 of the Act*

12.290 Sections 47 and 49 of the Act require conditions and directions respectively to be objectively justifiable, non-discriminatory, proportionate and transparent. We consider that the SMP conditions and direction are:

- objectively justifiable, in that they facilitate and encourage access to BT's network and therefore promote competition to the benefit of consumers;
- not unduly discriminatory, as they are imposed only on BT and no other operator has been found to hold a position of SMP in this market;

<sup>1215</sup> This is consistent with the BEREC Common Position **BP3** in relation to achieving the objective of assurance of access.

- proportionate, since they are targeted at addressing the market power that we have found BT holds in the AISBO markets and do not require it to provide access if it is not technically feasible or reasonable; and
- transparent in that the SMP conditions and directions are clear in their intention to ensure that BT provides access to its networks in order to facilitate effective competition.

12.291 In relation to our conclusion that the scope of the fair and reasonable obligation according to which BT must provide network access, should be broadened to include fair and reasonable charges, we consider this is appropriate in order to promote efficiency and sustainable competition in the AISBO markets and to provide the greatest possible benefits to end-users by enabling OCPs to purchase network access at levels that should be expected in a competitive wholesale market. In this respect, we have also taken into account the extent of investment of BT in the matters to which the broadened scope of the fair and reasonable obligation would relate.<sup>1216</sup>

12.292 For all the reasons set out above, we consider that the general and specific network access conditions, together with the direction, are appropriate to address the competition concerns identified, in accordance with section 87(1) of the Act.

## **Requirement not to unduly discriminate and Equivalence of Input**

### Aim of regulation

#### *Provision of Ethernet services on an Equivalence of Input basis*

12.293 We consider it appropriate to impose a requirement on BT, as a result of our finding of SMP in the AISBO markets, not to discriminate unduly in the provision of network access. In particular, we consider it appropriate to require that Ethernet services are supplied to competitors on an EOI basis.

12.294 Article 8(1) of the Access Directive<sup>1217</sup> requires Member States to ensure that national regulatory authorities are empowered to impose certain obligations where an operator is designated as having SMP. These include, under Article 10 of the Access Directive, obligations of non-discrimination. Article 10(1) provides that a national regulatory authority may: *“impose obligations of non-discrimination, in relation to interconnection and/or access”*. Article 10(2) further provides *“[o]bligations of non-discrimination shall ensure, in particular, that the operator applies equivalent conditions in equivalent circumstances to other undertakings providing equivalent services, and provides services and information to others under the same conditions and of the same quality as it provides for its own services, or those of its subsidiaries or partners”*.

12.295 Article 10 of the Access Directive is implemented into UK law by section 87(6)(a) of the Act which gives us a power to impose *“a condition requiring the dominant provider not to discriminate unduly against particular persons, or against a particular description of persons, in relation to matters connected with network access to the*

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<sup>1216</sup> In this respect, we consider the extent of investment – if required at all – would not be significant given the strictly behavioural nature of this specific remedy – i.e. it serves to impose an *ex ante* qualification on the manner in which BT must comply with the main obligation which is to meet reasonable requests for network access.

<sup>1217</sup> Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities.

*relevant network or with the availability of the relevant facilities*". We consider any conditions imposed pursuant to this power require equivalence as per Article 10(2).<sup>1218</sup>

12.296 A non discrimination obligation is intended as a complementary remedy to the network access obligation, principally to prevent the dominant provider from discriminating in favour of its own downstream divisions and to ensure that competing providers are placed in an equivalent position. Without such an obligation, the dominant provider is incentivised to provide the requested wholesale network access service on terms and conditions that discriminate in favour of its own downstream divisions. For example, BT may decide to charge its competing providers more than the amount charged to its own downstream units or it might strategically provide the same services but within different delivery timescales. Both these behaviours could have an adverse effect on competition.

12.297 Non discrimination can however have different forms of implementation.<sup>1219</sup> A strict form of non discrimination – i.e. a complete prohibition of discrimination – would result in the SMP operator providing exactly the same products and services to all CPs (including its own downstream divisions) on the same timescales, terms and conditions (including price and service levels), by means of the same systems and processes and by providing the same information. Essentially, the inputs available to all CPs (including the SMP operators' own downstream divisions) would be provided on a truly equivalent basis, an arrangement which has become known as EOI. As explained earlier in this Section, the concept of EOI was first identified in the TSR<sup>1220</sup> as one of our key policy principles to ensure that regulation of the telecommunication markets is effective. Following on from that review, a specific form of EOI was implemented in 2005 by means of the BT Undertakings.<sup>1221</sup>

12.298 On the other hand, a less strict interpretation of non discrimination may allow for flexibility and result in a more practical and cost-effective implementation of wholesale inputs in cases where it is economically justified. For example, we are imposing a less strict interpretation for the wholesale TISBO markets under which BT would be required to ensure that any discrimination is not undue and we propose to interpret this obligation in accordance with our guidelines of November 2005 on Undue discrimination by SMP providers (the Discrimination Guidelines).<sup>1222</sup>

<sup>1218</sup> This position is supported by our 2005 guidance on Undue discrimination by SMP operators where we state at paragraph 1.1 that "*in wholesale markets Requirements not to unduly discriminate (under the Act) have the same meaning, and describes the same concept, as an obligation of non-discrimination (under the [Access] Directive)*".

<sup>1219</sup> The European Commission has recently undertaken a project with the aim to publish some guidelines on how to interpret and enforce non-discrimination obligations. The European Commission's work is taking into account how non-discrimination obligations are currently implemented in the different member states and in Autumn 2011, at the European Commission's request, Ofcom responded to questions on these topics.

<sup>1220</sup> [http://stakeholders.ofcom.org.uk/binaries/consultations/telecoms\\_p2/summary/maincondoc.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/telecoms_p2/summary/maincondoc.pdf)

<sup>1221</sup> Definition of EOI in the BT Undertakings: '*Equivalence of Inputs*' or '*EOI*' means that BT provides, in respect of a particular product or service, the same product or service to all Communications Providers (including BT) on the same timescales, terms and conditions (including price and service levels) by means of the same systems and processes, and includes the provision to all Communications Providers (including BT) of the same Commercial Information about such products, services, systems and processes. In particular, it includes the use by BT of such systems and processes in the same way as other Communications Providers and with the same degree of reliability and performance as experienced by other Communications Providers.

<sup>1222</sup> <http://stakeholders.ofcom.org.uk/consultations/undsmp/contraventions/>

12.299 We consider that Article 10 of the Access Directive as implemented by section 87(6)(a) of the Act provides a basis for imposing both EOI and a less strict interpretation of non-discrimination which prevents discrimination that is undue.

12.300 In the case of Ethernet services, for the reasons set out earlier in this Section, we have concluded it is appropriate to require that Ethernet services are delivered to competitors on an EOI basis. The aim of the SMP condition is to maintain a level playing field in related downstream retail markets to the AISBO markets on which OCPs can compete with BT, by preventing BT from discriminating against OCPs in favour of its wholesale division.

12.301 We have excluded certain backhaul segments which form part of BT's core network. In addition we have excluded from the scope of the EOI obligation network access which BT is not providing on an EOI basis as at 31 March 2013.

12.302 Where the EOI obligation does not apply, BT remains subject to a no-undue discrimination obligation. In light of stakeholder responses,<sup>1223</sup> we confirm that this obligation applies to both non-pricing and pricing practices.

*No unduly discriminatory discounts*

12.303 The obligation not to discriminate unduly also applies to pricing discounts.

12.304 First, in relation to volume discounts, we recognise that these would very often in practice constitute undue discrimination since BT's retail arm would almost inevitably be the main beneficiary and there is therefore a strong potential for anti-competitive effects. However, we believe that this point is well understood by CPs and do not consider a change in the obligation is required specifically to reflect this.

12.305 Secondly, in relation to geographic discounts:

- As discussed in Section 5, we have conducted a detailed analysis of the geographic scope of each of the relevant retail and wholesale product markets. In summary, and as set out in more detail in Section 5, geographic areas can comprise a single relevant geographic market to the extent that:
  - competitive conditions in the geographic area are sufficiently homogeneous; and
  - the areas can be distinguished from neighbouring areas where the competitive conditions are appreciably different.
- We have noted that for the geographic markets where we have found SMP, the underlying costs and competitive conditions would not be completely homogenous throughout the UK (even outside the WECLA). This has suggested to us that some freedom to charge in a way that reflects more accurately the costs incurred and to respond to the local characteristics of competition that exist in these markets would be efficient. Moreover, given the level of cost differences that may exist and the extent of competition in some areas, BT's ability to compete could be limited if it were required to maintain nationally uniform prices. Hence, geographically differentiated prices may reflect BT responding legitimately to cost differences in the face of competition;

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<sup>1223</sup> See Section 9 for further discussion.



- In light of the above, we therefore consider that geographic discounts may or may not be unduly discriminatory depending on the circumstances. In the event of an allegation of offering unduly discriminatory geographic discounts, we would judge each alleged breach of the no undue discrimination obligation on a case by case basis.

12.306 In Sections 20 and 21 we have considered how geographic discounts should be treated in the specific charge control remedy we are imposing in each of the AISBO markets.

12.307 Thirdly, in relation to term discounts:

- in principle, we consider this form of discount could raise competition concerns – for example:
  - if BT's downstream operations were at an advantage compared to downstream competitors. In principle, the largest beneficiary of term discounts could be BT's downstream operations, as they may see no commercial disadvantage in being contractually tied to BT's wholesale services for a lengthy period of time. If so, it could provide BT with the ability to undercut downstream competitors in ways that they could not match (where those competitors rely on wholesale services from BT, but do not wish to sign up to the discounts);
  - term discounts may increase the barriers to entry/growth for upstream competitors to Openreach, if purchasers of wholesale services are tied into longer term contracts (and so increasing the switching costs);
- however, it is not necessarily the case that we should automatically view all forms of term discount as harmful to consumers;
- we therefore consider that term discounts may or may not be unduly discriminatory depending on the circumstances. In the event of an alleged breach we would judge each alleged breach on a case by case basis.

12.308 In Sections 20 and 21 we have considered whether there should be any restrictions on the term discounts that BT may offer and how they might be taken into account in the specific price control remedy we are imposing in each of the AISBO markets.

### SMP Condition

12.309 We have concluded that BT should be subject to a requirement not to unduly discriminate and provide Ethernet services on an EOI basis.

### Legal tests

12.310 We are satisfied that the SMP conditions meet the various tests set out in the Act.

12.311 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

12.312 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

12.313 In reaching our conclusion that BT should be subject to a requirement not to discriminate unduly and to provide Ethernet services on an EOI basis, we have taken all these six factors into account. In particular, we consider that the SMP conditions are required to secure effective competition in the long term.

12.314 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP conditions are aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by preventing BT from leveraging its SMP into related downstream markets.

12.315 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP conditions are:

- objectively justifiable in that they provide safeguards to ensure that competitors, and hence consumers, are not disadvantaged by BT discriminating unduly in favour of its own downstream activities or between different competing providers ;
- not unduly discriminatory, as they are imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate because:
  - in relation to the no undue discrimination obligation it only seeks to prevent discrimination that is undue; and
  - in relation to the obligation to provide Ethernet service on an EOI basis, for the reasons set out above at paragraphs 12.165 to 12.195;
- transparent in that they are clear in what they are intended to achieve.

## Direction relating to service level guarantees

### Aim of regulation

12.316 As a consequence of BT's control of wholesale infrastructure in these markets, CPs depend on BT for the provision of wholesale services which are able to support efficient and reliable end-user services. Whilst EOI requirements give BT some incentive to deliver efficient and reliable services to CPs (as its own downstream divisions must also use them), in previous work we have concluded that further measures are required to incentivise good performance.<sup>1224</sup>

12.317 In particular, we consider it important that the contractual arrangements for the wholesale products CPs buy from BT in this market are such that:

- they incentivise the efficient provision of reliable services to BT's wholesale customers;
- they set out fair and reasonable compensation payments for delays in delivery and repair of such services; and
- they allow BT and its wholesale customers to monitor effectively the performance of BT's provision and repair of wholesale regulated products.

12.318 In order to achieve these objectives, contractual arrangements need to include:

- a set of SLAs which reflects the commercial SLAs provided to end users of Alternative Interface leased lines; and
- a set of SLGs which sets out fair and reasonable compensations for delays in delivery and repair of such services.

12.319 In support of these objectives, in the 2007/8 Review we issued a direction under the network access condition specifying the SLG compensation arrangements for services BT provides in this market. The direction applied principles established in earlier SLG work. We consider that these principles are still valid and therefore that it is appropriate to reapply the direction. The direction requires BT to:

- pay compensation for orders not delivered by the Contractual Delivery Date (CDD) or the Customer Requirements Date (whichever is later), subject to specified compensation limits;
- pay compensation for faults not repaired within 5 hours, subject to specified compensation limits;
- pay SLG compensation payments proactively; and
- make compensation payments without prejudice to any right of CPs to claim for additional losses.

<sup>1224</sup> Service level guarantees: incentivising performance  
<http://stakeholders.ofcom.org.uk/binaries/consultations/slg/statement/statement.pdf>

## SMP Direction

12.320 We have concluded that BT should be subject to a direction which sets out fair and reasonable compensations for delays in delivery and repair of Ethernet services.

## Legal tests

12.321 We are satisfied that the direction meets the relevant tests set out in the Act.

12.322 First, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4 of the Act. In particular, the conditions are aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by the implementation of an SLG regime that will incentivise BT to provide good quality of service to CPs.

12.323 Secondly, section 49 of the Act requires directions to be objectively justifiable, non-discriminatory, proportionate and transparent. The direction is:

- objectively justifiable, in that it requires BT to adopt an SLG regime that will incentivise it to deliver good quality of services to CPs;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate since it only seeks to incentivise good quality of service that would adversely affect competition and ultimately cause detriment to end-users; and
- is transparent in that the direction is clear in what they are intended to achieve.

## **Charge controls**

### Aim of regulation

12.324 We are imposing a charge control remedy to address the competition problems we have identified, in particular the risk of excessive pricing.

12.325 Section 87(9) of the Act authorises the setting of an SMP services condition setting price controls for network access and relevant facilities. Section 88 of the Act specifies that Ofcom are not to set a price control unless it appears to Ofcom that there is a risk of adverse effects due to pricing distortions and it appears to Ofcom that setting a price control would promote efficiency, sustainable competition and confer the greatest benefits on the end users.

12.326 A price control can take a variety of forms<sup>1225</sup> including but not limited to a charge control, cost orientation and/or safeguard cap.

12.327 In a competitive market, the charges for services would be set on the basis of the commercial judgements of individual companies and could be expected to deliver cost reflective prices. However, as discussed above, one of the competition problems we have identified as a result of our market analysis of the AISBO markets, in particular our respective SMP assessments, is the risk of BT engaging in excessive pricing.

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<sup>1225</sup> As suggested by Recital 20 of the Access Directive.

12.328 Excessive prices at the wholesale level could make it difficult for third party CPs to compete at the retail level with BT and in the long term, may result in market exit. Unjustifiably high wholesale charges are also likely to result in high retail prices – i.e. consumers would be paying more for a service than they should expect if wholesale prices were constrained by effective competition.<sup>1226</sup>

12.329 Having identified this relevant risk of an adverse effect arising from price distortion in our market analysis,<sup>1227</sup> we have concluded that this risk should be addressed by the imposition of an appropriate charge control remedy in each of the AISBO markets. We have concluded that the charge control remedy in each of the AISBO markets also appears appropriate for the purposes of:

- promoting efficiency;
- promoting sustainable competition; and
- conferring the greatest possible benefits on end-users.<sup>1228</sup>

12.330 We have also taken account of the extent of the investment of BT in the matters to which the charge control remedy relates.

12.331 Our conclusions, together with our reasons, consultation responses and considerations of those responses, with regard to the detail of the charge control remedy we are imposing in each of the AISBO markets, and the reasons why we consider this remedy complies with the relevant legal tests in the Act, are set out in Section 21.

## Transparency and notification obligations

### Aim of regulation

12.332 We have concluded that BT should be subject to a set of obligations, aimed at promoting transparency and ensuring non-discrimination.<sup>1229</sup> The obligations which we discuss in more detail below are:

- an obligation to publish a reference offer, including terms and conditions of provisioning and repair;
- an obligation to give 28 days' notice of price reductions and to give 90 days' notice of all other changes to prices, terms and conditions for existing AISBO services;
- an obligation to give 28 days' notice of the introduction of prices, terms and conditions for new AISBO services;
- a requirement to notify technical information with 90 days notice;

<sup>1226</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of fair and coherent access pricing.

<sup>1227</sup> Within the meaning of section 88(3) of the Act.

<sup>1228</sup> Within the meaning of section 88(1)(b) of the Act.

<sup>1229</sup> In this respect, we consider the set out obligations aimed at promoting transparency and ensuring non-discrimination are consistent with the relevant best practices identified in the BEREC Common Position.

- an obligation to publish quality of service information, as directed by Ofcom; and
- obligations relating to requests for new network access.

12.333 These requirements are designed to support the general, and specific, network access and non-discrimination obligations. These forms of discrimination are particularly relevant when dealing with a vertically integrated incumbent, as in BT's case.

12.334 In our view, since their imposition as a result of the 2007/8 Review, these SMP obligations have been on the whole effective in supporting the network access and non-discrimination obligations.

12.335 We have concluded that it is appropriate to apply these obligations to BT.

### SMP Conditions

12.336 We have concluded that BT should be subject to requirements to provide information and give notice of changes.

### Legal tests

12.337 Section 87(6) of the Act authorises the setting of an SMP services condition requiring the dominant provider not to unduly discriminate against particular persons, or against a particular description of persons, in relation to matters connected with the provision of network access. Section 87(6) also authorises the setting of SMP services conditions that require the dominant provider to publish information about network access to ensure transparency and to publish terms and conditions.

12.338 We discuss each of the transparency obligations in more detail in the sub sections below.

## **Requirement to publish a Reference Offer (RO)**

### Aim of regulation

12.339 A requirement to publish an RO has two main purposes, namely:

- to assist transparency for the monitoring of potential anti-competitive behaviour; and
- to give visibility to the terms and conditions on which other providers will purchase wholesale services.

12.340 This helps to ensure stability in markets without which we consider incentives to invest might be undermined and market entry less likely.

12.341 The publication of a RO potentially allows for speedier negotiations, avoids possible disputes and gives confidence to those purchasing wholesale services that they are being provided on non-discriminatory terms. Without this, market entry might be deterred to the detriment of the long-term development of competition and hence consumers.

12.342 We consider the requirement to publish an RO imposed as a result of the 2007/8 Review had been effective in carrying out the three roles explained above. Therefore

we have concluded that it is appropriate to impose the same requirement on BT in this market review.

12.343 The condition requires the publication of a RO and specifies the information to be included in that RO (set out below) and how the RO should be published. It prohibits the dominant provider from departing from the charges, terms and conditions in the RO and requires it to comply with any directions Ofcom may make from time to time under the condition. The published RO must set out (at a minimum) such matters as:

- a clear description of the services on offer including technical characteristics and operational process for service establishment, ordering and repair;
- the locations of points of network access and the technical standards for network access;
- conditions for access to ancillary and supplementary services associated with the network access including operational support systems and databases etc;
- contractual terms and conditions, including dispute resolution and contract negotiation/renegotiation arrangements;
- charges, terms and payment procedures;
- service level agreements and service level guarantees; and
- to the extent that BT uses the service in a different manner to CPs or uses similar services, BT is required to publish a reference offer for in relation to those services.

### SMP Condition

12.344 We have concluded that BT should be subject to requirements to publish a RO.

### Legal tests

12.345 We are satisfied that the SMP condition meets the various tests set out in the Act.

12.346 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

12.347 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;

- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

12.348 In reaching our conclusion that BT should be subject to a requirement to publish a reference offer, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

12.349 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP condition is aimed at promoting competition firstly by ensuring that providers have the necessary information to allow them to make informed decisions about purchasing AISBO services in order to compete in downstream markets and by providing transparency in order to assist in the monitoring of anti-competitive behaviour.

12.350 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it requires that terms and conditions are published in order to encourage competition, provide stability in markets and monitor anti-competitive behaviour;
- not unduly discriminatory in that it is imposed only on BT and no other operator has been found to hold a position of SMP in the AISBO markets;
- proportionate in that only information that is considered necessary to allow providers to make informed decisions about competing in downstream markets is required to be provided; and
- transparent in that it is clear in its intention to ensure that BT publishes details of its service offerings.

## **Requirement to notify charges and terms and conditions**

### **Aim of regulation**

12.351 We have concluded that BT should be subject to an obligation to notify changes to its charges, terms and conditions.

12.352 Notification of changes to services at the wholesale level can assist competition by giving advanced warning of charge changes to providers purchasing wholesale services also in order to compete with the dominant provider in downstream markets. It also supports the non-discrimination obligation by ensuring that BT does not notify changes in a discriminatory manner. Notification of changes to charges therefore helps to ensure stability in markets without which we consider incentives to invest might be undermined and market entry made less likely. However, there may be



some disadvantages to notifications, particularly in markets where there is some competition. It can lead to a 'chilling' effect where CPs follow BT's prices rather than act dynamically to set competitive prices.

- 12.353 Currently the notification period for changes to prices, terms and conditions of existing products and services in these markets is 90 days and 28 days for new network access reflecting the lower administrative impact of the introduction of new services.
- 12.354 As discussed above, BT's view is that the notice period should be reduced to 28 days, to align it with the notice period Ofcom applies in the wholesale broadband access market. BT argued that 28 day notice is now standard commercial practice for wholesale services and would therefore not inconvenience CPs. BT also argued that reduced notice periods would make it easier for it to comply with its charge control obligations by enabling it to alter its charges more quickly, for example after RPI figures are published.
- 12.355 We need to ensure that the regulatory approach that we adopt in each market adequately addresses the competition issues which we have identified. In the WBA market we concluded that a 28 day notice period was appropriate but in other markets such as the WLA market, we concluded that the competition issues warranted maintaining a 90 day notice period for LLU services. We therefore, do not accept BT's argument that because we have given BT more commercial freedom in a particular economic market we should do the same in other economic markets.
- 12.356 The investment required to use wholesale AISBO services is significantly greater and requires CPs to build more complex networks than for most of the services to which we have applied a 28 day notice period. In this market there is also often a longer / more complex supply chain of network operators, resellers and systems integrators supporting multiple downstream services. This means that changes to wholesale AISBO services are likely to have a greater impact on CPs than changes to downstream services where we apply a 28-day notice period and will also be more complex to assess. Typically this might involve modelling the impact of the new charges on the cost of providing downstream services, securing internal approval for a pricing revisions and finally notifying end-users (which may be subject to a minimum notice period, typically 28 days). With a shorter notification period, there is a risk that CPs would have insufficient time to react to changes to wholesale terms and could for instance be left financially exposed by changes to wholesale prices. For these reasons we considered that the advantages of a 90 day notice period outweighed the disadvantages and that a 90 day notice period was therefore still generally appropriate.
- 12.357 However, we also recognised that industry and end users could benefit from shorter notification times when prices are being reduced. For example, there may be advantages in having a shorter notification period for price incentives to encourage migration to newer or more efficient AISBO services. There should also not be a risk of financial exposure for CPs if prices are being reduced. We therefore considered there was scope to reduce the notification period for price reductions to 28 days. Often price reductions are given as part of a special offer to which conditions are attached so the shorter notice period would also need to apply to such conditions.<sup>1230</sup>

<sup>1230</sup> For example, we have recently granted a notification waiver for Openreach's special offer for EAD to WES migration. This offered a discount on connection charges and a waiver of early termination charges on condition that customers upgraded to higher bandwidth circuits.  
<http://stakeholders.ofcom.org.uk/binaries/consultations/ethernet-waiver/statement/statement.pdf>

12.358 We noted that in the last year, we had consented to a request from BT to waive the notice period for price reductions for Ethernet services. We could maintain the 90 day notice period and grant waivers if we receive similar requests in future. However, we took the view that there was a likelihood that such requests would be granted, and we therefore considered that it would be more proportionate and less administratively burdensome to reduce the notice period for price reductions to 28 days.

12.359 We have now concluded that the following notification periods should apply:

- 28 day notice for prices, terms and conditions relating to new service introductions;
- 28 days notice for price reductions and associated conditions (for example conditions applied to special offers)<sup>1231</sup>; and
- 90 days notice for all other changes to prices terms and conditions.

### SMP Condition

12.360 We have concluded that BT should be subject to requirements to notify charges, terms and conditions.

### Legal tests

12.361 We are satisfied that the SMP condition meets the various tests set out in the Act.

12.362 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

12.363 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and

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<sup>1231</sup> We further consider that a 28 day notice period should apply to an increase in prices that may occur at the end of a special offer (where the price immediately following the end of the special offer is no higher than price immediately before the start of the special offer).

- the desirability of securing that electronic communications services are provided that are available throughout the member States.

12.364 In reaching our conclusion that BT should be subject to a requirement to notify changes to its charges, terms and conditions, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

12.365 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that CPs have the necessary information about changes to terms, conditions and charges sufficiently in advance to allow them to make informed decisions about competing in downstream markets.

12.366 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that there are clear benefits from the notification of changes in terms of ensuring that providers are able to make informed decisions within an appropriate time frame about competing in downstream markets;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in this market;
- proportionate, as 90 days is considered the minimum period necessary to allow competing providers to plan for changes to existing network access and 28 days would be sufficient for new network access and price reductions; and
- transparent in that it is clear in its intention to ensure that BT provides notification of changes to their charges and terms and conditions.

## **Requirement to notify technical information**

### Aim of regulation

12.367 We have concluded that changes to technical information should be published in advance, so that competing providers have sufficient time to prepare for them.

12.368 Under the requirement to publish a RO, BT is required to publish technical information. However, advance notification of changes to technical information is important to ensure that providers who compete in downstream markets are able to make effective use of the wholesale services provided by BT.

12.369 For example, a competing provider may have to introduce new equipment or modify existing equipment to support a new or changed technical interface. Similarly, a competing provider may need to make changes to their network in order to support changes to wholesale services offered by BT.

12.370 Technical information includes new or amended technical characteristics, including information on network configuration, locations of the points of network access and technical standards (including any usage restrictions and other security issues).

12.371 We consider the requirement to notify technical information imposed as a result of the 2007/8 Review has been effective in allowing providers sufficient time to prepare for such changes. Therefore we consider it is appropriate to impose the same requirement in this market review.

12.372 The condition requires the notification of new technical information within a reasonable time period but not less than 90 days in advance of providing new wholesale services or amending existing technical terms and conditions. We consider that 90 days is the minimum time that competing providers need to modify their network to support a new or changed technical interface or support a new point of access or network configuration.

12.373 Longer periods of notification may also be appropriate in certain circumstances. For example, if BT were to make a major change to their technical terms and conditions, a period of more than the 90 day minimum notification period may be necessary. We consider that regulations are not necessary to address such circumstances, because they are likely to be sufficiently rare for us to address them on a case-by-case basis.

### SMP Condition

12.374 We have concluded that BT should be subject to requirements to notify technical information.

### Legal tests

12.375 We are satisfied that the SMP condition meets the various tests set out in the Act.

12.376 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

12.377 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

12.378 In reaching our conclusion that BT should be subject to a requirement to notify technical information, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

12.379 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that providers have sufficient notification of technical changes to AISBO services to enable them to compete in downstream markets.

12.380 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it enables providers to make full and effective use of network access to be able to compete in downstream markets;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate in that 90 days is the minimum period that Ofcom considers is necessary to allow competing providers to modify their networks; and
- transparent in that it is clear in its intention that BT notify changes to technical information in advance.

## **Requirement to publish quality of service information**

### Aim of regulation

12.381 We have concluded that BT should be required to publish specific quality of service information.

12.382 Vertically integrated operators have the ability to favour their own downstream businesses over third party CPs by differentiating on price or terms and conditions. This discrimination could also take the form of variations in quality of service (either in service provision and maintenance or in the quality of network service provided by the dominant provider to external providers compared to its own retail operations). This has the potential to distort competition at the retail level by placing third party CPs at a disadvantage in terms of the services they can offer consumers to compete with the downstream retail business of the vertically integrated operator.

12.383 We consider the requirement to publish quality of service information imposed as a result of the 2007/8 Review has been effective in mitigating the risk of this type of discrimination. Therefore we consider it is appropriate to impose the same requirement on BT in this market review.

12.384 We conclude that for each of the AISBO markets, BT should be subject to an obligation to publish information about the quality of service of the network access it provides. The obligation requires BT to publish information as directed by Ofcom, rather than requiring BT to publish specific information from the date of the imposition of the obligation.

12.385 The main benefit of this obligation is that BT could be required to publish information that would enable other CPs to determine whether the service they receive from BT is equivalent to that provided by BT to its own retail divisions.

12.386 BT already publishes a detailed set of Key Performance Indicators (KPIs) that are shared and discussed with industry and the OTA. BT has also agreed with Ofcom and the OTA to start publishing a summary of key metrics aimed at demonstrating how its performance reflects on the end user experience, for example in terms of provisioning and fault repair for different levels of care. These metrics are intended to also include key products provided in the AISBO markets. Given this agreement we do not consider it necessary to issue a direction specifying the quality of service information that BT should publish. This obligation will therefore function as a backstop that would allow Ofcom to require BT to publish specific information if satisfactory agreements cannot be reached in future.

### SMP Condition

12.387 We have concluded that BT should be subject to requirements to publish quality of service information.

### Legal tests

12.388 We are satisfied that the SMP condition meets the various tests set out in the Act.

12.389 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

12.390 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

12.391 In reaching our conclusion that BT should be subject to a requirement to publish quality of service information, we have taken all these six factors into account. In

particular, we consider that the SMP condition is required to secure effective competition in the long term.

12.392 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that providers have visibility of the quality of service that BT provides for itself and to other providers.

12.393 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it aims to support the non discrimination obligations in the provision of services by requiring BT to publish quality of service information about the service it provides to itself and to other providers;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate because it only requires BT to publish information as directed by Ofcom in the event we consider such information is required to monitor BT's compliance with its other obligations, which is the minimum condition to ensure the desired objective; and
- transparent in that it is clear in its intention that BT is required to publish quality of service information.

## **Requests for new network access**

### Aim of regulation

12.394 We have concluded that BT should be subject to obligations that determine how requests for new types of network access should be handled.

12.395 Section 87(3) of the Act authorises the setting of SMP services conditions in relation to the provision of network services. Under section 87(5)(a) such conditions may include conditions that secure fairness and reasonableness in the way in which requests for new network access are made and responded to.

12.396 Vertically integrated operators have the ability to favour their own downstream business over third party CPs by differentiating on price or terms and conditions. One form of discrimination is in relation to the handling of requests for new types of network access. This has the potential to distort competition at the retail level by placing third party CPs at a disadvantage compared with the downstream retail business of the vertically integrated operator in terms of their ability to introduce new services to meet their customer needs and in terms of their ability to offer innovative services in order to compete more effectively.

12.397 Subject to our views expressed above in relation to Openreach's product development process, we consider the obligations imposed on BT determining how requests for new types of network access should be handled have been effective in mitigating the risk of this type of discrimination. Therefore we consider it is appropriate to impose the same obligations on BT in this market review. These obligations include:

- a requirement for BT to publish reasonable guidelines specifying the required content and form of requests for new network access and how they will be handled;
- a requirement for BT to provide sufficient technical information to CPs to allow them to draft product specifications that are efficient and which satisfy the reasonable requirements; and
- timescales within which BT must acknowledge and process requests.

### SMP Condition

12.398 We have concluded that BT should be subject to requirements regarding the handling of request for new network access.

### Legal tests

12.399 We are satisfied that the SMP condition meets the various tests set out in the Act.

12.400 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

12.401 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

12.402 In reaching our conclusion that BT should be subject to a requirement specifying how it should handle requests for new network access, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

12.403 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the condition is aimed at promoting competition and



securing efficient and sustainable competition for the maximum benefits for consumers by facilitating the development of competition in downstream markets.

12.404 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The condition is:

- objectively justifiable in that its purpose is to support the non discrimination obligations in the processing of requests for new network access;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate as it continues to provide a SoR process based on the currently implemented process, while allowing scope for industry to be involved in agreeing process improvements; and
- transparent in that the condition is clear in its intention to set requirements for the processing of requests for new network access.

## Insufficiency of national and Community competition law remedies

12.405 At the beginning of this Section we set out our conclusion that national and Community law remedies would be insufficient to address the competition problems we have identified in the AISBO markets.

12.406 We set out below, by reference to the remedies we have decided to impose, our reasons supporting this conclusion, and which reasons lead us to conclude that competition would be ineffective in the AISBO markets over the course of the three year review period.

12.407 First, we do not consider that the nature and scope of the remedies we are imposing to address the competition problems we have identified could be imposed equally effectively under competition law. This includes reliance on the BT Undertakings which are, in essence, a remedy under national competition law.<sup>1232</sup> As we explained in 2005 when we accepted them in lieu of a reference to the Competition Commission, the BT Undertakings are intended to complement *ex ante* regulation under the Act. They seek to deploy a variety of mechanisms aimed at defining equivalent treatment, and at preventing and detecting discriminatory conduct by BT when supplying wholesale network access and backhaul services to its downstream competitors. In contrast, the SMP remedies we are imposing are needed to address the competition problems we have identified in this market review and which we consider will pervade over the course of the three year review period. For example:

- we are imposing both a general, and specific, network access obligations, in the manner and form set out in Conditions 1 and 2, that apply in all of the AISBO markets – i.e. not just in one relevant market;
- Conditions 1 and 2 provide, amongst other things, for direction-making powers.<sup>1233</sup> These direction-making powers are important since they allows us to direct BT as to the application of the general, and specific, network access obligation – whether that should be in one or all of the wholesale AISBO markets

<sup>1232</sup> Enterprise Act 2002.

<sup>1233</sup> Condition 1.3 and Condition 2.2.

– and so ensure their application can be specifically tailored to address the competition problem(s) we have identified, both now and over the course of the three year review period. In this respect, under Condition 1.3, we are imposing a direction on BT specifying the SLG compensation arrangements for services BT provides in this market;

- we are imposing specific cost accounting obligations;
- the *ex ante* remedies we are imposing provide, amongst other things, that new products and services provided in the AISBO markets are captured by the relevant SMP obligations,<sup>1234</sup> thus ensuring their continued effectiveness to address the competition problems over the course of the three year review period.

