# Business Connectivity Market Review and Leased Line Charge Control

*TalkTalk response*

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**NON-CONFIDENTIAL**

# 1 Summary

1.1 This is TalkTalk's response to Ofcom's consultations[1] on Business Connectivity Market Review (BCMR) and Leased Line Charge Control (LLCC).

1.2 Leased lines for business and broadband/mobile backhaul are experiencing rapid innovation and growth. In particular there is an on-going shift in demand from older technologies and lower bandwidths to newer technologies that offer much higher bandwidths at lower costs. As well as increased bandwidth, customers are demanding increased reliability as broadband, mobile and business leased lines become more critical. It is essential that regulation keeps pace with these developments so that operators are able to better deliver the services that customers demand.

1.3 Unfortunately consumers have suffered from excessive prices – BT's returns are currently 31%[2] (three times WACC) and have been consistently high for the last 5 year – and poor quality. The BCMR and LLCC are a key opportunity to address some of these issues. Ofcom's Digital Communications Strategic Review has the potential to fully address these issues in the longer turn – for instance, structural separation will reduce discrimination, improve competition, drive investment in better service quality and allow de-regulation.

1.4 This review includes some significant improvements on previous reviews particularly the proposal to introduce dark fibre and minimum service standards. We fully support Ofcom's proposal to introduce dark fibre which will expose more of the value chain to competition, stimulating innovation and investment, reduce overall consumer prices and help to end the inflated pricing of higher bandwidth services which is retarding the use of high speed services. However, Ofcom's proposed design of the dark fibre remedy will severely limit the uptake of dark fibre and the benefits consumers will enjoy – the use of active minus will restrict competition to about a third of the market or less and the lack of must use obligation will mean it will take years before dark fibre is fit for purpose. We discuss below our particular concerns and alternatives that would better meet consumers' interests.

1.5 The first concern is Ofcom's proposal to use 'active minus' to setting dark fibre prices (i.e. 1Gbps Ethernet price less active layer costs) rather than the cost-based approach that Ofcom normally use to set wholesale prices. The ultimate effect of this novel and untested approach is that the dark fibre price will be above underlying costs (i.e. wholesale prices will be excessive) and so dark fibre will only be commercially viable to use in at most a third of the market. This will severely limit the price, innovation, quality and competition benefits that dark fibre can deliver

[1] We have responded to these separate consultations in one response since the issues are intrinsically linked. For example, protecting consumer interests for 10G Ethernet services could either be addressed through ensuring dark fibre is fit for purpose (which is addressed in the market review) and/or through stringent price regulation (which is addressed in the charge control)

[2] from RFS2014 RoCE was 27.8%. Correcting for the error (£19m) and attribution changes (£55m) in the cost attribution consultation results in a RoCE of 30.6%

compared to a cost-based pricing approach. Furthermore, the proposed approach is complex, administratively burdensome to implement/enforce, open to gaming by BT (e.g. creating new products to circumvent the regulation) and will create unnecessary risk – indeed Ofcom previously told the CAT that an active minus type of approach for dark fibre was 'impracticable'. The alternative of cost-based pricing will deliver more benefits to consumers and is more straightforward to implement.

1.6 The benefits that Ofcom claims for active minus pricing are highly questionable:

- Ofcom argue that the higher, above-cost dark fibre prices resulting from using active-minus will stimulate more infrastructure investment by competitors. However, this additional investment will, by definition, be productively inefficient since the above-cost prices will distort build/buy signals and induce inefficient investment. Thus this additional investment is not a benefit but rather the opposite – a reduction in overall welfare
- Ofcom presumes that active minus is preferable (to a cost-based approach) since it will result in less price rebalancing which Ofcom considers will be more allocatively efficient. However, Ofcom has presented no analysis or evidence to support this claim – it does not follow that some pricing gradient is efficient that an active minus approach is more efficient than cost-based. In fact, it is plausible that active minus will be *less* allocatively efficient. The most robust conclusion regarding allocative efficiency is that it is not clear whether active-minus will be more or less efficient. In any case, Ofcom typically places less weight on allocative efficiency than productive and dynamic efficiency
- Ofcom has assessed that cost-based pricing will be more difficult to implement since it will require a new bottom-up model to be developed. Yet Ofcom could use the existing top-down Ethernet model to derive cost-based prices with very little additional effort.

1.7 Our second concern is the lack of 'must use' obligation on BT to use dark fibre itself to produce active products. Must use obligations apply to all major wholesale products such as SMPF. MPF, WLR, WBA and EAD)[3]. Without a must use obligation BT has every incentive to delay and degrade the dark fibre product in order to hamper competitors using dark fibre. When LLU was introduced in 1999 there was similarly no obligation for BT to use the SMPF product itself to produce IPStream. Five years after the initial launch the SMPF product was low quality and not fit for purpose – compared to BT's own wholesale broadband product (IPStream), provisions were slower, fault rates were higher and repairs took longer. The product quality only improved when BT was obliged to use the SMPF product themselves – and then SMPF use took off. If Ofcom do not impose a must use obligation on BT then CPs and consumers face years of disputes and litigation before the dark fibre product is fit for purpose. Ofcom should change the remedy to require Openreach to

[3] an obligation for BT to use a dark fibre product is normally called 'equivalence of inputs' (EOI). However, in its consultation Ofcom uses EOI to where BT has the option of using the dark fibre product itself rather BT having the obligation to use it. Ofcom's use is, in our view, incorrect and misleading. However, to avoid confusion we have not used the EOI term.

use the dark fibre product itself for Openreach's own EAD Ethernet products – for new supply by September 2017 and for the existing base by March 2018.

1.8 One of the particularly harmful effects of the lack of a must use obligation is that dark fibre will not act as a sufficient constraint on Ethernet prices for several years. Ofcom accept that there is insufficient constraint across all Ethernet services (outside CLA) since it has found BT to have SMP. They have addressed this through a charge control for 100M and 1G Ethernet yet for 10G services they are only proposing a very weak 'safeguard' cap at CPI-CPI. With dark fibre unable to constrain 10G prices for several years, falling unit costs the safeguard cap will allow BT's returns to rise even further from 33% RoCE. Instead of the weak safeguard cap, BT should include 10G within a charge control at least until dark fibre demonstrably acts as a constraint on dark fibre prices.

1.9 We have four other key areas of concern with Ofcom proposals.

1.10 Ofcom has provisionally concluded that BT does not have SMP in the Central London Area (CLA) market – this is, according to Ofcom, principally based on the presence of on average six rival infrastructure within 100m of customer sites. Yet the evidence shows that even this extensive rival infrastructure is, in fact, insufficient to constrain BT – BT has a persistently high market share in the mid 40s (above the 40% where dominance concerns normally arise) and its returns (RoCE) are 48% (about four times their cost of capital). Whilst the extensive rival infrastructure may be desirable it is, as a matter of fact, insufficient to constrain BT or to justify a no SMP finding.

1.11 The cost attribution review is very welcome and long overdue since it should finally end BT being allowed to manipulate the regulated accounts which has inflated regulated wholesale charges by around £250m a year – a practice that has been going on for many years. We will respond separately to the review's proposals. However, we have concerns about how the review is implemented in the leased line charge control. Rather than implementing all of the corrected attributions through a starting price adjustment Ofcom has only adjusted for £22m of the total £55m attribution correction required for leased lines and £0m of the £19m of data errors. The impact of this is that BT can continue to illegitimately inflate leased line prices by about £70m over the first two years of the charge control. In respect of the attribution errors it appears that the reason for Ofcom's approach is that Ofcom mistakenly considers that some group overhead costs (such as Group Finance) are not incremental and under its method, it does not make a one-off adjustment for non-incremental costs. In practice, almost all these costs are incremental.

1.12 We support the imposition of minimum service standards and we agree with many of the aspects of Ofcom's approach. However, we see a number of areas where changes are required: inclusion of OSA and dark fibre in targets; increasing the targets which are currently soft and un-stretching for Openreach; removing the lower percentile limit target which is counterproductive.

1.13 Ofcom's cost of capital estimate could be improved in two ways. First, using the year three cost of capital to calculate prices will result in excessive returns – this can be

addressed by using the average cost of capital. Second, Ofcom has estimated a real risk free rate that is far above the likely level. This contributes to a cost of debt estimate of 5.4% which is implausibly high given that the current cost of debt is 2.6% and there are no factors that will result in a doubling of the cost of debt in the next three years.

1.14 As for our previous submissions our response only covers the dark fibre (not duct access) and CISBO services (not TISBO). An absence of comment should not be taken as agreement with Ofcom's proposals.

1.15 Our response of laid out as follows:

- Section 2 describes why we consider there should be an SMP finding in CLA
- Section 3 discusses the advantage of introducing dark fibre
- Section 4 explains why we consider a cost-based pricing approach as superior to an active minus one
- Section 5 describes why Ofcom's proposed 'EOI' approach that does not include a must use obligation will not address discrimination
- Section 6 describes our views on Ofcom's minimum service standard proposals
- Section 7 discusses a number of other market review issues
- Section 8 discusses other charge control issues

## 2 No SMP on BT in CLA

2.1 Ofcom has provisionally concluded that BT has no SMP in the CLA. Notably this is the first time that Ofcom has found no SMP in a major market in the absence of any regulated upstream product.

2.2 Ofcom's key justification for the no SMP finding is the extent of rival infrastructure in the CLA:

> *We find that no CP has SMP in the market for CISBO services in the CLA … This view is based primarily on our examination of the significant presence and density of rival infrastructure in the CLA. Table 4.4 (above) presents a range of metrics – including average network reach and depth of rival infrastructure at differing buffer distances (100m, 200m). Jointly, these measures provide a comprehensive characterisation of the presence and density of rival infrastructure in the CLA, and its impact on competition*
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> *• …virtually all businesses in the CLA have at least five OCPs within 200m (98%), and at least four OCPs within 100m (93%). The presence of rival infrastructure to this degree, in our view… ensures that the vast majority of (potential) users of CISBO in the CLA are likely to have competitive alternatives available to them in the event that BT raised its prices or otherwise offered poor terms of supply.*
>
> *• Our analysis shows that supplier choice in the CLA is a degree of magnitude greater than supplier choice in any other part of the UK, including the postcode sectors in the LP that are located adjacent to the CLA.*

*Given the significant presence of rival infrastructure in the CLA there is adequate scope for OCPs to use their existing infrastructure to compete for supply of CISBO services at any bandwidth. Whilst entry in the CLA still requires significant costs to be sunk and economies of scale and scope exist as elsewhere, the number and*

*Outside the CLA, there will be some businesses which do have a wide choice of supplier, but also a material number of businesses with no or too limited choice to benefit from competition.*[4]

2.3 We agree that the higher level of rival infrastructure distinguishes the CLA from other parts of the UK (and thus gives rise to a separate geographic market). However, the level of rival infrastructure is insufficient to constrain BT and therefore conclude that BT does not have SMP. The evidence of the lack of constraint in practice is clear:

- BT has a persistently high market share that is above the typical 40% where single dominance/SMP concerns normally arise[5] – BT's market share has been in the mid 40s since 2007 and shows no sign of sustained material decline[6]
- BT has very high returns of at least 48%[7] which is about four times their cost of capital[8]
- There is nothing identified that might arise in the period of the market review that would materially diminish BT's market power in the CLA such as additional rival infrastructure roll-out, new technology or reducing barriers to entry

2.4 In essence, the evidence indicates strongly that extensive rival infrastructure, whilst desirable, is insufficient to constrain BT either now or in the future. The extent of rival infrastructure is merely an indicator of the potential for competitive constraint – it cannot and should not trump clear evidence that there is not, in fact, a sufficient constraint.

2.5 Accordingly BT meets the criteria to be deemed to have SMP:

*Significant market power (SMP) is defined in the Act as being equivalent to the competition law concept of dominance. A CP shall be deemed to have SMP if, either*

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[4] BCMR May 2015 §4.141-§4.143

[5] "*In the Commission's decision making practice, single dominance concerns normally arise in the case of undertakings with market shares of over 40 %, although the Commission may in some cases have concerns about dominance even with lower market shares*". Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C 165/03), 11 July 2002 ('the SMP Guidelines'),

[6] In the 2007 BT's AISBO share in WECLA was c. 47%, in 2011 45-55% and in 2014 c47%. See Towerhouse LLP report for PAG July 2015§3.32

[7] This is the return on AISBO in WECLA (where there is a 'safeguard' cap). It is likely that the return on MISBO in WECLA is higher (given the far higher prices) and so the return on CISBO (= AISBO + MISBO) is likely to be higher than 48%. This return is before correcting for the errors/changed attributions contained in the Cost Attribution Review which, if done, would increase the RoCE above 48%

[8] We note that though there might be a constraint on BT's current prices this is insufficient to conclude no SMP. The question of whether there is SMP depends on whether prices are constrained to the competitive level. The test versus current prices is known as the 'Cellophane Fallacy'

*individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.*[9]

2.6 Ofcom's narrative on the role of market shares is informative:

*Changes in market shares can be informative about an undertaking's position in markets. More particularly, a decrease in the share of an undertaking may point to that undertaking having limited or declining market power. We note in this regard that:*
*• Where an undertaking maintains a high share over time, this provides further support for impediments to effective competition being present.*
*• While the gradual erosion of an undertaking's very high share may indicate that a market is becoming more competitive over time, such a development does, in itself, not preclude a finding of SMP.* [10]

2.7 Thus the evidence points firmly to BT having SMP in the CISBO CLA.

2.8 In this context there are two related issues worth addressing.

2.9 First, why is it that extensive rival infrastructure does not constrain BT? We consider that Ofcom does not need to understand this in order to conclude that BT has SMP. Notwithstanding we think there may be a number of reasons as to why rival infrastructures do not provide a constraint:

- Some of the operators are too small/niche focussed to act as a constraint except in small parts of the CISBO CLA market e.g. EUnetworks, Fibrespeed, Interoute, Concept Solutions, Neos
- The existence of difficulties in obtaining wayleaves and/or landlord permission to extend rivals networks from existing break-out points along streets and into buildings
- High dig costs particularly in central London
- A preference for CPs to use a few suppliers nationally (even for single site requirements) means that smaller regionally focussed providers tend to be overlooked[11]

2.10 Second, why was it appropriate to find no SMP in WBA in 2008 when there was a lesser degree of rival infrastructure? This is because there were/are a number of very different conditions between WBA in 2008 and CISBO CLA today. In particular:

- There was upstream regulation (LLU) that created a relatively level playing field in the WBA market. There is no regulation upstream of CISBO in CLA that addresses BT's upstream market power
- There were (in 2008) 5 rival operators[12] who covered much of the UK and served all customer segments. The number of similar wide UK coverage / all segments rivals operators in CISBO in CLA is just one (Virgin Media)

[9] BCMR May 2015 §A13.2

[10] BCMR May 2015 §A13.20

[11] For example, [✂ CONFIDENTIAL ✂]

- There were low costs (or logistical barriers) to connecting new WBA customers since MPF/SMPF lines were connected into all customers homes and/or they were provided to all operators including BT at the same wholesale price. In contrast, for CISBO as described above there are significant costs for rivals to extend their networks
- BT responded to the higher level of WBA competition in areas where LLU had rolled out indicating that the competition was providing some constraint. In CISBO the prices are the same in CLA as nationally

2.11 If BT is found to have SMP in the CLA then it raises the question of remedies to impose. We believe that they should be similar to those outside the CLA:

- Obligation to offer dark fibre on proper EOI terms
- Charge control on CISBO services (including 10G)
- Charge control on dark fibre
- Other general remedies such as Requirement to provide network access on reasonable request[13]

2.12 We do not consider that 'light' price regulation such as a safeguard cap is justified since a safeguard cap since will not constrain excessive prices. AISBO services in WECLA are currently subject to an RPI-RPI safeguard cap yet returns are 48%. A proper charge control is essential to impose some an effective constraint on BT's prices.