12.408 Secondly, as evidenced by the suite of remedies we are imposing, the requirements of intervening to address the competition problems in the AISBO markets are extensive. We list the remedies below:

- a requirement to provide network access including an obligation to offer fair and reasonable charges, terms and conditions;
- a requirement to provide cost accounting information;
- a requirement not to unduly discriminate;
- a requirement to provide Ethernet services on an EOI basis;
- a charge control;
- a requirement to publish a reference offer;
- a requirement to give notice of changes to prices terms and conditions:
  - 28 days notice for the introduction of prices, terms and conditions for new services;
  - 28 days notice for price reductions for existing services; and
  - 90 days notice for all other changes to prices, terms and conditions.
- a requirement to publish quality of service information;
- a requirement to notify technical information with 90 days notice;
- obligations relating to requests for new network access; and
- accounting separation and cost accounting obligations.

12.409 Thirdly, based on our regulatory experience from two previous market reviews, recent developments in the AISBO markets, consultation responses and expected developments over the three year review period, we remain of the view that providing continued certainty in the AISBO markets is of paramount concern – both to BT and

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<sup>1234</sup> See for example, Condition 1 which provides that the provision of network access – i.e. both existing and new – is on fair and reasonable terms, conditions and charges.

OCPs, and to end-users. We consider this is best achieved through *ex ante* regulation which, in comparison to competition law remedies and in light of our analysis of the relevant markets, will:

- will provide greater certainty over the course of the three year review period on the types of behaviour that are/are not allowed;
- allow for timely intervention – proactively by us and/or by parties bringing regulatory disputes to us for swift resolution<sup>1235</sup> – and consequently timely enforcement using the considerable enforcement powers accorded us under the Act to secure compliance,<sup>1236</sup> through a process with which the market in general is familiar and which is also set out in the Act.

## Removal of regulation

12.410 As set out above, the remedies we are imposing are those which we conclude are appropriate to address the competition problems we have identified in the AISBO markets as a result of our market analysis, and which we conclude reliance on national and Community competition law alone would be insufficient to address.

12.411 Accordingly, we are imposing the SMP conditions explained above. As a result of this, we are revoking all of the SMP conditions imposed on BT in the 2007/8 Review in the relevant wholesale market as defined in the 2007/8 Review.

12.412 We set out the notice revoking those SMP conditions, together with the new SMP conditions we are imposing in the AISBO markets, in the statutory notification which is in Annex 7 to this Statement.

## Conclusions regarding the remedies we are imposing in the AISBO markets

12.413 We have concluded that the following remedies should be imposed on BT in the AISBO markets:

- a requirement to provide network access including an obligation to offer fair and reasonable charges,<sup>1237</sup> terms and conditions;
- a requirement not to unduly discriminate;
- a requirement to provide Ethernet services on an EOI basis;
- a charge control;
- a requirement to publish a reference offer;
- a requirement to give notice of changes to prices terms and conditions:
  - 28 days notice for the introduction of prices, terms and conditions for new services;

<sup>1235</sup> See sections 185 to 191 of the Act, in particular section 185(1A).

<sup>1236</sup> See sections 94 to 104 of the Act.

<sup>1237</sup> In relation to fair and reasonable charges, see Section 9.

- 28 days notice for price reductions for existing services; and
- 90 days notice for all other changes to prices, terms and conditions.
- a requirement to publish quality of service information;
- a requirement to notify technical information with 90 days notice; and
- obligations relating to requests for new network access; and
- accounting separation and cost accounting obligations.<sup>1238</sup>

12.414 We have concluded that BT should be subject to a direction under the general access condition specifying the SLG compensation arrangements for services BT provides in this market.

12.415 As explained above we have concluded that these remedies also apply to interconnection and accommodation services that BT provides in connection with wholesale AI services.

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<sup>1238</sup> In relation to accounting separation and cost accounting obligations, see Section 16.

## Section 13

# Remedies for wholesale MI markets

## Introduction

- 13.1 In this Section we set out the remedies that we have decided to impose on BT in the following market:
- Wholesale market for Multiple Interface Symmetric Broadband Origination (MISBO) in the UK excluding the Hull area and the WECLA.
- 13.2 Unless stated otherwise, we refer to the market set out above as the wholesale MISBO market.
- 13.3 The remedies we have imposed are those which we conclude are appropriate to address the competition problems we have identified in the wholesale MISBO market as a result of our market analysis, in particular our SMP assessment, and which we conclude national and Community competition law alone would be insufficient to address. We set out the competition problems further below in this Section.

## Summary of our conclusions

- 13.4 Figure 13.1 below summarises the competition problems we have identified in this market and the remedies we have concluded are appropriate to address them.

**Figure 13.1: Summary of the competition problems and remedies**

Competition problems	Remedies
<ul style="list-style-type: none"> <li>Refusal to supply</li> <li>Predatory pricing</li> <li>Margin Squeeze</li> <li>Cross subsidisation</li> </ul>	Requirement to provide network access on reasonable request including an obligation to offer fair and reasonable charges, terms and conditions
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	Requirement to provide single-service Ethernet services on reasonable request <ul style="list-style-type: none"> <li>disaggregated single-service Ethernet access and backhaul;</li> <li>end-to-end single-service Ethernet products.</li> </ul>
<ul style="list-style-type: none"> <li>Price discrimination;</li> <li>Non-price discrimination, e.g. different terms and conditions, delaying tactics (different delivery timescales for provision and fault repair); strategic design of products; exclusive dealing; quality discrimination; different SLAs and SLGs;</li> <li>Predatory pricing;</li> <li>Margin squeeze.</li> </ul>	Requirement to provide end-to-end and backhaul services with WDM equipment at the customer's premises
	Requirement to provide network access on Equivalence of Input basis
	Obligation not to discriminate unduly
	Publication of reference offer
	Requirement to notify changes to charges and T&Cs
	Publication of quality of service as required by Ofcom
	Notification of technical information

Competition problems	Remedies
<ul style="list-style-type: none"> <li>• Price and non-price discrimination;</li> <li>• Excessive pricing;</li> <li>• Predatory pricing;</li> <li>• Margin squeeze.</li> </ul>	Accounting separation and cost accounting obligations
<ul style="list-style-type: none"> <li>• Cross-subsidisation</li> <li>• Excessive pricing</li> <li>• Over investments</li> <li>• Excessive costs/inefficiencies</li> </ul>	Charge control on single-service Ethernet products
<ul style="list-style-type: none"> <li>• Refusal to supply new network access;</li> <li>• Non-price discrimination, e.g. delaying tactics, strategic product design, etc.</li> </ul>	Requests for new network access

## Charge control remedy

13.5 In this Section, we set out our reasons why, at a high level, we remain of the view that a charge control in the wholesale MISBO market should be imposed. Our conclusions, together with our reasons, consultation responses and considerations of those responses, with regard to the detail of the charge control we are imposing, are set out in Section 20.

## Other pricing remedies

13.6 As part of our assessment of the appropriate package of pricing remedies, together with the non-pricing remedies, to address the competition problems we have identified in the wholesale MISBO market, we have considered the following, set out below. Our conclusions, together with our reasons, consultation responses and considerations of those responses, in relation to i) and ii) are set out in Section 9, and in relation to iii) are set out in Section 16.

- i) cost orientation;
- ii) the scope of the fair and reasonable obligation according to which, amongst other things, BT must provide general network access; and
- iii) accounting separation and cost accounting obligations.

13.7 In relation to i), we have decided, as per our proposal in the June BCMR Consultation, not to impose a cost orientation obligation on BT in the wholesale MISBO market.

13.8 In relation to ii), we have decided to broaden the scope of the obligation requiring the provision of network access by BT in the wholesale MISBO market to be on fair and reasonable terms and conditions, to include also fair and reasonable charges.

13.9 In relation to iii), we have decided, as per our proposals in the June and November BCMR Consultations, to impose accounting separation and cost accounting obligations on BT in the wholesale MISBO market.

## Remedies as a whole in the wholesale MISBO market

- 13.10 We consider that the remedies as a whole in the wholesale MISBO market would secure or further our statutory duties and would satisfy the relevant legal tests. In reaching our conclusions we have taken account of our regulatory experience from two previous market reviews, recent developments in the MISBO market (which, as noted in the June BCMR Consultation, is a relatively new market), consultation responses, and expected developments over the review period of three years.
- 13.11 In reaching our conclusions on the appropriate remedies to impose, we have taken due account of all applicable guidelines and recommendations issued by the European Commission (EC), and we have taken utmost account of the BEREC Common Position.<sup>1239</sup> We have also had regard to relevant guidance from the European Regulators' Group (ERG), Ofcom and ourselves.

## Structure of this Section

- 13.12 This Section is structured as follows:

Sub-section	Content
Assessment of competition problems in the MISBO market	Assessment of competition problems, including insufficiency of national and Community competition law remedies.
Approach in the June BCMR Consultation and the remedies we proposed	Summary of the assessment we carried out in the June BCMR Consultation and our proposed remedies.
Consultation responses and Ofcom's considerations	Summary of stakeholders' comments to the June BCMR Consultation and our considerations in respect of those comments.
Ofcom's conclusions on the appropriate remedies	Details of the remedies we have decided to impose and in relation to each, a statement of their aim and the legal tests we have applied to them.

## Assessment of competition problems in the wholesale MISBO market in the UK

- 13.13 We summarise below our assessment of the competition problems in the wholesale MISBO market before setting out the remedies we have concluded, having considered consultation responses, are appropriate to address those problems.

### Competition problems identified in the wholesale MISBO market

- 13.14 In light of our market analysis, in particular our SMP assessment, we summarise below the competition problems we have identified in the wholesale MISBO market. We have concluded BT would, in the absence of *ex ante* regulation, have the incentive, and its market power would afford it the ability, to engage in anti-competitive behaviour. These include, in particular:
- refusal to supply access at the wholesale level and thus restrict competition in the provision of services in the retail MI leased lines market, the residential fixed broadband market and mobile market;

<sup>1239</sup> BEREC Common Position on best practices in remedies imposed as a consequence of a position of significant market power in the relevant markets for wholesale lease lines, BoR (12) 83.

- engaging in unduly discriminatory practices in relation to prices, for example by charging its competitors more than it charges its own downstream divisions;
- engaging in unduly discriminatory non-pricing practices – e.g. by supplying the same products on different terms and conditions, different timescales for provision of fault and repair, quality discrimination, different SLAs and SLGs, creating new variants to fulfil the requirements of its downstream divisions and taking longer to address, or avoiding addressing, the requirements of its competitors; and
- charging excessively high prices and/or engage in anti-competitive cross subsidisation.

13.15 We have concluded BT would have the incentive to engage in these practices in order to adversely affect the development of competition in the related downstream retail markets and thus enable it to act independently of competitors, customers and ultimately of consumers in this market.

### **Insufficiency of national and Community competition law remedies**

13.16 For the reasons set out at the end of this Section, and by reference to the remedies we are imposing, we have concluded that national and Community law remedies would be insufficient to address the competition problems we have identified.

13.17 This has led us to conclude, as per our view in the June BCMR Consultation, that over the course of the review period of three years, competition would be ineffective in the wholesale MISBO market.

13.18 We now turn to the approach we adopted in the June BCMR Consultation which followed on from our assessment of the competition problems.

## **Approach in the June BCMR Consultation**

### **Assessment of appropriate remedies**

13.19 In order to address the competition problems identified in our market analysis, we proposed remedies in the June BCMR Consultation which would require BT to provide its competitors with wholesale access to its network and would define the rules that would apply to its provision of such access.

13.20 In assessing the appropriate nature and form of the remedies that we proposed, we considered the views expressed by stakeholders in response to the CFI and analysed current competition in the wholesale MISBO market. We summarise the responses we received to our CFI below.

13.21 In summary, we considered that the remedies we proposed in the wholesale MISBO market struck an appropriate balance between the following considerations:

- maintaining CPs' incentives to invest in infrastructure where it is effective and sustainable for them to deliver services without any reliance on BT's network;
- promoting CPs' incentives to invest effectively in core conveyance infrastructure where such investment is efficient and sustainable;



- ensuring that CPs can provide downstream services using BT's wholesale MISBO services where use of or investment in alternative infrastructure is unlikely to be effective and sustainable; and
- protecting users from potential exploitation through excessive pricing.

## Responses to the CFI

### *Stakeholders' views*

13.22 In the CFI we sought stakeholders' views on the likely evolution of MISBO services, and their responses helped focus the analysis which we set out below. We considered that the following points made by stakeholders in response to our CFI were of particular relevance to remedies in the MISBO market:

- UKCTA noted that the business connectivity market is changing rapidly, particularly in relation to the transition from TI to AI services and the growth of end-user bandwidth requirements. UKCTA noted that the capacity of leased lines being supplied to end-users has grown rapidly. At the time of the 2007/8 Review, 10Mbit/s Ethernet circuits were replacing 2Mbit/s TI access circuits. CPs are now commonly supplying 100Mbit/s access circuits and the transition to 1Gbit/s access circuits appears to have commenced.
- With high bandwidth access circuits now in widespread use, stakeholders argued for regulation of the high bandwidth AI market and the introduction of new access and backhaul remedies supporting all bandwidths above 1Gbit/s including interfaces such as Fibre Channel required to support the rapidly expanding demand for bandwidth in data centres. There was general agreement that the remedies should include a requirement to provide WDM circuits.
- UKCTA argued that Ofcom should put in place a framework that is sufficiently forward looking to accommodate this rapidly evolving market in which products could be introduced, achieve mass take-up and possibly even be superseded within the three year timescale of the market review. UKCTA argued that rather than put in place remedies based on specific technologies and bandwidths, Ofcom should specify remedies in terms of the underlying bottleneck assets namely BT's access and backhaul networks which CPs are unable to replicate economically.
- BT argued that our approach, not just in relation to MISBO but symmetric broadband origination at any bandwidth, should have flexibility to treat a large business site with competitive supply of services<sup>1240</sup> differently from the rest of the postcode sector in which it is located, in order to avoid results that would otherwise "*fly in the face of market realities*". It followed up its response to the CFI with a number of submissions, including its response to the June BCMR Consultation, arguing that we should identify a separate competitive market for connections at data centres, using a specific list of existing data centre sites, and that regulation should be removed and/or not applied.

<sup>1240</sup> BT defines such sites in its response to the June BCMR Consultation as 'multi-tenanted carrier neutral' data centres which they consider to be 'network nodes'.

*Ofcom's initial considerations*

- 13.23 We recognised that the leased lines market is changing rapidly, that end-users' demand for bandwidth is growing, and that WDM could play an important role alongside other technologies to fulfil some of that growing demand in downstream services, including retail leased lines, residential fixed broadband and mobile broadband services.
- 13.24 We agreed with UKCTA's comments that our proposals for remedies should be sufficiently forward looking to accommodate the evolution of the market in the next few years, in which products and technologies could evolve rapidly. We discuss below the specific objectives we took into account in proposing remedies in light of the likely models of competition and of the prospects for and impediments to their development.
- 13.25 BT framed its argument that we should treat data centres differently as a point which goes to market definition. We understand that it is appropriate to consider the position of data centres, and we set out our considerations of this question in Annex 12 of the June BCMR Consultation. We thought that the best way to address this potential issue was to consider whether a different approach to remedies might be appropriate. To the extent that we could show that there is more competition to supply data centres than other leased line users, it was appropriate to consider whether we should then apply a different set of remedies to services provided to data centres in areas where BT is found to have SMP. Our provisional conclusion was that it would be appropriate to consider such an approach only once interconnection of different networks' WDM systems becomes established, to enable more effective competition based on investment in infrastructure. However, at that stage we did not consider that there was a clearly defined category of 'data centres' which are sufficiently homogenous and distinct from other users to justify a differential approach to remedies.

Characteristics of the market

- 13.26 We were particularly mindful that the MISBO market is developing rapidly, and that demand for MISBO services is likely to grow significantly in the next few years.
- 13.27 The very high bandwidths that can be delivered with MISBO products currently find application in data centres, computing installations of large businesses, local and national governments, CPs' networks, and in production and broadcasting of television services.
- 13.28 Important factors in end-users' purchasing decisions are likely to include prices, delivery times and assurance of high service levels<sup>1241</sup>.
- 13.29 Reliability is a key requirement in applications that use MISBO products. It is often expressed in terms of availability, which is defined as the proportion of the time for which the service is available. A typical service requirement is likely to specify availability better than 99.999%. This is equivalent to a total of no more than about five minutes of downtime in a year.

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<sup>1241</sup> Ofcom commissioned CSMG to conduct research on very high bandwidth connectivity. The research report identified price, network reliability/service levels and lead times as the three most important criteria used by end users in choosing between competing providers (Figure 7, Page 21). The CSMG Research is published at <http://stakeholders.ofcom.org.uk/binaries/consultations/business-connectivity/statement/CSMG-report.pdf>.

13.30 In order to achieve such high levels of availability, CPs need to design resilience into their solutions. The design must take into account, among other things, that fibre anywhere along the route of the service could suffer accidental damage at any time, and that locating and repairing any such damage can take many hours. CPs often pre-provide alternative fibre routes for each service in order to address this possibility. They can then design solutions which can detect any degradation or interruption in the service in one route and, in that event, switch the service automatically to the alternative route. The resilience achievable is greater the shorter the segments in which the alternative fibre routes coincide in the same trench.

13.31 The MISBO market includes two technically different services:

- In the first, a CP installs WDM equipment at its customer's premises, allowing multiple services to be delivered using one pair of fibres; or
- In the second, a CP installs equipment that only allows a single service, usually based on Ethernet, to be delivered using one pair of fibres ('single-service Ethernet').

13.32 We found that CPs most often meet their customers' requirements for service bandwidths higher than 1Gbit/s by installing WDM equipment at the customer's premises and, much less often, with single-service Ethernet products. The WDM approach is more prevalent because it allows the CP to provide multiple services using one pair of fibres at the time of installation, and also to provide additional leased line services quickly and at low cost at any time subsequent to the initial installation, by adding service interface modules to the WDM equipment at both ends.

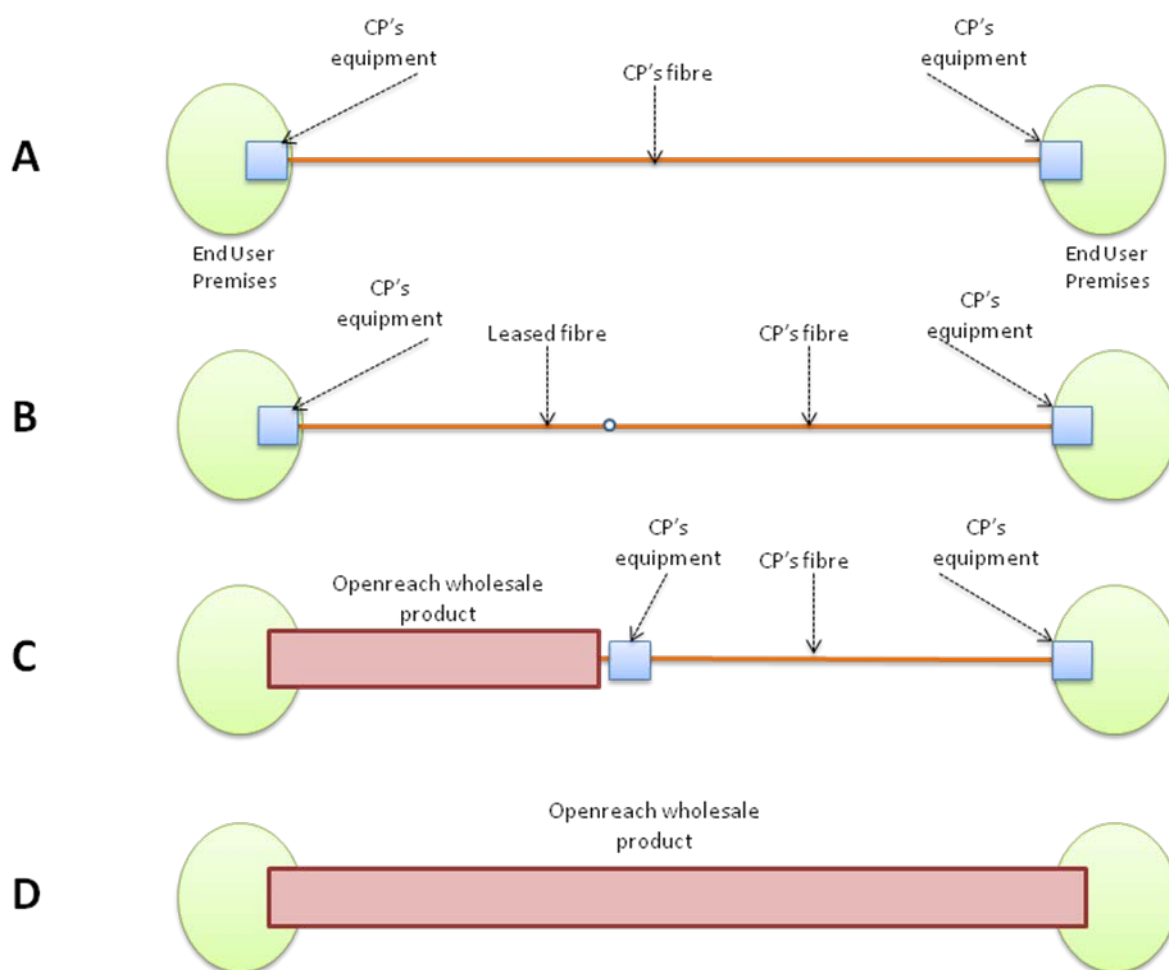
### Models of competition in MISBO

13.33 In order to help assess appropriate remedies, we first identified different business models that could be used by BT's competitors. The models correspond to different levels of investment in infrastructure. We refer to these models later in this Section in analysing current competition and its potential future development and in discussing the forms of network access that BT would need to provide in order to support them.

13.34 A CP can compete to supply a retail service supported by wholesale MISBO products according to one of the following models:

- A. use its own equipment and fibre exclusively; or
- B. use its own equipment, and use fibre leased from another CP, either exclusively or in combination with its own fibre; or
- C. fulfil a segment of the route of the service with its own equipment and fibre, and connect them to Openreach wholesale products to fulfil the remaining segment or segments; or
- D. use an Openreach wholesale product exclusively, without using any of its own equipment or fibre.

**Figure 13.2: Models of competition**



- 13.35 A CP using Model A would typically provide two alternative fibre routes between the ends of the service in order to support resilience.
- 13.36 Such a CP might use Model B in order to achieve greater geographic coverage than it could achieve with Model A alone.
- 13.37 In principle, a CP could use Model C to fulfil services for which extending its own physical network would cost too much, take too long or be practically infeasible.
- 13.38 Model D can support competition in downstream markets by allowing a CP to provide services without investing in or using any of its own infrastructure, effectively reselling Openreach's end-to-end services to its retail customers.
- 13.39 Whereas Models A-C are consistent with promotion of competition in the wholesale MISBO market and in downstream markets, Model D is only consistent with promotion of competition in downstream markets. This is a key distinction in light of the principle we adopted in our Strategic Review of Telecommunications that regulation should promote competition at the deepest level of the infrastructure at which it is likely to be efficient and sustainable.<sup>1242</sup>

<sup>1242</sup> See *Final statements on the Strategic Review of Telecommunications, and undertakings in lieu of a reference under the Enterprise Act 2002*, 22 September 2005, paragraph 3.14, at <http://stakeholders.ofcom.org.uk/binaries/consultations/752417/statement/statement.pdf>.

## Prospects for and impediments to the development of effective competition

- 13.40 Model A is, in theory, potentially viable for any particular CP seeking to compete to deliver a downstream service if the value of that service is sufficiently high to offset the costs of any construction that may be required to connect its network to end-users' sites, taking into account the likely need for alternative fibre routes to support resilience.
- 13.41 Some other impediments may prevent a CP from using Model A even in situations where the value of the service potentially exceeds the likely costs of construction. The delay involved in construction may exceed the lead-time required by the end-user. Furthermore, construction may not be practically possible in some cases, for example if part of the route would need to traverse property whose landlord does not agree to a wayleave.
- 13.42 The need for a CP to invest in construction of physical infrastructure, including any required alternative routes, extending to both ends of each downstream service, presents high barriers both to the entry of any new competition based on Model A and, potentially, to the expansion of MISBO services provided by any CP which currently competes with BT using Model A outside the WECLA and the Hull Area.
- 13.43 The limited coverage outside the WECLA of the networks of companies which lease their fibre to CPs restricts the increase of geographic scope that use of Model B currently offers CPs over and above that of Model A.
- 13.44 Model C is potentially important to the prospects for competition because it can present lower inherent barriers than Models A and B to the entry and expansion of competitors which invest in infrastructure. CPs using Model C can concentrate their investment in physical networks mainly along trunk and backhaul routes, in which they can aggregate traffic from many services and share the costs of their core infrastructure among those services, while relying mainly on BT's ubiquitous network to provide access to each customer's site. Our policies are designed to support Model C in the cases of TI and AI services by ensuring that a CP can compete to supply end-to-end services which fall partly within and partly outside the area covered by its network by purchasing access segments from BT to combine with its own (competitively supplied) core network. Model C can also enable CPs to extend their investment in infrastructure progressively over time, and hence to extend further the scope of infrastructure competition, in line with our objectives.
- 13.45 In order to use Model C, a CP needs to be able to hand over traffic effectively from its core network to a BT access segment. BT's single-service Ethernet MISBO products enable CPs to do so currently. However, we understood that CPs have not so far used BT's WDM-based MISBO products to hand over traffic from their own networks to a material extent, and that the ability of BT's current WDM-based products to support effective hand-over from CPs' WDM equipment is at an early stage of development. We explained this further in the June BCMR Consultation and re-state this in the paragraphs that follow.
- 13.46 CPs can already deliver single-service Ethernet MISBO products using Model C, for which, in accordance with BT's Undertakings, Openreach provides the following products on the basis of EOI:
- EBD 10000;
  - WES 2500, BES 2500, BES Daisy Chain 2500; and

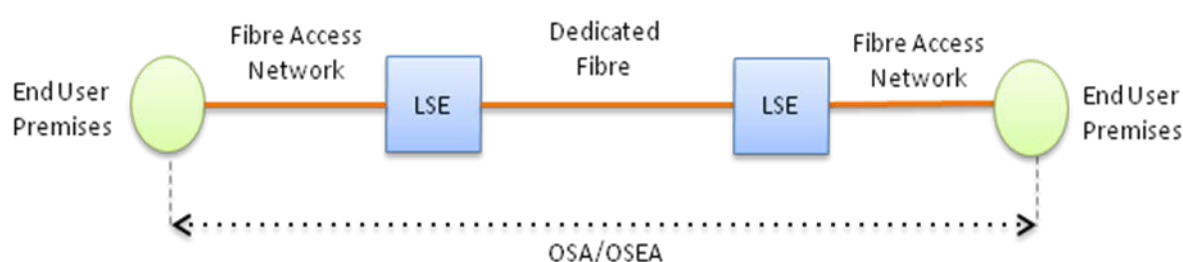
- WES 10000, BES 10000 and BES Daisy Chain 10000.

13.47 The industry's current ability to use Model C to deliver WDM-based MISBO products is less developed. Under the terms of BT's Undertakings, Openreach offers two wholesale leased lines services on the basis of EOI in which WDM equipment is located at the customer's premises:

- Optical Spectrum Access (OSA) for circuits with route distances no greater than 103km; and
- Optical Spectrum Extended Access (OSEA) for circuits of longer distances.

13.48 The most common use of OSA and OSEA is to provide end-to-end services, in accordance with Model D, as shown in the figure below.

**Figure 13.3 Optical Spectrum Access and Optical Spectrum Extended Access**



13.49 In principle, a CP could use OSA or OSEA to link an end-user site to its network node, and hence to provide a downstream service using Model C. In practice, however, interconnecting different networks' WDM-based leased lines services is currently uncommon, both because doing so can be costly and because available technology would not, at least until recently, have allowed the CP to assure reliability of the resulting service to the level often required by the end-user. To the extent that these limitations persist, CPs are not likely to use OSA or OSEA to provide services using Model C.

13.50 Pursuant to a commitment Openreach made to the industry, it has recently enhanced OSA and OSEA by providing interface options which comply with OTN technical standards.<sup>1243,1244</sup> These standards are designed, among other things, to facilitate interconnection of different networks' WDM systems while supporting assurance of high reliability to the end-user.

13.51 We understand that Openreach launched OTN interface options for OSEA on 29 April 2011 and for OSA on 31 January 2012. Openreach's recent release of these interface options could therefore help support development of competition using Model C in WDM-based services.

13.52 However, the extent to which CPs will adopt Model C in future to deliver services with WDM equipment at customers' premises is not certain. Firstly, it is too early to assess how effectively Openreach's new OSA and OSEA variants will support competition based on Model C. Secondly, the extent to which CPs are likely in future to aggregate traffic from MISBO services into shared trunk routes in their core

<sup>1243</sup> The background to this commitment is described in Annex 10 of the June BCMR Consultation.

<sup>1244</sup> ITU Standard G.709 is commonly called Optical Transport Network (OTN). It is defined as set of Optical Network Elements connected by optical fibre links, able to provide functionality of transport, multiplexing, switching, management, supervision and survivability of optical channels carrying client signals.

infrastructure is not clear. Some CPs have contributed to Openreach's development of the OSA and OSEA variants which could support Model C, and this suggests that they may be considering using this model in future.

- 13.53 Openreach currently provides end-to-end services that support Model D, including WEES 2500 and WEES 10000 for single-service Ethernet applications, and OSA and OSEA for services delivered using WDM equipment at customers' premises.
- 13.54 While Model D supports competition in downstream markets, it offers more limited scope for competitive differentiation or for price competition than the other models because all CPs which use Model D in effect resell the same inputs which they purchase from Openreach.

#### Implications on our proposals for remedies for the MISBO market

- 13.55 We expected growth in demand for bandwidth from users of downstream services to continue in the next few years, and therefore considered that the demand for MISBO services was likely to increase significantly in that period.
- 13.56 We found provisionally that BT has SMP in MISBO services outside the WECLA and the Hull area. We also found that, nevertheless, BT's competitors provide MISBO services to several sites outside the WECLA using Models A and B, reflecting the relatively high value of the downstream retail services.
- 13.57 While we recognised the significant barriers to entry and expansion inherent in Models A and B, it is possible that continued increase in demand for very high bandwidth services will increase BT's competitors' incentives to use Models A and B. This could stimulate competition based on investment in infrastructure, particularly if new demand will be concentrated in geographic areas close to BT's competitors' networks. We promote competition at the deepest level at which it is economic, and therefore considered that any remedies we impose in the MISBO market should not diminish CPs' incentives to invest in infrastructure (using Models A and B) to provide MISBO services outside the WECLA where it is efficient.
- 13.58 We recognised that, in principle, Model B could increase the geographic scope of effective competition in the wholesale MISBO market beyond that possible with Model A. We understood that currently companies that are both able and willing to make dark fibre available to CPs do not have extensive coverage outside the WECLA area. We discussed in Section 8 of the June BCMR Consultation the case for requiring BT to provide access to its dark fibre or to its ducts and poles, and explained in that section why we currently do not propose to require BT to do so.
- 13.59 We proposed continuing to support Model D because we considered that it enables competition in downstream markets in situations in which other models are not effective. We considered, however, that this model is likely to limit the benefits that competition could deliver to consumers through differentiation of services or through pressure on upstream costs.
- 13.60 We considered that the prospects for competition in the wholesale MISBO market could improve to a material extent if Model C could become an effective way to deliver services with WDM equipment at customers' premises. This model would present inherently lower barriers to entry and expansion than Models A and B, and hence promote competition at the deepest level at which it is likely to be efficient and sustainable, while providing CPs with more options to compete on price and service features than are possible with Model D.

13.61 However, noting that the extent to which CPs will adopt solutions based on Model C is uncertain, we recognised that it was possible that competition based on Model C could fail to develop effectively. In that case, we considered that the prospects for effective competition in the wholesale MISBO market were likely to be poor, and that there would be a greater risk that end-users and consumers could be exposed to excessive pricing.

13.62 Overall, the remedies that we proposed in the wholesale MISBO market, in our analysis, struck an appropriate balance between the following considerations:

- maintaining CPs' incentives to invest on the basis of Models A and B;
- promoting greater competition by supporting effective development of Model C;
- ensuring that Model D is available to BT's competitors where other models are not likely to be effective; and
- protecting users from potential exploitation through excessive pricing.

13.63 The remedies we proposed below for the MISBO market were intended to secure the achievement of an appropriate balance between those considerations. In particular:

- in seeking to address BT's ability to refuse to supply, we proposed imposing, to the extent that it would be proportionate to do so, clear obligations on BT to provide specific forms of network access that support Model C and Model D; and
- in seeking to address BT's incentives to charge excessive prices, we should bear in mind, among other things, the need to maintain CPs' incentives to invest on the basis of Models A and B and to promote their incentives to invest on the basis of Model C.

13.64 In light of the discussion above, we went on to assess the remedies which we considered are required to ensure CPs are able to obtain the forms of network access that support Models C and D, whilst maintaining their incentive to invest on the basis of Models A and B.

#### Addressing BT's ability to refuse to supply network access

13.65 In order to address BT's ability to refuse to supply network access to its competitors in the wholesale MISBO market we proposed (as set out below) that it should be subject to a general obligation to provide network access on reasonable request. In addition, we considered that clear obligations on BT to provide specific network access that support Model C and Model D would help promote competition.

13.66 It is noted that Openreach currently provides types of wholesale MISBO product, pursuant to BT's Undertakings, which support competition on the basis of Model C and Model D:

- Openreach currently provides single-service Ethernet MISBO products supporting Model C and Model D, specifically Openreach's current portfolio of single-service Ethernet products faster than 1Gbit/s includes disaggregated wholesale access and backhaul services as well as wholesale end-to-end services. Since publishing the June BCMR Consultation, Openreach has announced its intention to withdraw from further new supply the 2.5Gbit/s and 10Gbit/s variants of the WES, WEES and BES products and also that Openreach



has indicated that its OSA, OSEA and EBD products will meet the ongoing needs of its customers.<sup>1245</sup>

- Openreach currently provides OSA and OSEA, which support Model D for services delivered with WDM equipment at the customer's premises.

- 13.67 We considered it appropriate that these products continue to be provided pursuant to specific obligations, and this is what our proposals sought to achieve. In our view, the only way to achieve the aim of preventing refusal to supply (which would jeopardise Models C and D) was to impose a specific obligation on BT to supply, and we considered there is no less onerous way of doing so.
- 13.68 We noted that Openreach had recently launched variants of OSA and OSEA which sought to support Model C (in addition to the existing variants supporting Model D as noted above). It is too early to take a view about the extent to which CPs will adopt such variants or such other variants as may be developed.
- 13.69 Developments in WDM-based uses of Model C are at an early stage, and there is not yet a product which we can be confident supports Model C in this context. In the absence of clarity as to the specifications of an appropriate product, we considered that it would be premature to impose on BT an explicit requirement to provide such a product at this stage. We considered that we could not have confidence that it would achieve its aim, and that it could be more onerous than necessary.
- 13.70 However, in light of the potential for such products to improve the prospects of competition at a deep level in this market in the medium term, we said we would monitor Openreach's development of products which could support competition based on Model C in services delivered using WDM equipment in customers' premises. In addition, we said we would monitor CPs' adoption of solutions consistent with Model C for WDM-based services, including the number of relevant retail services delivered using Model C and the degree to which CPs adopt network architectures which aggregate traffic from services delivered with WDM equipment at customers' premises.

#### Addressing BT's ability to discriminate

- 13.71 We proposed to address BT's ability to discriminate, both in the prices it charges and in other ways, by imposing requirements designed to provide assurance that CPs and BT's downstream business will compete on a level playing field in providing services which use products in the wholesale MISBO market. We considered that requiring BT to provide network access on the basis of EOI could provide such assurance.
- 13.72 We considered that such a requirement was necessary to achieve the aim of addressing BT's ability to discriminate and noted that, at least to the extent that BT's services downstream of the wholesale MISBO market currently consume products provided by its Openreach division on the basis of EOI, was not likely to be more onerous than necessary to achieve that aim in the wholesale MISBO market because it would not require additional development costs to be incurred.
- 13.73 We recognised however that, exceptionally, it may be onerous to require BT to consume an Openreach MISBO product on the basis of EOI in the case of some of

<sup>1245</sup> As described by BT Openreach in a slide presented to the Ethernet product and commercial group in/or around August 2012.

the older leased lines of radial distance greater than 70km which it currently provides with WDM equipment at end-users' premises. We explained the background to the supply arrangements that have led to these exceptions in Annex 10 of the June BCMR Consultation.

- 13.74 In all other circumstances, we said we would expect BT to consume Openreach MISBO products on the basis of EOI in providing any downstream services, and to continue to do so as it develops its services, evolves its network and adopts new technology, unless we specifically direct otherwise.
- 13.75 However, EOI can have limited effect in cases where BT has no need to consume an upstream input needed by its competitors. We considered that such a case may arise in the development of competition based on Model C with WDM equipment at customers' premises. A CP providing such services and seeking to compete with BT using Model C would need a product from Openreach that would allow it to hand over traffic between its own network and BT's. The downstream businesses of BT, on the other hand, currently have no need to consume such a product from Openreach because they do not aggregate traffic from those services, and therefore do not need to hand over their traffic between different parts of BT's network.
- 13.76 BT's downstream businesses currently use Model D and consume Openreach's OSA and OSEA products. Openreach recently launched versions of OSA and OSEA with OTN interfaces which could allow CPs to hand over traffic to BT's network, and could support development of competition based on Model C. We noted that the two sets of variants of OSA and OSEA are likely to be very similar. We understood, for example, that they use the same WDM equipment and are distinguished from their Model D counterparts in that Openreach provides them with OTN interfaces rather than with end-user service interfaces such as Ethernet.
- 13.77 We proposed to address BT's ability to discriminate in relation to matters other than the price of these products by requiring BT to provide the Model C variants on the basis of EOI relative to their Model D counterparts in respect of every matter other than price. In addition, we proposed requiring BT not to discriminate unduly between the prices it charges for Model C and Model D variants. This means that the difference in price between Model C and Model D variants of the same product and of the same radial distance should be no greater<sup>1246</sup> than the difference between their long-run incremental costs, so as to incentivise a CP to choose the option which minimises overall costs, including its own costs. Since the benefits of the additional competition enabled by Model C would flow to all users of MISBO services, we also proposed that the development costs of the Model C variants should be recovered from all Openreach's MISBO services.<sup>1247</sup>

### Protecting end-users from the risk of excessive charges – a price control on BT's single-service Ethernet MISBO products

- 13.78 Without some intervention on pricing, a dominant provider would have the ability to charge excessive prices in order to maximise profits by increasing its revenues. Excessive prices at the wholesale level could make it difficult for third party CPs to

<sup>1246</sup> We noted that the incremental cost of the OTN interface needed for use with Model C is likely to be greater than that of the standard interface used with Model D.

<sup>1247</sup> We note that Ofcom has previously adopted this approach to the recovery of development costs as a result of the application of the six principles of pricing and cost recovery. See for example our 2004 Wholesale Local Access Market Review where these principles were applied to the recovery of systems set-up costs for local loop unbundling. <http://stakeholders.ofcom.org.uk/binaries/consultations/rwlam/summary/rwlam2.pdf>.

compete at the retail level with BT and, in the long term, may result in market exit. Unjustifiably high wholesale charges are also likely to result in high retail prices i.e. consumers would be paying more for a service than they should expect if wholesale prices were constrained by effective competition.

- 13.79 Price controls which can take a number of forms (charge control, cost orientation, safeguard cap) are intended to ensure that dominant operators do not price excessively. At the same time, we recognised that the wholesale MISBO market is still relatively small and that the technology is likely to develop rapidly, and considered that we should be cautious in proposing price controls which could reduce incentives to innovate and to invest.
- 13.80 We proposed a price control limited in scope to single-service Ethernet products only, and excluding services delivered with WDM equipment at customers' premises. In our view, such a control would strike an appropriate balance between constraining BT's ability to charge high prices on the one hand and minimising the risk of harming competition on the other.
- 13.81 In our view, imposing no price control in the wholesale MISBO market would not be appropriate at present because the market power we considered that BT enjoys could allow it to charge excessive prices, which are likely to flow through to excessive charges to end-users. BT could also have relatively weak incentives to provide its products more efficiently without any price control.
- 13.82 Most MISBO products are currently delivered with WDM equipment at customers' premises. The technology and market for services delivered with WDM equipment at customers' premises are still developing rapidly, so imposing price controls directly on such services could be too intrusive and prove harmful. In particular, some CPs compete with BT in this market using and investing in their own infrastructure to deliver such services, and a direct control on BT's prices for such services may diminish CPs' incentives for further investment.
- 13.83 We considered that CPs competing with BT in the MISBO market are less likely to invest in extending their own infrastructure to deliver single-service Ethernet products than to deliver services with WDM at the customers' premises, because the latter can be expanded at low additional cost.
- 13.84 Although demand for single-service Ethernet products is likely to grow over the period covered by this review, the volume of those products is likely to continue to represent a relatively small proportion of the wholesale MISBO market. Nevertheless, providers of fixed and mobile broadband services are likely to use them increasingly as consumers' demand for bandwidth grows, so despite their relatively low volume, we considered that controlling BT's prices for them would be proportionate because those prices would flow through to the prices many consumers pay.
- 13.85 A price control on the single-service Ethernet MISBO products would constrain BT's ability to raise prices for those products and, in addition, may impose some constraint on its prices for the WDM MISBO products as well, because the two product sets are, to some extent, mutually substitutable by BT's customers.
- 13.86 In addition, we considered that the combination of the limited competition from other CPs to provide MISBO products with WDM at customers' premises and our proposed obligations requiring BT to publish a reference offer and to provide its products on the basis of EOI, together with the proposed price control on single-service Ethernet

products, were likely to constrain BT's incentives to raise its prices for all MISBO products to an appropriate extent.

13.87 The LLCC Consultation set out detailed proposals for the price controls.

### Remedies proposed in the June BCMR Consultation

13.88 In light of all of the above, we then set out our assessment of the appropriate remedies for the wholesale MISBO market. The table below summarises the competition problems we identified in the wholesale MISBO market and the remedies we proposed to address them:

Competition problems	Proposed remedies
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	<ul style="list-style-type: none"> <li>Requirement to provide network access on reasonable request, including (without prejudice to the generality of the network access requirement): <ul style="list-style-type: none"> <li>disaggregated single-service Ethernet access and backhaul;</li> <li>end-to-end single-service Ethernet products</li> <li>end-to-end services with WDM equipment at the customer's premises</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Price discrimination</li> <li>Non-price discrimination, e.g. different terms and conditions, delaying tactics (different delivery timescales for provision and fault repair); strategic design of products; exclusive dealing; quality discrimination; different SLAs and SLGs</li> </ul>	<ul style="list-style-type: none"> <li>No undue discrimination in relation to the provision of network access.</li> <li>In addition, a requirement to provide all network access on the basis of Equivalence of Inputs (except for certain accommodation services and unless we consent)</li> <li>Rules governing response to requests for new network access</li> <li>Transparency, including <ul style="list-style-type: none"> <li>Obligation to publish a reference offer</li> <li>Obligation to publish changes to charges and to terms and conditions</li> <li>Obligation to notify technical information</li> <li>Obligation to publish quality of service as required by Ofcom</li> <li>Obligation to publish regulatory accounting information</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Excessive pricing</li> <li>Cross subsidisation</li> </ul>	<ul style="list-style-type: none"> <li>Price control on single-service Ethernet products</li> </ul>

### Summary of the remedies proposed in the June BCMR Consultation

13.89 Below we summarise the key elements of our proposed remedies.

#### *Requirement to provide network access*

13.90 In proposing that BT be required to meet reasonable requests for network access, we aimed to address BT's incentive to deny such access to CPs seeking to deliver services in the MISBO market (outside the WECLA and the Hull area) and in related downstream markets.

13.91 We considered, in particular, that BT should also be subject to clear obligations to provide specific wholesale access products which support competition consistent with Model D noting that it is not clear whether OSA and OSEA variants support Model C effectively at this time.

- 13.92 We therefore proposed that BT should be obliged to provide wholesale Ethernet access, backhaul and short range end-to-end segments and WDM services delivered as end-to-end segments.

*Non-discrimination and, unless we specifically direct otherwise, EOI*

- 13.93 In proposing to require BT not to discriminate unduly we sought to address its ability to discriminate in favour of its own downstream businesses. Further, we proposed that BT be required to provide network access on an EOI basis in order to provide a high level of assurance that BT and its competitors compete fairly in markets downstream of the wholesale MISBO market.
- 13.94 However, we recognised that it may be onerous to require BT to provide certain long-distance WDM circuits on an EOI basis and proposed that we should be able to direct that particular circuits need not be provided on an EOI basis.
- 13.95 The proposed obligation not to discriminate unduly also applied to pricing discounts.

*Transparency*

- 13.96 In order to ensure BT is complying with obligations to provide network access and not to discriminate unduly, we proposed additional obligations related to ensuring transparency. Such obligations provide third parties with access to the information they need to make informed decisions about purchasing BT's wholesale products.
- 13.97 We considered it appropriate to propose the following transparency obligations on BT:
- requirement to publish a reference offer;
  - an obligation to give 28 days' notice of price reductions and to give 90 days' notice of all other changes to prices, terms and conditions for existing MISBO services;
  - an obligation to give 28 days' notice of the introduction of prices, terms and conditions for new MISBO services;
  - a requirement to publish quality of service information;
  - a requirement to notify technical information with 90 days notice; and
  - obligations relating to requests for new network access.

*Requests for new network access*

- 13.98 In order to ensure that BT does not discriminate in favour of its own downstream businesses in relation to the handling of requests for new types of network access, we proposed obligations which include:
- a requirement for BT to publish reasonable guidelines specifying the required content and form of requests for new network access and how they will be handled;

- a requirement for BT to provide sufficient technical information to CPs to allow them to draft product specifications that are efficient and which satisfy the reasonable requirements; and
- timescales within which BT must acknowledge and process requests.

*Price control on single-service Ethernet products*

13.99 We proposed imposing a charge control condition on BT's single-service Ethernet MISBO products the purpose of which is to address BT's incentives to charge excessive prices.

## **Consultation responses and Ofcom's considerations**

### **Consultation responses in relation to interconnection and accommodation services**

13.100 BT considered that we had overstated the significance and relevance of a MISBO interconnection product (or lack of it) and argued that the absence of any apparent demand for any new form of interconnect product was consistent with competitive retail and wholesale markets.

#### Ofcom's considerations

13.101 We observed in the June BCMR Consultation, that whilst in principle a CP could use Openreach OSA or OSEA products to link an end-user site to its network node using the established interconnect services (CSH and IBH interconnection), interconnecting different networks' WDM-based leased line services was currently uncommon. We considered that the reason for this was that doing so was costly and would not, until the recent launch by Openreach of OTN interface options for OSA and OSEA, have allowed the CP to assure reliability of the resulting service to the level often demanded by consumers of high-bandwidth services. In relation to these matters, we considered it was too early to take a view on the development of the form of competition in MISBO described as Model C.<sup>1248</sup>

13.102 We remain of the view set out in the June BCMR Consultation, that given the potential for products like the OTN variants of OSA and OSEA to improve the prospects for competition at a deep level in MISBO markets, we will monitor Openreach's development of such products and the appetite of CPs to adopt these or other products which facilitate efficient and effective interconnection.

13.103 We set out our conclusions on whether BT should be required to provide specific types of interconnection services in Section 14.

### **Consultation responses in relation to a requirement to provide network access**

13.104 BT argued that the evidence it had submitted to us showed that many of the MISBO circuits provided by Openreach are located at network nodes and not business customer sites. BT considered that this demonstrated that the current product set is being used as an access component within CPs' end-to-end solutions i.e. supporting the types of competition which we characterised as Models C and D.

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<sup>1248</sup> See paragraphs 13.33 to 13.39 above.

## Ofcom's considerations

13.105 We discuss BT's arguments regarding the classification of MISBO circuit end points in our consideration of volume shares estimates for MISBO services outside WECLA in Section 7 of this Statement.

13.106 In reviewing our proposed MISBO network access remedies in light of BT's comments, we recognised that we needed to modify our proposed legal instrument in relation to both the definition of WDM Services and the specific form of WDM Services we intended to require BT to provide.

13.107 In the June BCMR Consultation we identified that demand for the very high bandwidths that can be delivered using MISBO products and, in particular, the scalability and flexibility afforded by WDM technology, finds application not just for end users (such as data-centres, large business ICT installations, the broadcasting industry and local and nation government) but also CPs' own networks<sup>1249</sup>. A number of respondents including CWW and TalkTalk noted that they expect growing CP demand for WDM based backhaul solutions at bandwidths of 1Gbit/s and above. While in our wholesale product market definition we defined the WDM services between customer premises, in the proposed definition and specific form of WDM services we inadvertently limited our definition of circuits to between end-user premises and where WDM is located at end-user premises.

13.108 The Act confers a specific meaning to "end-user"<sup>1250</sup> such that an end-user is not a communications provider. This is clearly not what we intended either by way of defining WDM Services or in relation to the specific form of WDM Services network access we require BT to provide by way of a remedy to its SMP in the wholesale MISBO market.

13.109 We have modified the definition of WDM Services in the legal instrument at Annex 7 as follows:

"WDM Services" mean services provided using wavelength division multiplexing equipment located at the customer's premises and which is capable of supporting multiple leased line services over a single fibre or pair of fibres.

13.110 In this definition we have replaced the term "end-user" with "customer" which is defined in section 405 of the Act as follows:

"customers", in relation to a communications provider or a person who makes an associated facility available, means the following (including any of them who use or potential use of the network, service or facility is for the purposes of, or in connection with, a business)

<sup>1249</sup> We also discussed, for example at paragraphs 12.41 to 12.49 of the June BCMR Consultation, the application of BT's current MISBO WDM products (OSA and OSEA) which Openreach currently provides (on an EOI basis) to its customers as end-to-end circuits between end-user or CP sites and in network ring and chain configurations. (See Openreach Optical Spectrum Services: A portfolio overview at <http://www.openreach.co.uk/orpg/home/products/opticalsolutions/downloads/OpticalSolutionsPortfoliooverview.pdf>.)

<sup>1250</sup> Under section 151 of the Act, "end-user", in relation to a public electronic communications services, means (a) a person who, other than as a communications provider, is a customer of the provider of that service; (b) a person who makes use of the service otherwise than as a communications provider; or (c) a person who may be authorised, by a person falling within paragraph (a), so to make use of the service.

(a) the person to whom the network, service or facility is provided or made available in the course of any business carried on as such by the provider or person who makes it available;

(b) the persons to whom the communications provider or person making the facility available is seeking to secure that the network, service or facility is so provided or made available;

(c) the persons who wish to be so provided with the network or service, or to have the facility so made available, or who are likely to seek to become persons to whom the network, service or facility is so provided or made available.

13.111 In the June BCMR Consultation we proposed imposing a specific form of network access obligation on BT in respect of WDM Services limited to the provision of wholesale end-to-end segments i.e. a circuit from one end-user premise to another. This proposed obligation therefore did not extend to imposing a specific obligation on BT to also provide WDM services in the form of product, with WDM equipment located in CPs' premises, which could be purchased by CPs to provide scalable backhaul solutions notwithstanding that Openreach currently offers such a service in the form of its OSA/OSEA products to meet its customers' requirements.

13.112 The purpose of specifying particular forms of network access obligation (in addition to a general network access requirement) is to provide clarity as to those forms of network access which we consider must be provided by BT. In the absence of such a requirement we consider BT would have an incentive to withdraw or no longer supply and make different products available under the general requirement of network access. In the case of WDM services in particular, we consider the absence of a specific obligation to provide products for application as both wholesale end-to-end segments and backhaul segments could be both disruptive to industry and potentially detrimental to the development of competition in downstream markets.

13.113 In considering the practical form of a specific WDM backhaul requirement, we consider that it is appropriate, at this time, to adopt the same approach we have used in respect of the construction of specific requirements to provide disaggregated Ethernet Services. Our reasoning in this case is based on our understanding that CPs' requirements for a flexible and scalable backhaul product such as OSA, provides an alternative to the legacy high bandwidth product BES which is due to be withdrawn and an alternative to EBD which, by design, conforms to BT's network architecture providing connectivity between BT's ASNs and OHPs.

13.114 We have therefore modified SMP Condition 2 to require the specific provision of:

WDM Services which do not contain a Trunk Segment including the provision of the following services –

(i) Backhaul Segments;

(ii) Wholesale End-to-End Segments.

### Consultation responses in relation to the withdrawal of WES, WEES and BES

13.115 Level 3 considered that BT's decision to announce the withdrawal from new supply of WES, WEES and BES 2.5Gbit/s and 10Gbit/s raised significant questions as to the effectiveness of our proposed MISBO remedies. Level 3 asked us to consider



requiring Openreach to continue to supply these products until a viable substitute is made available. It considered that a suitable form of substitute could be OSA with a single interface (including Resilient Option 2 scenarios) with chain configurations that would replicate a number of point to point single interface circuits and notes that Openreach was proposing the use of OSA for CP backhaul between BT exchanges where EBD is not available.

### Ofcom's considerations

13.116 We note that Openreach has announced its intention to withdraw from further new supply the 2.5Gbit/s and 10Gbit/s variants of the WES, WEES and BES products and also that Openreach has indicated that its OSA, OSEA and EBD products will meet the ongoing needs of its customers. It appears to us that single-interface OSA and OSEA products, which support services at 2.5Gbit/s and 10Gbit/s, would be a substitute for WES, WEES and BES as noted by some respondents<sup>1251</sup> to the June BCMR Consultation.

13.117 We consider concerns about whether the withdrawal from new supply of these products impacts the effectiveness of our proposed charge control later in this Section.

## **Consultation responses in relation to non-discrimination obligations**

### Consultation responses in relation to the provision of MISBO services on an Equivalence of Input basis

13.118 Some respondents, such as CWW and Geo, specifically welcomed our proposal to impose a requirement on BT not to discriminate unduly in the provision of network access and, specifically, to require that MISBO services are supplied to competitors on an EOI basis. Most other OCPs did not make any specific comment.

13.119 BT did not disagree with the imposition of an obligation not to unduly discriminate, but strongly disagreed with our proposal to impose an EOI SMP remedy in any MISBO markets. In BT's view, the reasons it gave as to why it considered that we cannot justify the imposition of EOI for AISBO markets apply equally to the wholesale MISBO market.

13.120 In addition BT cited two further concerns about the imposition of an EOI obligation in the wholesale MISBO market:

- An EOI obligation would limit BT's flexibility to offer the tailored designs and complex features required by customers, thereby limiting its ability to compete effectively in the wholesale MISBO market.
- An EOI obligation would create uncertainty as to the internal consumption model that BT should adopt when supplying end-to-end MISBO services, in particular whether it should adopt a Model C or Model D configuration.

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<sup>1251</sup> Such as Exponential-e and Level 3.

## Ofcom's considerations

### *Our aims and conclusions relevant to the principle of proportionality*

- 13.121 We recognise that an EOI obligation should be imposed only when the cost is proportionate. We have therefore carefully re-examined whether it would be proportionate to impose on BT an EOI obligation in the wholesale AISBO market in the WECLA, the wholesale AISBO market outside the WECLA and the wholesale MISBO market outside the WECLA (together, the Relevant Modern Markets).
- 13.122 Our conclusion is that, in balancing the aim pursued in this regard, and set out below, with associated costs and benefits, the imposition of an EOI obligation for the provision of Ethernet and WDM-based services in these markets is the necessary form of non-discrimination obligation required to effectively address the relevant competition problems we have identified, in particular BT's ability and incentive to engage in discriminatory pricing and non-pricing practices in favour of its downstream divisions in the provision of services in the Relevant Modern Markets.
- 13.123 In reaching this conclusion, we have had regard to a number of relevant considerations looking at the characteristics specific to the provision of Ethernet and WDM-based services in the Relevant Modern Markets. Our considerations include not only the above-mentioned particular competition problems, but also the need to secure our duties to further the interests of citizens and consumers in these markets by promoting competition in respect of choice, price, quality of service and value for money. We are required, in particular, to secure the availability throughout the UK of a wide range of electronic communications services. This duty also means that the desirability of encouraging the availability and use of high speed data transfer services throughout the UK is a particularly important objective to bear in mind in relation to Ethernet and WDM-based services and the effectiveness of this non-discrimination remedy.

### *The importance of creating a level playing field on the related downstream retail markets to the Relevant Modern Markets*

- 13.124 BT argues that we must be able to identify clearly the market failures which EOI is intended to address, and articulate why no lesser form of non-discrimination obligation will suffice.
- 13.125 First, for the reasons set out in Section 7, the thorough and overall analysis we have undertaken of the economic characteristics of each of these markets, based on existing market conditions, has led us to conclude that BT has SMP in the Relevant Modern Markets.
- 13.126 Secondly, the "market failures" to which BT refers, and which EOI is intended to address, arise as a result of the SMP in these wholesale markets and manifest themselves in the related downstream retail markets, as we explain below.
- 13.127 Leased lines are essential components for many downstream applications used by business customers. They also play an important role for CPs in delivering their own services to consumers, particularly as the majority of CPs remain reliant on BT's network in doing so. Specifically, Ethernet access and backhaul services are important inputs to major downstream retail markets which are important to the UK economy – including the market for fixed broadband services, the retail AI and MI leased lines markets and the mobile market.

13.128 By their nature, leased lines provide dedicated symmetric transmission capacity between fixed locations. The impact of any poor performance in developing, delivering, maintaining or repairing relevant products is therefore likely to be much larger than the price of the leased line itself, because of the detriments such failures are likely to have on downstream applications. Therefore, a buyer of a leased line is likely to choose a supplier that it is reliable in delivering them, for example, on time (including for any repairs required), consistently at the quality needed, using reliable systems and scalable processes.

13.129 This issue is particularly significant for Ethernet and WDM-based services, because they are now preferred in most new installations for higher bandwidths and demands for such bandwidths are expected to grow in the future. The rapid growth in the wholesale AISBO and MISBO markets is a significant development since the 2007/8 Review.

13.130 Despite the rapid growth in the Relevant Modern Markets, our market analysis, in particular our SMP assessment, has shown that:

- in the wholesale AISBO market outside the WECLA, BT's market share has remained consistently large since 2007;<sup>1252</sup>
- in the wholesale MISBO market outside the WECLA BT's market share is above 50%;<sup>1253</sup> and
- in the wholesale AISBO market in the WECLA, we have found that competitive conditions do not yet appear to have changed materially since the 2007/8 Review, with BT maintaining its position.<sup>1254</sup> We have found that the growth observed in certain OCPs' market share in the WECLA has come not at the expense of BT's market share but at the expense of other CPs'.

13.131 Our market analysis has also revealed that the Relevant Modern Markets are characterised by significant product development, and we do not consider this will change over the course of the forward-look review period. In this respect, we remain of the view expressed in the June BCMR Consultation that, in the absence of appropriate *ex ante* regulation, BT has the ability and incentive to favour meeting the requirements of its downstream divisions over those of other CPs in developing wholesale products. As a result, the products it provides to its downstream divisions may therefore be superior to those it provides to other CPs in respect of quality, performance and features, and may well involve superior processes and systems for their development, delivery, maintenance and repair. Equally, we remain of the view that BT has the ability and incentive to supply products with different levels of quality – e.g. different SLAs and SLGs, providing fault repair of products on different timescales, creating new variants to fulfil the requirements of its downstream division, prioritising the needs of its downstream divisions in developing improvements and enhancements, and taking longer to address, or avoiding addressing, the requirements of its competitors.

13.132 We consider such behaviour by BT could act as an impediment to improved products being made available equally promptly to both BT and OCPs and undermine a level playing field in the related downstream retail markets. The need for an effective non-

<sup>1252</sup> Our base case market share estimate for BT is 74%.

<sup>1253</sup> Our base case market share estimate for BT is 57%.

<sup>1254</sup> Our base case market share estimate for BT is 51%.

discrimination remedy (as part of a wider package of remedies) to address the impact of BT's SMP in the Relevant Modern Markets downstream is crucial to maintaining a level playing field between BT's downstream businesses and CPs over the course of the forward-look period of our review.

13.133 In this respect, Openreach Ethernet and WDM-based services are still subject to continuing product development and quality enhancements, and we consider EOI consumption provides the right incentives on BT to implement the changes and make better product variants available equally and simultaneously to both its downstream divisions and to its competitors.

*The effectiveness of the remedy to achieve the aim of a level playing field*

13.134 As part of our proportionality assessment, our first consideration is to determine what form the non-discrimination remedy should take to be effective in achieving our above-mentioned aim.

13.135 BT argues that the normal undue discrimination remedy will suffice. We disagree.

13.136 In our view, the normal undue discrimination remedy would, by its very nature, allow for certain discriminatory conduct – compliance with that obligation needs to establish in particular whether the discrimination in question is undue. However, whether the conduct in question is such as to amount to a breach of the undue discrimination obligation can only be determined on a case-by-case basis.

13.137 Conversely, an EOI obligation removes any degree of discretion accorded to the nature of the conduct. The distinction between these two forms of non-discrimination is that, in the case of the former, both the ability and the incentive on the part of the SMP operator may still exist to engage in the relevant conduct – however, in the case of the latter, the ability is removed *ex ante* altogether.

13.138 For the remedy to be effective – with regard to both price and non-price aspects – in achieving our aim of a level playing field on the related downstream retail markets to the Relevant Modern Markets, we consider that an EOI obligation is required, in particular to:

- prevent BT from discriminating against OCPs in favour of its downstream divisions; and
- actively promote effective competition in the related downstream retail markets, by ensuring a level playing field in them on which OCPs can compete with BT.

13.139 In contrast, we consider that the normal undue discrimination remedy would not remove the ability and incentive on BT to discriminate against OCPs in favour of its downstream divisions, and so could undermine a level playing field in the related downstream retail markets on which OCPs can compete with BT. As such, we consider that there is no choice of remedy as effective as EOI because the normal undue discrimination remedy would not achieve this aim.

13.140 Consequently, contrary to BT's arguments, we consider that our conclusion that there is a need for EOI is based on a correct assessment of the distinction between BT's obligations (as a vertically integrated operator) under a no undue discrimination obligation as compared with its obligations under an EOI obligation.

*Our assessment of the effects on BT and in the Relevant Modern Markets in imposing an EOI obligation*

- 13.141 BT argues we have had no, or insufficient, regard as to how the imposition of such an onerous obligation would impact on BT in relation to its position as one of a number of competitors in the Relevant Modern Markets which is, in its view, at the very least, “prospectively competitive” and where, again in BT’s view, it is not an “enduring monopolist (bottleneck) supplier”.
- 13.142 We disagree. As summarised above, and as set out in more detail in Section 7, our SMP assessment has found that BT’s position as BT puts it, as one of a number of competitors in the Relevant Modern Markets, is one of SMP.
- 13.143 In the wholesale AISBO market in the WECLA, for the reasons set out in our SMP assessment,<sup>1255</sup> we do not believe that OCPs will be able to compete effectively across the WECLA over the course of the three year review period. In this respect, BT’s position as, in its words, a bottleneck supplier, has endured since the 2007/8 Review and, as a result, we are imposing a package of SMP remedies that we consider is appropriate to address the competition problems we have identified in this market. The imposition of EOI is part of this package of SMP remedies, and which, for the reasons set out here, we have concluded it is proportionate to impose.
- 13.144 Equally though, we have, contrary to BT’s arguments, had regard to the potentially competitive<sup>1256</sup> nature of the wholesale AISBO market in the WECLA in imposing our charge control remedy. In comparison to the charge control remedy we are imposing in the wholesale AISBO market outside the WECLA, this charge control remedy affords BT greater pricing flexibility.
- 13.145 In relation to BT’s argument that we have not undertaken a balancing exercise of potential benefits on the downstream market versus potential disbenefits on the upstream market – e.g. the potential for such a remedy to increase barriers to entry or expansion for other competitors in the upstream market – we do not consider that such potential disbenefits to which BT refers, arise:
- we consider potential entrants or existing CPs in the Relevant Modern Markets will continue to invest in their infrastructure where they consider it economically efficient to do so, as evidenced by the extent of alternative infrastructure our market analysis has revealed in the WECLA. This has led us to conclude that, whilst BT will maintain a position of SMP in the wholesale AISBO market in the WECLA over the course of the three year review period, this market is potentially competitive<sup>1257</sup>. In this respect, as noted in the June BCMR Consultation, due to the current requirements in the Undertakings, it is BT’s current practice to supply services in the Relevant Modern Markets on an EOI basis.<sup>1258</sup> We do not consider EOI has adversely impacted upon OCPs’ ability and incentive to expand through infrastructure-build, again, as evidenced by the extent of alternative infrastructure our market analysis has revealed in the WECLA, and nor do we consider the impact will change over the course of the three year review period;

<sup>1255</sup> See Section 7, paragraphs 7.297 to 7.428 (in particular paragraphs 7.399 to 7.411).

<sup>1256</sup> We explain this further in paragraphs 7.399 to 7.411.

<sup>1257</sup> We explain this further in paragraphs 7.399 to 7.411.

<sup>1258</sup> See paragraphs 11.143 and 12.67. At paragraph 12.67 we noted that “BT’s services downstream of [the wholesale MISBO market] currently consume products provided by its Openreach division on the basis of EOI”.

- equally, where it is not economically efficient to build alternative infrastructure, CPs can continue to rely on the general, and specific, network access requirement we are imposing on BT in order to compete;
- to the extent that the wholesale product BT is offering on an EOI basis may be the one 'favoured' by wholesale customers over products offered by its wholesale competitors, then we would regard that as a reflection of the characteristics of BT's product that better meet the requirements of those wholesale customers. In this respect it would be incumbent on BT's competitors to produce a more competitive solution, for example by offering more attractive prices. In the WECLA, we have recognised the greater potential for OCPs to do so over the course of the three year review period and, consequently, we have imposed on BT a less stringent charge control remedy. We consider this should result in more competitive prices at the wholesale level and ultimately benefit end-users in the form of choice and competition in the related downstream retail markets. Conversely, outside the WECLA, our market analysis, in particular our SMP assessment, has revealed this potential to be less. As a result, the emphasis is more on ensuring that the wholesale service OCPs rely on in these wholesale markets from BT is equivalent to the service provided to BT's downstream divisions such that again, end-users enjoy the same benefit in the form of choice and competition in the related downstream retail markets.

13.146 Furthermore, contrary to BT's suggestion, in reaching our proposal in the June BCMR Consultation that it was appropriate to impose EOI, we assessed whether the EOI obligation is necessary, in the sense that it is no more onerous than is required to achieve our aims, and we did not consider that it would have adverse effects which might be disproportionate to these aims.

13.147 We stated, in particular, that:

"...due to the current requirements in the Undertakings, it is BT's current practice to supply Ethernet access and backhaul circuits on an EOI basis by means of its access division Openreach. We therefore consider that imposing a very similar requirement in the market review would not be onerous as it would not require BT to re-engineer existing systems and processes."<sup>1259</sup>

13.148 In doing so, we had specific regard to the fact that BT's compliance costs would not outweigh potential significant competition benefits and the potential disbenefits on the downstream markets if this EOI obligation was not imposed. We remain of this view.

13.149 We have also taken utmost account of the BEREC Common Position. In relation to achieving the objective of a level playing field,<sup>1260</sup> the BEREC Common Position identifies, amongst other things, as best practice that:

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<sup>1259</sup> Paragraph 11.143 of the June BCMR Consultation. As noted above, due to the current requirements of the Undertakings, it is also BT's current practice to supply services in the wholesale MISBO market on an EOI basis.

<sup>1260</sup> In this respect, the BEREC Common Position identifies the following competition issues which arise frequently: SMP players having an unfair advantage; having unmatched advantage, by virtue of their economies of scale and scope, especially if derived from a position of incumbency; discriminating in favour of their own group business (or between its own wholesale customers), either on price or non-price issues; exhibiting obstructive and foot-dragging behaviour.

“**BP10** NRAs should impose an obligation on SMP operators requiring equivalence, and justify the exact form of it, in light of the competition problems they have identified.

- **BP10a** NRAs are best placed to determine the exact application of the form of equivalence on a product-by-product basis. For example, a strict application of EOI is most likely to be justified in those cases where the incremental design and implementation costs of imposing it are very low (because equivalence can be built into the design of new processes) and for certain key legacy services (where the benefits are very high compared to the material costs of retro-fitting EOI into existing business processes. In other cases, EOO<sup>1261</sup> would still be a sufficient and proportionate approach to ensure non-discrimination (e.g. when the wholesale product already shares most of the infrastructure and services with the product used by the downstream arm of the SMP operator).”

13.150 We consider that our conclusion to impose an EOI obligation in the Relevant Modern Markets is consistent with that best practice. Our assessment is that this EOI obligation is proportionate when the combination of costs and benefits is balanced.

13.151 We have, however, decided to make some modifications to our proposal that appear to us appropriate to ensure that the EOI obligation does not produce any adverse effects which could be disproportionate to the aim we are pursuing of a level playing field in the related downstream retail markets on which OCPs can compete with BT. We discuss below the detail of our modifications, but we consider in particular that our clarification to exclude from the scope of the EOI obligation network access which BT is not providing on an EOI basis as at 31 March 2013 means that this obligation does not add any material compliance costs for BT.