# 3 Introduction of dark fibre remedy

3.1 We strongly agree with Ofcom's proposal to oblige BT to offer dark fibre. In the section we comment on Ofcom's assessment of the impact of introducing dark fibre on consumers' interests. In section 4 we comment on the particular pricing remedy Ofcom has proposed and in section 5 the approach to preventing non-price discrimination.

## 3.1 Overall impact

3.2 One of the impacts of introducing dark fibre is that it will (if implemented properly) expand the extent of competition to include the active layer. We consider that this is unambiguously a positive change. It is axiomatic that firms in competitive markets are more efficient than monopolists. The relentless and existential threat of entry and exit that is embodied in the competitive process forces all suppliers to improve their business to ensure that they are producing at the most efficient level. The Darwinian nature of competition ensures that suppliers who offer a poor service (in

[12] the operators at the time that were counted as 'Principal Operators' were AOL, Orange, Sky, TalkTalk and Tiscali. O2 was also a Principal Operator but had lower coverage

[13] See BCMR May 2015 Table 8.1

terms of high costs/prices, low quality and/or unattractive propositions) are forced to exit the market as customers switch to providers offering better quality services.

3.3 By contrast monopolists, insulated from the pressures of competition need not worry that inefficiency will force their exit and they lack incentives to compete for customers, reduce costs, offer high quality products and/or innovate.

3.4 Therefore, as a matter of principle we think Ofcom would be correct to presume that the outcomes for consumers will be better under the additional competition that passive allows (albeit that such a presumption is rebuttable). Whilst it is not possible at the outset to predict all of the specific benefits that will flow from competition, both theory and history show conclusively that benefits from competition are significant.

## 3.2 Productive efficiency

3.5 Ofcom discusses productive efficiency (at §4.26 to §4.32). This focuses on merits based competition driving reduced costs and the risk of inefficiency due to arbitrage opportunities. We have a number of comments on this:

- Ofcom suggest that may be some arbitrage opportunity resulting from dark fibre[14]. This is not correct. There will be no risk of arbitrage with dark fibre since dark fibre will be priced on a per circuit basis and BT will rebalance active prices to remove any arbitrage opportunity (since rebalancing to remove arbitrage opportunities is obviously in BT's commercial interests). It would be fundamentally incorrect for Ofcom to base its economic analysis on the assumption that BT will act irrationally and not rebalance prices. Even if BT chose to not fully rebalance active prices immediately dark fibre becomes available and arbitrage opportunities occurs for a short period it is unlikely a CP will enter based on extant margins since it will recognise that prices will change to fully remove any arbitrage.
- We agree that competition will drive reduced costs. Entrants may well be able to lower overall costs by operating more efficiently that BT – this may come through many sources such as: consolidation of equipment; lower cost equipment; lower cost installation and repair; or innovations that allow lower cost e.g. improved fault monitoring
- Cost minimisation incentives on BT (in the active layer) will be stronger with dark fibre remedies than without. Although a charge control creates some cost minimisation incentives[15], these incentives are weakened by the fact that cost reductions are in time passed through in lower charges, and are not able to be retained by BT. In contrast, if dark fibre remedies are introduced the cost minimisation incentive will be 'higher powered' since the operator

[14] For instance, in A24.55 Ofcom suggests there may be come risk: "*this arbitrage risk appears to be lower for dark fibre*"; "*the risk to BT's common cost recovery (and ultimately, its investment incentives) is also likely to be more limited with dark fibre than could be the case with duct access*."

[15] BCMR May 2015 §4.29

will in effect retain the benefits of any cost reductions into perpetuity (whether through higher profits or higher volumes).

- We agree that there will be a significant cost saving (i.e. productive efficiency) resulting from the CP consolidating the equipment needed for terminating the Ethernet circuit with other customer premise equipment – see Figure A23.1. Ofcom estimates this as up to £60-120m for the 2017/18 volume of circuits. We note that this saving will effectively recur as equipment is replaced
- The introduction of dark fibre will result in less duplication of fixed cost overall.
  - Use of BT's dark fibre will result in some duplication of active layer costs. However, this is likely to be minor since the vast majority of active layer costs are variable e.g. electronics
  - There will be a reduction in fixed cost duplication in the infrastructure (duct/fibre) layer as CPs switch from using self-build to dark fibre (see §3.16 below). This duplication reduction in the infrastructure layer is likely to be large since duct/fibre have large fixed costs
  - The duplication reduction is more than likely to offset the duplication increase in the active layer

3.6 A particular form of productive inefficiency that dark fibre will end is the absurd current situation where it is lower cost (to a CP) to purchase 2 x 1G circuits rather than 1 10G circuit even though the underlying cost of 2 x 1G circuits is almost twice that of a 10G circuit[16]. Such a situation is unequivocally inefficient – more costs are incurred for a lower quality service. Any sensible regulatory structure should seek to eliminate such irrational and inefficient behaviour.

## 3.3 Innovation and active layer investment

3.7 We agree with Ofcom's view that there will be greater innovation as a result of dark fibre. Indeed this was succinctly summarised in Ofcom's recent strategic review:

> *Competition based on passive remedies (where the access seeker controls the active electronic elements) generally provides greater scope for product differentiation and innovation compared to competition based on active remedies.* [17]

3.8 Ofcom has rightly identified innovations that did not happen but could have occurred if dark fibre was available (see Annex 27).

3.9 We also agree that Ofcom does not needs to identify specific innovations that will occur as a result of passive remedies[18]. Rather it needs to show that there are potential innovations that *could* be brought to market earlier by introducing dark

[16] [✂ CONFIDENTIAL ✂]

[17] Strategic Review of Digital Communications July 2015 §9.19

[18] BCMR May 2015 §A23.87

fibre. Any reliance on specific innovations inevitably involve speculating on CPs' commercial strategies and market outcomes.

3.10 As a general matter allowing competitors to innovate (we refer to this as 'self-innovation') will unequivocally result in more and earlier innovation[19]:

- Through self-innovation rivals are able to gain first mover advantage from their innovations and so there will be stronger incentives to innovate. No CP is able to enjoy a first mover advantage when Openreach innovates since Openreach is obliged to provide access to the innovation at the same time to all CPs (under proper EOI obligations). Thus EOI weakens one of the key incentives to innovate
- Self-innovation avoids coordination and transaction costs (as between Openreach and CPs) thereby making more innovation viable
- Openreach may, for a variety of reasons, reject requested innovations that would have been pursued by competitors if they were able to self-innovate. For example: may not be positive business case for Openreach and/or BT Group; may not fit Openreach's operating model, systems or vendor capabilities; Openreach only wants to focus on large developments[20]; Openreach are resource constrained; Openreach is more risk averse (and arguably culturally resistant to change)
- Having competition for innovation will increase the pressure on Openreach to innovate more and more quickly – currently there is no penalty to not innovating

3.11 In respect of particular innovations Ofcom has focussed on technology innovations. There are other types of innovations and improvements that Ofcom appear to have overlooked:

- new pricing structures and pricing innovations[21] such as: usage based tariffs; burstable speeds; 'pre-upgrade'[22]; different contract terms; different minimum term; balance of connection and rental[23]. Ofcom says that some of these are not unique to passive remedies[24]. We disagree since using dark fibre (rather active) less of the cost structure is variable allowing CPs more flexibility in how they recover costs

[19] See TalkTalk response to CFI May 2014 §2.37

[20] for example, Openreach would not entertain a active product development that was only demanded for a few customers (since it has a large fixed cost for any development since a development might impact 60-70 systems – see BCMR May 2015 §A23.144) whereas a smaller provider with simpler systems would be able to do a 'right size' development

[21] See TalkTalk response to CFI May 2014 §2.35

[22] Where a customer is provided with a 10Gb circuit but charged for a period of time for a 1Gb circuit

[23] These become more possible since competitors incur the fixed cost of the electronics rather than a prescribed structure of charges by Openreach

[24] BCMR May 2015 §A23.90

- process and quality innovations[25] such as lower fault rate and/or more rapid repair of faults in active equipment through for instance: more reliable equipment; better monitoring and proactive maintenance; hot standby; better fault handling; more engineers; added resilience. These benefits could be significant since, according to BT[26], the majority of faults on active circuits occur in the active layer. These innovations could be supported through stronger SLAs and SLGs. Ofcom notes[27] that dark fibre remedies would not effectively address all of the quality concerns since most provisioning problems do not relate to the active layer. However, this ignores that the majority of faults occur in the active layer[28] and so significant quality benefits may happen here. Further, there will be *some* quality benefits in provisioning from introducing dark fibre remedies since provisioning of the active layer will be competitive. Therefore dark fibre will improve quality.

3.12 We note in Ofcom's discussion regarding applications for dark fibre[29] that Ofcom did not include the comments TalkTalk included in its response. For the record we suggested that dark fibre would initially be used for backhaul (given the easier implementation, higher initial margin and other reasons) but in time would be used for all Ethernet circuits.

## 3.4 Infrastructure investment

3.13 Ofcom rightly considers the impact of introducing dark fibre on investment in infrastructure (i.e. in duct/fibre). We consider there to be a number of mechanisms by which future infrastructure competition could be affected:

- Changed incentives for infrastructure investment by BT
- Changed incentives for investment by competitors (e.g. Virgin, City Fibre Holdings)
- Changes in perceived regulatory risk

3.14 We do not think there will be any negative impact on BT's infrastructure investment incentives as a result of introducing dark fibre. BT's duct/fibre investments will be utilised the same whether customers who purchase active services from BT today switch to purchasing dark fibre from BT. In practice BT's network may be used more as rivals switch from building their own infrastructure or using others' infrastructure to using BT's dark fibre.

3.15 Though not 'infrastructure' we note that BT's active layer investments will not be stranded since there is (a) very little sunk cost and (b) BT's investments will, to a

[25] see TalkTalk response to CFI May 2014 §2.35

[26] BT note in their response that 65% of reported faults are in the active layer (BT response §91)

[27] BCMR May 2015 §4.9

[28] BCMR May 2015 footnote 30

[29] BCMR May 2015 A23.210

large degree, be covered by contractual terms across their shorter asset life[30]. Furthermore, there will be no disincentive to invest in active in future (as BT suggest[31]) – in fact the incentive to invest will be enhanced since there will be competition at that layer.

3.16 Regarding infrastructure investment by competitors there will likely be an impact (versus a counterfactual where dark fibre is not introduced). There may be a variety of impacts which will reduce infrastructure investment by competitors including:

- Competitor infrastructure investors may choose to purchase dark fibre rather than 'self-building' their own duct/fibre since 'buy' rather than 'build' is commercially preferable (e.g. lower cost)
- CPs who currently purchase active or dark fibre products from a competitor to BT may switch to purchasing a dark fibre product from BT

3.17 Ofcom has argued that any dark fibre remedy should seek to limit the reduction in competitors investment incentives for self-build:

> *CPs such as Virgin and CityFibre are contesting BT's SMP in some parts of the leased lines markets by investing in such infrastructure, and we therefore consider it important to limit the extent to which any passive remedies we propose could undermine their incentives.*[32]

3.18 We disagree with Ofcom's analysis. We do not think Ofcom's objective should be to encourage (any) competitor infrastructure investment *per se* – rather Ofcom's objective should aim to encourage efficient infrastructure investment. Indeed Ofcom seem to accept the this objective to only encourage efficient investment elsewhere in its consultations:

> *Promoting and safeguarding competition is an important aspect of our regulation in business connectivity markets. Effective competition can lead to improvements in economic efficiency, through dynamic efficiency, and benefits to citizens and consumers. However, not all competition leads to such improvements in economic efficiency. For example, where competition leads to inefficient duplication of investment, it can reduce economic efficiency. We consider that it is appropriate to promote and safeguard competition on its merits. By basing BT's regulated charges on the basis of BT's own costs of provision, we encourage competition to arise where other operators are more efficient than BT in providing those services. This is consistent with competition on its merits*[33]

3.19 Therefore, Ofcom needs to assess whether a dark fibre remedy will limit efficient investment.

3.20 Provided that the price of dark fibre is above LRIC (which in all cases it would be) then the investment that will be lost as a result of introducing dark fibre will, by

[30] Ofcom suggest (BMCR May 2015 §A24.43) that there may be stranding. This might be the case for duct access but is not the case for dark fibre.