#### *BT's two further concerns*

13.152 We do not consider that an EOI obligation should unduly limit BT's ability to offer tailored solutions in the wholesale MISBO market. Whilst we acknowledge that MISBO services can be complex, they are ultimately built from standard components. BT should be able to develop wholesale products that contain a sufficiently wide range of features and options to allow it to tailor solutions to meet customer requirements. An EOI requirement should not limit BT's flexibility in this respect, other than to require that it offer the same products to both internal and external wholesale customers.

13.153 It is not immediately apparent to us that the proposed EOI obligation gives rise to uncertainty about the appropriate consumption model that BT should adopt for end-to-end services. An EOI obligation requires BT to provide to other CPs that same product that it uses itself. Openreach currently supplies OSA and OSEA products on an EOI basis to BT's downstream divisions (e.g. BT Global Services) who sell end-to-end services such as Wavestream Connect and Wavestream Regional. We recognise that specific issues arise in respect of end-to-end services beyond 70km and, for reasons discussed below under the heading Wavestream National, have excluded long distance wholesale end-to-end services from the EOI obligation.

#### Wording of the EOI SMP condition

13.154 BT also raised concerns about the wording of the EOI obligation which generally followed the wording of the EOI obligation in the Undertakings but which omitted a list

<sup>1261</sup> Equivalence Of Outputs (EOO).

of exclusions included in the Undertakings version. In BT's view this list should be added to the condition if Ofcom decided to confirm its proposals.

### Ofcom's considerations

13.155 BT's comments about the wording of the EOI obligation and our consideration of them are the same as for the wholesale AISBO markets. We set out both in Section 12. In summary we have decided to modify the condition as BT suggests.

### Scope of the EOI SMP condition

13.156 Openreach wrote to us on 7 December 2012<sup>1262</sup> raising concerns about the scope of the proposed EOI SMP obligation that in its view might be wider than envisaged by Ofcom in the June BCMR Consultation. We set out those concerns in Section 12.

### Ofcom's considerations

13.157 In deciding to impose an SMP condition on BT to provide network access on an EOI basis in respect of the wholesale MISBO market in this review, it is not our intention to retrospectively apply EOI to elements of BT's existing network above and beyond that which is currently provided for by reference to the EOI requirements set out in BT's Undertakings. Such a requirement would, in our view, be disproportionate since it would involve BT identifying and re-engineering existing network infrastructure which has been built in a manner broadly reflective of the EOI obligations now proposed. We have therefore modified SMP condition 4 to clarify the scope of the EOI obligation such that the obligation does not apply to such network access which BT was not providing on an EOI basis as at 31 March 2013.

13.158 SMP condition 4 (see Annex 7) makes specific provision for Ofcom to consent in writing to exclusions from the EOI requirement. We have also modified the SMP conditions at Annex 7 to exclude those connections between BT's OHPs, which are not Terminating Segments, from an obligation to provide these connections on an EOI basis under SMP Condition 4.

### Consultation responses in relation to Wavestream National

13.159 BT and Geo commented on our proposal that BT should not be required to consume Openreach WDM products on the basis of EOI for circuits with a radial distance of greater than 70km. Geo considered that an EOI obligation should apply to BT's Wavestream National retail product (the relevant BT retail product) either by means of an SMP condition or the Undertakings. BT sought clarification about the impact of our proposals on its Wavestream National product. In particular:

- BT asked us to clarify the scope of the obligation in view of the fact that the draft legal instrument indicated that circuits provided after an unspecified date would need to be provided on an EOI basis. However, no such limitation had been discussed in the consultation.
- BT asked about our plans for the exemption to the Undertakings for Wavestream National services in light of our proposals.

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<sup>1262</sup> BT Openreach letter to Ofcom dated 7 December 2012 entitled "Proposed SMP EOI conditions – impact on Core Networks".



13.160 BT was concerned that legal uncertainty could arise as we had used different terms in the draft SMP condition and the Undertakings exemption even though in practice both relate to same Wavestream National products.

### Ofcom's considerations

13.161 We understand that Wavestream National is the only retail WDM product that BT currently provides for straight line distances over 70km so in practice, the proposed exclusion would apply to the same services as the Wavestream National exemption that we agreed in 2010.<sup>1263</sup>

13.162 Having reviewed the circumstances surrounding Wavestream National we conclude that imposing an EOI obligation would not be proportionate at this time given the size of the installed base of these products.<sup>1264</sup> We have therefore decided not to specify a date after which WDM services with a straight line distance over 70km must be provided on the basis of EOI.

13.163 We think it unlikely that any legal uncertainty would arise between the two obligations. We therefore intend to retain the wording proposed in the June BCMR Consultation other than to remove the reference to the provision date.

13.164 For the avoidance of doubt, we are now imposing a wholesale MISBO access remedy which requires BT to provide on the basis of EOI WDM services delivered as wholesale end-to-end segments from one end-user premise to another or as a backhaul segment from one customer premise to another. We have decided, for the reasons given above, to exclude such wholesale end-to-end segments with a straight line distance of more than 70km from EOI. However, BT is required to provide, on reasonable request, wholesale WDM services with a straight line distance of more the 70km subject to the no-undue discrimination requirement.

### *Review of the Wavestream National Exemption*

13.165 When the current Undertakings exemption agreement was agreed in December 2010, we said that the exemption may be subject to review following the next business connectivity market review. Given that our conclusion is to exclude these services from EOI under the SMP framework, we do not consider it necessary to review the exemption from EOI under the Undertakings covering the same services. In the event that we subsequently find evidence that causes us to reach a different view in relation to the continuation of this exclusion, then we may be minded to remove or modify the exclusion.

### *Volume discounts*

13.166 BT did not agree with our view that volume discounts would likely constitute undue discrimination referring, as it did for AISBO, that a number of players are able to win and place large orders for MISBO circuits, not just BT's downstream divisions. BT argued that, as with geographic and term discounts, volume discounts may or may not be unduly discriminatory depending on the circumstances. BT considered that preventing Openreach from offering volume discounts in the MISBO market would

<sup>1263</sup> Exemption from BT's Undertakings under the Enterprise Act 2002 related to Wavestream National, Statement dated 14 December 2010 published at <http://stakeholders.ofcom.org.uk/binaries/consultations/bt-wavestream/statement/wavestream-statement.pdf>

<sup>1264</sup> In addition to our market analysis we requested, and BT provided on a confidential basis, details of the size, demand and value of its WN installed base. [§<]

stifle its ability to compete with other large CPs who often win large scale contracts from customers.

### Ofcom's considerations

13.167 We consider that the distinctions we set out in the June BCMR Consultation, in respect of our position on the application of the requirement not to discriminate unduly to different forms of pricing discounts, remain appropriate. We consider volume discounts would very often in practice constitute undue discrimination, whereas geographic or term discounts may or may not be unduly discriminatory depending on the circumstances. We consider that there is a strong potential for anti-competitive effects to arise where BT's downstream divisions remain the largest purchasers of Openreach services and are therefore likely to be the largest beneficiaries of a volume discount scheme. We therefore consider that BT's observation that other CPs, and not just its own downstream divisions, could benefit from volume discounts does not diminish the validity of the basis for our rebuttable presumption.

13.168 With regard to BT's comments regarding the hindrance BT faces by not being permitted to offer volume discounts, we consider that it would be a matter for us to determine whether any volume discounts provided by BT were unduly discriminatory depending on the circumstances. It is not therefore necessarily the case that BT is prevented from offering volume discounts in all instances. In addition, BT can compete by making other tariff reductions, which do not feature volume discounts, including reductions in standard prices, geographic and term discounts. However, in all cases, the onus rests with BT to comply with its regulatory obligations including the obligation not to discriminate unduly and, in this case, in relation to different forms of pricing discounts.

## **Consultation responses in relation to transparency**

### Consultation responses in relation to the notification period

13.169 BT supported the proposal to reduce the notification period for price reductions to 28 days but considered that all changes to terms, conditions and prices should only require 28 days notice. It viewed this to be especially important for the MISBO market as price publication requirements need to be flexible in such dynamic product/technology areas to avoid constraining innovation. BT also asked us to clarify that price increases following a price reduction for special offers (i.e. back up to the original price or lower) should only require 28 days notice.

### Ofcom's considerations

13.170 In the June BCMR Consultation we carefully considered, amongst other things, the case for reducing the notification period for changes to services at the wholesale level in the rapidly developing MISBO markets. We considered that a shorter 28 day notice period was appropriate in respect of prices, terms and conditions relating to new service introductions and for price reductions and associated conditions (for example, conditions applied to special offers). However, we remain of the view that, on balance, for all other changes to prices, terms and conditions for wholesale MISBO services 90 days notice is an appropriate notification period for existing products and services which allows sufficient time for downstream providers to make necessary changes to their downstream products and services.

13.171 The price publication obligations complement the no undue discrimination obligations and help protect CPs against unfair pricing and conditions. Whilst we acknowledge BT's comments about innovation in MISBO markets, we remain of the view that in this wholesale market, the benefits of a 90 day notice period (other than those circumstances in which we have specifically concluded that a shorter period is appropriate) is an appropriate remedy to assist competition where we have found BT to have SMP.

13.172 We confirm that the 28 day notice period will apply to special offers by which we mean price notifications that specify a limited term price reduction and where the price immediately following the special offer is no higher than immediately before the special offer commenced. We have re-worded Condition 7.4 to clarify this.

### Consultation responses about notification requirements

13.173 In Section 11 we discuss BT's comments about the notification requirements in Conditions 7 and 9 in relation to the wholesale TI markets. Given Conditions 7 and 9 also apply to the wholesale MISBO market, BT's comments and our consideration of them in relation to the wholesale TI markets apply equally in relation to the wholesale MISBO market.

### Consultation responses in relation to inclusion of usage factors in ACCNs

13.174 In Section 11 we discuss BT's comments about the content of Access Charge Change Notices in Condition 7.5. Given Condition 7 also applies to the wholesale MISBO market, BT's comments and our consideration of them in relation to the wholesale TI markets apply equally in relation to the wholesale MISBO market.

### **Consultation responses in relation to requests for new network access**

#### Consultation responses about the Openreach product development process

13.175 BT's comments about Openreach's product development process, and our consideration of them for the wholesale MISBO market, apply equally to the wholesale AISBO markets. These are set out in Section 12.

#### Consultation responses in relation to Condition 10

13.176 In Section 11 we discuss BT's proposed changes to the new network access obligations in Condition 10. Given Condition 10 also applies in the wholesale MISBO market, BT's comments and our consideration of them in relation to the wholesale TI markets apply equally in relation to the wholesale MISBO market.

### **Consultation responses in relation to a charge control on single-service Ethernet MISBO products**

13.177 Stakeholders' responses ranged from those that argued for a light touch approach of having no price control on MISBO products but relying instead on a no-undue discrimination requirement (as BT suggests) or a requirement that charges are fair and reasonable as proposed by Virgin, through to those from COLT, Telefónica and Level 3 who disagreed with our proposal to exclude WDM services from the price control. UKCTA argued that, absent a price control to provide price certainty, we should rely on cost orientation obligations.

- 13.178 BT strongly supported our proposal not to impose cost orientation but argued that, for services moving from unregulated to regulated, it was premature to impose any form of price control at this stage in the market's development. BT did not agree with our proposal to apply a charge control to single-service Ethernet products and considered this to be unjustified, unnecessary and potentially damaging. BT argued that such a control would inevitably act as a direct constraint on WDM prices and discourage investment and innovation in this area.
- 13.179 BT agreed with us that for high bandwidth MISBO the market is relatively small and the technology used is developing rapidly and that we should be cautious about proposing controls which risk reducing investment and innovation. BT also agreed that WDM services make up the largest product set in the market and that imposing controls directly on those services could be too intrusive and harmful. But, BT argued that the same risk would apply to the technologically and functionally substitutable<sup>1265</sup>, but lesser used, 1Gbit/s single service Ethernet, product set. BT argued that if we conclude that it has SMP in some geographies for MISBO, it would be appropriate to rely on the non-discrimination obligation (subject to its comments on EOI).
- 13.180 Virgin did not support the imposition of a charge control in the wholesale MISBO market, arguing that it would be inconsistent with our objective of maintaining infrastructure investment incentives. It disagreed with our view that the proposed charge control (on single service Ethernet products) would be a cautious approach. It considered that the charge control would place an indirect constraint on BT's wholesale WDM charges and as a result have a significant adverse effect on its ability to compete and invest in high bandwidth technologies. In its view the charge control would be wholly disproportionate and it would have an adverse effect on the wholesale MISBO market and would not be consistent with the provisions of section 88 of the Act. It considered that we should adopt a more cautious approach in the first instance. It considered that a proportionate intervention would be to apply only general remedies and extend the scope of the network access obligation to require BT to have fair and reasonable charges.
- 13.181 Virgin was also concerned that controlling only the prices of single service Ethernet products would give BT an incentive to manage its MISBO services so as to diminish the effect of the charge control. This could artificially reduce demand and or supply of single service high bandwidth Ethernet in favour of WDM alternatives which could disadvantage both competing network providers and consumers (both wholesale and retail). Not imposing a control on certain products would remove the risk of such a distortion occurring.
- 13.182 Sky and UKCTA were concerned about potential confusion in our provisional conclusion that WDM services will not be subject to a charge control, whereas SMP Condition 5.3 lists EBD services that are based on WDM technology. Sky and UKCTA both recommended that we make it clear in our final statement and legal instrument, that EBD is a single-service Ethernet product and is intended to be included within the Ethernet charge control.
- 13.183 Whereas COLT, in general, welcomed our decision to define wholesale MISBO markets, it strongly disagreed with our proposal to exclude WDM from any price control. COLT suggested that our reason for not doing so was because WDM is a new technology. COLTs argued that WDM is a mainstream technology which has been in widespread use for years.

<sup>1265</sup> BT observed that Openreach has launched OTN interface options for WDM services which should allow the effective use of these products under model C.

- 13.184 Exponential-e welcomed our proposal to apply a charge control to single-service Ethernet above 1Gbit/s, but it was concerned that it might not be effective. Openreach could, in the light of its announced withdrawal of its legacy higher bandwidth WES and BES products, choose not to supply a single service OSA solution or argue that OSA based solution as multi-interface capable in order to circumvent the obligations around provision and price control.
- 13.185 Level 3 noted that whilst single interface remedies afford some comfort, it was disappointed that we had not fully considered the need to impose a full set of remedies to ensure full equivalence with BT's own downstream business which Level 3 understood currently use WDM technology. Level 3 was also concerned that the wording of the proposed remedy was insufficiently tight and that OSA could evade the provisions. It was particularly concerned about the risks that the remedy could prove ineffective given the uncertainty resulting from BT's intention to withdraw WES, WEES and BES 2.5Gbit/s and 10Gbit/s products.
- 13.186 Telefónica was concerned that we had proposed leaving WDM circuits out of price regulation. It considered that WDM affords greater flexibility of wholesale service supporting multi-providers/multi-services over the same circuit and appeared to offer increasing opportunities to support network architecture and build strategies emerging in the mobile sector.
- 13.187 UKCTA noted that we had found BT to have SMP in the wholesale MISBO market but relied solely on the obligation of EOI in relation to the pricing of these services<sup>1266</sup>. Given the importance we had placed on the need for price certainty and how the charge controls for TI and AI may address this need, UKCTA considered that it would expect MISBO services to be subject to controls that would provide price certainty. In the absence of a charge control UKCTA proposed that we rely upon cost orientation obligations.

### Ofcom's considerations

- 13.188 As set out above, as a result of our market analysis, in particular our SMP assessment, one of the competition problems we have identified in the wholesale MISBO market is the risk of excessive pricing.
- 13.189 Our proposal to address this competition problem in the June BCMR Consultation sought to strike an appropriate balance between, on the one hand, constraining BT's ability to charge excessively and, on the other hand, the risk of imposing a charge control remedy which could reduce incentives to innovate and invest in what is currently a relatively small market in which technology is developing rapidly. We considered that imposing a charge control confined to single-service Ethernet MISBO products, and not to products delivered as optical services with WDM equipment at customers' premises, would strike such an appropriate balance, noting that the two sets of products were, to some extent, mutually substitutable by BT's customers.
- 13.190 We do not agree with BT that reliance on EOI alone would be sufficient to address the risk of excessive pricing. We are imposing EOI to address the risk of BT engaging in discriminatory practices, not to regulate the maximum equivalent level at which it would be obliged to charge (as a result of the EOI obligation), both its

<sup>1266</sup> We note that whereas on page 12 of UKCTA's response to the June BCMR Consultation it argues that we rely solely on an EOI obligation with regard to the pricing of MISBO services, on page 13 UKCTA observes that in relation to the proposed MISBO remedies we propose introducing a charge control on single-service Ethernet products.

wholesale division and OCPs. In this respect, our view in the June BCMR Consultation that it would be inappropriate not to impose a charge control was “because the market power we currently consider BT enjoys [the existence of which our SMP assessment in the wholesale MISBO market in this Statement has subsequently confirmed] could allow it to charge excessive prices, which are likely to flow through to excessive charges to end-users.”<sup>1267</sup> Equally, we consider that the effect of BT charging equivalently high prices to both its wholesale division and OCPs would be adverse consequences for end-users in the form of high prices in the related downstream retail markets.

13.191 We agree with Virgin that imposing a charge control on single service Ethernet products will impose some constraint on BT’s prices for WDM MISBO services – indeed in the June BCMR Consultation we stated that “a price control on the single-service Ethernet products would constrain BT’s ability to raise prices for those products and, in addition, may impose some constraint in its prices for WDM MISBO products as well, because the two products sets are, to some extent, mutually substitutable by BT’s customers”.<sup>1268</sup> However, we do not agree that in doing so we have undermined CPs’ incentives to invest in their own infrastructure to deliver WDM MISBO services. In this respect, we took this incentive into account in reaching our proposed charge control remedy. In the June BCMR Consultation we noted that “[m]ost MISBO products are currently delivered with WDM equipment at customers’ premises. The technology and market for services delivered with WDM equipment at customers’ premises are still developing rapidly, so imposing price controls directly on such services could be too intrusive and prove harmful. In particular, some CPs compete with BT in this market using and investing in their own infrastructure to deliver such services, and a direct control on BT’s prices for such services may diminish CPs’ incentives for further investment”.<sup>1269</sup>

13.192 We remain of the view that the charge control on single-service Ethernet MISBO services will not unduly constrain WDM MISBO prices such that other CPs’ incentives to invest in high bandwidth services are damaged:

- as recognised in the June BCMR Consultation, WDM and single-service Ethernet MISBO products are, to some extent, substitutable by BT’s customers. However, at the same time, single-service Ethernet lacks the scalability of WDM (in terms of support for multiple channels and rapid deployment of additional channels) and also its flexibility in terms of the interfaces supported (WDM supports a wide variety of interfaces including specialised interfaces such as FICON);
- BT’s single-service Ethernet MISBO products do not currently constrain the price of WDM purchases where bandwidths in excess of 10Gbit/s are required and nor do we consider they will do so over the three year review period. In this respect we note our market analysis<sup>1270</sup> has shown that BT’s WDM services have a significant price advantage over its single-service Ethernet MISBO products where there is demand for bandwidth greater than 10Gbit/s. This price differential reflects an underlying cost differential. In this respect, the charge control for single-service Ethernet MISBO services reflects the costs of BT’s WES, BES and WEES services which are now approaching the end of their life and have higher costs than current generation product WDM products.

<sup>1267</sup> See paragraph 12.76.

<sup>1268</sup> See paragraph 12.80.

<sup>1269</sup> See paragraph 12.77.

<sup>1270</sup> See, in particular, Section 3.

13.193 Consequently, we consider the charge control for single-service Ethernet MISBO services:

- promotes efficiency in that it provides signals for efficient investment in infrastructure;
- promotes sustainable competition in that it provides economic signals for efficient investment in infrastructure to support MISBO services; and
- confers the greatest possible benefits on end-users in that, in our view, the charge control remedy achieves the appropriate balance between ensuring prices for services in the MISBO market are not excessive, whilst also recognising the benefits of OCPs' continued investment in their own infrastructure to deliver WDM services which should translate into greater retail competition and choice for the end-user.

13.194 Further, we do not agree with Virgin that reliance on the obligation to provide general network access on, amongst other things, fair and reasonable charges would be sufficient to address the risk of excessive pricing. As set out at the beginning of this Section, we have decided to broaden the scope of the obligation requiring the provision of network access by BT to be on fair and reasonable terms and conditions, to include fair and reasonable charges.<sup>1271</sup>

13.195 However, we remain of the view that the charge control remedy we are imposing is the most appropriate remedy to address the competition problem we have identified in the wholesale MISBO market of excessive pricing. In this respect, in all the relevant wholesale markets in which we have identified excessive pricing as a competition problem, we have imposed a charge control to address this. The details of the charge control we are imposing on single-service Ethernet MISBO products are set out in Section 20. We consider that the obligation to provide general network access on, amongst other things, fair and reasonable terms including charges would serve as a weaker, and less certain, constraint by comparison to the charge control remedy to address the risk of excessive pricing.<sup>1272</sup>

13.196 Nor do we agree with Virgin's, and CPs' general, concern that a charge control on single-service Ethernet products will incentivise BT to manage its MISBO services so as to reduce the effectiveness of the charge control (and thereby serve to artificially reduce demand and or supply of single-service high bandwidth Ethernet in favour of WDM alternatives).

13.197 We consider that BT is obliged to provide 2.5Gbit/s and 10Gbit/s single-service Ethernet products on reasonable request. BT has flexibility to decide how it provides these regulated services. However, should it choose to withdraw the existing WES, WEES and BES 2.5Gbit/s and 10Gbit/s products during the period of the charge control the replacement products will be subject to the charge control since our charge controls provide that services that substitute wholly or substantially existing services in a charge control basket are added to that basket. We understand that BT's intention is that future demand for such services will be fulfilled with the OSA/OSEA products in single channel configuration. We consider that were BT to adopt this approach such single channel variants would be subject to the Ethernet

<sup>1271</sup> See Section 9.

<sup>1272</sup> As noted in Section 9, the inclusion of charges within the scope of the fair and reasonable obligation is not intended to impose any additional constraint on the maximum charges that BT may levy, such as a lower ceiling than that permitted by the charge controls.

charge control. Thus BT would not be able to reduce the effectiveness of the charge control by replacing Ethernet services such as WES and BES with WDM services.

13.198 We further confirm that EBD is a single-service Ethernet product within the scope of the charge control.

### **Consultation responses in relation to the practical implementation of remedies across separate MI markets**

13.199 Similar to AISBO, BT considered that we should address the issue of how to treat circuits crossing geographic market boundaries by identifying two separate types of obligation for terminating segments and wholesale end-to-end services respectively.

13.200 For circuits between an end-user site and a CP's site, BT argued that the relevant geographic market should be determined by the location of the end-user. In other words, a service to an end-user's site in the WECLA should be entirely subject to the regulatory constraint appropriate to the WECLA irrespective of where the serving CP's site is located. BT argued that the same would be true for MISBO circuits used for backhaul where a remote BT exchange is connected to a CP's core site. BT said that there was no need for us to rely on an overly simplistic "circuit is in the WECLA if both ends are in the WECLA" method.

13.201 For wholesale end-to-end services, BT agreed with our proposal that price components specific to each end should be treated within the geographic market relevant to each end, and that the non-location-specific price elements should be treated according to the regulation applying outside of the WECLA.

13.202 Level 3 was concerned that the wording of the proposed remedy in relation to circuits between WECLA and non-WECLA destinations raised questions of interpretation and invited us to ensure that the final wording of the relevant SMP condition is absolutely clear and explicit.

13.203 UKCTA understood that we proposed that BT is obliged to provide MISBO circuits with one circuit end within the WECLA area. Like Level 3, UKCTA also considered that the detail of this requires clear specification within the SMP obligation and did not believe that this requirement is clear from the SMP conditions we proposed.

### **Ofcom's considerations**

13.204 Having considered BT's comments, we believe that the classification proposed by BT is more consistent with our view of competitive conditions in the WECLA for Ethernet circuits than the approach we proposed in the June BCMR Consultation. In particular, CPs should be able to establish network nodes within the WECLA and serve sites within the WECLA from them. We have therefore decided that this classification should apply.

13.205 On reflection we also think that it would be more straightforward to classify end-to-end circuits as a whole rather than by components. Thus wholesale MISBO circuits that cross the WECLA boundary should be classified as follows:

- Wholesale end to end MISBO services (i.e. circuits between two end-user sites) – should be classified as inside the WECLA only if both end-users sites are in the WECLA and other circuits should be classified as outside the WECLA (i.e. if one or more sites are outside the WECLA); and



- Other wholesale MISBO services (i.e. circuits between an end-user site and a network node or between network nodes) – should be classified as being in the WECLA if the end-user site is within the WECLA or in the case of backhaul circuits if the remote end of a backhaul circuit is within the WECLA.

13.206 We consider that the guidance we have provided in relation to this matter is sufficiently clear for the purposes for which it is intended and that it is not necessary to make this explicit on the face of the SMP Conditions as Level 3 appears to suggest.

## Ofcom's conclusions on the appropriate remedies

13.207 In order to address the competition problems we have identified in the wholesale MISBO market, we have concluded it is appropriate to:

- adopt the remedies proposed in the June and November<sup>1273</sup> BCMR Consultations; and
- to broaden the scope of the obligation requiring the provision of network access by BT to be on fair and reasonable terms and conditions, to include also fair and reasonable charges.

13.208 Our conclusions are the result of our cumulative consideration of:

- our assessment of the appropriate remedies, as set out in the June BCMR Consultation and set out above;
- our considerations of consultation responses; and
- all the evidence available to us.

13.209 Below we set out:

- the aim of the remedies that we have concluded should be imposed on BT in the wholesale MISBO market;
- the obligations imposed on BT by the remedies; and
- the reasons why we consider the remedies comply with the relevant legal tests in the Act.

13.210 The SMP conditions which give effect to our conclusions are set out in Annex 7.

## Interconnection and accommodation services

13.211 In order to use the wholesale MISBO services that BT provides in these markets CPs also require certain interconnection and accommodation services. To achieve an overall solution we consider that it is necessary to regulate the provision of these ancillary services,<sup>1274</sup> in the absence of which, we consider BT would have an

<sup>1273</sup> Our conclusions regarding accounting separation and cost accounting, together with our considerations of responses received, are set out in Section 16.

<sup>1274</sup> This is consistent with the BEREC Common Position **BP7** in relation to achieving the objective of assurance of co-location at delivery points and other facilities.

incentive to refuse to supply or to supply in a discriminatory manner, for example by charging excessive prices.

13.212 Network access is defined in sections 151(3) and (4) of the Act and includes interconnection services and/or any services or facilities that would enable another CP to provide electronic communications services or electronic communication networks. We consider that a requirement to provide network access would, therefore, include any ancillary services as may be reasonably necessary for a Third Party to use the services. Consequently, each of the obligations that we impose on BT (set out below) for these markets also applies to the provision of accommodation and interconnection services that are reasonably required by CPs in connection with the provision of the regulated services.

13.213 In Section 14 we set our conclusions on whether BT should be required to provide specific types of interconnection services.

## **Requirement to provide network access**

### Aim of regulation

#### *General requirement to provide network access*

13.214 We have concluded it is appropriate to impose a requirement for BT to meet reasonable requests for network access.

13.215 We consider that, in the absence of the nature of the network access obligation we are imposing, BT would have the ability and incentive to refuse to provide network access or to supply on such terms that amount to a refusal to supply, which would otherwise prevent or restrict competition in the wholesale MISBO markets and enable BT to monopolise the provision of services in the related downstream retail markets.<sup>1275</sup>

13.216 Further, in light of consultation responses, which we set out together with our considerations of those responses and our reasons in Section 9, we have concluded that the scope of the fair and reasonable obligation according to which BT must provide network access, should be broadened to include fair and reasonable charges.<sup>1276</sup>

13.217 The way in which Ofcom might assess reasonable demands for access is set out in the Access Guidelines. We consider that it is appropriate in cases where a CP has SMP to impose an access obligation on that provider requiring it to meet all reasonable requests for network access within the relevant wholesale market, irrespective of the technology required, on fair and reasonable charges, terms and conditions.<sup>1277</sup>

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<sup>1275</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of assurance of access.

<sup>1276</sup> As set out in Section 9, in reaching this conclusion we have taken utmost account of the BEREC Common Position.

<sup>1277</sup> We also discuss in Section 9 how the fair and reasonable charges obligation complements other pricing remedies.

### *Requirement to provide specific types of network access*

13.218 In concluding that BT be required to meet reasonable requests for network access by providing wholesale products with specified characteristics (in addition to proposing that it be required to meet any reasonable requests for network access), we aim to address the ability and incentive that BT has to disrupt or restrict competition by refusing to supply types of wholesale products which can enable its competitors to deliver services effectively in ways which we consider important in light of our market analysis.<sup>1278</sup> In particular, we consider that BT should be subject to clear obligations to provide specific wholesale access products which support competition in the wholesale MISBO market and, in turn, promote competition in the related downstream retail markets.

### SMP Condition

13.219 We have concluded that BT should be subject to both a general requirement to meet reasonable requests for network access and to provide specific types of network access.

### Legal tests

#### *Section 87 of the Act*

13.220 Section 87(3) of the Act authorises the setting of an SMP services condition requiring the dominant provider to provide such network access as we may, from time to time, direct. These conditions may, pursuant to Section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at the times required by or under the conditions.

13.221 When considering the imposition of such conditions in a particular case, Ofcom must have regard to the six factors set out in Section 87(4) of the Act, including, *inter alia*,

- the technical and economic viability of installing and using other facilities, including the viability if other network access products whether provided by the dominant provider<sup>1279</sup> or another person<sup>1280</sup>, that would make the proposed network access unnecessary;
- the feasibility of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed (taking account of any public investment made); and
- the need to secure effective competition, including where it appears to us to be appropriate, economically efficient infrastructure based competition, in the long term.

<sup>1278</sup> This is consistent with the BEREC Common Position **BP1** in relation to achieving the objective of assurance of assurance of access.

<sup>1279</sup> i.e. in this instance BT.

<sup>1280</sup> i.e. other CPs.

13.222 The definition of access and the way in which we might assess reasonable demands for access are set out in our Access Guidelines.<sup>1281</sup> We consider it appropriate in cases where we find a CP has SMP (such as BT in this case) to impose an access obligation on that provider requiring it to meet all reasonable requests for network access within the relevant wholesale market, irrespective of the technology required, on fair and reasonable charges, terms and conditions.

13.223 In imposing the general, and specific, requirements for the provision of network access, we have taken all six factors into account. In particular, in light of our market analysis, we consider these requirements are necessary for securing effective competition, including economically efficient infrastructure based competition, in the long term.<sup>1282</sup> As discussed in our SMP assessment, there are considerable sunk costs associated with building networks to provide leased lines services. It is unlikely to be economically viable to build competing access networks of a sufficient scale to provide effective constraint on BT's SMP in the wholesale MISBO market. Further, the requirement for BT only to meet reasonable network access requests also ensures that due account is taken of the technical and economic viability of installing and using other facilities, the feasibility of the proposed network access, and of the investment made by BT initially in providing the network.

*Statutory duties under sections 3 and 4 of the Act*

13.224 In addition to taking into account the six factors in section 87(4) of the Act, we consider that these general, and specific, requirements for the provision of network access:

- further the interests of citizens in relation to communications matters and further the interests of consumers in the wholesale MISBO market by promoting competition, in accordance with our general duty under section 3(1) of the Act;
- seek to achieve the objective of securing the availability throughout the UK of a wide range of electronic communications services, in accordance with our duty under section 3(2) of the Act;

13.225 In imposing network access obligations which enable us to carry out our general duty under section 3 of the Act, we have also had regard to the following (these appearing to us to be relevant in the circumstances):<sup>1283</sup>

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

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<sup>1281</sup> *Imposing access obligations under the new EU directives*, Of tel, 13 September 2002, available at [http://www.ofcom.org.uk/static/archive/oftel/publications/ind\\_guidelines/acce0902.pdf](http://www.ofcom.org.uk/static/archive/oftel/publications/ind_guidelines/acce0902.pdf)

<sup>1282</sup> This is consistent with the BEREC Common Position **BP3** in relation to achieving the objective of assurance of access.

<sup>1283</sup> In accordance with our duty under section 3(4) of the Act.

13.226 We also consider the general, and specific, requirements for the provision of network access accord with the six European Community requirements for regulation under section 4 of the Act, in particular by:

- promoting competition in the provision of electronic communications networks and services, associated facilities and the supply of directories; and
- encouraging the provision of network access and service interoperability, namely securing efficient and sustainable competition, efficient investment and innovation, and the maximum benefit for customers of CPs.

*Statutory duties under sections 47 of the Act*

13.227 Sections 47 of the Act require SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. We consider the SMP conditions are:

- objectively justifiable, in that they facilitate and encourage access to BT's network and therefore promotes competition to the benefit of consumers;
- not unduly discriminatory, as they are imposed only on BT and no other operator has been found to hold a position of SMP in the wholesale MISBO market;
- proportionate, since they are targeted at addressing the market power that BT holds in this market and do not require it to provide access if it is not technically feasible or reasonable; and
- transparent, in that the SMP conditions are clear in their intention and implementation.

13.228 In relation to our conclusion that the scope of the fair and reasonable obligation according to which BT must provide network access, should be broadened to include fair and reasonable charges, we consider this is appropriate in order to promote efficiency and sustainable competition in the wholesale MISBO market and to provide the greatest possible benefits to end-users by enabling OCPs to purchase network access at levels that should be expected in a competitive wholesale market. In this respect, we have also taken into account the extent of investment of BT in the matters to which the broadened scope of the fair and reasonable obligation would relate.<sup>1284</sup>

13.229 For all the reasons set out above, we consider that the general and specific network access conditions are appropriate to address the competition concerns identified, in accordance with section 87(1) of the Act.

## **Requirement not to unduly discriminate and Equivalence of Input**

### Aim of regulation

13.230 For the reasons set out earlier in this Section, we have concluded it is appropriate to require that the general, and specific, requirements for the provision of network access are delivered to competitors on an EOI basis. The aim of the SMP condition is to facilitate the creation of a level playing field in the wholesale MISBO market on

<sup>1284</sup> In this respect, we consider the extent of investment – if required at all – would not be significant given the strictly behavioural nature of this specific remedy – i.e. it serves to impose an *ex ante* qualification on the manner in which BT must comply with the main obligation which is to meet reasonable requests for network access.

which OCPs can compete with BT, by preventing BT from discriminating against OCPs in favour of its wholesale division, thereby actively promoting competition in the wholesale MISBO market and, in turn, in the related downstream retail markets.

13.231 For the reasons set out in Section 12, we consider that Article 10 of the Access Directive, as implemented by section 87(6)(a) of the Act provides a basis for imposing both EOI and a less strict interpretation of non-discrimination which prevents discrimination that is undue.

13.232 We recognise that it might be that there are some WDM circuits over 70km which it might be onerous to require to be provided on an EOI basis and, consequently we have exempted the provision of particular circuits from the obligation to provide on an EOI basis.

13.233 We have also excluded certain backhaul segments which form part of BT's core network. In addition we have excluded from the scope of the EOI obligation network access which BT is not providing on an EOI basis as at 31 March 2013.

13.234 Where the EOI obligation does not apply, BT remains subject to a no-undue discrimination obligation. In light of stakeholder responses,<sup>1285</sup> we confirm that this obligation applies to both non-pricing *and* pricing practices.

*No unduly discriminatory discounts*

13.235 The obligation not to discriminate unduly also applies to pricing discounts.

13.236 First, in relation to volume discounts we recognise that these would very often in practice constitute undue discrimination since BT's retail arm would almost inevitably be the main beneficiary and there is therefore a strong potential for anti-competitive effects. However, we believe that this point is well understood by CPs and do not consider a change in the obligation is required specifically to reflect this.

13.237 Secondly, in relation to geographic discounts:

- As discussed in Section 5, we have conducted a detailed analysis of the geographic scope of each of the relevant retail and wholesale product markets. In summary, and as set out in more detail in Section 5, geographic areas can comprise a single relevant geographic market to the extent that:
  - competitive conditions in the geographic area are sufficiently homogeneous; and
  - the areas can be distinguished from neighbouring areas where the competitive conditions are appreciably different.
- We have noted that for the geographic markets where we have found SMP, the underlying costs and competitive conditions would not be completely homogenous throughout the UK (even outside the WECLA). This has suggested to us that some freedom to charge in a way that reflects more accurately the costs incurred and to respond to the local characteristics of competition that exist in these markets would be efficient. Moreover, given the level of cost differences that may exist and the extent of competition in some areas, BT's ability to compete could be limited if it were required to maintain nationally uniform prices.

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<sup>1285</sup> See Section 9 for further discussion.

Hence, geographically differentiated prices may reflect BT responding legitimately to cost differences in the face of competition.

- In light of the above, we therefore consider that geographic discounts may or may not be unduly discriminatory depending on the circumstances. In the event of an allegation of offering unduly discriminatory geographic discounts, we would judge each alleged breach of the no undue discrimination obligation on a case by case basis.

13.238 In Section 20 of this Statement, we have considered how geographic discounts should be treated in the charge control remedy we are imposing in the wholesale MISBO market.

13.239 Thirdly, in relation to term discounts:

- in principle, we consider this form of discount could raise competition concerns – for example:
  - if BT's downstream operations were at an advantage compared to downstream competitors. In principle, the largest beneficiary of term discounts could be BT's downstream operations, as they may see no commercial disadvantage in being contractually tied to BT's wholesale services for a lengthy period of time. If so, it could provide BT with the ability to undercut downstream competitors in ways that they could not match (where those competitors rely on wholesale services from BT, but do not wish to sign up to the discounts);
  - term discounts may increase the barriers to entry/growth for upstream competitors to Openreach, if purchasers of wholesale services are tied into longer term contracts (and so increasing the switching costs);
- however, it is not necessarily the case that we should automatically view all forms of term discount as harmful to consumers;
- we therefore consider that term discounts may or may not be unduly discriminatory depending on the circumstances. In the event of an alleged breach we would judge each alleged breach on a case by case basis.

13.240 In Section 20 of this Statement we have considered whether there should be any restrictions on the term discounts that BT may offer and how they might be taken into account in the specific price control remedy we are imposing in the wholesale MISBO market.

### SMP Condition

13.241 We have concluded that BT should be subject to a requirement not to discriminate unduly and, unless we specifically direct otherwise, provide network access on an EOI basis.

### Legal tests

13.242 We are satisfied that the SMP conditions meet the various tests set out in the Act.

13.243 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time,

direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

13.244 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

13.245 In reaching our conclusion that BT should be subject to a requirement not to discriminate unduly and to provide Ethernet services on an EOI basis, we have taken all these six factors into account. In particular, we consider that the SMP conditions are required to secure effective competition in the long term.

13.246 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP conditions are aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by preventing BT from leveraging its SMP into downstream markets.

13.247 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP conditions are:

- objectively justifiable, in that they provide safeguards to ensure that competitors, and hence consumers, are not disadvantaged by BT supplying other than on an EOI basis or otherwise discriminating unduly in favour of its own downstream activities or between different competing providers;
- not unduly discriminatory, as they are imposed only on BT and no other operator has been found to hold a position of SMP in the wholesale MISBO market;
- proportionate because:
  - in relation to the no-undue discrimination obligation it only seeks to prevent discrimination that is undue; and
  - in relation to the imposition of the EOI obligation, for the reasons set out above at paragraphs 13.121 to 13.153; and



- transparent, in that the SMP conditions are clear in what they are intended to achieve.

## Transparency and notification obligations

13.248 We have concluded that BT should be subject to a set of obligations, aimed at promoting transparency and ensuring non-discrimination.<sup>1286</sup> The obligations we discuss in more detail below are:

- requirement to publish a reference offer;
- an obligation to give 28 days' notice of price reductions<sup>1287</sup> and to give 90 days' notice of all other changes to prices, terms and conditions for existing MISBO services;
- an obligation to give 28 days' notice of the introduction of prices, terms and conditions for new MISBO services;
- a requirement to publish quality of service information;
- a requirement to notify technical information with 90 days notice; and
- obligations relating to requests for new network access.

13.249 These obligations are designed to support the general, and specific, network access and non-discrimination obligations.

## Legal tests

13.250 Section 87(6) also authorises the setting of SMP services conditions that require the dominant provider to publish information about network access to ensure transparency and to publish terms and conditions.

13.251 We discuss each of the transparency and notification obligations in more detail below.

## Requirement to publish a reference offer (RO)

### Aim of regulation

13.252 A requirement to publish a RO has two main purposes, namely:

- to assist transparency for the monitoring of potential anti-competitive behaviour; and
- to give visibility to the terms and conditions on which other providers will purchase wholesale services.

<sup>1286</sup> In this respect, we consider the set of obligations aimed at promoting transparency and ensuring non-discrimination are consistent with the relevant best practices identified in the BEREC Common Position.

<sup>1287</sup> We consider that a 28 day notice period should apply to any increase in prices that may occur at the end of a special offer (where the price immediately following the end of the special offer is no higher than the price immediately before the start of the special offer).

13.253 This helps to ensure stability in markets and, without it incentives to invest might be undermined and market entry less likely.

13.254 The publication of a RO potentially allows for speedier negotiations, avoids possible disputes and give confidence to those purchasing wholesale services that they are being provided on non-discriminatory terms. Without this, market entry might be deterred to the detriment of the long-term development of competition and hence consumers.

13.255 The condition requires the publication of a RO and specifies the information to be included in that RO (set out below) and how the RO should be published. It prohibits the dominant provider from departing from the charges, terms and conditions in the RO and requires it to comply with any directions Ofcom may make from time to time under the condition. The published RO must set out (at a minimum) such matters as:

- a clear description of the services on offer including technical characteristics and operational process for service establishment, ordering and repair;
- the locations of points of network access and the technical standards for network access;
- conditions for access to ancillary and supplementary services associated with the network access including operational support systems and databases etc;
- contractual terms and conditions, including dispute resolution and contract negotiation/renegotiation arrangements;
- charges, terms and payment procedures;
- service level agreements and service level guarantees; and
- to the extent that BT uses the service in a different manner to CPs or uses a similar service, BT is required to publish a reference offer in relation to those services.

### SMP Condition

13.256 We have concluded that BT should be subject to a requirement to publish a RO.

### Legal tests

13.257 We are satisfied that the SMP condition meets the various tests set out in the Act.

13.258 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

13.259 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

13.260 In reaching our conclusion that BT should be subject to a requirement to publish a reference offer, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

13.261 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the condition is aimed at promoting competition firstly by ensuring that providers have the necessary information to allow them to make informed decisions about purchasing MISBO services in order to compete in downstream markets and by providing transparency in order to assist in the monitoring of anti-competitive behaviour.

13.262 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it requires that terms and conditions are published in order to encourage competition, provide stability in markets and monitor anti-competitive behaviour;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in the wholesale MISBO market;
- proportionate, as only information that is considered necessary to allow providers to make informed decisions about competing in downstream markets is required to be provided; and
- transparent, in that the SMP condition, is clear in its intention and implementation.

## **Requirement to notify charges, terms and conditions**

### Aim of regulation

13.263 We have concluded that BT should be subject to an obligation to notify changes to its charges, terms and conditions.

13.264 Notification of changes to services at the wholesale level can assist competition by giving advanced warning of charge changes to providers purchasing wholesale services in order to compete with the dominant provider in downstream markets. It also supports the non-discrimination obligation by ensuring that BT does not notify changes in a discriminatory manner. Notification of changes to charges therefore helps to ensure stability in markets without which we considered incentives to invest might be undermined and market entry made less likely. However, there may be some disadvantages to notifications, particularly in markets where there is some competition. It can lead to a 'chilling' effect where CPs follow BT's prices rather than act dynamically to set competitive prices. On balance, however, we do not consider that this consideration would undermine the imposition of this obligation. Competitors rely to a significant degree on the provision of wholesale services to enable them to compete in downstream markets. We have concluded that the advantages of notifying charges are therefore likely to outweigh any potential disadvantages.

13.265 We believe that prior notification of changes to charges, terms and conditions are important to ensure that competing providers have sufficient time to plan for such changes, as they may want to restructure the prices of their downstream offerings in response to changes to charges at the wholesale level.

13.266 We consider that the notification period should allow sufficient time for downstream providers to make necessary changes to their downstream products and services. We believe that 90 days would ordinarily be an appropriate notification period for existing products and services.

13.267 However, we also recognise that the industry and end-users could benefit from shorter notification times when prices are being reduced. For example, there may be advantages in having a shorter notification period for price incentives to encourage migration to newer or more efficient MISBO services. There should also not be a risk of financial exposure for CPs if prices are being reduced. We therefore consider 28 days to be an appropriate notification period for price reductions. Often price reductions can be part of a special offer to which conditions are attached so the shorter notice period would also need to apply to such conditions.<sup>1288</sup>

13.268 In addition, we consider that the prior notification period for new products and services should reflect the lesser administrative impact of changes to charges for new products and services. We consider that 28 days is therefore an appropriate notification period for new products and services.

13.269 We therefore conclude that the following notification periods should apply:

- 28 day notice for prices, terms and conditions relating to new service introductions;
- 28 days notice for price reductions and associated conditions (for example conditions applied to special offers);<sup>1289</sup> and

<sup>1288</sup> For example, we have recently granted a notification waiver for Openreach's special offer for EAD to WES migration. This offered a discount on connection charges and a waiver of early termination charges on condition that customers upgraded to higher bandwidth circuits.  
<http://stakeholders.ofcom.org.uk/binaries/consultations/ethernet-waiver/statement/statement.pdf>

<sup>1289</sup> We further consider that a 28 day notice period should apply to any increase in prices that may occur at the end of a special offer (where the price immediately following the end of the special offer is no higher than the price immediately before the start of the special offer).

- 90 days notice for all other changes to prices terms and conditions.

### SMP Condition

13.270 We have concluded that BT should be subject to a requirement to notify charges, terms and conditions.

### Legal tests

13.271 We are satisfied that the SMP condition meets the various tests set out in the Act.

13.272 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

13.273 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

13.274 In reaching our conclusion that BT should be subject to a requirement to notify changes to its charges, terms and conditions, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

13.275 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that CPs have the necessary information about changes to terms, conditions and charges sufficiently in advance to allow them to make informed decisions about competing in downstream markets.

13.276 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that there are clear benefits from the notification of changes in terms of ensuring that providers are able to make informed decisions within an appropriate time frame about competing in downstream markets;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in the wholesale MISBO market;
- proportionate, as 90 days is considered the minimum period necessary to allow competing providers to plan for changes to existing network access and 28 days for new network access and price reductions; and
- transparent, in that the condition, is clear in its intention and implementation.

## **Requirement to notify technical information**

### Aim of regulation

13.277 We have concluded that changes to technical information should be published in advance, so that competing providers have sufficient time to prepare for them.

13.278 Under the requirement to publish a RO, BT is required to publish technical information. However, advance notification of changes to technical information is important to ensure that providers who compete in downstream markets are able to make effective use of the wholesale services provided by BT.

13.279 For example, a competing provider may have to introduce new equipment or modify existing equipment to support a new or changed technical interface. Similarly, a competing provider may need to make changes to their network in order to support changes to wholesale services offered by BT.

13.280 Technical information includes new or amended technical characteristics, including information on network configuration, locations of the points of network access and technical standards (including any usage restrictions and other security issues).

13.281 The condition requires the notification of new technical information within a reasonable time period but not less than 90 days in advance of providing new wholesale services or amending existing technical terms and conditions. We consider that 90 days is the minimum time that competing providers need to modify their network to support a new or changed technical interface or support a new point of access or network configuration.

13.282 This does not rule out that there may be circumstances in which longer periods of notice may be appropriate, but in the absence of particular situations that can be anticipated now this cannot be reflected explicitly in conditions.

### SMP Condition

13.283 We have concluded that BT should be subject to a requirement to notify technical changes.

### Legal tests

13.284 We are satisfied that the SMP condition meets the various tests set out in the Act.

13.285 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

13.286 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

13.287 In reaching our conclusion that BT should be subject to a requirement to notify technical information, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

13.288 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that providers have sufficient notification of technical changes to MISBO services to enable them to compete in downstream markets.

13.289 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it enables providers to make full and effective use of network access to be able to compete in downstream markets;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in the wholesale MISBO market;
- proportionate in that 90 days is the minimum period that Ofcom considers is necessary to allow competing providers to modify their networks; and
- transparent in that it is clear in its intention that BT notify changes to technical information in advance.

## **Requirement to publish quality of service information**

### Aim of regulation

13.290 We have concluded that BT should be required to publish specific quality of service information.

13.291 Vertically integrated operators have the ability to favour their own downstream business over third party CPs by differentiating on price or terms and conditions. This discrimination could also take the form of variations in quality of service (either in service provision and maintenance or in the quality of network service provided by the dominant provider to external providers compared to its own retail operations). This has the potential to distort competition at the retail level by placing third party CPs at a disadvantage in terms of the services they can offer consumers to compete with the downstream retail business of the vertically integrated operator.

13.292 In order to mitigate this risk we have concluded that, for each of the wholesale MISBO products, BT should be subject to an obligation to publish information about the quality of service of the network access it provides. The main benefit of this in wholesale markets is that other CPs could ensure that the service they receive from BT is equivalent to that provided by BT to its own retail divisions.

13.293 The obligation will require BT to publish information as directed by Ofcom, rather than requiring BT to publish specific information from the date of the imposition of the obligation.

### SMP Condition

13.294 We have concluded that BT should be subject to a requirement to publish quality of service information.

### Legal tests

13.295 We are satisfied that the SMP condition meets the various tests set out in the Act.

13.296 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

13.297 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;



- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

13.298 In reaching our conclusion that BT should be subject to a requirement to publish quality of service information, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

13.299 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that providers have visibility of the quality of service that BT provides to itself and to other providers.

13.300 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it aims to prevent undue discrimination in the provision of service by requiring BT to publish quality of service information about the service it provides to itself and to other providers;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate because it only requires BT to publish information as directed by Ofcom in the event we consider such information is required to monitor BT's compliance with its other obligations, which is the minimum condition to ensure the desired objective; and
- transparent in that it is clear in its intention that BT is required to publish quality of service information.

## **Requests for new network access**

### Aim of regulation

13.301 We have concluded that BT should be subject to obligations that determine how requests for new types of network access should be handled.

13.302 Vertically integrated operators have the incentive to favour their own downstream business over third party CPs by discriminating on price or terms and conditions. Where such an operator has SMP it also has the ability to discriminate. One form of potential discrimination is in relation to the handling of requests for new types of network access. This has the potential to distort competition at the retail level by placing third party CPs at a disadvantage compared with the downstream retail business of the vertically integrated operator in terms of their ability to introduce new services to meet their customer needs and in terms of their ability to offer innovative services in order to compete more effectively.

13.303 In order to ensure that BT does not discriminate in this way, we have concluded that BT should be subject to a set of obligations that specify how it should handle requests for new types of network access. These obligations would support the obligation not to unduly discriminate by specifying how requests should be handled.

13.304 We consider that the obligations which are currently applied in other leased lines markets are fit for purpose and should be applied to the wholesale MISBO market. These obligations include:

- a requirement for BT to publish reasonable guidelines specifying the required content and form of requests for new network access and how they will be handled;
- a requirement for BT to provide sufficient technical information to CPs to allow them to draft product specifications that are efficient and which satisfy the reasonable requirements; and
- timescales within which BT must acknowledge and process requests.

### SMP Condition

13.305 We have concluded that BT should be subject to a requirement specifying how it should handle requests for new network access.

### Legal tests

13.306 We are satisfied that the SMP condition meets the various tests set out in the Act.

13.307 First, section 87(3) of the Act authorises the setting of a SMP condition requiring the dominant provider to provide network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to, and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

13.308 When considering the imposition of such conditions in a particular case, we must take into account six factors set out section 87(4) of the Act:

- the technical and economic viability, having regard to the state of market development, of installing and using facilities that would make the proposed network access unnecessary;
- the feasibility of the provision of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed;
- the need to secure effective competition in the long term;
- any rights to intellectual property that are relevant to the proposal; and
- the desirability of securing that electronic communications services are provided that are available throughout the member States.

13.309 In reaching our conclusion that BT should be subject to a requirement specifying how it should handle requests for new network access, we have taken all these six factors into account. In particular, we consider that the SMP condition is required to secure effective competition in the long term.

13.310 Secondly, we have considered our duties under the Act, including our general duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by facilitating the development of competition in downstream markets.

13.311 Thirdly, section 47 of the Act requires SMP conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that its purpose is to prevent undue discrimination in the processing of requests for new network access;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in this market;
- proportionate as it continues to provide a SOR process based on the currently implemented process, while allowing scope for industry to be involved in agreeing process improvements; and
- transparent, in that the SMP condition, is clear in its intention and implementation.

## **Charge control on single-service Ethernet MISBO products**

### Aim of regulation

13.312 We are imposing a charge control remedy on BT's single-service Ethernet MISBO products to address the competition problems we have identified in the wholesale MISBO market, in particular the risk of excessive pricing.

13.313 Section 87(9) of the Act authorises the setting of an SMP services condition setting price controls for network access and relevant facilities. Section 88 of the Act specifies that Ofcom are not to set a price control unless it appears to Ofcom that there is a risk of adverse effects due to pricing distortions and it appears to Ofcom that setting a price control would promote efficiency, sustainable competition and confer the greatest benefits on the end users.

13.314 A price control can take a variety of forms<sup>1290</sup> including but not limited to a charge control, cost orientation and/or safeguard cap.

13.315 In a competitive market, the charges for services would be set on the basis of the commercial judgements of individual companies and could be expected to deliver cost reflective prices. However, as discussed above, one of the competition problems we have identified as a result of our market analysis of the wholesale MISBO market, in particular our SMP assessment, is the risk of BT engaging in excessive pricing.

13.316 Excessive prices at the wholesale level could make it difficult for third party CPs to compete at the retail level with BT and in the long term, may result in market exit.

<sup>1290</sup> As suggested by Recital 20 of the Access Directive.

Unjustifiably high wholesale charges are also likely to result in high retail prices – i.e. consumers would be paying more for a service than they should expect if wholesale prices were constrained by effective competition.<sup>1291</sup>

13.317 Having identified this relevant risk of an adverse effect arising from price distortion in our market analysis,<sup>1292</sup> we have concluded that this risk should be addressed by the imposition of an appropriate charge control remedy on single-service Ethernet products. We have concluded that the charge control remedy also appears appropriate for the purposes of:

- promoting efficiency;
- promoting sustainable competition; and
- conferring the greatest possible benefits on end-users.<sup>1293</sup>

13.318 We have also taken account of the extent of the investment of BT in the matters to which the charge control remedy relates.

13.319 Our conclusions, together with our reasons, consultation responses and considerations of those responses, with regard to the detail of the charge control we are imposing, and the reasons why we consider this remedy complies with the relevant legal tests in the Act, are set out in Section 20.

## **Insufficiency of national and Community competition law remedies**

13.320 At the beginning of this Section we set out our conclusion that national and Community law remedies would be insufficient to address the competition problems we have identified in the wholesale MISBO market.

13.321 We set out below, by reference to the remedies we have decided to impose, our reasons supporting this conclusion, and which reasons lead us to conclude that competition would be ineffective in the wholesale MISBO market over the course of the three year review period.

13.322 First, we do not consider that the nature and scope of the remedies we are imposing to address the competition problems we have identified could be imposed equally effectively under competition law. This includes reliance on the BT Undertakings which are, in essence, a remedy under national competition law.<sup>1294</sup> As we explained in 2005 when we accepted them in lieu of a reference to the Competition Commission, the BT Undertakings are intended to complement *ex ante* regulation under the Act. They seek to deploy a variety of mechanisms aimed at defining equivalent treatment, and at preventing and detecting discriminatory conduct by BT when supplying wholesale network access and backhaul services to its downstream competitors.

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<sup>1291</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of fair and coherent access pricing.

<sup>1292</sup> Within the meaning of section 88(3) of the Act.

<sup>1293</sup> Within the meaning of section 88(1)(b) of the Act. See also, in this respect, paragraphs 13.188 to 13.198 above.

<sup>1294</sup> Enterprise Act 2002.

13.323 In contrast, the SMP remedies we are imposing are needed to address the competition problems we have identified in this market review and which we consider will pervade over the course of the three year review period. For example:

- we are imposing both general, and specific, network access obligations, in the manner and form set out in Conditions 1 and 2;
- Conditions 1 and 2 provide, amongst other things, for direction-making powers.<sup>1295</sup> These direction-making powers are important since they allows us to direct BT as to the application of the general, and specific, network access obligation, and so ensure their application can be specifically tailored to address the competition problem(s) we have identified, both now and over the course of the three year review period;
- the *ex ante* remedies we are imposing provide, amongst other things, that new products and services provided in the wholesale MISBO market are captured by the relevant SMP obligations,<sup>1296</sup> thus ensuring their continued effectiveness to address the competition problems over the course of the three year review period.

13.324 Secondly, as evidenced by the suite of remedies we are imposing, the requirements of intervening to address the competition problems in the wholesale MISBO market are extensive. We list the remedies below:

- a requirement to provide network access including an obligation to offer fair and reasonable charges, terms and conditions;
- a requirement to provide cost accounting information;
- a requirement not to unduly discriminate;
- a requirement to provide Ethernet services on an EOI basis;
- a charge control;
- a requirement to publish a reference offer;
- a requirement to give notice of changes to prices terms and conditions:
  - 28 days notice for the introduction of prices, terms and conditions for new services;
  - 28 days notice for price reductions for existing services; and
  - 90 days notice for all other changes to prices, terms and conditions.
- a requirement to publish quality of service information;
- a requirement to notify technical information with 90 days notice;

<sup>1295</sup> Condition 1.3 and Condition 2.2.

<sup>1296</sup> See for example, Condition 1 which provides that the provision of network access – i.e. both existing and new – is on fair and reasonable terms, conditions and charges.

- obligations relating to requests for new network access; and
- accounting separation and cost accounting obligations.

13.325 Thirdly, based on recent developments in the wholesale MISBO market, consultation responses and expected developments over the three year review period, we remain of the view that providing continued certainty in the wholesale MISBO market is of paramount concern – both to BT and OCPs, and to end-users. We consider this is best achieved through *ex ante* regulation which, in comparison to competition law remedies and in light of our analysis of the relevant markets, will:

- will provide greater certainty over the course of the three year review period on the types of behaviour that are/are not allowed;
- allow for timely intervention – proactively by us and/or by parties being regulatory disputes to us for swift resolution<sup>1297</sup> – and consequently timely enforcement using the considerable enforcement powers accorded us under the Act to secure compliance,<sup>1298</sup> through a process with which the market in general is familiar and which is also set out in the Act.

## Conclusions regarding the remedies we are imposing in the wholesale MISBO market

13.326 We have concluded that the following remedies should be imposed on BT in the wholesale MISBO market:

- a requirement to provide network access including an obligation to offer fair and reasonable charges,<sup>1299</sup> terms and conditions;
- a requirement not to unduly discriminate;
- a requirement to provide Ethernet and WDM services on an EOI basis;
- a charge control on single-service Ethernet MISBO products;
- a requirement to publish a reference offer;
- a requirement to give notice of changes to prices terms and conditions:
  - 28 days notice for the introduction of prices, terms and conditions for new services;
  - 28 days notice for price reductions for existing services; and
  - 90 days notice for all other changes to prices, terms and conditions.
- a requirement to publish quality of service information;
- a requirement to notify technical information with 90 days notice;

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<sup>1297</sup> See sections 185 to 191 of the Act, in particular section 185(1A).

<sup>1298</sup> See sections 94 to 104 of the Act.

<sup>1299</sup> In relation to fair and reasonable charges, see Section 9.

- obligations relating to requests for new network access; and
- accounting separation and cost accounting obligations.<sup>1300</sup>

13.327 As explained above we have concluded that these remedies also apply to interconnection and accommodation services that BT provides in connection with wholesale MI services.

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<sup>1300</sup> In relation to accounting separation and cost accounting obligations, see Section 16.

## Section 14

# Interconnection and accommodation services

## Introduction

- 14.1 CPs need to purchase certain ancillary services from BT in order to use the regulated wholesale services which BT is required to provide in wholesale leased lines markets. The ancillary services include interconnection and accommodation services necessary to enable CPs to interconnect their networks with BT's. We therefore consider it necessary to regulate provision of interconnection and accommodation services in order to address BT's SMP in the relevant wholesale markets.
- 14.2 In the previous Sections we have set out the remedies which we have decided to impose in those wholesale markets for TISBO, TI regional trunk segments, AISBO and MISBO in which we found that BT has SMP. We explained that those remedies will also apply to interconnection and accommodation services. Consequently BT will be required to meet reasonable requests for interconnection and accommodation services under the general network access obligation that we propose for each of these markets.
- 14.3 In this section we set out the types of interconnection and accommodation services that we have decided should be included in BT's obligations to provide network access in the relevant wholesale markets for TISBO, regional TI trunk segments, AISBO and MISBO services. These remedies are based on the nature of the competition problems we have identified in our market analysis in relation to the respective wholesale markets to which they apply. We set out the corresponding competition problems in Sections 11 to 13.

## Summary of our conclusions

- 14.4 We have concluded that BT should be subject to specific obligations to provide interconnection and accommodation services, as set out in Figure 14.1 below.



**Figure 14.1 Summary of interconnection and accommodation service obligations**

Competition issues	Wholesale Markets	Remedies (in addition to those specified for each market in preceding sections)
Refusal to supply	<p>In the UK excluding the Hull area and the WECLA:</p> <ul style="list-style-type: none"> <li>low bandwidth AISBO</li> <li>MISBO</li> </ul> <p>In the WECLA</p> <ul style="list-style-type: none"> <li>low bandwidth AISBO</li> </ul>	<p>The obligation to provide network access includes the following services:</p> <ul style="list-style-type: none"> <li>Customer Sited Handover (CSH)</li> <li>In Building Handover (IBH)</li> <li>Accommodation services</li> </ul>
	<p>In the UK, excluding the Hull area:</p> <ul style="list-style-type: none"> <li>low bandwidth TISBO</li> <li>regional TI trunk segments</li> </ul> <p>In the UK excluding the Hull area and the WECLA:</p> <ul style="list-style-type: none"> <li>medium bandwidth TISBO</li> <li>high bandwidth TISBO</li> </ul>	<p>The obligation to provide network access includes the following services:</p> <ul style="list-style-type: none"> <li>Customer Sited Handover (CSH)</li> <li>In Span Handover (ISH)</li> <li>In Span Handover extension (ISH Extension)</li> <li>In Building Handover (IBH)</li> <li>Accommodation services</li> </ul>
Non price discrimination	<p>In the UK, excluding the Hull area:</p> <ul style="list-style-type: none"> <li>low bandwidth TISBO</li> <li>regional TI trunk segments</li> </ul> <p>In the UK excluding the Hull area and the WECLA:</p> <ul style="list-style-type: none"> <li>medium bandwidth TISBO</li> <li>high bandwidth TISBO</li> <li>low bandwidth AISBO</li> <li>MISBO</li> </ul> <p>In the WECLA</p> <ul style="list-style-type: none"> <li>low bandwidth AISBO</li> </ul>	Obligation to allocate accommodation space on the basis of equivalence of inputs (EOI)
Excessive pricing	<p>In the UK, excluding the Hull area:</p> <ul style="list-style-type: none"> <li>low bandwidth TISBO</li> <li>regional TI trunk segments</li> </ul> <p>In the UK excluding the Hull area and the WECLA:</p> <ul style="list-style-type: none"> <li>medium bandwidth TISBO</li> <li>high bandwidth TISBO</li> <li>low bandwidth AISBO</li> <li>MISBO</li> </ul> <p>In the WECLA</p> <ul style="list-style-type: none"> <li>low bandwidth AISBO</li> </ul>	Price controls for interconnection and accommodation services

- 14.5 In relation to BT's development of ISH and interconnection aggregation (high density handover) solutions requested by CPs for AISBO services, our view is that BT should bring those developments to conclusion as soon as reasonably possible so that deployment of appropriate solutions can proceed.

## Structure of this Section

14.6 The structure of this Section is as follows:

Sub-section	Description
<b>Description of the interconnection and accommodation services provided in the business connectivity markets</b>	
<b>Our Consultation proposals</b>	<ol style="list-style-type: none"> <li>1. Assessment of competition problems relevant to interconnection and accommodation services</li> <li>2. Assessment of appropriate remedies</li> <li>3. Remedies proposed in the June BCMR Consultation</li> </ol>
<b>Consultation responses</b>	<ol style="list-style-type: none"> <li>1. Stakeholders' views</li> <li>2. Our reasoning</li> </ol>
<b>Our conclusions on the appropriate remedies</b>	

## Description of the interconnection and accommodation services provided in the business connectivity markets

14.7 A Point of Connection (POC) or Point of Handover (POH) is the point at which BT's network interconnects with that of another CP. The relevant services provided at a POC can broadly be divided into links and equipment. Links are the duct and fibre which connect the equipment of two interconnecting communications providers in order to allow transmission between the networks of these two communications providers. Equipment at each end of a link (which can include multiplexers and transmission terminals) aggregates, disaggregates and terminates partial circuits for onward transmission.

### POC for Wholesale TISBO & TI trunk interconnection services

14.8 BT currently provides the following types of interconnection service for wholesale TISBO services:

- Customer-Sited Handover (CSH): an interconnection service in which BT provides a POC at the site of the interconnecting CP. In order to do so, BT has to extend its network out to the POC and to provide a link from its site to the interconnecting CP's site, as well as equipment at both ends;
- In-Span Handover (ISH): an interconnection service in which both BT and the interconnecting CP build out their respective networks to a passive handover point located between their respective premises. The handover point is adjacent to the BT exchange and therefore most of the build is the responsibility of the interconnecting CP. BT provides the part of the ISH link running from the handover point to its POC, along with ISH equipment at BT's site. The interconnecting CP supplies the equipment at its own site and the part of the ISH link from that site to the handover point; and
- In Span Handover extension (ISH extension): this arrangement is similar to ISH, however the handover point is located further from BT's exchange but still within the serving area of that exchange.

- 14.9 Each of these types of service supports aggregated handover of terminating segments over high bandwidth links.
- 14.10 CSH does not involve the interconnecting CP building out its network to BT's exchange and the significant costs of doing so. Therefore, it is usually a method of handover preferred by new CPs or where a handover link is expected to carry a limited volume of traffic. Regulation of CSH is essential to ensure that barriers to entry for new interconnecting CPs are low. If CPs could only interconnect using ISH and had to meet the significant costs of building their links up to BT's exchanges, this could deter market entry and therefore affect the development of competition in these markets.
- 14.11 ISH is the preferred method of handover for CPs who have reasonably extensive network infrastructure. An interconnecting CP will aim to hand over as close as possible to BT's exchange, in order to minimise the charges payable to BT. Regulation of ISH (including the ISH extension variant) is necessary to ensure that CPs have the option of building out their own networks and of connecting closer to BT's exchange. This therefore assists and incentivises CPs to extend their own infrastructure.
- 14.12 In the 2007/8 Review we required BT to provide CSH, ISH and ISH extension. We also concluded that BT should provide In Building Handover (IBH), which is a POC at co-location space rented by a CP in a BT exchange in support of disaggregated TISBO services. As these services were still under development at the time we did not apply a specific obligation to supply IBH.

### **POC for wholesale AISBO services**

- 14.13 BT currently provides the following types of interconnection service for wholesale AISBO services:
- Two types of CSH:
    - Without aggregation: BT terminates individual circuits at the CP's site without aggregation (i.e. interconnection is part of the service and there is no separate interconnection link). This method is commonly used for WES and EAD circuits; and
    - With aggregation: BT supplies Bulk Transport Link (BTL) which aggregates multiple EBD services for delivery over a single interconnection link to the CP's site. As with TISBO CSH, BT provides a POC at the site of the interconnecting communications provider. In order to do so, BT has to extend its network out to the POC at the CP's site and to provide a CSH link along with CSH POC equipment.
  - IBH: BT provides a POC at co-location space rented by a CP in a BT exchange. Currently BT hands over individual circuits to the CP in the latter's co-location space without aggregation.
- 14.14 BT does not offer ISH products for AISBO services at present.
- 14.15 In the 2007/8 Review we required BT to provide CSH and IBH for AISBO services.
- 14.16 The pattern of usage of interconnection services for AISBO services differs significantly from that of TISBO services. CPs generally regard BTL as too expensive

and generally use either CSH (without aggregation) or IBH. Use of IBH appears to have grown, particularly since BT introduced EAD Local Access, whose pricing gives CPs an incentive to establish a Point of Presence (POP) in a BT exchange.

- 14.17 We also note that CPs have requested that Openreach develop an ISH interconnection option and also an aggregation capability to make IBH and ISH interconnection more efficient than the current practice of handing over each circuit individually. We discuss this request further below.

### **POC for wholesale MISBO services**

- 14.18 The interconnection services that BT provides for the high bandwidth Ethernet services that fall within the MISBO market are the same as those it provides for the lower bandwidth Ethernet services that fall within the AISBO market (i.e. as discussed above).
- 14.19 BT's WDM services OSA and OSEA are generally provided on an end-to-end basis (i.e. between customer premises) but BT also offers CSH and IBH.
- 14.20 We did not find that BT had SMP in the MISBO market in the 2007/8 Review so BT is not currently subject to any *ex-ante* obligations in relation to interconnection and accommodation.