[31] BCMR May 2015 §A24.71

[32] BCMR May 2015 §7.61

[33] Leased Line Charge Control June 2015 §4.27

definition be inefficient investment[34]. Thus any reduction in investment resulting from introducing dark fibre will be a reduction in inefficient investment. Ofcom rightly highlight that a dark fibre price that is 'too high' can also lead to inefficient infrastructure build.

> *The absolute price level could distort build/buy decisions of CPs, with a passive price which is "too high" potentially leading to inefficient infrastructure build, while a passive price which is "too low" (for example, below cost) could lead to inefficient use of passives (as well as risk BT's common cost recovery, as discussed above). Both of these could lead to productive inefficiencies in the relevant markets.* [35]

3.21 Non-supply of dark fibre is effectively the same as too high a price. This it follows, on Ofcom's own analysis, that non-supply of dark fibre will lead to inefficient infrastructure build.

3.22 Thus introducing dark fibre will not result in a reduction in efficient investment – rather it will result in an improvement in productive efficiency through reducing inefficient investment (provided dark fibre prices are above LRIC). If Ofcom continues to consider that dark fibre will have a negative impact on efficient investment then we would encourage it to clearly lay out its reasoning as to why this should be the case.

3.23 In the longer term, dark fibre could incentivise a greater level of efficient infrastructure investment (as well as in the short / medium term reducing inefficient investment). This is because dark fibre will allow competitors to build more scale which will make competitive infrastructure investment more viable.

3.24 We do not think that there are material innovation gains from added infrastructure investment (rather than dark fibre) since there is minimal innovation in the duct/fibre layer. Ofcom highlighted this in its recent strategic review

> *… the dynamic efficiency benefits from competition based on passive remedies may be similar to those realised from full end-to-end competition. This is because there may be small additional dynamic efficiency benefits associated with some passive elements such as civil infrastructure (e.g. ducts and poles).* [36]

3.25 Lastly we note that the degree of lost rival infrastructure investment is likely to be small since there is anyway little new infrastructure investment to provide leased lines as indicated by the limited change in infrastructure since the last BCMR.

3.26 The third impact on investment is whether the change in regulation will increase perceived future risk as a result of potential investors believing that regulation may change in future that could strand future investments. We do not think that this is realistic since a change in the regulatory approach to introduce dark fibre products

[34] In effect today, without a dark fibre option build/buy signals are distorted and competitors are induced to make duplicative and inefficient investments where in practice BT could provide dark fibre at a lower cost.

[35] BCMR May 2015 §24.177

[36] Strategic Review of Digital Communications July 2015 §9.19

has been a realistic and foreseeable possibility for many years and so could have been factored into investment plans of BT and other infrastructure investors:

- It has always been within Ofcom's powers to introduce such remedies (provided they were objectively justified)
- The recent Civil Infrastructure Directive (CID) will mean that infrastructure sharing is required.
- Ofcom has never indicated that it would not introduce such remedies.
- Passive inputs have been introduced in other markets. For example:
  - duct/pole access (PIA) was imposed in WLA in UK in 2010
  - duct access and dark fibre has been imposed in several other European countries (e.g. Spain, Portugal, Italy, Austria, France).

3.27 BT and other impacted operators (such as Virgin, Vodafone, COLT, CFH) would have been aware for five to ten years that introducing regulated dark fibre access at a future BCMR is a possibility.

3.28 Therefore we do not consider that a change in regulation to introduce dark fibre should – given the specifics of this case – be perceived as unforeseen and therefore create future regulatory uncertainty that will weaken future investment incentives.

3.29 In summary considering the multiple effects on infrastructure investment, we do not think that there will be a negative impact on *efficient* infrastructure investment – in fact dark fibre will reduce inefficient infrastructure investment and so be beneficial.

## 3.5 Distributional impacts

3.30 Ofcom raises a number of 'concerns' that result from price rebalancing which will mean that some prices will go up and some down and some customers will pay more and some less.

3.31 The first and important point to make is that price rebalancing is not *per se* a bad thing – rather it is just a change.

3.32 Price rebalancing could though have negative impacts if it resulted in:

- Allocative inefficiency
- Prices increases for particularly important or vulnerable customer groups
- Significant and unforeseeable price increases for customers

3.33 We discuss each of these below.

### 3.5.1 *Allocative efficiency*

3.34 Allocative efficiency can change as a result of pricing rebalancing. Essentially, output can be increased by recovering a greater proportion of common cost from the less

price elastic products (known as Ramsey pricing) and so a move towards from Ramsey prices can increase allocative efficiency or conversely a move away from Ramsey prices can decrease efficiency.

3.35 Currently there is a very steep price gradient – prices of 10G circuits are over 5 times[37] those of 10M/100M even though they have very similar costs. If dark fibre was introduced then it would flatten this gradient. Ofcom says it does not know whether the current pricing gradient is efficient:

> *Overall, we do not seek to take a view as to whether the current active pricing structure is definitively "efficient" or otherwise, not least given it would likely be a very complex process to determine this (given the detailed information and data that would be required, as well as the complex range of factors that may be at play which would need disentangling).*

3.36 Ofcom is right to say this since it is highly unlikely that current prices optimises output and efficiency. There are a number of reasons for this:

- Setting efficient Ramsey pricing would require detailed data about demand functions at the consumer level (in leased lines, mobile and broadband) and about the link between wholesale prices and retail prices in a market where only some operators purchase BT Ethernet inputs. Even if this data was available the calculations required to determine efficient prices would be complex as Ofcom itself recognises
- BT has not suggested it has completed this analysis or presented any evidence to suggest that the current price structure (or even a less steep gradient) is efficient – even though it would be in their interests to do so if it had actually done this analysis. The high watermark of their rhetoric is that 'flexibility is good'
- BT have other clear reasons to set a steep price gradient, particularly, since it allows a higher price for (non-price regulated) 10G products. It requires no data or any analysis to identify that a steep price gradient increase profits due to this effect

3.37 Despite this lack of evidence about the efficiency (or inefficiency) of the current structure Ofcom proceed to suggest that rebalancing away from this steep gradient would reduce efficiency:

> *"there may be a loss of allocative efficiency if the (relatively) higher prices for low bandwidth products caused total output to fall[38].*

3.38 In a similar vein Ofcom repeatedly describes rebalancing as a negative impact that it has concerns about and that it should minimise the impact of rebalancing[39].

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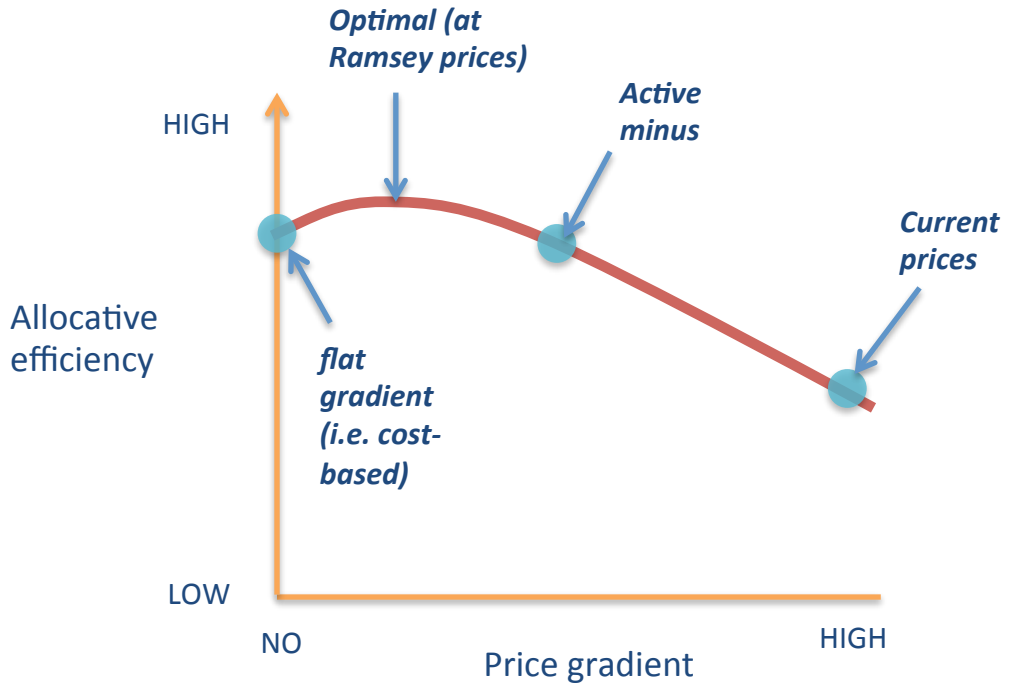
[37] Based on data for AISBO and MISBO in non-WECLA from RFS 2015 RFS. We can provide Ofcom these calculations

[38] BCMR May 2015 §7.68

[39] See for example Table 7.1 which talks about 'concerns' and BCMR §7.69, §9.88 and LLCC §6.171, §A24.171 where Ofcom discusses desire to minimise the impact. Also Ofcom frequently refers to the impacts as 'risks' e.g. §1.31

3.39 We think that Ofcom is misplaced in its view that rebalancing will reduce allocative efficiency and that as a consequence Ofcom should seek to minimise the amount of rebalancing. The exhibit below illustrates how allocative efficiency will change as the price gradient changes – assuming the price elasticity is higher for low bandwidth products. At some gradient an optimal point (i.e. Ramsey prices) is reached and either side of this allocative efficiency will decline.

*Allocative efficiency at different level of price gradient*




3.40 What Ofcom however does not know is where the different pricing structures fit on this curve. The current pricing structure is almost certainly some way beyond the optimum – for the current structure to be optimal would require that the price elasticity of demand for 10M/100M circuits at the retail level to be about 16 times that of a 10G circuit[40]. No evidence has been advanced to suggest that this is even plausible. As we point out above the likely reason for such a steep price gradient is that it allows BT higher profits due to, in particular, allowing it to set higher prices for 10G services which are unregulated.

3.41 Therefore, we think Ofcom is incorrect to conclude that there will be a negative allocative efficiency impact from introducing dark fibre. We think it is plausible that there will be an increase in allocative efficiency resulting from introducing dark fibre. Probably the most robust conclusion that Ofcom can reach is that the impact is unclear.

[40] the average common cost recovery on a 10G circuit is 16 times that form a 10M/100M circuit (based on data for AISBO and MISBO in non-WECLA from RFS 2015 RFS. We can provide Ofcom these calculations). For prices to be optimal Ramsey prices the common cost recovery is the inverse of the price elasticity

3.42 Another allocative efficiency benefit will be that customers will make better and more efficient choices of bandwidth. In particular, broadband providers (based on LLU) will be able to offer more attractive products by using higher bandwidths. Broadband which is experiencing bandwidth demand increases of about 50% a year to serve increasing need for TV over broadband and other bandwidth intensive services is currently retarded by the current Ethernet pricing structure which artificially deters capacity upgrades even though the underlying cost is low.

### 3.5.2 *Impact on different customers*

3.43 Ofcom indicates that there may be a concern if different customer segments are effected in different ways:

> *Although distributional impacts are not necessarily a concern per se, nonetheless there may be concerns if dark fibre resulted in a substantial shift in the pattern of BT's cost recovery from large enterprises, MNOs and LLU operators, which tend to use higher bandwidth products, to smaller enterprises, which tend to use lower bandwidth ones*[41].

3.44 We do not understand this concern unless there were some specific and identified economic or social benefit from certain customer segments or groups having lower prices than others – it does not appear that Ofcom has identified any such benefit. Even if this were true we do not consider that it is the role of *ex ante* regulation to deliver this. Rather it can and should be delivered through other interventions such as some form of public subsidy (like the BDUK voucher scheme) or a universal service obligation. Furthermore, it is not correct to say that smaller enterprises will necessarily face higher costs. Smaller enterprises purchase mobile services (which rely on high bandwidth mobile backhaul) and broadband (which relies on high bandwidth LLU backhaul) and so will benefit from lower high bandwidth wholesale prices. Indeed as smaller enterprises rarely purchase leased lines they will almost all benefit from rebalancing due to falls in mobile and broadband prices.

### 3.5.3 *Price increases*

3.45 Price increases on customers can cause a concern if they are unforeseeable and very significant. However, the price increases that might result from rebalancing are small (may be 10% to 20%) since there is a forecast overall 9% one-off plus 10% annual fall in Ethernet prices. Furthermore they are foreseeable since they are likely to come in 2017 onwards (assuming dark fibre works) and could be predicted at least from March 2016.

## 3.6 Summary of key economic impacts

3.46 The table below provides a summary of the various economic impacts of introducing dark fibre. In our view introducing dark fibre is unequivocally positive for consumers.

[41] BCMR May 2015 §7.68

*Efficiency impacts of dark fibre*

| Area | Impact | Description |
|---|---|---|
| Productive efficiency (active layer) | ✔✔✔ | Will introduce competition in this layer allowing lower cost operators to enter and increasing BT's efficiency incentives. Arbitrage (and inefficient entry) will not occur as BT will rebalance its active prices |
| Productive efficiency (infrastructure layer) | ✔ | Will reduce inefficient investment |
| Dynamic efficiency (active) | ✔✔✔ | Competition and entry will encourage both innovation and investment by all market participants. Will help ensure better quality |
| Dynamic efficiency (infrastructure) | ✔ | Will result in less investment and innovation though lost investment would have been inefficient. Little lost innovation<br>No change in incentives for BT's investment |
| Allocative efficiency | **?** | Could be positive or negative – no robust evidence either way |
| Other distributional impacts | **?** | No evidence that price rebalancing will be harmful or beneficial |

3.47 The key aspects of the assessment are:

- Productive and dynamic efficiency gains in the active layer are strong and clear – and Ofcom agrees
- Contrary to Ofcom's view we see there are productive and dynamic efficiency benefits in the infrastructure layer since inefficient investment will be reduced.
- On allocative efficiency, we consider that there is no robust evidence that introducing dark fibre and consequent rebalancing will increase or decrease efficiency. In any case, typically Ofcom places little weight on allocative efficiency (see §4.50 below)

## 3.7 Other impacts

3.48 We describe below a number of other benefits and claimed dis-benefits of dark fibre.

### 3.7.1 *Benefits*

3.49 Dark fibre will reduce the opportunity for BT to engage in anti-competitive discrimination such as:

- Price discrimination through focusing price rises in baskets on products used more by external customers and/or where competition is weak[42]. With dark

[42] Ofcom identified a good example of this where BT had relatively inflated the price of EAD compared to EAD-LA since competitors purchased proportionately more EAD. BCMT May 2015 §10.18

fibre the ability for such discrimination will be reduced since for instance, BT could not discriminate by relatively raising the price of 10M services if competitors purchased relatively more of them

- Non-price discrimination whereby Openreach prioritises developments that favour BT's downstream divisions. If dark fibre is introduced (and fit for purpose) Openreach's incentive to prioritise developments for the rest of BT will diminish since if it does so it will lose market share. Discrimination will become more important if BT acquires EE since BT will also have incentives to prioritise mobile backhaul developments that are required by EE. It is notable that the CMA have included the mobile backhaul market as one where they consider there may be harm as a result of the merger[43]

3.50 Though dark fibre will increase the overall regulatory burden in the short term introducing dark fibre has the potential in the medium- to long-term to reduce the overall costs of regulation if active products can be deregulated since the cost of regulating (just) dark fibre will be less than the cost of regulating (just) active.