### **Accommodation**

- 14.21 Openreach currently provides two types of regulated accommodation services: Co-mingling and Access Locate. Co-mingling is exclusively provided in support of Local Loop Unbundling (LLU), whilst Access Locate provides accommodation for the majority of other access services supplied by Openreach, including Ethernet leased lines. A CP wishing to use disaggregated AISBO products is thus required to purchase Access Locate in order to enable it to deploy its own equipment in the BT exchange space. Openreach also offers a commercial accommodation service called Access Locate Plus, which allows the CP to locate a wider range of equipment, such as video and broadband servers.

### **Cablelink services**

- 14.22 In addition to the interconnection products described above, BT also provides a product in support of accommodation services called Cablelink. Cablelink has both internal and external variants. The internal variant allows a communications provider to connect two remote licensed areas of the BT exchange building (i.e. two separate areas in which the communications provider has installed its equipment) or to connect equipment in the CP's licensed area to a pre-existing fibre entering the exchange building via the cable chamber. The external variant allows a communications provider's external fibre cable to be pulled into the exchange building by BT and routed to the CP's licensed area.
- 14.23 Cablelink is not a handover product as such as it is a passive product that does not interconnect BT equipment to the CP's equipment for the purposes of carrying TISBO or AISBO traffic. However, we consider that it is an essential element of the accommodation services that BT provides because it allows a CP to connect its POP within the BT exchange with the CP's fibre outside the exchange.

## Our consultation proposals

- 14.24 Section 87(3) of the Act authorises the setting of an SMP services condition requiring the dominant provider to provide such network access as Ofcom may, from time to time, direct. These conditions may, pursuant to section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.
- 14.25 Section 87(3) includes reference to conditions requiring relevant facilities to be made available. Network access is also defined in sections 151(3) and (4) of the Act so as to include interconnection services and/or any services or facilities that would enable another CP to provide electronic communications services or electronic communication networks. We considered that a requirement to provide network access would, therefore, include any ancillary services as may be reasonably necessary for a Third Party to use the services.
- 14.26 In relation to price controls, section 87(9) of the Act authorises the setting of an SMP services condition setting price controls for network access and relevant facilities. Section 88 of the Act specifies that Ofcom are not to set a price control unless it appeared to Ofcom that there was a risk of adverse effects due to pricing distortions and it appeared to Ofcom that setting a price control would promote efficiency, sustainable competition and confer the greatest benefits on the end users. Additionally, in setting a price control, Ofcom must take into account the extent of investment in the matters to which the control relates by the person to whom it applies.

### Assessment of competition problems relevant to interconnection and accommodation

- 14.27 In the absence of regulation BT would have an incentive not to supply some or all of these services or to charge excessive prices, particularly as it does not require interconnection services in order to provide its own downstream retail services. As CPs must purchase these services this would have the same effect as excessive prices for the main wholesale services BT supplies and would undermine the remedies that we proposed to impose. We therefore considered it necessary to require BT to provide certain interconnection and accommodation services.
- 14.28 We also noted that space and power in BT's exchanges is limited, that BT has the incentive and, in the absence of appropriate regulation, the ability to discriminate in favour its own needs in allocating such space and power. We considered that the concerns we identified in this regard in our Telecommunications Strategic Review and in a subsequent Statement on a variation to BT's Undertakings in 2008 were still valid.

### Assessment of appropriate remedies

#### TISBO and TI regional trunk services

- 14.29 We proposed that BT should be required to provide each of the types of interconnection service discussed above, namely CSH, ISH, ISH extension which are the established means of interconnection for TISBO and TI regional trunk services. As discussed above each of these services performs a different function and

facilitates competition in a different manner and we therefore considered it important that BT provide all three types of interconnection.

- 14.30 Now that BT is preparing to introduce disaggregated TISBO products we proposed that BT should be required to provide accommodation services and IBH for TISBO and TI regional trunk services. We considered that the use of disaggregated TISBO products would facilitate competition and innovation in the interests of consumers by allowing CPs to expand the range of services they supply from POPs they establish in BT local exchanges, thereby enabling them to exploit economies of scale and scope in the provision of business connectivity and other services such as LLU based broadband and telephony services.
- 14.31 We considered that these services should be subject to price controls and provided on non-discriminatory and transparent terms.

### AISBO services

- 14.32 We proposed that BT should be required to provide each of the types of interconnection service discussed above, namely CSH and IBH. As discussed above each of these services performs a different function and facilitates competition in a different manner and we therefore considered it important that BT provide both types of interconnection.
- 14.33 As previously discussed in section 11 the ISH and interconnection aggregation (high density handover) developments requested by CPs appeared to us to be sensible developments that would broadly align the interconnection options available for Ethernet services with those already available for TISBO services. They have the potential to improve the efficiency of interconnection by reducing the overall amount of equipment required (and as a result reduce the amount of equipment space required and power consumed) and also to reduce costs. Also, an ISH option would be better suited to CPs with extensive network infrastructure and would reduce the pressure on accommodation in BT exchanges (which is in short supply at some locations) and would enable CPs to interconnect at exchanges where no accommodation space is available. We therefore considered that the product development should be brought to a conclusion as soon as reasonably possible so that deployment could proceed and CPs can begin to benefit from these enhancements as soon as possible.
- 14.34 We considered that these services should be subject to price controls and provided on non-discriminatory and transparent terms, including a requirement for provision of network inputs on an equivalence of inputs basis.

### MISBO services

- 14.35 We proposed that BT should be required to offer CSH and IBH interconnection products which are the established interconnection services for Ethernet and WDM services in this market.
- 14.36 As with AISBO services, we considered that BT should continue to develop ISH, ISH extension and aggregation options for Ethernet services.
- 14.37 We considered that these services should be subject to price controls and provided on non-discriminatory and transparent terms, including a requirement for provision of network inputs on an equivalence of inputs basis.

## Accommodation

- 14.38 We also proposed that BT should be required to offer accommodation services in support of disaggregated services in the TISBO, AISBO and MISBO markets.
- 14.39 We considered that these services should be subject to price controls and provided on non-discriminatory and transparent terms.

## Allocation of space

- 14.40 We considered that the use of disaggregated products such as EAD Local Access facilitates competition and innovation in the interests of consumers by allowing other CPs to access BT's bottleneck assets at least cost. We therefore wish to encourage the use of disaggregated AISBO and TISBO products. The availability of accommodation in BT exchanges is an important enabler to this model of competition.
- 14.41 We acknowledged that, with the increasing consumption of disaggregated products such as EAD Local Access, accommodation has become more important and that pressure on accommodation space has increased.
- 14.42 The provision of space and power was identified as an area for concern in the Telecoms Strategic Review and was subsequently the subject of significant regulatory attention. This culminated in a variation to the BT Undertakings in 2008.<sup>1301</sup> In this variation, Openreach agreed to undertake a proactive review of exchange space, to develop a multi-use accommodation product and to allocate space and power on an EOI basis.
- 14.43 The effect of this variation was to commit Openreach to assign space and power on a 'first-come-first-served' (FCFS) basis but not to consume the same accommodation products that are used by CPs. This was based on the assessment that given the scale of deployment of equipment by BT, BT's requirements are likely to be different to other CPs so that BT would be likely to use different products to other CPs even if it was required to obtain these products from Openreach.
- 14.44 We also took the view that it was appropriate that provisioning activities such as the provision of ironwork and power in BT owned buildings be carried out by a single provider as management of an exchange where multiple CPs are all carrying out their own works would be complex and inefficient.
- 14.45 We considered that these conclusions remain valid. We thought that allocation of accommodation on an EOI basis in conjunction with a set of charge-controlled accommodation products that meet CPs needs addressed the competition issue in a proportionate manner.
- 14.46 Given the importance of accommodation to CPs it is essential that space and power continue to be allocated on an FCFS basis. For this reason, we proposed that BT should be required to allocate space and power on an EOI basis.

<sup>1301</sup> Variations to BT's Undertakings under the Enterprise Act 2002 in respect of BT's NGN, Space and Power and OSS separation

[http://stakeholders.ofcom.org.uk/binaries/consultations/variatiions\\_bt/statement/statement071008.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/variatiions_bt/statement/statement071008.pdf)

## Availability of space

- 14.47 In the last 18 months, there have been two initiatives to address the shortage of accommodation at some exchanges.
- 14.48 Firstly, pursuant to section 5.49(d) of the variation to the BT Undertakings discussed above, BT Operate recently undertook a proactive review based on planning instructions provided by Openreach and agreed with the Ethernet Industry forum. The review was proactively monitored by the Equality of Access Office (EAO) and involved 69 different Local Exchanges signalled by industry stakeholders as being in shortage of space. For the large majority of exchanges, the EAO was satisfied that Openreach and BT Operate had plans to accommodate further CPs' equipment. However, the EAO concluded that BT's timescales for freeing space are quite long. At that time the average lead time for reviewing space in an exchange building, plan appropriate actions to free space and execute the plan was 126 days. This is mainly due to resource constraints within BT Operate.
- 14.49 Secondly, in December 2011 the Office of Telecom Adjudicators 2 (OTA2) set up the 'Plan & Build' industry forum to investigate possible solutions to this problem. The role of the forum is to review operational performance in the provision of access to exchange space, power, cable infrastructure (tie cables) and Main Distribution Frames.
- 14.50 We agreed with the EAO that there may be scope to reduce the lead times to fulfil new accommodation orders. We believed that the work currently undertaken by the OTA2 will help industry finalise a better process to free space in BT exchanges and thus required BT to continue engaging with industry via the OTA2 forum.
- 14.51 Noting the above developments, we considered that the proposed remedies are sufficiently flexible to address issues which may arise in relation to availability of space.

## **Consultation responses**

- 14.52 Our proposals in the June BCMR Consultation regarding BT's interconnection and accommodation services attracted relatively little comment from respondents.
- 14.53 BT did not object to our proposals to apply SMP conditions to these ancillary services, and considered that the conditions would merely clarify the existing position. COLT welcomed the improvements in our proposed arrangements for hand-over and interconnection.

## **Ofcom's considerations**

- 14.54 We note that, to the limited extent that stakeholders commented on our proposals in the June BCMR Consultation regarding interconnection and accommodation, they agreed with them.

## **Conclusions**

- 14.55 In light of the responses we received, we have decided to adopt unchanged our proposals on interconnection and accommodation services set out in the June BCMR Consultation. Figure 14.2 below summarises the obligations that will apply to BT.



**Figure 14.2: Summary of interconnection and accommodation service obligations**

Wholesale Markets	Remedies
<p>In the UK excluding the Hull area and the WECLA:</p> <ul style="list-style-type: none"> <li>low bandwidth AISBO</li> <li>MISBO</li> </ul> <p>In the WECLA</p> <ul style="list-style-type: none"> <li>low bandwidth AISBO</li> </ul>	<p>The obligation to provide network access includes the following services:</p> <ul style="list-style-type: none"> <li>Customer Sited Handover (CSH)</li> <li>In Building Handover (IBH)</li> <li>Accommodation services</li> </ul> <p>Price controls for interconnection and accommodation services</p> <p>Obligation to allocate accommodation space on the basis of equivalence of inputs (EOI)</p>
<p>In the UK, excluding the Hull area:</p> <ul style="list-style-type: none"> <li>low bandwidth TISBO</li> <li>regional TI trunk segments</li> </ul> <p>In the UK excluding the Hull area and the WECLA:</p> <ul style="list-style-type: none"> <li>medium bandwidth TISBO</li> <li>high bandwidth TISBO</li> </ul>	<p>The obligation to provide network access includes the following services:</p> <ul style="list-style-type: none"> <li>In Span Handover (ISH)</li> <li>In Span Handover extension (ISH Extension)</li> <li>Customer Sited Handover (CSH)</li> <li>In Building Handover (IBH)</li> </ul> <p>Price controls for interconnection and accommodation services</p> <p>Obligation to allocate accommodation space on the basis of equivalence of inputs (EOI)</p>

14.56 In relation to BT's development of ISH and interconnection aggregation (high density handover) solutions requested by CPs for AISBO services. Our view is that BT should bring those developments to conclusion as soon as reasonably possible so that deployment of appropriate solutions can proceed.

## Legal tests

14.57 We are satisfied that that the obligations (set out in Annex 7) meet the various tests set out in the Act.<sup>1302</sup> We address the tests in relation to the detail of the relevant charge controls in Sections 17 to 24 of this Statement.

14.58 First, we have considered our duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the obligations are aimed at promoting competition by ensuring that CPs are supplied with interconnection and accommodation services that they require in order to use the wholesale services BT supplies effectively.

14.59 Secondly, sections 47 and 49 of the Act require conditions and directions respectively to be objectively justifiable, non-discriminatory, proportionate and transparent. The conditions and directions are:

- objectively justifiable, in that they facilitate and encourage access to BT's network and therefore promotes competition to the benefit of consumers;

<sup>1302</sup> See, in this respect, Sections 11 to 13 above.

- not unduly discriminatory, as they are proposed only for BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate, in that they prevent BT from exploiting its SMP by withdrawing these interconnection and accommodation services; and
- transparent in that the condition is clear in its intention to ensure that BT provide access to its networks in order to facilitate effective competition.

## Section 15

# Remedies for the Hull area

## Introduction

- 15.1 In this Section we set out the SMP remedies that we have decided to impose on KCOM in the following retail and wholesale markets:
- wholesale market for low bandwidth Traditional Interface Symmetric Broadband Origination (TISBO) in the Hull area at bandwidths up to and including 8Mbit/s;
  - wholesale market for medium bandwidth Traditional Interface Symmetric Broadband Origination (TISBO) in the Hull area at bandwidths above 8Mbit/s and up to and including 45Mbit/s;
  - wholesale market for high bandwidth Traditional Interface Symmetric Broadband Origination (TISBO) in the Hull area at bandwidths over 45Mbit/s and up to and including 155Mbit/s;
  - wholesale market for very high bandwidth Traditional Interface Symmetric Broadband Origination (TISBO) in the Hull area at 622Mbit/s bandwidth;
  - wholesale market for low bandwidth Alternative Interface Symmetric Broadband Origination (AISBO) in the Hull area, bandwidths up to and including 1Gbit/s;
  - retail market for low bandwidth traditional interface leased lines in the Hull area at bandwidths up to and including 8Mbit/s; and
  - retail market for low bandwidth alternative interface leased lines in the Hull area at bandwidths up to and including 1Gbit/s.
- 15.2 Unless stated otherwise we refer to the low, medium, high and very high bandwidth wholesale traditional interface markets listed above collectively as the ‘TISBO markets’.
- 15.3 The remedies we have imposed are those which we conclude are appropriate to address the competition problems we have identified in the markets set out above as a result of our market analysis, in particular our assessment in Section 7, and which we conclude national and Community competition law alone would be insufficient to address, and which for the retail markets set out above we also conclude reliance on upstream wholesale regulation would also be insufficient. We set out the competition problems further below in this Section.

## Summary of our conclusions

- 15.4 Figure 15.1 below summarises the competition problems we have identified in the markets in the Hull area listed above at paragraph 15.1, and the remedies that we have concluded are appropriate to address them.

**Figure 15.1: Summary of competition problems and remedies**

Competition problems	RETAIL remedies: Low bandwidth AI market Low bandwidth TI market	WHOLESALE remedies: Low bandwidth AISBO market TISBO markets
<ul style="list-style-type: none"> <li>• Refusal to supply</li> <li>• Predatory pricing</li> <li>• Margin squeeze</li> <li>• Cross subsidisation</li> </ul>	<ul style="list-style-type: none"> <li>• Requirement to supply retail leased lines on fair and reasonable terms, conditions and charges</li> </ul>	<ul style="list-style-type: none"> <li>• Requirement to provide network access on reasonable request, including on fair and reasonable terms, conditions and charges</li> </ul>
<ul style="list-style-type: none"> <li>• Price discrimination</li> <li>• Non-price discrimination, e.g.               <ul style="list-style-type: none"> <li>◦ Different terms</li> <li>◦ Delaying tactics (late provisioning etc.)</li> <li>◦ Strategic product design</li> <li>◦ Exclusive dealing</li> <li>◦ Quality discrimination</li> <li>◦ Different SLAs &amp; SLGs</li> </ul> </li> <li>• Predatory pricing;</li> <li>• Margin squeeze;</li> <li>• Excessive pricing.</li> </ul>	<ul style="list-style-type: none"> <li>• Requirement not to discriminate unduly</li> <li>• Requirement to publish a reference offer</li> </ul>	<ul style="list-style-type: none"> <li>• Requirement not to discriminate unduly</li> <li>• Requirement to publish a reference offer</li> <li>• Requirement to notify charges, terms and conditions</li> <li>• Requirement to notify technical information</li> <li>• Accounting separation obligations</li> </ul>

## Remedies as a whole in the wholesale and retail markets

- 15.5 As in the 2007/8 Review, we have not imposed charge controls to address the risk of excessive pricing in relation to markets in the Hull area. We have concluded that a more proportionate approach, which also has good incentive properties, is to monitor KCOM's charges against a suitable benchmark of BT's charges.
- 15.6 Since the June BCMR Consultation, KCOM has offered a voluntary commitment in relation to its wholesale leased lines prices.<sup>1303</sup> This specifies substantial reductions in KCOM's charges for wholesale TI and AI services. Our initial benchmarking indicates that these reductions would bring KCOM's charges broadly into line with BT's over the next three years.
- 15.7 On this basis, we have decided to accept these voluntary undertakings. We consider that KCOM's commitment, together with the price publication obligations we are imposing in the relevant wholesale and retail markets, will provide stakeholders with valuable reassurance about leased line charges in Hull over the next three years. Whilst we cannot fetter our discretion in this matter, our initial view is that these commitments reduce the likelihood that we will need to intervene in respect of KCOM's charges.

<sup>1303</sup> KCOM's letter setting out its voluntary commitment is reproduced in Annex 11.

- 15.8 In the event that we receive a complaint or have our own concerns about KCOM's wholesale charges or its retail charges (which are outside the scope of its voluntary commitment), as an initial step to inform the need for intervention, we would compare KCOM's charges with a suitable benchmark of BT's charges.<sup>1304</sup>
- 15.9 As part of the appropriate package of pricing remedies, together with the non-pricing remedies, to address the competition problems we have identified in the TISBO, AISBO and retail markets in the Hull area, we are imposing accounting separation obligations in the TISBO and AISBO markets. Our conclusion, together with our reasons, consultation responses and considerations of those responses, in relation to this are set out in Section 16.
- 15.10 We consider the remedies as a whole in the TISBO, AISBO and retail markets in the Hull area would secure or further our statutory duties, and would satisfy the relevant legal tests. In reaching our conclusions we have taken account of our regulatory experience from two previous market reviews, recent developments in these markets, consultation responses, and expected developments over the review period of three years.
- 15.11 In reaching our conclusions on the appropriate remedies, we have taken due account of all applicable guidelines and recommendations issued by the European Commission (EC), and we have taken utmost account of the BEREC Common Position.<sup>1305</sup> We have also had regard to relevant guidance from the European Regulators' Group (ERG), Oftel and ourselves.

## Structure of this Section

- 15.12 This Section is structured as follows:

Sub-section		Description
<b>Our Consultation proposals</b>		
<b>Retail markets</b>	<b>Assessment of competition problems</b>	<ol style="list-style-type: none"> <li>1. Competition problems identified in the Hull area retail market</li> <li>2. Insufficiency of national and Community competition law remedies</li> </ol>
	<b>Approach in the June BCMR Consultation</b>	<ol style="list-style-type: none"> <li>1. Assessment of appropriate remedies</li> <li>2. Remedies proposed</li> </ol>
<b>Whole sale markets</b>	<b>Assessment of competition problems</b>	<ol style="list-style-type: none"> <li>1. Competition problems identified in the Hull area retail market</li> <li>2. Insufficiency of national and Community competition law remedies</li> <li>3. Result of our assessment of the competition problems</li> </ol>
	<b>Approach in the June BCMR Consultation</b>	<ol style="list-style-type: none"> <li>1. Assessment of appropriate remedies</li> <li>2. Remedies proposed</li> </ol>
<b>Other</b>	<b>Other considerations</b>	Consideration of the requirement for a specific obligation on KCOM with respect to interconnection and accommodation services related to AISBO and TISBO markets

<sup>1304</sup> We discuss the form of this benchmark later in this Section.

<sup>1305</sup> BEREC Common Position on best practices in remedies imposed as a consequence of a position of significant market power in the relevant markets for wholesale lease lines, BoR (12) 83.

Consultation responses	
Our consideration of Consultation responses	
Our conclusions on the appropriate remedies	Retail markets
	Wholesale markets

## Assessment of competition problems in the retail markets in the Hull area

15.13 The competition problems and the appropriate remedies are very similar in each identified retail market, and we have therefore considered both the retail low bandwidth TI market and the retail low bandwidth AI market together in our assessment below.

### Competition problems identified in the Hull area retail market

15.14 In light of our market analysis, in particular our assessment in Section 7, we summarise below the competition problems we have identified in these retail markets and which behaviour, in the absence of *ex ante* regulation and despite the existence of upstream wholesale regulation, we have concluded KCOM would have the incentive, and its market power would afford it the ability, to engage in. These include, in particular:

- refusal to supply some retail low bandwidth TI or AI leased lines, for example by restricting the range of products available to end-users;
- charging excessively high prices;
- engaging in unduly discriminatory pricing practices, for example by charging certain groups of end-users more than others, in order to restrict retail competition or for other reasons; and
- engaging in unduly discriminatory practices relating to non-price aspects of retail leased lines for example by offering certain groups of users different terms and conditions than others, different quality of service or different provision or repair timescales. This may be in order to restrict retail competition or for other reasons.

15.15 To assess the appropriate remedies to address these competition problems, we have carried out an analysis of current competition in the retail TI low bandwidth and retail AI low bandwidths markets in the Hull area.

### Insufficiency of national and Community competition law remedies

15.11 For the reasons set out at the end of this Section, including by reference to the package of remedies we are imposing, we have concluded that national and Community competition law remedies would be insufficient to address the competition problems we have identified.

15.12 This has led us to conclude that over the three year review period, competition would be ineffective in these retail markets.

15.13 We now turn to the approach we adopted in the June BCMR Consultation which followed on from our assessment of the competition problems.

## Approach to retail remedies in the June BCMR Consultation

### Assessment of appropriate remedies

- 15.16 We apply regulation at the wholesale level where this is sufficient to address competition in downstream markets. Indeed, under section 91(2) of the Act, we may only impose retail remedies where wholesale regulation is insufficient fully to perform our duties in relation to the market situation in the relevant retail market.
- 15.17 Our analysis led us to the view that the remedies imposed in the relevant upstream markets in the Hull area would not address the identified competition problems over the period of the review. As discussed below, we considered that KCOM's share of these retail markets was likely to remain high over the period of this review despite the availability of regulated upstream wholesale services. In the retail low bandwidth TI market there is little incentive for CPs to invest in order to compete with KCOM given the declining nature of this market (even leaving aside the size of the potential customer base). The retail low bandwidth AI market is growing but, due to the small size of the potential customer base in Hull, in our view it offered insufficient potential for revenue and profit to attract a significant amount of entry over the three year forward looking period even in the presence of regulated access to upstream wholesale inputs.

### Refusal to supply

- 15.18 We noted that competitive entry had not to date occurred to any significant extent and we considered it to be unlikely during the period of this review. As a result, retail customers in the Hull area are largely dependent upon KCOM's continued willingness to supply products appropriate to their needs. Our analysis suggested that KCOM had SMP and, if so, it would have the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers. Consequently, we considered that there was a risk that KCOM might unreasonably refuse to supply certain types of service or customer groups if such a strategy would serve its commercial interests. We therefore considered that, in order to address this concern, KCOM should be subject to an obligation to meet reasonable requests for supply of retail leased lines in these markets.

### Withdrawal of retail low bandwidth TI services

- 15.19 Unlike BT, KCOM had not announced any plans to withdraw retail low bandwidth TI leased lines. However, given that similar considerations apply to the Hull area as to the rest of the UK, we recognised that KCOM may wish to consider how best to manage a withdrawal process in the coming years, and possibly in the course of the forward-looking period.
- 15.20 We acknowledged that, to the extent the situation in the Hull area mirrors that elsewhere in the UK, these services may be approaching the end of their life. However, as with the corresponding BT services, we considered that end users would require sufficient notice of the withdrawal of these services, particularly for critical applications.
- 15.21 As KCOM had not yet formulated plans to withdraw these services, we considered it appropriate to maintain the obligation to supply these services in order to prevent them from being withdrawn prematurely. Once KCOM has formulated plans to withdraw these services and we are satisfied that KCOM has provided sufficient notice to address end-users' concerns, we will consider any steps which may be

appropriate in relation to this proposed obligation. For example, we could alter the obligation to supply to facilitate withdrawal, by removing the obligation for KCOM to supply new services.

### Excessive pricing

- 15.22 In a competitive market, prices could be expected to be cost reflective. However, where a provider has SMP, competition cannot be expected to provide effective constraints and *ex ante* regulation may be desirable to prevent charges from being set at an excessive level.
- 15.23 In these markets, we proposed KCOM had SMP and as previously discussed there is limited likelihood of significant competitive entry and we considered that KCOM would have the ability to charge excessive prices to the detriment of end users.
- 15.24 The prohibition on undue discrimination and requirement to publish a reference offer only do a limited amount to address the incentive to charge excessive prices, and we considered, in light of our current understanding of the scale of the potential issue in Hull and the costs of intervention, whether further measures would be appropriate in the Hull area.
- 15.25 One possible solution to address the risk of excessive pricing would be to impose a charge control. Under an RPI +/-X form of charge control regulation, incentives are normally created for the dominant provider to increase efficiency, thereby imitating the effect of a competitive market.
- 15.26 We considered whether a charge control would be appropriate at this point. Our decision was that it would not be appropriate to impose this remedy at this stage. In reaching this view, we considered in particular that it would not be proportionate to impose such a remedy. While a charge control is in principle likely to be effective in addressing the risk of any excessive pricing by KCOM, we also needed to consider what is the minimum necessary remedy to achieve the aim pursued in light of available evidence. In this regard, to start with, we noted that KCOM had not previously been subject to a charge control in these markets. Also, we noted that we had neither received any complaints from customers and competitors, nor had we received responses to the CFI expressing concerns about retail prices. We also considered that a charge control could at this stage produce adverse effects which were disproportionate to the aim that would be pursued by any such control, in particular taking account of the significant costs to KCOM and us of formulating a charge control.
- 15.27 We also considered the alternative of imposing a cost orientation obligation to address the possible risk of excessive pricing. However, we believed that a cost orientation obligation in the present circumstances would be disproportionate for similar reasons discussed above in relation to a charge control. We considered, in addition, that such an obligation, if used as the primary control on KCOM's charges, would not address the lack of incentive properties that we thought would be required in relation to KCOM for this remedy to be effective.
- 15.28 The alternative we suggested in the June BCMR Consultation was to monitor prices against a suitable benchmark for competitive prices.
- 15.29 As we discuss later in this section, we considered that BT's wholesale prices provided an initial suitable benchmark against which to assess KCOM's wholesale charges. We considered that KCOM's wholesale charges with a reasonable



allowance for KCOM's gross retail margin (to cover retail costs including a reasonable rate of return) would be a suitable candidate for a benchmark against which to assess KCOM's retail prices.

- 15.30 At the retail level, we considered that for now the appropriate and proportionate approach was for KCOM to provide greater transparency about its retail leased lines charges. Accordingly, we proposed that KCOM should be obliged to publish a reference offer including prices, terms and conditions.

### Undue discrimination

- 15.31 As noted above, our analysis suggested that KCOM had SMP and, if so, it would have the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers in these retail markets. We therefore considered that KCOM would have the incentive to discriminate unduly against particular groups of retail customers, for example by charging excessive prices, imposing unfair terms or providing inferior service quality. KCOM also has the incentive to discriminate unduly against particular groups of retail customers in order to restrict competition e.g. by charging higher prices where competition is weak and lower prices where it is stronger, or setting higher prices to OCPs when they purchase KCOM's retail products. In order to address this risk, we proposed that KCOM should be subject to an obligation not to discriminate unduly.
- 15.32 To provide transparency and to support the proposed obligation, we considered that KCOM should also be required to publish a reference offer specifying prices, terms and conditions.<sup>1306</sup> As noted above, we took into account the need for this proposed obligation in assessing the appropriateness of a specific pricing remedy.

### *Pricing*

- 15.33 In conjunction with obligations not to discriminate unduly, we proposed that the dominant provider should publish its prices in a reference offer and not to deviate from them in order to reduce the risk of unduly discriminatory pricing.
- 15.34 In the retail low bandwidth TI market and the retail low bandwidth AI market, there is relatively little competition, particularly for large local institutions whose business connectivity requirements are mostly within the Hull area where it appears that KCOM is the only supplier. Given this, the main impact of requiring KCOM not to deviate from published prices would be to restrict its ability to offer discounts to large local users which might lead to higher prices for them. We therefore proposed that KCOM should have some flexibility to price discriminate so that it may offer discounts where it is efficient to do so.
- 15.35 In order to provide the necessary transparency about retail prices, we proposed that KCOM should be required to publish the maximum charges that it offers for retail services in these markets (i.e. the prices before any bespoke discounts for larger users). These prices would be used as the basis for the pricing benchmarks discussed above in order to ensure that the comparison reflects the prices available to all users.
- 15.36 This does not mean that KCOM would have complete flexibility to price discriminate, as discounts that are offered purely to forestall competition would still be considered

<sup>1306</sup> Absent the remedies, retail prices for business products are not likely to be particularly transparent, making it more difficult to detect undue discrimination or other anticompetitive practices.

unduly discriminatory. In the event of an alleged breach we would judge each alleged breach on a case-by-case basis.

## Remedies proposed in the June BCMR Consultation

15.37 The table below summarises the competition problems we identified and the remedies we proposed to address them.

**Figure 15.2: Summary of competition problems and proposed remedies**

Competition problems	RETAIL remedies: Low bandwidth AI market Low bandwidth TI market
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	<ul style="list-style-type: none"> <li>Requirement to supply retail leased lines</li> </ul>
<ul style="list-style-type: none"> <li>Price discrimination</li> <li>Non-price discrimination, e.g.               <ul style="list-style-type: none"> <li>Different terms</li> <li>Delaying tactics (late provisioning etc.)</li> <li>Strategic product design</li> <li>Exclusive dealing</li> <li>Quality discrimination</li> <li>Different SLAs &amp; SLGs</li> </ul> </li> <li>Predatory pricing;</li> <li>Margin squeeze;</li> <li>Excessive pricing.</li> </ul>	<ul style="list-style-type: none"> <li>Requirement not to discriminate unduly</li> <li>Requirement to publish a reference offer</li> </ul>

## Assessment of competition problems in the wholesale markets in the Hull area

15.38 The competition problems and the appropriate remedies are very similar for the TISBO and AISBO markets in the Hull area, and we therefore consider them together in our assessment below.

### Competition problems identified in the Hull area wholesale market

15.39 In light of our market analysis, in particular our assessment in Section 7, we summarise below the competition problems we have identified in the TISBO and AISBO markets and which behaviour, in the absence of *ex ante* regulation, we have concluded KCOM would have the incentive, and its market power would afford it the ability, to engage in. These include, in particular:

- refusal to supply access at the wholesale level and monopolise the provision of services in the retail TI and AI leased lines;
- engaging in undue price discriminatory practices – e.g. by charging its competing providers more than the amount charged to its downstream divisions;
- engaging in undue non-price discriminatory practices – e.g. by supplying the same products on different terms and conditions, different timescales for provision and fault repair, quality discrimination, different SLAs and SLGs, creating new variants to fulfil the requirements of its downstream division and

taking longer to address, or avoiding addressing the requirements of its competitors;

- charging excessively high prices; and
- refusing to supply, or engage in delaying tactics in the provision of, new network access services requested by its competitors.

15.40 We consider that KCOM would have the incentive to engage in these practices in order to adversely affect both the development of competition in wholesale markets and in the related downstream retail markets, and thus enable it to continue to act independently of competitors, customers and ultimately of consumers in those markets.

15.41 To assess the appropriate remedies to address these competition problems, we carried out an analysis of current competition in the TISBO and AISBO markets in the Hull area, and we have taken into account views expressed by stakeholders in response to our CFI and to the June BCMR Consultation.

### **Insufficiency of national and Community competition law remedies**

15.42 For the reasons set out at the end of this Section, including by reference to the package of remedies we are imposing, we have concluded that national and Community competition law remedies would be insufficient to address the competition problems we identified.

15.43 This has led us to conclude that over the three year review period, competition would be ineffective in the TISBO and AISBO markets in the Hull area.

15.44 We now turn to the approach we adopted in the June BCMR Consultation which followed on from our assessment of the competition problems.

## **Approach to wholesale remedies in the June BCMR Consultation**

### **Assessment of appropriate remedies**

#### Refusal to supply

15.45 Our SMP analysis showed that the lack of competition in the wholesale markets in the Hull area stemmed primarily from entry barriers, particularly the magnitude of the costs of duplicating network infrastructure relative to the revenues available from communications services. These factors meant that KCOM's costs of supply (which are largely sunk) were significantly lower than its competitors' and that, as a consequence, it was unlikely to be economically viable for KCOM's competitors to invest in the provision of network facilities on a sufficient scale to provide an effective constraint on KCOM's SMP in the downstream markets. Further, competitors were unlikely to be willing to make the necessary investments in the TISBO markets as all of them were declining.

15.46 Given these entry barriers, we considered that an obligation for KCOM to meet reasonable requests for access to its network would assist in promoting competition. Such an obligation would overcome the entry barriers by allowing CPs to provide services using network components rented from KCOM. We considered that, in the absence of such a requirement, KCOM would have an incentive not to provide such

access, and would be able to monopolise the provision of services in the downstream markets.

### Excessive pricing

- 15.47 In a competitive market, prices could be expected to be cost reflective. However, where a provider has SMP, competition cannot be expected to provide effective constraints and ex-ante regulation may be desirable to prevent charges from being set at an excessive level. Such intervention could also have as its objective the aim of promoting efficiency and of allowing the development of effective competition in downstream markets.
- 15.48 In these markets, we proposed that KCOM has SMP and as previously discussed there was little likelihood of significant competitive entry and KCOM had the ability to charge excessive prices to the detriment of end users.
- 15.49 The prohibition on undue discrimination and requirement to publish a reference offer only do a limited amount to address the incentive to charge excessive prices, and we considered, in light of our current understanding of the scale of the potential issue in Hull and the costs of intervention, whether further measures would be appropriate in the Hull area.
- 15.50 One possible solution to address the risk of excessive pricing would be to impose a charge control. Under an RPI +/-X form of charge control regulation, incentives are normally created for the dominant provider to increase efficiency, thereby imitating the effect of a competitive market.
- 15.51 We considered whether a charge control would be appropriate at this point and decided that at this stage it was not. In reaching this view, we considered in particular that it would not be proportionate to impose such a remedy. While a charge control is in principle likely to be effective to address the risk of any excessive pricing by KCOM, we also needed to consider what the most proportionate remedy was to achieve the aim pursued in light of available evidence. In this regard, to start with, we noted that KCOM had not previously been subject to a charge control in these markets. We also said that we had neither received any complaints from customers and competitors, nor had we received responses to the CFI expressing concerns in this regard.<sup>1307</sup> We also considered that a charge control could at this stage produce adverse effects which were disproportionate to the aim that would be pursued by any such control, in particular taking account of the significant costs to KCOM and us of formulating a charge control.
- 15.52 We also considered the alternative of imposing a cost orientation obligation to address the possible risk of excessive pricing. However, we believed that a cost orientation obligation in the present circumstances would be disproportionate for similar reasons discussed above in relation to a charge control. We considered, in addition, that such an obligation, if used as the primary control on prices, would not provide the efficiency incentives that we thought would be required in relation to KCOM for this remedy to be effective.
- 15.53 The alternative we proposed in the June BCMR Consultation was to monitor prices against a suitable benchmark for competitive prices.

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<sup>1307</sup> This statement in the June BCMR Consultation was in error. In its response to the CFI, Everything Everywhere reported that prices for lease lines in Hull were prohibitive and it urged Ofcom to place tighter controls on KCOM's prices.

- 15.54 We considered that BT's wholesale prices provided an initial suitable benchmark against which to assess KCOM's wholesale charges.
- 15.55 We therefore considered that for now the more appropriate and proportionate approach was for KCOM to provide greater transparency about its wholesale leased lines charges. Accordingly, we proposed that KCOM should be obliged to publish a reference offer including prices terms and conditions.

### Undue discrimination

- 15.56 As noted above, our analysis suggested that KCOM had SMP and, if so, it would have the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers in these retail markets. We therefore considered that KCOM would have the incentive to discriminate by providing wholesale services on prices, terms and conditions that favour its own retail activities in a way that would have a material adverse effect on competition and in turn consumers. For example, KCOM has the incentive to charge competing providers more than the amount charged to its own downstream units or it might strategically provide the same services but within different delivery timescales. In order to address this risk, we proposed that KCOM should be subject to an obligation not to discriminate unduly.
- 15.57 To provide transparency and to support this obligation we considered it appropriate to require KCOM to publish a reference offer specifying prices, terms and conditions. To ensure that competing providers have sufficient time to prepare for changes to KCOM's wholesale services we also considered that KCOM should be required to give advance notice of changes to prices, terms and conditions and changes to technical information about its wholesale services. As noted above, we took into account the need for this proposed obligation in assessing the appropriateness of a specific pricing remedy.

### *Pricing*

- 15.58 Often, in conjunction with obligations not to discriminate unduly, we require the dominant provider to publish its prices in a reference offer and not to deviate from them in order to reduce the risk of unduly discriminatory pricing.
- 15.59 In these markets, there is relatively little competition, particularly for large local institutions whose business connectivity requirements are mostly within the Hull area where it appeared that KCOM was the only supplier. Given this, the main impact of requiring KCOM not to deviate from published prices would be to restrict its ability to offer discounts to large local users which might lead to higher prices for them. We therefore proposed that KCOM should have some flexibility to price discriminate so that it may offer discounts where it is efficient to do so.
- 15.60 In order to provide the necessary transparency about wholesale prices, we proposed that KCOM should be required to publish the maximum charges that it offers for wholesale services in these markets (i.e. the prices before any bespoke discounts). These prices would be used as the basis of the pricing benchmarks discussed above in order to ensure that the comparison reflects the prices available to smaller users.
- 15.61 This does not mean that KCOM would have complete flexibility to price discriminate, and discounts that are offered purely to forestall competition would still be considered unduly discriminatory. In the event of an alleged breach we would judge each alleged breach on a case by case basis.

## Remedies proposed in the June BCMR Consultation

15.62 The table below summarises the competition problems we identified and the remedies we proposed to address them.

**Figure 15.3: Summary of competition problems and proposed remedies**

Competition problems	WHOLESALE remedies: Low bandwidth AISBO market TISBO markets
<ul style="list-style-type: none"> <li>Refusal to supply</li> </ul>	<ul style="list-style-type: none"> <li>Requirement to provide network access on reasonable request</li> </ul>
<ul style="list-style-type: none"> <li>Price discrimination</li> <li>Non-price discrimination, e.g.               <ul style="list-style-type: none"> <li>Different terms</li> <li>Delaying tactics (late provisioning etc.)</li> <li>Strategic product design</li> <li>Exclusive dealing</li> <li>Quality discrimination</li> <li>Different SLAs &amp; SLGs</li> </ul> </li> <li>Predatory pricing;</li> <li>Margin squeeze;</li> <li>Excessive pricing.</li> </ul>	<ul style="list-style-type: none"> <li>Requirement not to discriminate unduly</li> <li>Requirement to publish a reference offer</li> <li>Requirement to notify charges, terms and conditions</li> <li>Requirement to notify technical information</li> </ul>

## Other considerations

### Interconnection and accommodation services for the TISBO and AISBO markets

15.63 In the June BCMR Consultation we noted that large scale wholesale entry was not expected in these markets. Nor had there been any such demand since the commencement of wholesale obligations in the wholesale TISBO market since the 2003/04 Review. Where competition has materialised, we understood that it had done so by relying on KCOM's retail products. Thus the evidence suggested that there was very limited, if any, demand for investments in interconnection facilities and services in the Hull area.

15.64 Interconnection and accommodation services fall within the scope of the network access obligations that we proposed for KCOM in these markets.<sup>1308</sup> KCOM would be required to meet reasonable requests for interconnection and accommodation services in relation to wholesale services in these markets. We considered this was sufficient to address the competition problems identified. Given the lack of demand for interconnection and accommodation services, we did not propose to oblige KCOM to provide specific interconnection or accommodation products at this time.

<sup>1308</sup> Network access is defined in sections 151(3) and (4) of the Act and includes interconnection services and/or any services or facilities that would enable another CP to provide electronic communications services or electronic communication networks. We consider that a requirement to provide network access would, therefore, include any ancillary services as may be reasonably necessary for a Third Party to use the services.

- 15.65 Specific obligations were inadvertently included in the draft SMP conditions proposed in the June BCMR Consultation and have been removed from the SMP conditions set out in Annex 7 to this Statement.

## Consultation responses about retail and wholesale remedies

- 15.66 We received three responses to the June BCMR Consultation on the regulation to be applied in Hull, and only one extensive response, which was from KCOM. One respondent was concerned that the proposal was too stringent, and the other that it provided insufficient protection.
- 15.67 Zen Internet requested that KCOM's retail prices be closely monitored to ensure the ability to apply bespoke pricing was being fairly applied, and expressed concern that, in the absence of a charge control, KCOM's wholesale prices may be uncompetitive.
- 15.68 Everything Everywhere noted that mobile backhaul via microwave solutions was not a true substitute to mobile backhaul via leased lines, and would become decreasingly attractive with the higher bandwidths required for LTE deployment. It therefore considered that we should impose a remedy requiring the supply of suitable mobile backhaul products.
- 15.69 In the June BCMR Consultation we omitted to report that in its response to our CFI, Everything Everywhere raised concerns about leased lines pricing in Hull. It considered that KCOM's leased lines prices were prohibitive and urged Ofcom to take steps to constrain KCOM's charges.
- 15.70 KCOM made a detailed submission the main points of which were:
- Prospects for competition – KCOM considered that our assessment of the prospects for competition in Hull was overly pessimistic and noted that MS3 Communications is deploying a fibre access network in Hull and plans to offer leased line services.
  - Regulation of retail markets – KCOM considered that retail regulation is unnecessary and unwarranted as there was no suggestion of refusal to supply by KCOM or any allegations of excessive pricing or of undue discrimination. KCOM also argued that our proposal to re-regulate the retail TI market that was previously deregulated was unprecedented. Preparation of a retail reference offer would involve a great deal of work as would assessing existing customer contracts for compliance with the new obligations.
  - Cost recovery – KCOM noted that some retail TI low bandwidth services are reaching the end of their life. It was concerned that retail regulation, particularly price regulation would prevent it recovering the costs associated with these services.
  - Price benchmarking – KCOM considered that voluntary commitments on pricing (by KCOM) would be a more proportionate approach to benchmarking. It considered benchmarking of its prices against BT's to be inappropriate and unworkable. In particular, KCOM considered that:
    - Significant differences between KCOM's pricing structure and BT's would make a meaningful comparison difficult.

- Technical differences between KCOM's network and BT's (including architecture, scale and utilisation) would make meaningful comparison difficult.
- KCOM considered BT's DSAC to be a more appropriate comparator. In its view it would not be correct to conclude that KCOM's charges are excessive based on a comparison with BT's wholesale prices given that Ofcom has used DSAC as a benchmark for excessive pricing by BT.
- BT's charge controls and hence its prices may take market specific factors into account which would not be relevant to KCOM.
- Implementation timescales for retail regulation - KCOM considered one month to be insufficient time to implement the retail regulation as proposed, suggesting Ofcom allow at least 6 months.
- Active vs. passive remedies - KCOM agreed that passive remedies were not required to promote downstream competition.
- Regulation of wholesale services - KCOM welcomed the flexibility to offer discounts on published prices.

15.71 KCOM also submitted to Ofcom, on a confidential basis, a report by economic consultancy NERA concerning the appropriateness of benchmarking KCOM's prices against those of BT.

## Ofcom's considerations

### Prospects for competition

15.72 We have considered KCOM's comments about the prospects for competition in our assessment in Section 7.

### Mobile backhaul obligation

15.73 We do not consider that a specific mobile backhaul remedy is necessary as EE suggests because generic wholesale leased lines services are used for mobile backhaul. We also note that KCOM is under an obligation to meet reasonable requests for network access, thus mobile operators could request specific features such as synchronisation if they are required.

### Retail regulation

15.74 Whilst we acknowledge that retail leased lines markets is not included in the EC's Recommendation<sup>1309</sup>, we remain of the view that, despite the existence of upstream wholesale regulation, retail regulation is appropriate in light of our market analysis, particularly our assessment in Section 7,<sup>1310</sup> and also in light of consultation responses. As set out in Section 7, we are also satisfied that the 'three criteria test'

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<sup>1309</sup> Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services.

<sup>1310</sup> In this respect, we also note the results of our SMP assessments in the relevant wholesale markets (i.e. the TISBO and AISBO markets) in the Hull area which have revealed KCOM's market share is 100% or close to 100% in every market (see, again, Section 7).



set out in the EC's Recommendation is satisfied in relation to both retail markets in the Hull area. We also consider our assessment of appropriate remedies for the two retail markets in the June BCMR Consultation remains valid, in particular:

- KCOM's market share in the retail low bandwidth TI market in the Hull area is very large<sup>1311</sup> and, in the absence of exceptional circumstances, evidence in and of itself of the existence of a dominant position;<sup>1312</sup>
- there is little incentive for CPs to invest in the retail TI low bandwidth market over the course of the three year period in order to compete with KCOM, given the declining nature of this market (even leaving aside the size of the potential customer base);
- KCOM's market share in the retail low bandwidth AI market in the Hull area is also very large<sup>1313</sup> and, again, in the absence of exceptional circumstances, evidence in and of itself of the existence of a dominant position;
- although we recognise the retail low bandwidth AI market is growing, due to the small size of the potential customer base in the Hull area, we have concluded it offers insufficient potential revenue and profit to attract a sufficient amount of entry over the three year review period.

## Price benchmarking and voluntary commitments

- 15.75 We remain of the view that monitoring KCOM's charges against a suitable benchmark is a proportionate response to the risk of excessive pricing that we have identified in these markets.
- 15.76 We acknowledge that KCOM and BT have adopted differing pricing structures for their wholesale leased lines services and may also have differing approaches to recovering their costs (for example the balance between connection and rental charges). However, we consider that notwithstanding these differences a meaningful price comparison can be produced provided the comparison is constructed so as to assess the overall level of charges for the respective leased line services rather than to mechanistically compare individual charges.
- 15.77 We proposed BT's wholesale charges as a suitable benchmark because BT's wholesale charges are subject to RPI-X charge controls. The controls are designed amongst other things to drive BT's revenues into line with its forecast costs over the period of the control and to incentivise BT to incur its cost efficiently, with a view to producing an outcome similar to that we might expect from an efficient operator in a hypothetically competitive market. We would expect KCOM's charges in Hull to reflect similar outcomes and therefore consider BT's charges to be an appropriate benchmark. Whilst we use BT's DSAC in the current charge controls as a test of whether an individual charge may be excessive, DSAC figures are generally well above the FAC figures with which the charge controls aim to align average prices.<sup>1314</sup>

<sup>1311</sup> As set out in Section 7 of this Statement, our revised estimate of KCOM's market share is 87%.

<sup>1312</sup> See, in this respect, paragraph 75 of the SMP Guidelines.

<sup>1313</sup> As set out in Section 7 of this Statement, our revised estimate of KCOM's market share is that it is more than 75%.

<sup>1314</sup> Cost forecasts are generally prepared on an FAC basis which allows recovery of an appropriate, reasonable amount of common costs across the basket as a whole. The DSAC of a service generally includes a much larger share of common costs than its FAC. Hence, where some charges are at or close to DSAC, other charges are

Consequently we do not consider that BT's DSAC figures would be an appropriate basis for the benchmarks.

- 15.78 As discussed above, since the June BCMR Consultation we have accepted voluntary commitments from KCOM in relation to its wholesale prices. We consider that these commitments together with the price publication obligations we are imposing in the wholesale and retail markets provide stakeholders with valuable reassurance about leased line charges in Hull over the next three years. Whilst we cannot fetter our discretion in this matter we consider that the commitments reduce the likelihood that we will need to intervene in respect of KCOM's charges.

### **Cost recovery**

- 15.79 Benchmarking is not a formal price control mechanism and would not prevent KCOM setting its charges at a level that would recover its efficiently incurred costs. This is because the benchmark prices would either be determined freely in competitive markets, or would be subject to a charge control which is set to allow recovery of efficiently incurred costs.
- 15.80 As discussed above, we acknowledge that some of KCOM's low bandwidth leased lines services may be approaching the end of their life. As comparable services offered by BT are also approaching the end of their life, this should not undermine the validity of benchmarking as a means of monitoring KCOM's charges for such services.

### **Timescales for implementation of retail regulation**

- 15.81 In view of KCOM's request we have allowed six months for KCOM to prepare its retail reference offers. We have modified SMP condition 8 accordingly.

## **Ofcom's conclusions on the appropriate remedies**

- 15.82 Having considered all consultation responses received, and having reviewed all evidence available to us, we have concluded that the most appropriate remedies to address the competition problems identified are those proposed in the June and November<sup>1315</sup> BCMR Consultations. As noted above we have also accepted a voluntary commitment from KCOM in relation to its wholesale charges. This commitment is reproduced in Annex 11.
- 15.83 Below we set out the rationale for each of the remedies that we are applying to KCOM in the Hull area, together with how we consider these remedies to satisfy the relevant legal tests.

### **Retail market remedies**

- 15.84 Under section 91 of the Act where wholesale regulation in the upstream market would not suffice to achieve our duties and objectives with regard to the relevant retail market, the sorts of SMP conditions authorised or required by sections 87 to 89 of the Act may be set in that retail market.

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likely to have to be well below DSAC in order to comply with the control based on FAC. Note also that when DSAC is used as a test of excessive charging, this test is not applied mechanistically.

<sup>1315</sup> See Section 16 for our conclusions, and considerations of responses received, in relation to the imposition of accounting separation obligations.

15.85 In light of our market analysis, particularly our assessment in Section 7 and our assessment set out in this Section, we do not consider that wholesale regulation would address the competition problems we have identified at the retail level.

## Requirement to supply retail leased lines

### Aim of regulation

15.86 As discussed above, we consider there is a risk that KCOM might unreasonably refuse to supply retail leased lines services. To address this risk we consider it appropriate to impose an obligation for KCOM to supply retail leased lines on reasonable request and to supply them on fair and reasonable terms, conditions and charges as we may from time to time direct.

### Legal tests

15.87 We are satisfied that the SMP condition (as set out in Annex 7) meets the various tests set out in the Act.

15.88 First, section 87(3) of the Act authorises the setting of an SMP services condition requiring the dominant provider to provide such network access as Ofcom may, from time to time, direct. These conditions may, pursuant to Section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

15.89 When considering the imposition of such conditions in a particular case we take into account the six factors set out in section 87(4), including *inter alia*:

- the technical and economic viability of installing and using other facilities, including the viability of other network access products whether provided by the dominant provider<sup>1316</sup> or another person,<sup>1317</sup> that would make the proposed network access unnecessary;
- the feasibility of the proposed network access; and
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed (taking account of any public investment made).

15.90 In imposing the requirement to supply retail leased lines (on reasonable request and to supply them on fair and reasonable terms, conditions and charges as we may from time to time direct), we have taken all of the six factors into account.

15.91 Secondly, we have had regard for to our duties under section 3, and all the Community requirements set out in section 4, of the Act. We note, in particular, that we consider the requirement to supply retail leased lines furthers the interests of citizens and consumers in relation to communications matters by ensuring the availability of retail leased lines services in these markets.

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<sup>1316</sup> i.e. in this instance KCOM.

<sup>1317</sup> i.e. other CPs.

15.92 Section 47 of the Act requires conditions to be objectively justifiable, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that, absent this obligation, there is a risk KCOM might not supply retail leased lines to some or all end-users;
- not unduly discriminatory, as only KCOM and no other operator has been found to hold a position of SMP in these markets and would therefore have the ability and incentive to exploit customers by not supplying end users;
- proportionate since it is the least onerous obligation which addresses this particular risk of harm to end-users and citizens and will otherwise allow KCOM to refuse to supply these services. In particular, wholesale remedies alone would be insufficient because there is little prospect that alternative suppliers would step in using wholesale inputs were such services withdrawn by KCOM; and
- transparent in that the SMP condition is clear in its intention and because the purpose and meaning of the requirement and the reasons for imposing it are clearly explained in this Statement.

15.93 Regarding the obligation to supply on fair and reasonable terms, conditions and charges, we consider this is appropriate in order to address sufficiently the competition problems we have identified in these retail markets and ensure end-users derive maximum benefit in terms of choice, price and quality. In this respect, we have also taken into account the extent of investment of KCOM in the matters to which the scope of the fair and reasonable obligation would relate.<sup>1318</sup>

## **Requirement not to discriminate unduly**

### Aim of regulation

15.94 As discussed above we consider that KCOM has the incentive to distort competition by discriminating against particular groups of retail customers. To address this risk, we consider that, in the retail low bandwidth TI market and the retail low bandwidth AI market, KCOM should be subject to a requirement not to discriminate unduly against particular persons or against a particular description of persons in relation to matters connected with the supply of retail leased lines. We confirm that this obligation applies to both non-pricing *and* pricing practices.<sup>1319</sup>

15.95 As discussed above, we permit KCOM to offer bespoke prices and require it to publish only its maximum charges in its reference offer. This does not mean that KCOM has complete flexibility to price discriminate – the obligation requires that any pricing and non-pricing practices must not be unduly discriminatory. In the event of an alleged breach we will judge each alleged breach on a case-by-case basis.

### Legal tests

15.96 We are satisfied that the SMP condition (as set out in Annex 7) meets the various tests set out in the Act.

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<sup>1318</sup> In this respect, we consider the extent of investment – if required at all – would not be significant given the strictly behavioural nature of this specific remedy – i.e. it serves to impose an *ex ante* qualification on the manner in which KCOM must comply with the requirement to supply leased lines on reasonable request.

<sup>1319</sup> See Section 9 for further discussion.

- 15.97 First, we consider section 87(6)(a) of the Act authorises the setting of an SMP condition requiring the dominant provider not to unduly discriminate against particular persons, or against a particular description of persons, in relation to matters connected with the provision of network access.
- 15.98 Secondly, we have had regard for to our duties under section 3, and all the Community requirements set out in section 4, of the Act. We note in particular that the SMP condition is aimed at preventing the distortion of competition and harm to particular groups of end-users in the form of high prices, unfair terms or inadequate service that might occur if KCOM had the freedom to unduly discriminate in the provision of services in these markets.
- 15.99 Section 47 of the Act requires conditions to be objectively justifiable, proportionate and transparent. The SMP condition is:
- objectively justifiable, in that KCOM would otherwise be able to distort competition by discriminating against particular groups of retail customers – e.g. through charging high prices where competition is weak and lower prices where it is stronger and/or engaging in unduly discriminatory non-pricing practices (such as imposing unfair terms or offering inadequate quality of service to particular groups of customers). The requirement therefore promotes competition and furthers the interests of consumers;
  - not unduly discriminatory, as only KCOM and no other operator has been found to hold a position of SMP in these markets and would therefore have the ability and incentive to exploit customers by engaging in unduly discriminatory pricing and non-pricing practices;
  - proportionate because it is the least onerous obligation which addresses this particular risk of harm to competition and also because we have allowed KCOM the flexibility to price discriminate where it is efficient to do so. As noted in relation to the obligation to supply, we do not consider wholesale remedies would be sufficient because there little prospect that alternative suppliers would step in using wholesale inputs were KCOM to charge excessive prices, impose unfair terms or offer inadequate quality of service; and
  - transparent in that the SMP condition is clear in its intention and because the purpose and meaning of the obligation and the reasons for imposing it are clearly explained in this Statement.

### **Requirement to publish a reference offer (including maximum charges, terms and conditions)**

#### Aim of regulation

- 15.100 We consider it appropriate that KCOM should be subject to an obligation to publish a reference offer specifying terms and conditions and maximum retail prices for its services in these markets. This obligation will provide transparency about prices, terms and conditions in support of the non-discrimination obligation and to enable KCOM's retail prices to be monitored. In the absence of such an obligation, KCOM would have an incentive not to publish this information with the result that discriminatory conduct or excessive pricing would be less visible.
- 15.101 We therefore require KCOM to publish a reference offer including at least the following:

- technical characteristics of the services including the physical and electrical characteristics as well as the detailed technical and performance specifications which apply at the network termination point;
- maximum charges, including the initial connection charges, the periodic rental charges and other charges;
- information concerning the ordering procedure;
- contractual details; and
- any refund procedure.

15.102 This obligation prohibits KCOM from departing from the terms and conditions in the reference offer and requires it to comply with any directions Ofcom may make from time to time under the condition.

15.103 As discussed above, KCOM is required to publish maximum charges that must not be exceeded but is permitted to offer discounts that are not published in the reference offer.

### Legal tests

15.104 We are satisfied that the SMP condition (as set out in Annex 7) meets the various tests set out in the Act.

15.105 First, section 87(6) of the Act authorises the setting of SMP services conditions that require the dominant provider to publish information about network access to ensure transparency and to publish terms and conditions.

15.106 Secondly we have had regard for to our duties under section 3, and all the Community requirements set out in section 4, of the Act. We note that the SMP condition is aimed in particular at preventing KCOM from varying terms and conditions in a way which would harm citizens and consumers and at providing transparency about the highest prices that KCOM charges to enable us to monitor retail prices.

15.107 Section 47 of the Act requires conditions to be objectively justifiable, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that it provides certainty to operators and prevents KCOM from withholding information from customers and competitors, or misusing information in a way which could harm competition, which would be a real risk in the absence of the conditions. In addition the SMP condition facilitates monitoring of KCOM's retail prices and monitoring compliance with the other obligations, notably the obligation not to unduly discriminate;
- not unduly discriminatory, as only KCOM and no other operator has been found to hold a position of SMP in these markets and would therefore have the ability and incentive to exploit customers by withholding or misusing information;
- proportionate, since it is targeted at addressing the SMP that we have found KCOM holds in these markets. This obligation supports the other SMP conditions imposed to address KCOM's SMP in this market. It provides transparency on retail pricing as a safeguard against excessive pricing and it ensures that CPs

have access to information they need to compete fairly with KCOM. As noted in relation to the obligation to supply, we do not consider wholesale remedies would be sufficient because there is little prospect that alternative suppliers would step in using wholesale inputs were KCOM to withhold or misuse information. Additionally, a wholesale remedy would not be capable of supporting the other obligations at the retail level referred to above; and

- transparent in that the SMP condition is clear in its intention and because the purpose and meaning of the obligation and the reasons for imposing it are clearly explained in this Statement.

## Wholesale market remedies

### Requirement to provide network access

#### Aim of regulation

15.108 As discussed above, in order to promote competition and to address the risk of refusal to supply, we consider it is appropriate to impose a requirement for KCOM to meet reasonable requests for network access and to supply such network access on fair and reasonable terms and conditions including charges.<sup>1320</sup>

15.109 The way in which Ofcom might assess reasonable demands for access is set out in the Access Guidelines. We consider that it is appropriate in cases where a CP has SMP to impose an access obligation on that provider requiring it to meet all reasonable requests for network access within the relevant wholesale market, irrespective of the technology required, on fair and reasonable terms, conditions and charges.

#### Legal tests

15.110 We are satisfied that the SMP condition (as set out in Annex 7) meets the various tests set out in the Act.

15.111 First, section 87(3) of the Act authorises the setting of an SMP services condition requiring the dominant provider to provide such network access as Ofcom may, from time to time, direct. These conditions may, pursuant to Section 87(5), include provision for securing fairness and reasonableness in the way in which requests for network access are made and responded to and for securing that the obligations in the conditions are complied with within periods and at times required by or under the conditions.

15.112 When considering the imposition of such conditions in a particular case we take into account the six factors set out in section 87(4), including *inter alia*:

- the technical and economic viability of installing and using other facilities, including the viability of other network access products whether provided by the dominant provider<sup>1321</sup> or another person,<sup>1322</sup> that would make the proposed network access unnecessary;

<sup>1320</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of assurance of access.

<sup>1321</sup> i.e. in this instance KCOM.

- the feasibility of the proposed network access;
- the investment made by the person initially providing or making available the network or other facility in respect of which an entitlement to network access is proposed (taking account of any public investment made); and
- the need to secure effective competition, including where it appears to us to be appropriate, economically efficient infrastructure based competition, in the long term.

15.113 In proposing the general requirement for the provision of network access, we have taken all of the six factors into account. In particular, having considered the viability of KCOM's competitors making network investments we consider that the network access obligation is necessary for securing effective competition in the long term. The requirement for KCOM only to meet reasonable network access requests also ensures that due account is taken of the technical and economic viability and of the investment made by KCOM initially in providing the network.

15.114 Secondly, we have considered our duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits in terms of choice, price and quality for consumers by facilitating the development of competition in downstream markets.

15.115 Thirdly, section 47 of the Act requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that it facilitates and encourages access to KCOM's network and therefore promotes competition to the benefit of consumers;
- not unduly discriminatory, as it is imposed only on KCOM and no other operator has been found to hold a position of SMP in these markets;
- proportionate, since it is targeted at addressing the market power that we have found KCOM holds in these markets and does not require it to provide access if it is not technically feasible or reasonable; and
- transparent in that the SMP conditions is clear in its intention to ensure that KCOM provides access to its networks in order to facilitate effective competition.

15.116 Regarding the obligation to supply on fair and reasonable terms, conditions and charges, we consider this is appropriate in order to promote efficiency and sustainable competition in the TISBO and AISBO markets, and to provide the greatest possible benefits in terms of choice, price and quality to end-users by enabling OCPs to purchase network access at levels that should be expected in a competitive wholesale market. In this respect, we have also taken into account the extent of investment of KCOM in the matters to which the broadened scope of the fair and reasonable obligation would relate.<sup>1323</sup>

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<sup>1322</sup> i.e. other CPs.

<sup>1323</sup> In this respect, we consider the extent of investment – if required at all – would not be significant given the strictly behavioural nature of this specific remedy – i.e. it serves to impose an *ex ante* qualification on the manner in which KCOM must comply with the main obligation which is to meet reasonable requests for network access.



15.117 For all the reasons set out above, we consider that the SMP condition is appropriate to address the competition concerns identified, in line with section 87(1) of the Act.

## **Requirement not to discriminate unduly**

### Aim of regulation

15.118 As discussed above we consider it appropriate that KCOM should be subject to a requirement not to discriminate unduly in the provision of wholesale services in these markets. In the absence of such a requirement, KCOM would have an incentive to provide the requested network access on terms and conditions that discriminate in favour of its own downstream divisions.<sup>1324</sup>

15.119 As discussed above, we permit KCOM to offer discounts and require it to publish only its maximum charges in its reference offer. This does not mean that KCOM will have complete flexibility to price discriminate, and discounts that are offered purely to forestall competition will still be considered unduly discriminatory. In the event of an alleged breach we will judge each alleged breach on a case by case basis.

### Legal tests

15.120 We are satisfied that the SMP condition (as set out in Annex 7) meets the various tests set out in the Act.

15.121 First, we have considered our duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits in terms of choice, price and quality for consumers by seeking to prevent KCOM from leveraging its SMP into downstream markets.

15.122 Second, section 47 of the Act requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that it provides safeguards to ensure that competitors, and hence consumers, are not disadvantaged by KCOM discriminating unduly in favour of its own downstream activities or between different competing providers;
- not unduly discriminatory, as the SMP condition is imposed only on KCOM and no other operator has been found to hold a position of SMP in these markets;
- proportionate since it seeks only to prevent undue discrimination whilst allowing KCOM flexibility to offer discounts where it is efficient to do so; and
- transparent in that the SMP condition is clear in what it is intended to achieve.

## **Transparency and notification obligations**

15.123 We have concluded that KCOM should be subject to a set of obligations, aimed at promoting transparency and ensuring non-discrimination,<sup>1325</sup> which we set out below.

<sup>1324</sup> See, in this respect, the competition issues which the BEREC Common Position identifies as arising frequently in relation to seeking to achieve the objective of a level playing field.

<sup>1325</sup> In this respect, we consider these obligations aimed at promoting transparency and ensuring non-discrimination are consistent with the relevant best practices identified in the BEREC Common Position.

## **Requirement to publish a reference offer including maximum charges, terms and conditions**

### Aim of regulation

15.124 As discussed above, we consider that to provide transparency and to support the non-discrimination obligation KCOM should be required to publish a reference offer. This will:

- assist transparency for the monitoring of potential anti-competitive behaviour;
- facilitate benchmarking of KCOMs prices against BT's as discussed above;
- give visibility to the terms and conditions on which other providers will purchase wholesale services;
- help ensure stability in markets without which we consider incentives to invest might be undermined and market entry less likely; and
- facilitate speedier negotiations, avoiding possible disputes and giving confidence to those purchasing wholesale services that they are being provided on non-discriminatory terms. Without this, market entry might be deterred to the detriment of the long-term development of competition and hence consumers.

15.125 This SMP condition requires the publication of a reference offer and specifies the information to be included in that reference offer (set out below) and how the reference offer should be published. The reference offer must set out (at a minimum) such matters as:

- a clear description of the services on offer including technical characteristics and operational process for service establishment, ordering and repair;
- the locations of points of network access and the technical standards for network access;
- conditions for access to ancillary and supplementary services associated with the network access including operational support systems and databases etc;
- contractual terms and conditions, including dispute resolution and contract negotiation/renegotiation arrangements;
- maximum charges, terms and payment procedures;
- service level agreements and service level guarantees; and
- to the extent that KCOM uses the service in a different manner to CPs or uses a similar service, KCOM is required to publish a reference offer in relation to those services.

15.126 The obligation prohibits KCOM from departing from the terms and conditions in the reference offer and requires it to comply with any directions Ofcom may make from time to time under the condition.

15.127 As discussed above KCOM is required to publish maximum charges that must not be exceeded but is permitted to offer discounts that are not published in the reference offer.

### Legal tests

15.128 We are satisfied that the SMP condition (as set out in Annex 7) meets the various tests set out in the Act.

15.129 First, we have considered our duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the SMP condition is aimed at promoting competition firstly by ensuring that providers have the necessary information to allow them to make informed decisions about purchasing wholesale services in order to compete in downstream markets and by providing transparency in order to assist in the monitoring of anticompetitive behaviour.

15.130 Second, section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it requires that terms and conditions are published in order to encourage competition, provide stability in markets and monitor anti-competitive behaviour;
- not unduly discriminatory, as it is imposed only on KCOM and no other operator has been found to hold a position of SMP in these markets;
- proportionate, as only information that is considered necessary to allow providers to make informed decisions about competing in downstream markets is required to be provided; and
- transparent in that it is clear in its intention to ensure that KCOM publishes details of its service offerings.

## **Requirement to notify prices, terms and conditions**

### Aim of regulation

15.131 We consider that KCOM should be required to notify changes to its charges, terms and conditions.

15.132 Notification of changes to services at the wholesale level can assist competition by giving advanced warning to CPs purchasing wholesale services that also compete with the dominant provider in downstream markets. It also supports the non-discrimination obligation by ensuring that KCOM does not notify changes in a discriminatory manner. Notification of changes to charges therefore helps to ensure stability in markets and without which we consider incentives to invest might be undermined and market entry made less likely.

15.133 Our considerations about the appropriate notification periods are the same for these markets as for the wholesale TISBO and AISBO markets in the rest of the UK where BT has SMP (as discussed in Sections 10 and 11). We therefore impose the following notice periods:

- 28 day notice for prices, terms and conditions relating to new service introductions;

- 28 days notice for price reductions and associated conditions (for example conditions applied to special offers); and
- 90 days notice for all other changes to prices terms and conditions.

### Legal tests

15.134 We are satisfied that the SMP condition (as set out in Annex 7) meets the relevant tests set out in the Act.

15.135 First, we have considered our duties under section 3, and all the Community requirements set out in section 4, of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits for consumers by ensuring that CPs have the necessary information about changes to terms, conditions and charges sufficiently in advance to allow them to make informed decisions about competing in downstream markets.

15.136 Secondly, section 47 of the Act requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable, in that there are clear benefits from the notification of changes in terms of ensuring that providers are able to make informed decisions within an appropriate time frame about competing in downstream markets;
- not unduly discriminatory, as it is imposed only on BT and no other operator has been found to hold a position of SMP in these markets;
- proportionate, as 90 days is considered the minimum period necessary to allow competing providers to plan for changes to existing network access and 28 days would be sufficient for new network access and price reductions; and
- transparent in that the SMP condition is clear in its intention to ensure that KCOM provides notification of changes to their charges and terms and conditions.