3.51 Regulation of active products (compared to dark fibre) is complex and can increase scope for regulatory error and failure. The greater innovation and complexity in active services results in Ofcom being involved in more detailed *ex ante* regulation and can lead to complex disputes. For example:

- charge control design is complicated by the inclusion or exclusion of services which are partial substitutes on both the supply and demand side in the coverage of the charge control
- The forecasting of revenues and costs is also challenging due to the migration between services and the introduction of new services. Dark fibre volumes will be more predictable
- There is a need to identify and estimate costs for the MEA which might not reflect the current products

3.52 In contrast, dark fibre, which does not include active electronics and has a limited number of variants, is less complex and so is less costly to design and enforce and less prone to error and regulatory failure. It will also be more stable and predictable.

3.53 Ofcom suggest that the transition from CPs using active to a situation where they predominantly use dark fibre may take longer than the transition from WBA to LLU since broadband had a relatively higher level of growth[44]. We think that the opposite might be true since LLU take-up was delayed by the time it took to unbundle exchanges – about 6-7 years after the (re)launch of LLU in 2005. In the case of dark fibre the exchanges already have the infrastructure installed to allow use of dark fibre almost immediately.

[43] CMA ANTICIPATED ACQUISITION BY BT GROUP PLC OF EE LIMITED, Statement of issues, 17 July 2015

[44] BCMR May 2015 §A23.194

### 3.7.2 *Claimed disadvantages*

3.54 Below we discuss a number of the claimed disadvantages or dis-benefits of introducing dark fibre. In most cases we think they are incorrect.

3.55 In a number of places dark fibre gets tarnished by concerns that are only relevant for duct access e.g. arbitrage risk and distance arbitrage (for example see Table 7.1 A26.130, Table A26.5). Ofcom must not attribute problems to dark fibre that are only relevant to duct access. It can do this by fully separating its assessment of the two different remedies rather than assessing the different remedies together – the two remedies are very different in their impacts and so it is confusing to assess them together.

3.56 BT argued that dark fibre would lead to cherry picking: "*BT considered that the introduction of passive access products could lead to 'cherry picking' whereby CPs would use passive remedies to only offer more lucrative services*"[45]. It is unclear what BT mean by cherry picking. To the degree to which they mean arbitrage then this will not occur since BT will rebalance its prices (as discussed above). To the degree to which this means CPs targeting higher margin customers (once rebalancing has occurred) we think BT has no legitimate complaint. This form of competitive entry is a natural feature of a market economy and it is efficient for firms to seek to attract higher margin customers:

- BT cherry picks – it has not rolled out FTTC everywhere in the country (absent substantial subsidies from government) since it is not 'lucrative' elsewhere. Similarly it rolled out broadband first in more 'lucrative' areas
- Virgin Media cherry picks – it is only rolling out its DOCSIS network to about 55% of the country presumably because it is less lucrative elsewhere
- Supermarkets cherry pick – they only open stores in high population and presumably more profitable areas

3.57 Therefore, we cannot understand BT's complaint about cherry picking – cherry picking could only be a concern when the incumbent is constrained in its ability to respond to arbitrage based competition. That is not the case here.

3.58 BT also complains that smaller companies will be disadvantaged by this regulation since only the larger firms will be able to consume dark fibre[46]. We think this concern is misplaced for a number of reasons:

- Smaller firms will benefit from this regulation since they will be able to purchase wholesale Ethernet products from a range of providers rather than having to rely on Openreach – this competition will ensure they enjoy more innovation, higher quality and lower prices. This same model has developed in broadband where, for example, TalkTalk purchase MPF from Openreach and sell a wholesale broadband products to a range of wholesale partners and resellers. This is both good for smaller players and for competition

[45] BCMR May 2015 §A24.9

[46] BCMR May 2015 §A23.94

- We do not see any material consolidation or impact on the market structure. In any case, the objective of regulation is not to maintain a particular market structure through a 'one-size fits all' set of remedies (or lowest common denominator) but to meet consumer interests

# 4 Dark fibre pricing

4.1 Ofcom considers whether, and if so how, dark fibre prices should be regulated. BT has SMP and so the ability and incentive to refuse access and/or set excessive prices[47]. Therefore, in our view Ofcom needs to regulate prices in order to ensure that consumers' interests are met.

4.2 The standard approach to regulating wholesale prices is to base wholesale prices on cost. Instead Ofcom has proposed to set dark fibre prices through a novel approach whereby the price is based on the 1Gbps Ethernet price less the active layer costs (called active minus). In this section we discuss the relative merits of the cost-based and active minus approaches.

## 4.1 General concerns with active minus

4.3 The standard and orthodox approach to setting to the wholesale charges for important regulated products is cost-based whereby charges are set to align with costs (normally based on FAC). However for dark fibre Ofcom has adopted a novel and untested approach whereby the wholesale dark fibre price is set as the price of 1G less the cost of the active layer. This is referred to as 'active-minus'. We strongly disagree with this approach. We think that if Ofcom introduced this it would severely restrict the benefits that dark fibre will deliver to consumers (versus a counterfactual of cost-based pricing) and it will also burden Ofcom and stakeholders with unnecessary administrative effort in developing and managing this complex regulation.

4.4 The ultimate effect of this novel and untested approach is that the dark fibre price will be substantially above underlying costs (i.e. wholesale dark fibre prices will be excessive). We estimate cost-based rental price[48] would be about £1,400 per year (in 2017/18) whereas the active minus price[49] will be £2,500 or more even after reflecting the substantial price reductions in the Ethernet basket and the sub-cap on 1Gbps.

[47] BCMR May 2015 §9.33

[48] estimated average cost of duct/fibre derived from RFS 2015 for AISBO and MISBO in non-WECLA forecast forward to 2017/18 assuming 5% decline in unit costs in line with efficiency assumption

[49] Since active prices in aggregate are currently above cost the active minus price will be inflated. To overcome this we have compared prices in the last year of the charge control (starting April 2018) when active prices should be aligned with cost. This is a reasonable comparison to make since much dark fibre will not be used in volume until 2018. For the purposes of projecting the dark fibre price we have assumed: the cost of duct/fibre falls by 5% pa from cost today (based on RFS14) in line with efficiency assumption; the price of 1G falls at the same rate as the basket; and, the cost of the active layer falls at 7% pa form £750.

4.5 Ofcom's proposal to deliberately set an artificially high price will foreclose competitive entry, limit the extent of the market that is contestable, restrict entry and constrain the use of dark fibre:

- it will not be commercially viable for CPs to use dark fibre to provide 10M and 100M Ethernet circuits since the dark fibre price will be above BT's Ethernet price - £2,500 dark fibre price versus £1,600 for EAD 100M. This is a very material constraint since about 65% of circuits in 2017/18 are 10M and 100M. Ofcom accepts this
- It may also restrict the efficient use of dark fibre for 1G and 10G circuits since there will be some scale economies involved to use dark fibre (for instance fixed costs in developing systems and own active layer) and under Ofcom's approach these fixed costs will only be able to be recovered over a much small number of circuits[50]. Ofcom also accepts this [51]. If 1Gbps circuits are not effectively contestable then only 5% of the market will be open to competition

4.6 This constraint will severely limit the productive efficiency, innovation, quality and competition benefits that dark fibre can deliver compared to a cost-based pricing approach. We discuss the economic impacts in section 4.3 below. In the next section, we discuss how (in)consistent using active minus is with Ofcom's stated objectives.

## 4.2 Consistency of active minus with Ofcom's objectives

4.7 The use of active minus, the resulting excessive price and constraint on use constraint is inconsistent with many of Ofcom's own stated objectives and principles. Some examples are highlighted below.

4.8 One of Ofcom's main statutory duties is to promote competition – yet Ofcom's use of active minus prices (versus cost based) clearly and significantly restricts competition:

> *It shall be the principal duty of Ofcom, in carrying out their functions; … to further the interests of consumers in relevant markets, where appropriate by promoting competition*[52]

4.9 Ofcom says it does not wish (for good reason) to limit the applications to which dark fibre is used. Yet the proposed active minus approach limits the applications that can be used with dark fibre:

> *We therefore do not consider it appropriate to restrict the use of the remedy to any specific applications or products in the wholesale leased lines markets. As we set out in Annex 23, the benefits are likely to be realised across a range of applications and any undue restrictions in product use may reduce the benefits of passive access. In particular,*

[50] See Frontier report for PAG s2.1.2 for more explanation on this point

[51] BCMR May 2015 §9.21

[52] Communications Act Section 3(1)

*limiting the allowed use may prevent CPs from maximising the scale and scope efficiencies of their investment.* [53]

4.10 Ofcom's says that its objective is to prevent excessive prices yet active minus allows BT to price dark fibre significantly above underlying cost:

*[We are concerned] that, in the absence of appropriate ex ante regulation, there is a relevant risk of adverse effects arising from BT, and KCOM, fixing and maintaining some or all prices at an excessively high level or imposing a price squeeze.* [54]

*In selecting the form and level of price controls, we seek to balance a number of regulatory objectives. These included, among other things […] preventing BT from setting excessive charges*[55]

4.11 Active minus will allow BT to, yet again, earn excessive profits from the BCMR market. We do not understand why Ofcom would want to allow this to occur.

4.12 Ofcom says that it wishes to ensure competition on the merits – yet active minus pricing does not allow competition on the merits for the majority of the market:

*Promoting and safeguarding competition is an important aspect of our regulation in business connectivity markets. Effective competition can lead to improvements in economic efficiency, through dynamic efficiency, and benefits to citizens and consumers. However, not all competition leads to such improvements in economic efficiency. For example, where competition leads to inefficient duplication of investment, it can reduce economic efficiency. We consider that it is appropriate to promote and safeguard competition on its merits. By basing BT's regulated charges on the basis of BT's own costs of provision, we encourage competition to arise where other operators are more efficient than BT in providing those services. This is consistent with competition on its merits*[56]

4.13 Ofcom says that it does not wish to intentionally favour active based competition over dark fibre based competition or visa versa by ensuring prices reflect LRIC cost differences. Yet its active minus approach does precisely what it says it wants to avoid by setting a price difference less than the LRIC cost differential (for 10M and 100M services):

*In light of the above, we do not consider that there is a prima facie case for intentionally favouring competition based on dark fibre over that based on BT active products, or vice versa. In particular, we consider that both productive and dynamic efficiency point to pricing being set to reflect LRIC differentials.* [57]

4.14 Ofcom's says that its aim is to replicate a competitive market outcome. In a competitive market prices would reflect cost (not the price of a particular product less the active costs):

[53] BCMR May 2015 §7.11

[54] BCMR May 2015 §9.24

[55] BCMR May 2015 §8.171

[56] Leased Line Charge Control June 2015 §4.27

[57] Leased Line Charge Control June 2015 §8.17

*The proposed obligation would seek to replicate the outcome we would expect in an effectively competitive market*[58]

## 4.3 Economic impacts of using active minus

4.15 Below we describe the economic efficiency impacts of Ofcom's proposal to use active minus to set dark fibre prices.

### 4.3.1 *Productive efficiency*

4.16 Under cost-based pricing the productive efficiency benefits in the active layer will flow from all circuits. Under active minus pricing, dark fibre will only be viable for a third (or possibly less) of circuits and thus the productive efficiency benefits will be far lower.

4.17 Under cost-based pricing there will be less competition and competitive investment at the infrastructure layer. However, this lost investment will be inefficient investment and therefore cost-based pricing will reduce productive inefficiencies. Effectively under active minus the dark fibre price will be further above LRIC (than using cost-based) it will induce inefficient infrastructure as competitors would only build their own alternative infrastructure even though it was at a higher cost than BT.

4.18 The concept that too high a price can result in inefficient upstream investment is articulated elsewhere in Ofcom's consultation.

- Ofcom recognises that 'too low' dark fibre prices may result in an inefficiently low level of competitor infrastructure investment – the corollary of this is that 'too high' dark fibre prices may result in an inefficiently high level of competitor infrastructure investment[59].

  *Further, if the price of regulated access is "too low" relative to self-build costs (i.e. it is not cost-reflective), it may undermine incentives to self-build in areas where it would have been commercially viable to do so and where it would offer additional benefits over and above the passive remedy. As a result, it may lead to higher levels of take-up of regulated services and lower infrastructure investment than may be efficient.* [60]

[58] BCMR May 2015 §9.32

[59] Ofcom made a similar point in reference to active versus dark fibre: "*We consider it important to incentivise CPs to make efficient choices between active services and dark fibre, so as to maximise productive efficiency. We propose that this would be best achieved by requiring that the differential in charges between these products reflect those costs that BT avoids in the long run by providing a dark fibre rather than an active product i.e. the LRIC of the 'active' elements. A differential above this level may incentivise inefficient entry, i.e. downstream CPs using the dark fibre input even though their incremental active costs are greater than those of BT. A differential below LRIC may prevent downstream firms that are at least as efficient as BT from making an efficient choice to purchase the dark fibre input*." Leased Line Charge Control June 2015 §8.12

[60] BCMR May 2015 §A24.88

- Ofcom recognise that efficiency of build/buy decisions will be driven by the price difference between the options (and thus if price difference too high it will result in inefficiency):

> *… the relativity between self-build costs and regulated passive pricing will affect the efficiency of the build-buy decision of CPs as well as the likely scale and scope of take-up of any passive remedy (and therefore the downstream competitive conditions faced by any CP with its own infrastructure)*[61].

### 4.3.2 *Dynamic efficiency*

4.19 Under cost-based pricing the dynamic efficiency benefits in the active layer (i.e. greater efficient investment and innovation) will flow from all circuits. Under active minus pricing, dark fibre use will be restricted to a third (or possibly less) of circuits and thus the dynamic efficiency benefits will be far lower.

4.20 Under cost-based pricing there will be less competition and competitive investment at the infrastructure layer. However, this lost investment will be inefficient investment and therefore cost-based pricing will reduce dynamic inefficiencies. Ofcom seem to have reached the wrong conclusion about investment since it has mistakenly set itself a policy objective to reduce negative impacts on infrastructure providers (whether or not the impact was an efficient or inefficient one):

> *… this decision also reflects a policy objective of preserving to some extent the bandwidth gradient, reducing the potential negative impacts on competing infrastructure providers and on the purchasers of low bandwidth leased lines.* [62]

4.21 There will be no material change[63] in BT infrastructure investment and innovation incentives as a result of using cost based pricing – for instance it will still be able to fully recover its common costs.

4.22 The loss in innovation in the infrastructure layer as a result of cast based prices will be marginal since there is limited innovation in duct/fibre – the vast majority of innovation occurs in the active layer.

4.23 There will be no change in BT infrastructure investment and innovation incentives as a result of using cost based pricing – for instance it will still be able to fully recover its common costs. Under active minus BT will be able to over-recover its costs possibly leading to over-investment.

4.24 A key driver of investment is the risk that potential investors (at all levels in the value chain) face. Cost-based pricing will provide a stable and predictable environment thereby reducing investment risk. By contrast, active minus will create an unstable and unpredictable environment as a result of a number of factors:

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[61] BCMR May 2015 §24.88

[62] BCMR May 2015 §26.151

[63] Arguably introducing dark fibre will reduce inefficient (over-)investment

- The prices will not be known in advance and will be subject to gaming creating risk for investors that the dark fibre price will increase
- BT may game other aspects of the regulatory regime (e.g. by introducing new products to circumvent the regulation) which could result in entrants using dark fibre being margin squeezed or being able to compete on a level playing field
- It will be very difficult for investors to predict the regulatory environment in the longer term. For instance, the choice of 1Gbps as the reference product today is ultimately an arbitrary choice. What will happen in the next review if 10Gbps volumes increase substantially or 100Gbps products are introduced – will the reference product move to 10Gbps and the dark fibre price increase?

#### 4.3.3 *Allocative efficiency*

4.25 Ofcom's appears to favour the active-minus approach principally because it enables BT to partially maintain its current tariff gradient and reduce rebalancing[64]. For example

> *… this decision also reflects a policy objective of preserving to some extent the bandwidth gradient, reducing the potential negative impacts on … the purchasers of low bandwidth leased lines.* [65]

4.26 Less rebalancing, Ofcom suggests, will be more allocatively efficient.

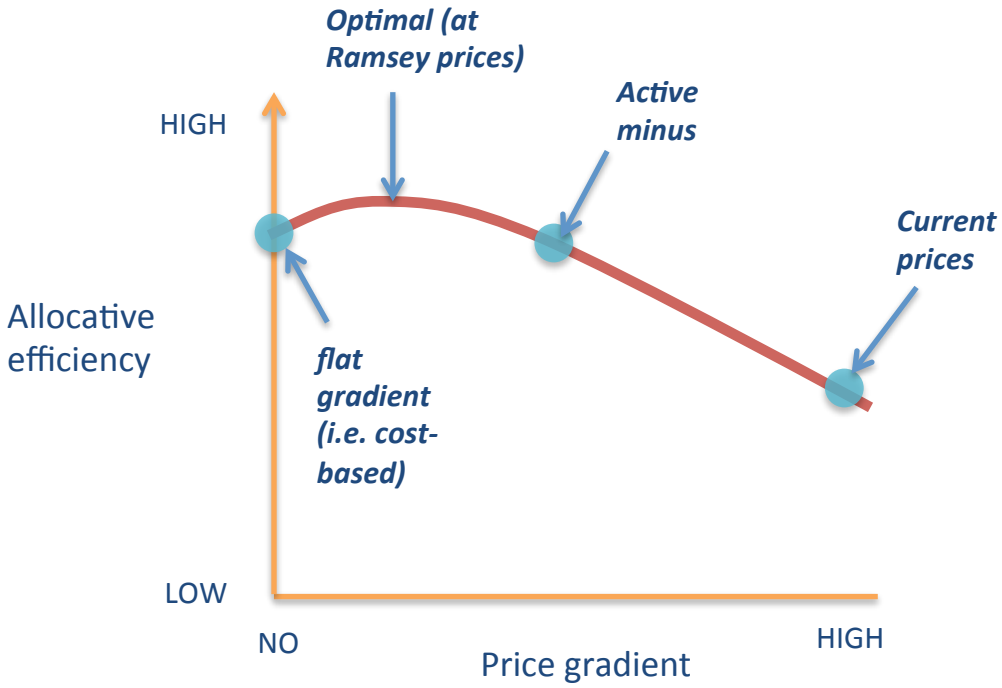
4.27 We think Ofcom is mistaken to conclude that the greater level of rebalancing resulting from cost-based pricing will reduce allocative efficiency.

4.28 The diagram below shows the allocative efficiency of different price structures – assuming that price elasticity is higher for lower bandwidths. It is necessarily illustrative since it is unclear where different models sit on the curve – whilst cost-based pricing sits to the left of the optimal point (since it results in no gradient) it is unclear where active minus sits.

[64] BCMR May 2015 §A26.145

[65] BCMR May 2015 §26.151

*Allocative efficiency at different level of price gradient*




4.29 Ofcom has provided no evidence that the pricing under active minus will be any more allocatively efficient than under cost-based. In fact, we think it is plausible that there will be an increase in allocative efficiency resulting from cost-based pricing . Probably the most robust conclusion that Ofcom can reach is that the impact is unclear.

## 4.4 Implementation issues of using active minus

4.30 In the section below we discuss implementation issues with active minus including those discussed by Ofcom.

### 4.4.1 *Approach to deriving cost-based price*

4.31 Ofcom's assessment of cost-based pricing appears to proceed on the basis that the price will be derived using a bottom up model[66]. Ofcom then goes on to note that this approach may give rise to pricing inconsistency between dark fibre and active products (and so potential arbitrage).

4.32 However, Ofcom's approach is unnecessary and ill-advised. The best approach to derive a cost-based dark fibre price is to use the same FAC model and data that is used to set the Ethernet charge control (i.e. top down). This will be both easier than

[66] BCMR May 2015 §A26.130

a bottom-up model (since the data and model already exists) and will also ensure that prices are compatible.

4.33 We see no benefit to using a bottom-up model and Ofcom has provided no explanation as to what the benefit is. Thus we assess active minus and cost based on the basis that a top down model is used to derive cost based prices.

### 4.4.2 *Compatibility with active prices*

4.34 Ofcom assesses the compatibility of the dark fibre price with active prices under the two price approaches. We are not fully sure what Ofcom is addressing. The section is titled "*Compatibility with active price structure/risk of arbitrage*". However, the question of arbitrage and inefficient entry is addressed in Ofcom's analysis in productive efficiency. Ofcom also suggest the good compatibility would a low level of rebalancing (see below) – yet this issue is picked up in Ofcom allocative efficiency assessment.

> *In this section we consider the extent to which the pricing approach would be able to maintain a good level of compatibility with the current structure of active prices. A low level of compatibility implies the likelihood of a significant change being needed in the structure of active prices and pattern of cost recovery whereas a high level of compatibility is likely to result in relatively minimal impacts on the active price structure currently in the UK leased line market.* [67]

4.35 We summarise below our view on arbitrage and rebalancing.

- There will be no material arbitrage resulting from dark fibre at cost-based prices since BT will rebalance
- Whilst rebalancing implies some prices increase (and some decreases) there is no inherent harm that results – it is merely a change. There is no reason for Ofcom to prefer a less change scenario
- Rebalancing is not a negative welfare effect. It is plausible that rebalancing will improve allocative efficiency

4.36 Given that BT will rebalance its active prices as a result of dark fibre being introduced there will generally be compatibility between dark fibre and active prices. However, given the difference in the way the active minus price and a cost-based price are derived then there could be small differences in the dark fibre and active price compatibility. We discuss these below.

4.37 To ensure efficient use of dark fibre and active products the price difference should be close to the actual LRIC cost difference[68].

4.38 Using a top-down model the dark fibre and active prices price difference will be equal to forecast the FAC cost difference. This will be close to LRIC since the

[67] BCMR May 2015 §A26.128

[68] For example, see BCMR May 2015 §24.177 which discusses pricing of passive which is the same concept.

LRIC:FAC ratio is above 90%[69]. If Ofcom so wished it could in fact using its top down model to set the price difference to equal the forecast LRIC cost difference (it did this when it set MPF and WLR prices).

4.39 Under an active minus approach the price difference (for 1Gbps) will be based on a lagging actual LRIC cost estimate.

4.40 The optimal price difference would be actual LRIC. In practice, neither pricing approach will set the price difference at actual LRIC – both have disadvantages and there is probably little to choose between the two methods:

- Cost-based uses forecast FAC or LRIC rather than actual LRIC which means forecast error could lead to a divergence between forecast LRIC and actual LRIC. However, since the forecast period is just three years the impact is likely to be minimal
- Active minus uses BT's lagging actual LRIC estimate. Thus it is not optimal since (a) it is a lagging figure and (b) it is susceptible to gaming

4.41 Ofcom also appears concerned[70] that a cost based approach may be incompatible with the active pricing approach in the case that the active price was set to equal cost at the outset, rather than as a glide path. Given that the dark fibre remedy would not be implemented until year 2 of the charge control period, by which time active prices should have moved closer to costs, this is unlikely to be a significant effect. In year 3 of the charge control since by then prices would be aligned with forecast costs. CPs are unlikely to invest in active equipment on the basis of a slightly elevated margin for a single year. To the degree that this is a valid concern, it could be addressed by applying a glide path to the cost-based dark fibre prices to ensure the appropriate price difference.

### 4.4.3 *Burden on stakeholders*

4.42 The burden on Ofcom, BT and CPs of the active minus approach will be greater than under the cost-based approach.

4.43 A cost-based approach is relatively straightforward to implement since it can be based on the same FAC model used to set the Ethernet charge control (as described above) and also requires very little on-going monitoring and management. In contrast, an active minus approach will require a range of additional activities such as:

- Developing and issuing guidance on derivation of active layer costs
- Imposing a sub-cap on 1Gbps EAD in order to limit gaming by BT. This will reduce BT's commercial flexibility (albeit given Ofcom's active-minus proposal wholly necessary)

[69] The AVEs and CVEs are based on LRIC:FAC ratios. Ofcom gives the AVEs/CVEs for Ethernet electronics CO485 (LLCC June 2015 Table 8.30) as AVE (0.96), pay CE (0.89) and non-pay CVE (0.90)

[70] BCMR May 2015 §A26.130

- Requirement on BT to calculate active layer costs each year
- Ofcom monitoring and assessing whether BT's estimate of active layer costs is reasonable
- Possible disputes regarding active layer costs
- Action to address gaming by BT such as [✂ CONFIDENTIAL ✂]
- Possible legal action regarding the regulation constituting a margin squeeze under Competition Law[71]

4.44 It is notable that in the COLT appeal of the 2012 BCMR Ofcom stated to the Competition Appeals Tribunal that an active minus type of approach for setting dark fibre prices was 'impracticable'[72]. It is not explained why Ofcom has not reflected their previous assessment in this assessment. BT also considered active minus difficult to implement, they said:

> *… "active minus" (by which the passive access price is calculated continuously from the active access price from which BT achieves the highest common cost recovery) were unprecedented and would involve a root and branch change to regulation*[73]

4.45 Another longer term downside of active minus is that it is likely to require on-going active regulation for a longer period – if the active minus approach is used in perpetuity they active regulation will also be necessary in perpetuity. Cost-based pricing provides a strong possibility that active regulation could be withdraw in the medium term.

### 4.4.4 *Possibility of gaming*

4.46 Whilst a cost-based approach sets prices in advance and so has limited gaming opportunity an active minus approach offers BT/Openreach various opportunities to limit the effect of regulation through gaming. For instance:

- [✂ CONFIDENTIAL ✂] This is not a theoretical risk as Ofcom indicates that the guidance will not fully specify the appropriate approach: '*…we may take a different approach if it is appropriate to do so in the specific circumstances of the dispute*'[74]
- [✂ CONFIDENTIAL ✂]
- [✂ CONFIDENTIAL ✂]

4.47 Gaming will not only frustrate and reduce the effectiveness of regulation but will also absorb more Ofcom and stakeholder resource to address.

[71] see Joint Submission by PAG 31 July 2015 §3.2

[72] COLT appeal of BCMR 2012 (Case No.: 1212/3/3/13). Judgement §161

[73] COLT appeal of BCMR 2012 (Case No.: 1212/3/3/13). Judgement §168

[74] Leased Line Charge Control June 2015 §8.27

## 4.5 Summary

4.48 The table below shows a summary of our views of the impact of cost-based versus active minus pricing – we only provide the relative score as between cost-based and active minus since the absolute score is not relevant.