## **Requirement to notify technical information**

### Aim of regulation

15.137 We consider that changes to technical information be published in advance, so that competing providers have sufficient time to prepare for them.

15.138 Under the requirement to publish a reference offer, KCOM is required to publish technical information. However, advance notification of changes to technical information is important to ensure that providers who compete in downstream markets are able to make effective use of the wholesale services provided by KCOM.

15.139 For example, a competing provider may have to introduce new equipment or modify existing equipment to support a new or changed technical interface. Similarly, a competing provider may need to make changes to their network in order to support changes to wholesale services offered by KCOM.

15.140 Technical information includes new or amended technical characteristics, including information on network configuration, locations of the points of network access and technical standards (including any usage restrictions and other security issues).

15.141 The condition requires the notification of new technical information within a reasonable time period but not less than 90 days in advance of providing new wholesale services or amending existing technical terms and conditions. We consider that 90 days is the minimum time that competing providers need to modify their network to support a new or changed technical interface or support a new point of access or network configuration.

15.142 Longer periods of notification may also be appropriate in certain circumstances. For example, if KCOM were to make a major change to their technical terms and conditions, a period of more than the 90 day minimum notification period may be necessary.

### Legal tests

15.143 We are satisfied that the SMP condition (as set out in Annex 7) meets the various tests set out in the Act.

15.144 First, we have considered our duties under section 3 and all the Community requirements set out in section 4 of the Act. In particular, the SMP condition is aimed at promoting competition and securing efficient and sustainable competition for the maximum benefits in terms of choice, price and quality for consumers by ensuring that providers have sufficient notification of technical changes to wholesale services to enable them to compete in downstream markets.

15.145 Second, section 47 requires conditions to be objectively justifiable, non-discriminatory, proportionate and transparent. The SMP condition is:

- objectively justifiable in that it enables providers to make full and effective use of network access to be able to compete in downstream markets;
- not unduly discriminatory, as the SMP condition is imposed only on KCOM and no other operator has been found to hold a position of SMP in these markets;
- proportionate in that 90 days is the minimum period that Ofcom considers is necessary to allow competing providers to modify their networks; and
- transparent in that it is clear in its intention that KCOM notify changes to technical information in advance.

## **Insufficiency of national and Community competition law remedies**

### **In relation to the wholesale markets in the Hull area**

15.146 At the beginning of this Section, we set out our conclusion that national and Community competition law remedies would be insufficient to address the competition problems we have identified in the TISBO and AISBO markets in the Hull area.<sup>1326</sup>

15.147 We set out below, by reference to the remedies we have decided to impose, our reasons supporting this conclusion, and which reasons lead us to conclude that competition would be ineffective in these wholesale markets in the Hull area over the course of the three year review period.

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<sup>1326</sup> The relevant wholesale markets are those listed in paragraph 15.1 above.

15.148 First, we do not consider appropriate remedies could be imposed under competition law. In this respect, we refer to the nature and scope of the remedies we are imposing to address the competition problems:

- Condition 1 provides, amongst other things, that the provision of general network access “shall also include such associated facilities as are reasonably necessary for the provision of network access and such other entitlements as Ofcom may from time to time direct.”<sup>1327</sup> This direction-making power is important since it allows us to direct KCOM as to the application of the general network access obligation – whether that should be in one or all of the TISBO and AISBO markets – and so ensure its application can be specifically tailored to address the competition problem(s) we have identified over the course of the three year review period;
- we are imposing accounting separation obligations; and
- the ex ante remedies we are imposing provide, amongst other things, that new products and services are captured by the relevant SMP obligations,<sup>1328</sup> thus ensuring their continued effectiveness to address the competition problems over the course of the three year review period.

15.149 Secondly, as evidenced by the nature and scope of the package of remedies we are imposing, we consider the requirements of intervening to address the competition problems in these wholesale markets in the Hull area are extensive.

15.150 Thirdly, based on our market analysis, consultation responses and expected developments over the three year review period, we remain of the view that providing continued certainty in these wholesale markets in the Hull area is of paramount concern, both to KCOM and to prospective competitor, and to end-users, and we consider this is best achieved through ex ante regulation which, in comparison to competition law remedies, would:

- provide greater certainty over the course of the three year period on the types of behaviour that are/are not allowed;
- allow for timely intervention – proactively by us and/or by parties bringing regulatory disputes to us for swift resolution<sup>1329</sup> – and consequently timely enforcement using the considerable enforcement powers accorded us under the Act to secure compliance,<sup>1330</sup> through a process with which the market in general is familiar and which is also set out in the Act.

## **In relation to the retail markets in the Hull area**

15.151 At the beginning of this Section we set out our conclusion that national and Community competition law remedies would be insufficient to address the competition problems we have identified in the retail markets in the Hull area.<sup>1331</sup>

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<sup>1327</sup> Condition 1.3.

<sup>1328</sup> See for example, Condition 6 which provides that the supply of retail leased lines – i.e. both existing and new – is on fair and reasonable terms, conditions and charges.

<sup>1329</sup> See sections 185 to 191 of the Act, in particular section 185(1A).

<sup>1330</sup> See sections 94 to 104 of the Act.

<sup>1331</sup> The relevant retail markets are those listed in paragraph 15.1 above.

15.152 We set out below, by reference to the package of remedies we have decided to impose, our reasons supporting this conclusion, and which reasons lead us to conclude that competition would be ineffective in the retail markets in the Hull area over the course of the three year review period.

15.153 First, we do not consider appropriate remedies could be imposed under competition law. In this respect, we refer to the nature and scope of the remedies we are imposing which have been designed to be able to effectively address the competition problems over the three year review period. For example, the direction-making power in Condition 6.2 allows us “from time to time” to direct KCOM as to the terms, conditions and charges on which it is to supply retail leased lines (in accordance with the obligation imposed under Condition 6.1). In addition, the remedies we are imposing provide, amongst other things, that new products and services are captured by the relevant SMP obligations,<sup>1332</sup> thus ensuring their continued effectiveness to address the competition problems over the course of the three year review period.

15.154 Secondly, we consider the requirements of intervening could be extensive – e.g. the time and resources required not only to investigate whether national or Community competition law has indeed been breached, but also to determine an appropriate remedy and then the need to monitor any imposed terms and conditions as part of the appropriate remedy.

15.155 Thirdly, based on our market analysis, consultation responses and expected developments over the three year review period, we remain of the view that continuing to provide certainty in the retail markets in the Hull area is of paramount concern, both to KCOM and to any prospective competitors and also to end-users. We consider this is best achieved through ex ante regulation which, in comparison to competition law remedies, would:

- provide greater certainty over the course of the three year period on the types of behaviour that are/are not allowed;
- allow for timely intervention – proactively by us and/or by parties bringing regulatory disputes to us for swift resolution<sup>1333</sup> – and consequently timely enforcement using the considerable powers accorded us under the Act to secure compliance,<sup>1334</sup> through a process with which the market in general is familiar and which is also set out in the Act.

## Removal of regulation

15.156 As set out above, the remedies we are imposing are those which we conclude are appropriate to address the competition problems we have identified in the relevant wholesale and retail markets in the Hull area as a result of our market analysis,<sup>1335</sup> and which we conclude reliance on national and Community competition law alone would be insufficient to address.

<sup>1332</sup> See for example, Condition 6 which provides that the supply of retail leased lines – i.e. both existing and new – is on fair and reasonable terms, conditions and charges.

<sup>1333</sup> See sections 185 to 191 of the Act, in particular section 185(1A).

<sup>1334</sup> See sections 94 to 104 of the Act.

<sup>1335</sup> Including, where relevant, despite the existence of upstream wholesale regulation.

15.157 Accordingly, we are imposing the SMP conditions explained above. As a result of this, we are revoking all of the SMP conditions imposed on KCOM in the 2007/8 Review in the relevant wholesale market as defined in the 2007/8 Review.

15.158 We set out the notice revoking those SMP conditions, together with the new SMP conditions we are imposing in the relevant wholesale and retail markets in the Hull area we have defined in this review, in the statutory notification which is in Annex 7 to this Statement.

## **Conclusions regarding the remedies we are imposing in the wholesale and retail markets in the Hull area**

15.159 We have concluded that the following remedies should be imposed on KCOM in those wholesale markets in the Hull area listed in paragraph 15.1 above:

- a requirement to provide network access on reasonable request, including an obligation to offer fair and reasonable terms, conditions and charges;
- a requirement not to unduly discriminate;
- a requirement to publish a reference offer;
- a requirement to notify charges, terms and conditions;
- a requirement to notify technical information; and
- accounting separation obligations.<sup>1336</sup>

15.160 We have concluded that the following remedies should be imposed on KCOM in those retail markets in the Hull area listed in paragraph 15.1 above:

- a requirement to supply retail leased lines on fair and reasonable terms, conditions and charges;
- a requirement not to unduly discriminate; and
- a requirement to publish a reference offer.

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<sup>1336</sup> In relation to accounting separation obligations, see Section 16.



## Section 16

# Accounting obligations

## Introduction

16.1 In this Section we set out the accounting obligations that we have decided to impose on BT in the following markets:

- the wholesale market for low bandwidth TISBO in the UK excluding the Hull area at bandwidths up to and including 8Mbit/s;
- the wholesale market for medium bandwidth TISBO in the UK excluding the Hull area and the WECLA at bandwidths above 8Mbit/s and up to and including 45Mbit/s;
- the wholesale market for high bandwidth TISBO in the UK excluding the Hull area and the WECLA at bandwidths above 45Mbit/s and up to and including 155Mbit/s;
- the wholesale market for regional trunk segments in the UK;
- the wholesale market for low bandwidth AISBO in the WECLA at bandwidths up to and including 1Gbit/s;
- the wholesale market for low bandwidth AISBO in the UK excluding the Hull area and the WECLA at bandwidths up to and including 1Gbit/s;
- the wholesale market for MISBO in the UK excluding the Hull area and the WECLA; and
- the retail market for very low bandwidth TI leased lines in the UK excluding the Hull area at bandwidths below 2Mbit/s.

16.2 We also set out the accounting obligations that we have decided to impose on KCOM in the following markets:

- the wholesale market for low bandwidth TISBO in the Hull area at bandwidths up to and including 8Mbit/s;
- the wholesale market for medium bandwidth TISBO in the Hull area at bandwidths above 8Mbit/s and up to and including 45Mbit/s;
- the wholesale market for high bandwidth TISBO in the Hull area at bandwidths above 45Mbit/s and up to and including 155Mbit/s;
- the wholesale market for very high bandwidth TISBO in the Hull area at bandwidths at 622Mbit/s;
- the wholesale market for low bandwidth AISBO in the Hull area at bandwidths up to and including 1Gbit/s;

- the retail market for low bandwidth TI leased lines in the Hull area at bandwidths up to and including 8Mbit/s; and
- the retail market for low bandwidth AI leased lines in the Hull area at bandwidths up to and including 1Gbit/s.

16.3 These remedies are based on the nature of the competition problems in these markets and, in particular, underpin other remedies imposed in those markets by enabling compliance to be monitored and by providing transparency.

## Structure of this Section

16.4 We note that responses to the June BCMR Consultation led us to revisit our position on cost accounting as part of the November BCMR Consultation. In this Section, we briefly address accounting separation and other issues, before moving on to the cost accounting position. We then set out our conclusions and relevant legal tests. This Section is structured as follows:

Sub-section	Description
Introduction	
Accounting separation and other issues	Review of our proposals in the June BCMR Consultation and the further November BCMR Consultation, Ofcom's views on consultation responses, and conclusions.
Cost accounting	Review of our proposals in the June BCMR Consultation and, Ofcom's views on consultation responses, and conclusions.
Conclusions on the appropriate remedies	Our conclusions of the appropriate remedies based on the above assessment. For each remedy we clarify the aim and the legal basis.

## Summary of our conclusions

16.5 We have concluded that, to support the remedies set out in Sections 9 to 15, it would be appropriate for BT and KCOM to be subject to certain accounting obligations in each of the markets in which they have SMP. In those Sections, we have set out our assessment of the competition problems that exist in the wholesale and retail<sup>1337</sup> markets in which we have found BT and KCOM to have SMP. This includes our assessment of the insufficiency of national and Community competition law remedies to address the competition problems we have identified, and the remedies which we have concluded are appropriate to address those problems.

16.6 The identified remedies include accounting obligations. Accounting obligations support other remedies by ensuring that we have access to information necessary to carry out our work, and that the dominant provider records information about relevant transactions in a way which is accessible when required. They also allow the proper attribution of costs across markets to be monitored, and for there to be transparency as to compliance. Without appropriate accounting obligations, there is a risk that the other remedies identified in relation to individual markets would not be effective.

16.7 The table below summarises the relevant competition problems (as identified in the preceding Sections) and the accounting obligations that we have concluded are

<sup>1337</sup> Despite the existence of upstream wholesale regulation.

appropriate, in combination with the remedies set out in those other Sections, to address them.

**Figure 16.1 Summary of competition problems and accounting obligations**

Competition problems <sup>1338</sup>	Retail markets	Wholesale markets
<b>Markets in which BT has SMP</b> <ul style="list-style-type: none"> <li>Price discrimination</li> <li>Non-price discrimination</li> <li>Predatory pricing</li> <li>Margin squeeze</li> <li>Excessive pricing</li> </ul>	<ul style="list-style-type: none"> <li>Cost accounting</li> </ul>	<ul style="list-style-type: none"> <li>Accounting separation</li> <li>Cost accounting</li> </ul>
<b>Markets in which KCOM has SMP</b> <ul style="list-style-type: none"> <li>Price discrimination</li> <li>Non-price discrimination</li> <li>Predatory pricing</li> <li>Margin squeeze</li> <li>Excessive pricing</li> </ul>		<ul style="list-style-type: none"> <li>Accounting separation</li> </ul>

## Accounting separation and other issues

### Our proposals in the June BCMR Consultation

16.8 In the June BCMR Consultation, we proposed that BT and KCOM should be subject to accounting separation obligations in each of the wholesale markets in which we had proposed that they have SMP. We explained the rationale for our proposal noting that, if the obligation not to discriminate unduly is to be meaningful, a dominant provider needs to be required to make transparent its wholesale prices and internal transfer prices – i.e. to demonstrate that it is not unduly discriminating against CPs. In practice this means that they are obliged to produce financial statements that reflect the performance of each of the markets as though they were separate businesses. Accounting separation therefore enables Ofcom to monitor whether a dominant provider is unduly discriminating.<sup>1339</sup>

16.9 Our proposals regarding accounting separation remained unchanged in the November BCMR Consultation.

### Responses to the June BCMR Consultation

16.10 Only BT commented in detail on the proposed accounting separation obligations. BT queried our proposal in paragraph 10b of the draft legal instrument to impose conditions OA29 to OA31 (as set out in the 2004 Statement on Regulatory Reporting<sup>1340</sup>) in the retail market for low bandwidth TI leased lines. These conditions

<sup>1338</sup> Only competition problems relevant to accounting problems listed here.

<sup>1339</sup> In the June BCMR Consultation, the SMP services conditions we proposed to impose on BT include a no undue discrimination SMP condition (see proposed SMP services conditions 3 and 12, as set out in Schedule 2 of the Notification at Annex 14 to the June BCMR Consultation).

<sup>1340</sup> [http://stakeholders.ofcom.org.uk/binaries/consultations/fin\\_reporting/statement/finance\\_report.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/fin_reporting/statement/finance_report.pdf)

would require it to prepare and maintain a retail catalogue.<sup>1341</sup> BT noted that this proposal was contrary to our decision in our 2009/10 update to the regulatory financial reporting obligations, in which these obligations were withdrawn.

## Ofcom's response

16.11 The inclusion of these obligations in paragraph 10b of the draft legal instrument was an oversight. As BT points out, we withdrew these obligations in our 2009/10 update to the regulatory financial reporting obligations.<sup>1342</sup> We do not consider that re-imposition of these obligations is warranted given the limited scope of ex-ante retail regulation on BT (the retail very low bandwidth TI market being the only market), and have removed these obligations from the legal instrument in Annex 7 to this Statement.

## Cost accounting

### Our proposals in the June BCMR Consultation

16.12 With regard to cost accounting obligations, we stated in the June BCMR Consultation that “we are not proposing that BT should be subject to any cost orientation obligations in the business connectivity markets. Consequently we do not propose to apply cost accounting obligations”.<sup>1343</sup> Nor did we propose cost accounting obligations in relation to KCOM.

16.13 Seven respondents to the June BCMR Consultation objected to our proposal not to apply cost accounting obligations on BT. The main points made were:

- cost accounting obligations should be retained even if Ofcom decides not to apply cost orientation obligations;
- publication of cost accounting information promotes transparency and enables CPs to monitor discriminatory conduct by BT such as loading costs onto services that CPs consume more than BT;
- scrutiny of cost accounting information by CPs helps ensure its integrity. Accounting problems are often uncovered by CPs rather than by Ofcom;
- continuity of publication of accounting information is also important to aid understanding and to maintain integrity; and
- Ofcom would require BT to produce cost accounting information in order to set charge controls.

### Our proposals in the November BCMR Consultation

16.14 In light of responses to the June BCMR Consultation, in the November 2012 Consultation we proposed that BT (but not KCOM) should be subject to cost

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<sup>1341</sup> A retail catalogue is a document describing each of the retail products, constituent retail activities and supporting activities that appear in retail regulatory financial statements.

<sup>1342</sup> Changes to BT and KCOM's Regulatory Financial Reporting 2009/10  
<http://stakeholders.ofcom.org.uk/binaries/consultations/btregs10/statement/statement.pdf>

<sup>1343</sup> Paragraph 15.12.

accounting obligations in each of the wholesale markets in which we had proposed that it has SMP.

- 16.15 In light of our proposal not to apply cost orientation obligations, we considered whether it was still appropriate for BT to be required to a) produce DLRIC and DSAC figures for products/services in these markets and b) to publish the DLRIC and DSAC figures for wholesale services in its Regulatory Financial Statements (RFS). Our assessment was that we would still require DLRIC and DSAC figures for these proposed services to be produced, but not to be published.
- 16.16 We did not propose any other changes to the cost accounting information that BT currently publishes.

## Responses to the June and November BCMR Consultations

- 16.17 BT, CWW, Easynet, EE/MBNL, EE, Level 3, TalkTalk, Virgin, and Verizon commented on our proposals. All supported the imposition of cost accounting obligations but only BT supported the proposal that it should no longer be required to publish DLRIC and DSAC figures.<sup>1344</sup>
- 16.18 BT argued that cost accounting obligations along with the other regulatory financial reporting obligations require it to publish more information than is necessary to address the identified competition concerns. In BT's view publication of cost accounting data at the market level or at most charge control basket level would be sufficient. It suggested these concerns should be taken forward as part of Ofcom's review of regulatory financial reporting obligations.
- 16.19 CWW, Easynet, EE/MBNL, EE, Level 3, TalkTalk, Virgin, and Verizon supported the continued publication of DLRIC and DSAC figures. The main points made in support this were:
- Publication of DLRIC and DSAC figures is necessary to enable CPs to monitor BT's compliance with the charge controls;
  - Stopping publication would weaken the constraint on BT's charges because CPs would not be able to monitor BT's charges against DLRIC and DSAC;
  - Publication enables CPs to monitor the effectiveness of the charge controls and BT's pricing behaviour;
  - Publication of DLRIC figures enables CPs to determine whether individual charges are set at anti-competitively low levels;
  - There is no significant cost or confidentiality concern associated with publication of DLRIC and DSAC figures so BT should be required to publish them; and
  - Scrutiny by CPs is necessary to ensure the accuracy of these figures, thus if Ofcom intends to use them when setting charge controls BT should be required to publish them.

<sup>1344</sup> Most respondents also reiterated and expanded on their comments in the June BCMR Consultation about cost orientation obligations. BT restated its support for the withdrawal of these obligations but others expressed disappointment that we had not changed our proposals in light of the responses. We discuss stakeholder these responses in Section 9.

- 16.20 Virgin said that we should have deferred consideration about the publication of DLRIC and DSAC figures to our annual update of regulatory financial obligations. It further argued that we had made a procedural error by putting forward these proposals and not formally notifying the changes to the relevant obligations.

### **Ofcom's view**

- 16.21 We currently require BT to publish DLRIC and DSAC figures in order that CPs may gain confidence in BT's compliance with cost orientation obligations. Absent cost orientation obligations, the primary purpose of the publication of these figures falls away. BT is not required to take account of DLRIC and DSAC in order to comply with the charge controls, or other obligations we are imposing in these markets. Consequently, publication of these figures is not necessary to enable CPs to monitor BT's compliance with the charge controls. CPs will be able to use BT's charge control compliance statements, which are published annually in connection with BT's RFS, to monitor BT's compliance with the charge controls.
- 16.22 Similarly, we are not persuaded that there is a strong case for continued publication to enable CPs to monitor the effectiveness of the charge controls, or to monitor BT's charges for anti-competitive pricing. We are putting in place other measures, notably sub-caps within the main charge control together with associated monitoring provisions, to ensure that there are adequate controls on individual prices. We consider we have demonstrated that the charge controls will adequately constrain BT's prices and, as noted above, BT's charge control compliance statements will enable CPs to monitor BT's compliance with the charge controls.
- 16.23 We have also considered whether the figures should be published so that CPs can scrutinise them to ensure they are accurate for our use. Whilst scrutiny by CPs is welcome, we do not consider this alone is sufficient justification for publication in this case. These figures would be used to inform our decision about whether to make starting charge adjustments when setting charge controls and would be subject to detailed review during the preparation of our charge control proposals.
- 16.24 In relation to Virgin's comments, we consider that these comments reflect a misunderstanding of the process being followed. Our view is that it was logical to discuss DLRIC/DSAC publication in the November BCMR Consultation in order that respondents could see the full scope of our proposals in relation to cost accounting. However, we continue to implement changes to regulatory financial reporting obligations stemming from market reviews in our annual updates to the regulatory financial reporting obligations – that is also the approach we are taking in this case. This allows us to ensure that changes stemming from market reviews are implemented in a consistent manner. We do not consider this approach constitutes a procedural error.
- 16.25 We agree with BT that its wider concerns about the appropriateness of the current level of publication of regulatory financial information are best considered in our review of the regulatory financial reporting obligations, and therefore do not address them further here.

### **Ofcom's conclusions on the appropriate remedies**

- 16.26 We have concluded that the most appropriate remedies to address the competition problems identified remain those that we proposed in the June BCMR Consultation, as revised by the November BCMR Consultation.

- 16.27 Our conclusions are the result of our cumulative consideration of our assessment of the appropriate remedies, as set out in the June and November BCMR Consultations, our consideration of the consultation responses, and all the evidence available to us.
- 16.28 In reaching our conclusions we have also taken into due account of all applicable guidelines and recommendations issued by the EC, and we have taken utmost account of the BEREC Common Position.<sup>1345</sup> We have also had regard to relevant guidance from the ERG, Oftel and ourselves.
- 16.29 Below we set out:
- the aim of the remedies that we have concluded should be imposed on BT and KCOM in the markets listed in paragraphs 16.1 and 16.2 above;
  - the obligations imposed on BT and KCOM by the remedies; and
  - the reasons why we consider the remedies comply with the relevant legal tests in the Act.

## **Accounting separation obligations**

### Aim of regulation

- 16.30 In relation to accounting separation, if the obligation to not unduly discriminate is to be meaningful, a dominant provider needs to be required to make transparent its wholesale prices and internal transfer prices – i.e. to demonstrate that it is not unduly discriminating against CPs. In practice this means that they are obliged to produce financial statements that reflect the performance of the markets as though they were separate businesses. Accounting separation therefore enables Ofcom to monitor whether a dominant provider is unduly discriminating.

### SMP Condition

- 16.31 Consistent with our approach in other market reviews, we intend to implement our decisions regarding the imposition of regulatory financial reporting obligations in relation to BT and to KCOM in our annual update through directions applied to BT's, and to KCOM's, regulatory financial reporting obligations.
- 16.32 We have decided in this Statement to set SMP conditions to impose those obligations on BT and KCOM, respectively, which conditions will also provide the legal basis for above-mentioned future directions. We consider that the accounting separation and cost accounting obligations satisfy the relevant legal tests for the reasons set out below.

### Legal tests

- 16.33 Under sections 87(7) and 87(8) of the Act, appropriate accounting separation obligations may be imposed on the dominant provider in respect of the provision of network access, the use of the relevant network and the availability of relevant facilities. That is to say, the dominant provider may be required to maintain a separation for accounting purposes between such different matters relating to

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<sup>1345</sup> BEREC Common Position on best practices in remedies imposed as a consequence of a position of significant market power in the relevant markets for wholesale lease lines, BoR (12) 83.

network access or the availability of relevant facilities. We intend to rely on this legal basis in imposing accounting separation obligations on BT and KCOM.

- 16.34 We are satisfied that the accounting separation obligations set out in Schedule 2 of Annex 2 (in respect of BT) and Annex 3 (in respect of KCOM) to the Financial Reporting Statement and Notification 2004<sup>1346</sup> meet the various tests set out in the Act.
- 16.35 We have considered our duties under section 3 of the Act and consider that the application of the accounting separation obligations on BT and on KCOM is justifiable to promote competition in relation to the provision of electronic communications networks, and to ensure the provision of network access and services interoperability for the purpose of securing efficient and sustainable competition and the maximum benefit for consumers.
- 16.36 We have considered the Community requirements set out in section 4 of the Act and consider they are met. Specifically, the accounting separation obligations encourage the provision of network access for the purpose of securing efficient and sustainable competition in the markets for electronic communications networks and services, by ensuring dominant providers – i.e. BT and KCOM both of whom we have concluded have SMP in the markets listed in paragraphs 16.1 and 16.2 above – do not discriminate unduly in favour of their own downstream businesses, thereby disadvantaging 3<sup>rd</sup> party CPs.
- 16.37 We consider that the accounting separation obligations meet the criteria set out in section 47 of the Act in that they are:
- objectively justifiable for the reasons set out above;
  - not unduly discriminatory, as they only apply to BT and KCOM who are the only providers we have concluded have SMP, and in this respect we have also concluded that both providers should be subject to a forms of non-discrimination obligations;
  - proportionate, as they are necessary as a mechanism to allow Ofcom and third parties to monitor whether BT and KCOM are engaging in discriminatory behaviour; and
  - transparent, as they are set out in Schedule 2 of Annex 2 (in respect of BT) and Annex 3 (in respect of KCOM) to the Financial Reporting Statement and Notification 2004.

## **Cost accounting obligations**

### Aim of regulation

- 16.38 Cost accounting obligations require the dominant provider to maintain a cost accounting system (a set of processes and systems) to capture the costs, revenues, assets and liabilities associated with the provision of services and to attribute them in a fair, objective and transparent manner to individual services in order that the costs of individual services may be determined. In conjunction with the other financial

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<sup>1346</sup> *The regulatory financial reporting obligations on BT and Kingston Communications Final statement and notification, published 22 July 2004*  
[http://stakeholders.ofcom.org.uk/binaries/consultations/fin\\_reporting/statement/finance\\_report.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/fin_reporting/statement/finance_report.pdf)



reporting obligations, cost accounting obligations perform several important functions. In particular:

- Cost accounting obligations ensure that we have information necessary to carry out our work, pursuant to our statutory duties, including the following:
  - Information to support our market reviews. Our market reviews involve a forward-looking, structural evaluation of the relevant markets, based on existing market conditions. The information deriving from cost accounting obligations assists us in this evaluation, in particular, at the remedies stage in determining whether a form of price control<sup>1347</sup> (if any) should be imposed and, if so, what the appropriate price control should be. For the reasons set out in this Statement, we are imposing charge controls in some of the markets in which we have found BT has SMP. In our preferred method of charge control regulation – RPI+/-X – fully allocated cost (FAC) accounting information (usually information relating to the last financial year and preceding years) is an input to our assessment of the dominant provider's base year costs and cost trends. Similarly FAC, distributed stand alone cost (DSAC) and distributed long run incremental cost (DLRIC) information, is used for our assessment of whether starting charge adjustments may be appropriate.<sup>1348</sup> We have adopted this method in designing the charge controls we are imposing in this review.<sup>1349</sup>
  - Information to support the monitoring of effectiveness of remedies. Given the nature of a market review, any SMP findings apply prospectively. In this respect, cost accounting obligations provide important information to ensure that remedies we have applied in our market reviews in general, and those SMP conditions we are imposing as a result of this review, continue to address the competition problems identified (in particular the charge controls we are imposing), and to enable our timely intervention should such intervention ultimately be needed.
  - Information to support investigations of potential breaches of SMP obligations and anti-competitive practices generally. It may also be used in resolving disputes.
- Cost accounting obligations ensure that the dominant provider records all information necessary for the purposes listed above at the time that relevant transactions occur, by requiring the dominant provider to record detailed information about the costs it incurs in providing services on an ongoing basis. Absent such a requirement, there is a strong possibility that the necessary information would not be available when it is required, and in the necessary form and manner.
- The imposition of cost accounting obligations ensure that wholesale costs are attributed across the wholesale markets (and the individual services within them) in a consistent manner. This militates, in particular, against the risk of double recovery of costs or that costs might unreasonably be loaded onto particular products or markets.

<sup>1347</sup> Within the meaning of section 87(9) of the Act.

<sup>1348</sup> We usually prefer to use charge control glide paths to bring charges into line with forecast costs but where charges are significantly misaligned with costs and there is a risk of distortion we may use starting charge adjustments.

<sup>1349</sup> See Section 18 for further discussion.

- Publication of cost accounting information aids transparency, providing reassurance to stakeholders about compliance with SMP obligations, allowing stakeholders to monitor compliance and, more generally, enabling stakeholders to make better informed contributions to the development of the regulatory framework.

16.39 In relation to production of DLRIC and DSAC figures for wholesale services in these markets, our assessment is that we will still require DLRIC and DSAC figures for these services. In particular, we may use these figures to inform our decisions about whether to apply starting charge adjustments. These figures may also be useful to inform our assessment of SMP or to set future cost orientation obligations. We conclude it is appropriate to maintain the obligation for BT to *produce* these figures.

16.40 BT is currently required to publish DLRIC and DSAC figures for wholesale services in its RFS in order that CPs may gain confidence regarding BT's compliance with cost orientation obligations. Given our decision not to apply cost orientation obligations, we conclude that BT should not be required to *publish* DLRIC and DSAC figures in these markets,<sup>1350</sup> but only to continue to deliver them to Ofcom. Compliance with sub-caps, which will be used to prevent individual charges rising to excessive levels, can be monitored by stakeholders by reference to BT's pricing notifications whereas DLRIC and DSAC figures are published in arrears. We therefore conclude there would be at least an equivalent level of transparency under the proposed new arrangements.

16.41 We conclude it is not necessary to make any other changes to the cost accounting information that BT is required to produce and publish pursuant to the cost accounting obligations. In particular, BT will continue to be required to deliver to Ofcom, as well as to publish, FAC figures for wholesale markets at the product/service level and also to publish the calculation of FAC based on component costs. Publication of this information is appropriate in markets where there is a risk of pricing distortions or undue discrimination. Such transparency will, in particular, enable CPs to:

- assess the accuracy of product/service level data. In some ways, CPs are in a better position to do this than the regulator as they are involved in the business of buying and using the products/services concerned.
- monitor BT's compliance with other SMP obligations, including the no undue discrimination obligations.

### SMP condition

16.42 Consistent with our approach in other market reviews, we intend to implement our decisions regarding the imposition of regulatory financial reporting obligations in relation to BT and to KCOM in our annual update through directions applied to BT's, and to KCOM's, regulatory financial reporting obligations.

16.43 For the retail very low bandwidth TI market, there are no established reporting and publication obligations as BT is not currently subject to retail cost accounting obligations in any other markets. We will therefore give further consideration as to the appropriate reporting and publication obligations in our next annual update of the regulatory financial reporting obligations.

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<sup>1350</sup> i.e. those wholesale markets listed in paragraph 16.1 above.

- 16.44 We have decided in this Statement to set SMP conditions to impose those obligations on BT and KCOM, respectively, which conditions will also provide the legal basis for above-mentioned future directions. We consider that the accounting separation and cost accounting obligations satisfy the relevant legal tests for the reasons set out below.

### Legal tests

- 16.45 First, we are imposing wholesale cost accounting obligations under section 87(9) of the Act. Section 88 of the Act states that Ofcom are not to set an SMP condition falling within section 87(9) except where it appears from the market analysis that there is a relevant risk of adverse pricing effects arising from price distortion and it also appears that the setting of the condition is appropriate for the purposes of:
- promoting efficiency;
  - promoting sustainable competition; and
  - conferring the greatest possible benefits on the end-users of the public electronic communications services.
- 16.46 Section 88(2) also requires that we must take account of the extent of investment in the matters to which the conditions relates and the person to whom the condition applies – i.e. BT in this case.
- 16.47 As discussed above in this Section (and in the previous Sections), one of the competition problems we have identified is the risk of excessive pricing in the markets in which we have found BT has SMP.
- 16.48 For the reasons set out above we consider that cost accounting obligations promote efficiency and promote sustainable competition. We have also taken account of the extent of the investment of BT in the matters to which the cost accounting obligations relate.
- 16.49 In addition, under section 91 of the Act, where wholesale regulation in the upstream market would not suffice to achieve our duties and objectives with regard to the relevant retail market, the sorts of SMP conditions authorised or required by sections 87 to 89 of the Act may be set in that retail market. In this respect, we consider imposing accounting separation on BT only in the relevant wholesale markets would not provide us with the necessary transparency in the relevant retail market.
- 16.50 Secondly, we have considered our duties under section 3 of the Act. In particular, we consider our decision to impose cost accounting obligations on BT would further the interests of citizens and further the interests of consumers in relevant markets by the promotion of competition. Further, we consider that, in accordance with section 4 of the Act, cost accounting obligations in particular promote competition in relation to the provision of electronic communications networks and encourage the provision of network access for the purpose of securing efficiency and sustainable competition in downstream markets for electronic communications networks and services, resulting in the maximum benefit for retail consumers.
- 16.51 Thirdly, we consider our decision to impose cost accounting obligations on BT meets the criteria set out in section 47(2) in that cost accounting obligations are:
- objectively justifiable, for the reasons set out above;

- not unduly discriminatory, as it is to be imposed only for BT and no other operator has been found to hold a position of SMP in the relevant markets in which we are imposing cost accounting obligations;
- proportionate since they achieve the appropriate balance between the provision of relevant financial information to Ofcom and the publication of relevant financial information to provide sufficient transparency to stakeholders; and
- transparent as they are set out in Schedule 2 of Annex 2 to the Financial Reporting Statement and Notification 2004.