*Efficiency and implementation of cost-based versus active minus dark fibre pricing*

| Area | Impact | Description |
|---|---|---|
| Productive efficiency (active layer) | ✔✔✔ | Active minus will reduce potential productive benefits to about a third of all circuits (or possibly less) whereas cost-based deliver productive efficiency benefits to all circuits |
| Productive efficiency (infrastructure layer) | ✔ | Active minus will incentivise inefficient investment since dark fibre price will be further above LRIC cost |
| Dynamic efficiency (active) | ✔✔✔ | Innovation and investment will be restricted to about a third or less of circuits<br>Active minus less predictable and so increases risk |
| Dynamic efficiency (infrastructure) | ✔ | Will result in less investment and lost innovation though lost investment would have been inefficient and innovation is limited.<br>No change in incentives for BT's investment. Under cost-based BT able to recover common cost<br>Active minus less predictable and so increases risk |
| Allocative efficiency | ? | Could be positive or negative – no robust evidence either way |
| Compatibility with active prices | = | Difference in active and dark fibre prices will be based on ex ante FAC forecast for cost based and lagging actual LRIC cost estimate for active minus (which is susceptible to gaming by BT). Both similarly effective |
| Burden on stakeholders | ✔✔✔ | Active minus more complex and difficult to implement (e.g. need for guidance, sub-caps)<br>Likely to have on-going disputes and/or litigation<br>Active minus will result in active regulation being required for longer |
| Gaming risk | ✔✔ | Active minus susceptible to gaming by BT |

✔ cost-based marginally better ✔✔✔ cost-based much better

✗ cost-based marginally worse ✔✔✔ cost-based much worse

= no material difference ? unclear

4.49 Overall we think it clear that a **cost-based pricing is clearly superior to an active minus**.

4.50 The main areas of difference versus Ofcom's own assessment (as shown in Table A26.8) is:

- We do not view the reduction in infrastructure investment as a result of cost-based pricing as reducing efficiency since the lost investment is a decrease in inefficient investment. Furthermore, active minus is inherently more unpredictable and so creates (unnecessary) risk which will discourage efficient investment
- Ofcom proceed on the false premise that it should limit rebalancing and that limiting rebalancing improves efficiency. We do not consider that there is any robust evidence to suggest that there will be lower (or higher) allocative efficiency as a result of cost-based pricing. In any case, allocative efficiency is typically given a lower weight than productive and dynamic efficiency in Ofcom assessments[75] so even if this was a minor negative it would not swing the overall conclusion
- We disagree with Ofcom's assessment of active compatibility since it was based on an approach to determine cost-based prices that is unnecessary and ill-advised. Using the same FAC model as is used to derive Ethernet prices will be both easier and ensure compatibility

# 5 Ensuring non discrimination on dark fibre

5.1 In this section we discuss the various options for preventing discrimination on non-price elements of dark fibre and particularly Ofcom's proposed approach.

## 5.1 Ofcom's approach to preventing discrimination

5.2 It is well accepted and Ofcom itself agrees that absent suitable regulatory obligations "*[BT] is incentivised to provide the [wholesale services] on terms and conditions that discriminate in favour of its own downstream divisions.*"[76] The reason for this incentive is that if dark fibre becomes an effective basis for competition BT's market share and market power will diminish in the active market and it will also lose competitive advantage in markets downstream of active[77]. The negative commercial impact of dark fibre on BT is obvious given BT's vehement (though ultimately fatuous) rhetoric against introducing dark fibre.

[75] For example: "*Historically, we have typically attached higher weight to productive and dynamic efficiency considerations for wholesale leased lines, rather than trying to achieve allocative efficiency at every point in time. This is because productive and dynamic efficiency improvements are likely to generate greater benefit to consumers over time; as the firm becomes more efficient and increases investment and innovation, this should ultimately result in lower prices and better services for consumers*" (Leased Line Charge Control June 2015 §4.77). Although Ofcom makes this statement in the context of glidepaths, it is unclear why such a stance should not also apply when deciding on the preferred pricing approach.

[76] BCMR May 2015 §9.61

[77] Currently Openreach can favour (for example) BT Business in the design of the Ethernet products. It will be more difficult to favour BT Business in the design of dark fibre products. This occurred in New Zealand. Whilst TNZ was vertically integrated it fought against providing dark fibre in order to protect its retail business though once Chorus (the upstream unit) was structurally separated it was we understand much more willing to offer dark fibre

5.3 Ofcom faced into the problem of discrimination in its 2005 telecoms strategic review. It identified that BT's competitors (who relied on wholesale products such as SMPF, WLR and IPStream which BT itself did not use) suffered from a lack of 'equality of access' and in particular:

*"Those who rely on BT to provide such access have experienced twenty years of:*
- *slow product development;*
- *inferior quality wholesale products;*
- *poor transactional processes; and*
- *a general lack of transparency."*[78]

5.4 Ofcom's core solution to this problem was equivalence of input (EOI) (combined with functional separation). The central element of EOI was that BT was obliged to use the same wholesale products as its competitors for both new supply of the relevant downstream product and also its existing customer base to the wholesale product.

5.5 Thus, for instance in relation to EOI on SMPF (the undertakings were agreed in Sept 2005):

- EOI applied to SMPF
- BT was obliged to use SMPF for all new supply of IPStream from 30 June 2006 (this was known as the RFS[79] date)
- BT was obliged to use SMPF for all supply of IPStream from 31 December 2006 (this was know as the IBMC[80] date) i.e. by migrating the whole IPStream to use SMPF

5.6 The centrality of the obligation to use was repeated in Ofcom strategic review:

*Equivalence of inputs (EOI) aims to ensure a level playing field between BT's downstream business units and competitors purchasing access to its network. Openreach is required to supply a range of products and services to downstream rivals and its own downstream divisions on the same terms, at the same prices and using the same processes. This ensures that any deficiencies in those products and services are felt by BT itself, as well as its downstream competitors, so that BT is incentivised to address them.*

5.7 We refer to the obligation to use the wholesale product as 'must use' obligations. Similar EOI rules (which included must use obligations) applied to MPF, WLR, IPStream, WES, BES, WES-backhaul, ISDN2 and IDSN30[81]. EOI has subsequently applied to new regulated wholesale products such as WBC, GEA, EAD and EBD that did not exist at the time of the undertakings.

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[78] Strategic Review of Telecommunications, Phase 2 consultation document, Nov 2004 §1.19

[79] "RFS date" means the Ready For Service date from which an Equivalence of Inputs product or service is available for use by other Communications Providers for their new End-Users, and is also available for use by BT (and is in use by BT) to handle all product or service events for New End-Users (being new after the RFS date). The RFS date is also the date of the start of migration of the relevant installed base of End-Users. Source: BT's undertakings.

[80] "IBMC" means, in relation to any product or service, Installed Base Migration Complete, and is the date by which the migration of all of the relevant BT installed End-User base to the Equivalence of Inputs product is completed. Source: BT's undertakings.

[81] See BT's undertakings Annex 1

5.8 The reason for imposing must use obligations on BT was that it created strong incentives for BT to improve the quality of wholesale products – a problem that had plagued the sector for years. For example, Ofcom said:

> *"… equivalence of input delivers many advantages over equivalence of outcome* [where BT is not obliged to use the product itself]*. It generates better incentives to BT to improve the products it offers to its competitors, it increases transparency, it is easier to monitor compliance, and it would require less on-going intervention by Ofcom. It therefore offers greater potential to solve the problem of inequality of access in a sustainable fashion."*[82]

5.9 As was described by a stakeholder at the time, EOI meant that "*BT had to eat its own dog food*".

5.10 Ofcom decided that EOI (with must use obligations) was appropriate for all new products and some existing products but was not merited on some existing products that were not key or were in decline. Ofcom said:

> *For all new regulated wholesale products and some key existing ones, we believe that a strong model is needed in which BT is required to offer exactly the same wholesale products to its wholesale customers as to its own retail activities. For existing products, we propose to assess each case on its merits. It may be that for some products, the costs of product and process redesign required by this type of equivalence would not be merited given their limited lifespan*[83]

5.11 Ofcom has, since the 2005 review, reiterated the importance of EOI in ensuring non-discrimination and a level playing field and that EOI included a must use obligation . For example:

- Ofcom reiterated the importance of EOI with must use obligations when it imposed EOI on GEA/VULA in the 2010 WLA decision – it described EOI then as a 'complete prohibition on discrimination'.

  > *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 Equivalence of Inputs (EoI) within the scope of BT's Undertakings.*[84]

- In the general discussion in the BCMR Ofcom says:

  > *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 CP's own downstream divisions) would be provided on a truly equivalent basis, an arrangement which has become known as EOI.*[85]

- In the proposal to impose EOI for CISBO Ofcom says:

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[82] Strategic Review of Telecommunications, Phase 2 consultation document, Nov 2004 §6.13

[83] Strategic Review of Telecommunications, Phase 2 consultation document, Nov 2004 §1.37

[84] Review of the WLA market, Consultation, March 2010 §6.32

[85] BCMR May 2015 §8.60

*… we believe it is appropriate to require that CISBO services are delivered to competitors on an EoI basis. This is because:*

*• CISBO products are upstream inputs to two major retail telecommunications markets – the broadband market and the retail CI leased lines market. Our wholesale regulation must aim at ensuring there is a level playing field for competitors in both these markets. The availability of wholesale inputs on an EoI basis would seek to prevent BT engaging in discriminatory practices that could adversely affect competition and ultimately cause detriment to citizens and consumers;*

*• prohibiting undue discrimination while stopping short of EoI could result in BT providing competitors with a different set of products to those it provides to itself, potentially using different processes and systems for their development, delivery, maintenance and repair. While this may not be unduly discriminatory (depending on the precise circumstances), it would fall short of true equivalence and could undermine effective competition. For example, it may act as an impediment to improved products being made available equally promptly to BT and to its competitors. It is therefore necessary, in our view, to require provision on an EoI basis in addition to the prohibition of undue discrimination;.*[86]

5.12 Therefore, based on Ofcom's own analysis two principles are clear:

- First, proper EOI includes a must use obligation
- Second, a must use obligation is essential to allow competitors to compete on a level playing field and not be discriminated against

## 5.2 Ofcom's approach to dark fibre

5.13 Below we discuss Ofcom's approach to dark fibre.

5.14 Ofcom initially states says that it needs to apply EOI to dark fibre to ensure non-discrimination and a level playing field:

*In Section 8 we set out our consideration of the most appropriate form of non-discrimination obligation for the remedies in the CISBO markets in which BT has SMP and our proposal that they should be provided on an EOI basis. In our current view, similar considerations apply in relation to dark fibre, and we therefore propose that BT should provide dark fibre on the basis of EOI.*

*In the absence of such a requirement, we consider that BT's SMP in these markets means that it would have both the incentive and the ability to refuse to provide dark fibre access, thereby favouring its own downstream operations with the effect of hindering effective and sustainable competition in the corresponding downstream markets, ultimately against the interests of end users.*

*In particular, we consider that in the absence of EOI BT would have the incentive to provide superior dark fibre products to its downstream divisions compared with those it provides to other CPs.*[87]

[86] BCMR May 2015 §8.60

[87] BCMR May 2015 §9.67-§9.69

5.15 However, Ofcom then effectively contradicts itself by proposing an EOI remedy with no must use obligation. Ofcom summarises its approach at §9.65:

> *We propose that BT would be required to provide dark fibre on the basis of EOI. This should ensure that CPs can compete on a level playing field in providing services which use dark fibre. For the avoidance of doubt, we do not propose to require BT to consume a dark fibre product in providing active services.*

5.16 This paragraph is wrong and inconsistent with Ofcom's own policy.

5.17 Firstly, Ofcom it is misleading (and inconsistent with Ofcom's own position in this BCMR and elsewhere) to describe what Ofcom is suggesting as EOI since it does not include a must use obligation[88]. In fact, as far as we understand Ofcom's EOI rules imposes no obligation on BT at all[89].

5.18 Second and more importantly, Ofcom is wrong to suggest that under its proposed approach "*CPs can compete on a level playing field*". Ofcom has repeatedly stated (including elsewhere in the BCMR itself) that a level playing field can only be achieved by imposing EOI with must use obligations.

5.19 Under Ofcom's proposal where BT does not have to use the dark fibre product itself, BT will have very strong incentives and ability to discriminate against competitors by degrading the product quality and delay improvements to avoid a level playing field. The history of LLU and other wholesale products shows that until BT is obliged to use a product itself quality will be poor and there will be no level playing field. It is naïve to think that the proposed approach will ensure non-discrimination and a level playing field in a timely period. If Ofcom pursue their proposed approach the

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[88] Ofcom's approach is akin to having a 'requirement to notify changes' remedy without any obligation to publish changes before they happen

[89] Ofcom clarified its approach in a note published on 9 July:

*BT has raised a question whether we propose that any regulations would apply to products which BT, downstream of Openreach, might provide by using dark fibre products which Openreach would provide in compliance with our proposed Dark Fibre Access remedy.*

*We clarify here that we do not propose to impose SMP conditions ex ante on products which BT divisions, downstream of Openreach, might provide by using the dark fibre products which Openreach would provide in complying with our proposed Dark Fibre Access remedy, as long as BT fulfils otherwise the SMP conditions we propose in relation to active services. If Openreach were to fulfil all BT's obligations in relation to active services, and BT's downstream divisions were to provide additional active services by consuming regulated dark fibre from Openreach, we consider that our proposal to require BT to provide dark fibre on the basis of Equivalence of Inputs (EOI) should give sufficient assurance that CPs could compete in the provision of these downstream active services on a level playing field.*

This effectively means that other parts of BT (BT Wholesale for instance) have the option of using the dark fibre product and if they do use dark fibre the resulting downstream products will not be subject to ex ante regulation. Ofcom repeats its false claim that this is EOI (it is not since there is no must use obligation). Furthermore, it is simply untrue to say that this should give assurance to CPs of a level playing field. Openreach has still every incentive to degrade the dark fibre product and so does BT Group. All the option does is provide a weak 'carrot' that might in the long term create a weak incentive for BT to use dark fibre in order to avoid regulation on active products.

outcome will be years of disputes and litigation before the dark fibre product is fit for purpose and is able to constrain BT's SMP in providing active products. We cannot understand why Ofcom would want to repeat the debacle of LLU for dark fibre.

5.20 We see no compelling reason to not impose a must use obligation since dark fibre meets all of Ofcom's criteria for imposing EOI.

- It is a major and important wholesale product
- It is a new wholesale product
- It is not in decline

5.21 Ofcom state the reason for its non-EOI approach is that it would be disproportionate:

> *… we do not consider that it would be proportionate to require BT to consume its regulated dark fibre products as inputs for the provision of all the existing and new active wholesale leased line services.*[90]

5.22 Ofcom provide no evidence to support this assertion. We do not think it would be disproportionate. Whilst there may be some cost required for BT to consume the dark fibre wholesale product rather than the current internal supply model we do not think this will be material compared to the substantial benefits.

- Pursuant to the undertakings BT completed changes for much larger customer bases – 20 million in the case of WLR versus up to 200,000 in the case of dark fibre
- No one (including Ofcom) has ever suggested that the far greater EOI obligations imposed in 2005 were disproportionate
- Given that the dark fibre product will mirror the Ethernet product it should be relatively straightforward for the Ethernet products to consume dark fibre – for example, no changes to the Ethernet products will be necessary
- BT is already going through systems developments

5.23 In summary we think it is clear that EOI with must use obligations should apply to dark fibre:

- Ofcom itself accepts that the only effective way to ensure a level playing field and effective competition is EOI whereby BT consumes the same wholesale products that competitors use
- Ofcom's reasons to not apply proper EOI – for instance, a declining or unimportant product – do not apply in the case of dark fibre
- There is no evidence presented that imposing proper EOI is disproportionate

[90] BCMR May 2015 §9.70

## 5.3 Approach to applying proper EOI for dark fibre

5.24 If EOI is to be imposed then it is necessary to decide on the scope and timescale for BT to consume the dark fibre product itself to provide downstream products. In particular there are three relevant issues:

- What downstream products should consume dark fibre?
- The date by which BT use dark fibre for all new downstream product supply – known as ready for service (RFS)
- The date by which all existing downstream product supply date is transitioned across to use the dark fibre product – known as installed base migration complete (IBMC)

5.25 Our view on these issues is given below.

5.26 Regarding the products it is not necessary for all active products to consume dark fibre – provided a large majority of BT downstream active products consume the dark fibre product then it should create strong incentives to deliver a reasonable dark fibre product. On this basis we consider that EAD (including EAD, EAD-LA and EAD-ER), EBD and WES should consume dark fibre – together they account over 90% of supply. It may be appropriate to also include WDM services such as OSA. We note that once BT has re-engineered it systems to consume dark fibre to produce EAD then it will be relatively straightforward to also consume dark fibre for all active Ethernet products. The 'must use' obligation should also apply to all new active products launched by Openreach or other parts of BT after April 2016.

5.27 Regarding the RFS and IBMC dates, the timescales required in BT's 2005 undertakings are useful benchmarks

- SMPF: RFS 9 months, IBMC 15 months. There were about 4m SMPF lines at the time
- WES: RFS 12 months, IBMC 18 months. There were about 20,000 circuits at the time

5.28 There are a number of factors that could suggest a shorter or slightly longer period for RFS and IBMC for dark fibre.

- Dark fibre differs from the two examples above because the wholesale dark fibre product does not currently exist (whereas SMPF and WES existed at the time of the undertakings). Therefore, from the date of Ofcom's decision in say March 2016 it may take slightly longer to reach the RFS and IBMC dates. However, BT can obviously start planning and implementing the system changes necessary for Ethernet to consume dark fibre whilst the dark fibre product is being developed (which starts in April 2016).
- There are a number of other factors that would suggest that BT could do these changes more quickly than in 2005
  - The number of lines involved is much less than SMPF (up to 200,000)

- BT now has experience of making these type of product and system changes
- the systems BT uses today should be more modern and suitable for modifications to allow EOI to be introduced than the ones it used in 2005 since the system stack is relatively new
- the dark fibre product will closely mirror the Ethernet product making consumption relatively simple.

5.29 Therefore, we consider that assuming a March 2016 decision date and a April 2017 dark fibre product launch that the EOI dates should be (at the latest):

- RFS: Sept 2017
- IBMC: April 2018

5.30 Ofcom should consider whether and what penalties should apply in the case of these dates being missed including automatic penalties. Automatic penalties applied for some of the Undertakings obligations e.g. a direct payment to WLR customers is a WLR IBMC data was missed.

## 5.4 Other measures to reduce discrimination

5.31 We discuss below a number of other measures that Ofcom should impose in order to prevent discrimination and other comments on Ofcom's proposals.

5.32 In the 2005 strategic review, Ofcom complemented the imposition of EOI with the functional separation of Openreach and system separation to address a number of other sources of discrimination e.g. to prevent BT's downstream units getting better information about upstream wholesale products and BT's downstream units having greater influence over the development of regulated wholesale products. Whilst we would not suggest the creation of separate and independent business units to manage dark fibre and active products, we think Ofcom should consider whether any organisational measures should apply for dark fibre for instance by requiring that dark fibre is developed/managed by a unit in Openreach that is separate to the unit that develops/manages Ethernet products. Similarly Ofcom should consider whether a light form of system separation is appropriate e.g. access controls.

5.33 There are many important non-price terms and features that form a critical part of wholesale products such as discounts, SLAs, SLGs, payment terms, communication processes. There should be a presumption that the terms for dark fibre exactly match the terms for Ethernet products unless there is sound reason to depart.

5.34 Ofcom has proposed that KPIs are published for dark fibre. It is important that exactly the same KPIs are published on dark fibre as for Ethernet products since this will ensure transparency and help identify any discrimination (see s6.9 below). If BT is not required to consume dark fibre itself to produce its Ethernet products a comprehensive and consistent set of KPIs will be even more critical. Ofcom has

suggested that some dark fibre KPIs are not published on BT's website[91]. It is essential that all KPIs are published. There is no reason to limit transparency and Ofcom has not explained any reason to do so.

5.35 The same QoS obligations (i.e. minimum service standards) that apply to Ethernet products should apply to dark fibre and/or the obligation should apply to Ethernet and dark fibre circuits.

5.36 It must be recognised that even proper EOI (with must use obligations) does not address price discrimination or excessive prices. All EOI means is that the internal transfer charge between BT divisions is notionally set at the wholesale charge. It does not BT's incentives or ability to discriminate. At some points in the consultation[92] Ofcom seems to suggest otherwise.

# 6 Quality of service

6.1 In this section we comment on Ofcom's proposals to impose minimum service standards (MSS) and KPI obligations.

6.2 We agree with many of Ofcom's proposals. However, we have a few areas where we consider that the proposals should be modified and improved:

- Minimum service standards should apply to OSA products since they are becoming increasingly important
- It is absolutely critical that minimum service standards apply to dark fibre. BT already have strong incentives to degrade the quality of the dark fibre product – the lack of proposed must use obligation means that they can foreclose competitive entry without any harm to themselves. A lack of minimum service standard will further enhance this harmful incentive
- The TTP targets are too 'soft' – the target in 2016/17 is far below what Openreach could reasonably attain and the 2017/18 is below an efficient level
- The TTP target should not include any 'lower percentile limit' – requiring a minimum 40% of orders provided in less than 30 days will be detrimental to customer interests
- The TTP target should be designed so that Openreach cannot improve its perceived performance by delaying issuing KCI1s – as it does now
- KPIs must be provided separately for each product and for BT and non-BT CPs in order to be able to identify discrimination
- The compliance period should be 3 months, not 12 months

[91] BCMR May 2015 §9.146

[92] for example BCMR May 2015 §9.64, §9.69, §8.59

## 6.1 Need for minimum service standards ('MSS')

6.3 We consider that the case for regulation to improve Openreach's quality of service is compelling.

- As a monopoly with SMP, Openreach lacks the competitive pressure that would incentivise it to provide quality levels that meet customer needs (i.e. at an efficient level}.
- Openreach's vertical integration (with downstream businesses) reduces its incentive to provide good quality:
  - poor quality slows down market share erosion of BT's downstream units by making switching (away from them) more difficult
  - when quality is poor there tends to be a 'flight to brand' where businesses favour the perceived 'safe' brand of BT (albeit irrationally)
  - vertical integration means that no SLGs are paid to the rest of BT weakening any incentive that SLGs might provide – therefore, under vertical integration the incentive for good quality weakens
- because SLGs only reflect part of the cost of low quality[93] they are unlikely to incentivise the optimal level of quality[94]
- The prolonged period of poor performance combined with the repeated failures to deliver improvement provides strong empirical evidence that Openreach's incentives are insufficient to deliver good quality

6.4 It is important to recognise that poor provisioning quality has significant detrimental effects beyond the individual customers affected. Low provisioning quality deters switching and so competition and entry. Thus the whole market (not just customers requiring new lines) suffer from poor quality.

6.5 Therefore, we see there a need for strong regulation to ensure that quality levels are reasonable. We do not agree that minimum service standards are necessarily the best method to achieve this. Ofcom has not properly examined other methods such as linking allowed price changes to quality levels or increasing SLGs.

## 6.2 Scope of MSS

6.6 Ofcom has proposed to apply MSS only to a sub-set of products:

- Included: EAD, EAD-LA, EBD, cablelink both 'provide' and 'regrade'[95]
- Excluded: OSA, legacy Ethernet, dark fibre

[93] SLGs only reflect losses to CPs but not losses to end customers

[94] The optimal level of quality will be where the marginal operating cost reduction of lowering quality equals the marginal cost to users of lower quality. Though Openreach enjoys the full operating cost of reducing quality it only faces part of the marginal cost to users. The impact of this is that the profit maximizing quality level will be lower than the optimal/efficient level

[95] a provide is a new circuit whereas a regrade is an upgrade to a higher speed e.g. 10M to 100M

6.7 We do not agree with this approach.

6.8 Ofcom's reason to exclude OSA (i.e. optical) services appears to be that:

- they are low volume
- they were not highlighted by CPs as being problem areas in their call for input responses
- improvements in other Ethernet may also improve OSA since "*… [the proposed remedies] … may encourage improvements in Openreach's leased line fibre provisioning processes and performance more generally. We consider that it is unlikely that Openreach would operate substantially different order and provisioning processes for these other products which are delivered in much the same way*." [96]

6.9 This does not provide a sound justification for not imposing an MSS on OSA.

6.10 The comments by CPs will have reflected the historic situation 1 to 2 years ago. Ofcom in considering the appropriate regulation needs to consider the situation through the market review period i.e. from April 2016 to March 2019. [✂ CONFIDENTIAL ✂]. Furthermore, we are also experiencing provisioning problems and reducing quality with OSA.

6.11 We do not think that MSS standards on EAD will lead to good quality on OSA. If OSA is not included in the MSS it will likely result in quality deteriorating for OSA as Openreach would have a strong incentive to divert resources and prioritise provisioning of EAD and EBD orders over OSA orders (even though it uses the same process).

6.12 Including OSA within the MSS would be costless to do and will have clear benefits. Therefore, we do not consider there is any sound reason to exclude it.

6.13 With regard to dark fibre the same argument applies in even greater force than for OSA. For dark fibre there is a greater incentive and ability for Openreach to degrade quality:

- By reducing quality, BT can foreclose entry in the active market
- There is no 'must use' (or EOI) requirement on BT to use dark fibre itself – therefore its downstream activities will not suffer from poor quality

6.14 Therefore, minimum service standards must apply to dark fibre.

6.15 Though legacy Ethernet products (such as WES, BES and WEES) may have low provisioning volumes we see little reason as to why these should be excluded.

6.16 Ofcom has proposed that there will be a single target for provides and regrades together. The inclusion of regrades may create problems. Regrades do not require new fibre to be installed and so can be provisioned in a short period with little

[96] Leased line charge control June 2015 §13.125

resource. If regrades are included in the targets then BT may be able to meet the target by providing a greater proportion of regrades and providing lower quality on provide orders. Given this, it may be worth considering having separate MSS targets for regrades and provisions.

6.17 Thus, in conclusion we think that the minimum service standards should apply to a basket of products including:

- EAD, EAD-LA, EBD and Cable Link products
- OSA products
- Dark fibre

6.18 There should be a separate target for 'provides' and 'regrades'. Similarly, dark fibre migration orders (i.e. from EAD to dark fibre) should be excluded since they involve little work.

## 6.3 Type of target

6.19 Ofcom has proposed having three main provisioning related targets (numbers provided are for 2016/17):

- average initial CDD period $\leq$46 days (i.e. initial estimate of time to provide)
- $\geq$80% orders actually provisioned within the initial CDD
- average actual time to provide $\leq$46 days (TTP)

6.20 We agree with this three-pronged approach. Setting only a TTP target would not address customers' need for greater certainty[97].

6.21 We agree that the average initial CDD targets should be set to equal the average TTP targets.

6.22 On the TTP target we agree with having a upper percentile limit i.e. a maximum of 3% of orders delivered in more than 159 days. This will prevent an excessive 'tail' (which would be offset by other orders having a lower TTP). This approach aligns with customers interests since long TTP are particularly problematic for CPs and customers. In effect it will reduce the TTP deviation from the average.

6.23 However, we disagree with having a lower percentile limit which requires BT to deliver a minimum of 40% of circuits in less than 30 days i.e. a minimum level of low TTP provisions. This will not serve any customer interest. In fact, this target will increase the TTP deviation from the average which customers dislike. Imposing a lower percentile limit (in combination with the average TTP target) will result in Openreach diverting resources and delaying the other 60% of jobs in order to meet the target for the 40% of jobs. That is a negative for customers. Ofcom has not provided any reasoning as to why Ofcom considers its proposal is in customers'

[97] Certainty could be addressed in other ways e.g. by combining a TTP target with a target for the correlation between the initial CDD and TTP

interests. If anything, Ofcom should impose the exact opposite of what it proposing i.e. a maximum % circuits provisioned in 30 days in order to prevent BT form meeting the average TTP target by only improving the TTP on easy orders leaving long orders with long TTPs.

## 6.4 Level of target

6.24 We broadly agree with the targets for % orders provisioned within the initial CDD. However, we have reservations about basing values on the DoJ trial. The metrics within the trial were set pre-BCMR proposal and are predicated on the existing deemed consent categories and not those as defined in Table A17.9.

6.25 We have a number of comments on the targets set for TTP:

- Ofcom has broadly set the TTP targets in 2017/18 to equal the level of actual performance in 2011. We consider that this is 'soft'. Ofcom should be setting quality targets at the 'efficient' level[98] – i.e. the level at which the marginal additional cost to provide higher quality equals the additional benefit to users. Since SLGs in 2011 were lower than the cost to CPs and consumers of lower quality then the level of quality that Openreach in 2011 is likely to have been lower than the efficient level (at that time). Furthermore, it is highly likely that in the period between 2011 and 2017/18 the efficient level is likely to have increased (given the increased criticality of BCM products). Therefore, if Ofcom is aiming to set an efficient level of quality in 2017/18 it should set the level above historic levels of performance.
- Ofcom has based the target for 2016/17 on the performance level in 2014. It is unclear why Ofcom thinks it appropriate to assume no improvement in the two years following the low point of Openreach's poor performance. Openreach has a number of improvement initiatives that are already delivering improvements and/or will come to fruition before 2016/17 (e.g. DoJ, better contractor management, bringing test rodding in house). Furthermore, Openreach can increase resource levels to improve performance. Therefore, we think that the 2016/17 target should be higher than the 2014 performance
- Furthermore, it appears that the data on which Ofcom is setting the starting TTP target is out of date. Currently, under the DoJ trial Openreach is achieving 17 days on Cat 1 orders[99]. Yet according to Table 13.12 the current performance (which is used to set the 2016/17 performance) is 46 days which assumes that Cat 1 orders are delivered within 29 days (see Table 13.6).

[98] as Ofcom points out in §13.148

[99] 12 days for 'quick win' and 19 days for other Cat 1

6.26 We note that it may be useful for Ofcom to assess provisioning performance (by Openreach and others) in markets where BT does not have SMP in order to identify the efficient level of quality[100].

## 6.5 Lack of incentive to improve quality on more difficult orders

6.27 Under Ofcom's current proposals there is insufficient incentive on Openreach to improve quality on those orders which require civil work (i.e. orders excluding Cat 1 and Cat 2.1).

6.28 As we explain above BT could meet 46 days target average TTP by delivering ~17 days on Cat 1 orders (which it is already achieving) and *increasing* the days to deliver other orders. In fact, we believe that BT could reduce the TTP on Cat1 orders even further. The upper and lower percentile limits will do nothing to encourage better quality on more difficult orders.

6.29 Thus we consider that Ofcom should impose other regulation to ensure that there are reasonable incentives to deliver better quality on more difficult orders:

- Lowering the average TTP so that delivery on more difficult orders cannot worsen from today
- Setting a second upper percentile limit whereby (say) a maximum of 40% of orders should be provisioned in more than 50 days (the numbers are illustrative – Ofcom would need to set the actual numbers based on 2011 and 2014 performance)

## 6.6 Exclusions

6.30 Ofcom rightly addresses (§13.126) the issue of whether certain orders will not be counted in the assessment of whether Openreach has met the TTP minimum service standards. Ofcom propose that only orders affected by customer caused delays should be excluded from the assessment[101] and that orders affected by non-customer caused delays and MBORCs are included. We agree with this approach

- If for instance, orders affected by non-customer caused delays were excluded (e.g. delays due to delay in permission for street works) then Openreach would have a weak incentive to resolve these delays which are within Openreach's control
- If orders affected by MBORCs were excluded then it would increase the incentive on Openreach to game the regulation by declaring an MBORC and would also mean that for these orders there would be little incentive for

[100] Though It may be that the level of quality is similar in both areas since Openreach is unable to differentiate to reflect the differing levels of competition

[101] it is not clear whether Ofcom is proposing that the order is excluded from the MSS assessment or instead that the TTP for that order is reduced to reflect the customer caused delay

Openreach to provision these quickly since they would not count towards compliance with the MSS

6.31 However, Ofcom needs to be cognisant that allowing customer caused delays to be excluded creates the potential for gaming and manipulation of the system by BT whereby Openreach categorise non-customer caused delays as customer caused delays.

6.32 BT has a history of a very similar form of behaviour in respect of deemed consent. In 2014 the level of SLGs paid to TalkTalk significantly reduced even though the level of quality remained poor. Following analysis it became clear that this had occurred because BT had been manipulating deemed consents in order to reduce the SLGs payable[102]. BT was unilaterally applying deemed consents to orders where this was not justified – it appears that Vodafone have experienced a similar problem[103]. [✂ CONFIDENTIAL ✂] What was particularly disappointing with Openreach's behaviour was that it appeared to be diverting its effort into manipulating deemed consent rather than to improving quality.

6.33 Therefore, we fear that Openreach will – in order to meet the minimum service standards – manipulate the categorisation of delays and/or introduce new codes. Accordingly, Ofcom should design its regulation to prevent this e.g. categories cannot be changed without CP approval and/or Ofcom approvals.

## 6.7 Clock start

6.34 It appears that Openreach can, and does, improve its reported performance by not 'starting the clock' until sometime after an order has been submitted and validated. Under the current process, the clock does not start until a KCI1 has been issued. TalkTalk constantly experiences delays in issuing KCI1 – currently they take 5 days. Openreach has openly stated that the delay in issuing KCIs is due to them 'throttling' orders into the pipeline to reduce pressure on planning. This gaming and manipulation must be prevented.

6.35 This could be achieved by starting the clock at order placement and so including the time between order placement and validation within the TTP target. The service standards would based on time to provide from order submission rather than from KCI1 being issued. This would require adding may be 1 or 2 days to the target TTP (i.e. 47 not 46 days) to allow for the validation process.

[102] SLGs are paid if Openreach fails to deliver a circuit within the CDD. The CDD can be revised provided there is deemed consent.

[103] Dispute between Vodafone and BT concerning Deemed Consent in relation to the provision of Ethernet Services. http://stakeholders.ofcom.org.uk/enforcement/competition-bulletins/open-cases/all-open-cases/cw_01165/

## 6.8 Compliance period

6.36 Ofcom is proposing that compliance is checked for each year. We think there is a case for adopting a shorter period say each 3 months.

6.37 A year period was adopted for copper service because there were variations in load on the copper engineering workforce due to weather patterns. This was because high rainfall led to higher fault levels resulting (all else equal) in lower quality on provisions and repair (since the same workforce provided both services). By adopting a year long period it allows the peaks and troughs due to weather to be smoothed out.

6.38 However, weather has much less of an impact on Ethernet services since, for instance, fibre is not affected by rain. Therefore, the need for a long period is not necessary. A shorter period would be beneficial since it will mean that non-compliance can be identified and addressed more quickly.

## 6.9 KPIs

6.39 KPIs should be reported separately for each product. This will help identify discrimination (particularly in the case of dark fibre or variants of EAD that BT purchases proportionally more of) and also help ensure BT is not gaming the minimum service standards by only improving quality for products to which targets apply.

6.40 The KPIs should be separately provided for BT CPs and non-BT CPs to identify and so help avoid discrimination.

## 6.10 Information flow

6.41 Alongside quick delivery and certainty of delivery another important aspect of quality is information flow. We currently consider information flow is poor (which is one reason TalkTalk pay extra for project management services). Though we understand that setting specific targets for this would be difficult – particularly since provisioning processes are evolving – we do think that Ofcom needs to be aware of the problems here and be willing to act if Openreach is behaving unreasonably.

6.42 Openreach has deteriorated information flow in the past in order to allow itself more flexibility. For example, the working process was amended by Openreach in June 2013 with the introduction of the 'Day 19' process. This process was introduced to allow Openreach extra time to provide a CDD for complex orders but in fact was adopted for the majority of orders. Additional delay was also introduced within the 'Day 19' process when Openreach changed the ECC process from providing final ECCs at Day 8 to providing indicative ECCs at Day 8 and final ECCs at Day 14. At the same time the 5 day update was withdrawn which significantly reduced the updates and information flow to CPs received from Openreach.

## 6.11 SLG negotiation

6.43 A key element of the SLG regime is the use of deemed consent. SLGs are paid if Openreach fails to deliver a circuit within the CDD though the CDD can be revised provided there is 'deemed consent' for a delay. Under the current contract deemed consent can be applied in cases of non-customer caused delays (e.g. delays due to delay in permission for street works). We think that the approach to deemed consent should align with the approach for exclusions for minimum service standards (see s6.6 above) which would mean that non-customer caused delays do not lead to deemed consent. We see no cogent reason for the approach for SLGs to differ from that for minimum service standards. Accordingly, Ofcom should make clear in its BCMR Statement and/or regulations that the approach for deemed consent should follow that for minimum service standards.

6.44 Ofcom now accepts that BT holds a more powerful negotiating position than other CPs (§13.256). Whilst the proposed principles and process for SLA/SLG negotiation will partially address this imbalance BT will still have more strength and consequently can impose unfair terms on CPs. We think this remaining imbalance could be partly reduced by:

- Ofcom publicly indicating more willingness to intervene in the case of deadlock
- Ofcom being willing to overturn previously imposed conditions (e.g. linkages between forecasting accuracy and SLGs)
- Allowing backdating (i.e. retrospection) of revised SLGs

6.45 We also consider the 6 month deadline quite tight. 9 months may be more appropriate (provided that it is treated as a firm backstop).

## 6.12 Other

6.46 It is not clear whether the KPIs in a particular period will be measured based on orders accepted or orders completed – the cohort of orders accepted in a particular year will be different from the cohort of orders completed in that year since some orders accepted in one year will be completed in the following year.

# 7 Other market review and remedies issues

7.1 In this section we comment on a number of other aspects of Ofcom's market analysis, SMP conclusions and remedies.

## 7.1 Geographic market analysis

7.2 We do not comment on the geographic market analysis in this response. However, we support the comments on Ofcom's market analysis that are contained in the report for the PAG commissioned from Towerhouse LLP[104].

## 7.2 Obligations on high bandwidth CISBO in London Periphery

7.3 Ofcom propose[105] no EOI obligation on high bandwidth CISBO (e.g. 10G and WDM) in the London Periphery (LP) because it would not be proportionate since:

- very high CISBO are not regulated in LP today
- the dark fibre remedy will be the main vehicle in future for competition for very high bandwidth services and make EOI obligation unnecessary

7.4 We disagree with this proposal for two main reasons:

- There will be almost zero additional cost required to impose EOI[106] on high bandwidth CISBO given that EOI is already being imposed on high bandwidth elsewhere in UK. Thus the disproportionality argument is irrelevant since something is disproportionate if the cost outweighs the benefits
- Under Ofcom's proposed EOI approach dark fibre will not be an effective remedy (or 'vehicle for competition') for many years until dark fibre becomes fit for purpose

## 7.3 Dark fibre product features

7.5 Though initially dark fibre products will mirror Ethernet there should be requirement on Openreach to develop the dark fibre product in ways that do not mirror Ethernet provided such developments are fair and reasonable forms of network access. For instance, if a dark fibre customer requested a shorter product repair time than is currently offered on Ethernet Openreach should be required to provide such a product even if it did not want to offer that same functionality on Ethernet.

# 8 Other charge control issues

8.1 In this section we comment on a number of other aspects of Ofcom's proposals on price regulation.

[104] Geographic market analysis in the BCMR: A response to the consultation on behalf of the Colt, Sky, TalkTalk and Vodafone, Towerhouse LLP, JULY 2015

[105] BCMR May 2015 §8.65

[106] whether proper EOI or the non-EOI that Ofcom is proposing

## 8.1 High bandwidth CISBO services must be charge controlled

8.2 We consider that there is a strong and compelling case for high bandwidth CISBO services (which include 10G and WDM products) to be charge controlled. We refer to these services as 10G services below since the majority of these services are 10G Ethernet.

8.3 Ofcom accept that where BT have SMP there is a risk of consumer harm through excessive prices.

> *[We are concerned] that, in the absence of appropriate ex ante regulation, there is a relevant risk of adverse effects arising from BT, and KCOM, fixing and maintaining some or all prices at an excessively high level or imposing a price squeeze.* [107]

8.4 Notably the risk of excessive prices applies across all Ethernet services (outside CLA) since it has found BT to have SMP across all bandwidths. Importantly, Ofcom concludes that the underlying level of competitive intensity depends on infrastructure competition[108]. This implies that given the level of infrastructure competition is the same for all bandwidths then the level of competitive intensity and need for constraint and price regulation is similar across all bandwidths.

8.5 To address BT's SMP Ofcom have proposed a charge control for 100M and 1G Ethernet. Yet for 10G services Ofcom are only proposing a very weak 'safeguard' cap at CPI-CPI. This is despite RoCE on 10G services being about 33%[109] which is about three times BT's cost of capital. Given falling unit costs the safeguard cap will, absent any other constraint, allow returns to rise to even more excessive levels. The term 'safeguard' is misleading – it does not safeguard consumes interests.

8.6 Ofcom's reasoning for imposing only a very weak safeguard cap is that dark fibre will constrain 10G pricing. Ofcom says:

> *Our intention is that competition based on passive remedies should provide the primary constraint on prices for very high CISBO services.* [110]

8.7 We do not think that dark fibre will provide sufficient constraint to reduce BT's prices to competitive levels – certainly if Ofcom's pursues its non-EOI approach on dark fibre.

8.8 If Ofcom pursues its no must use obligation on BT for dark fibre then it is almost certain that dark fibre will provide no meaningful constraint on 10G pricing for the

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[107] BCMR May 2015 §9.24

[108] See for example, BCMR May 2015 §1.18, §4.8, §4.35, §4.123, §4.137. Unlike previous reviews Ofcom does not consider that lower market share for high bandwidth services reflects greater competitive intensity at higher bandwidths since market share differences are transient. It will also end the 'gravy train' where BT was able to avoid regulation of high bandwidth services on the basis of relatively low market shares. It then built up it share to a similar level to low bandwidth services. This happened to 100M and 1G and will probably happen with 10G

[109] 33% if ROCE on MISBO in non-WECLA from RFS14. The true ROCE is higher than 33% since the ROCE has been inflated by errors and incorrect cost attributions (see Cost Attribution Review)

[110] BCMR May 2015 §8.190

period of the market review. In this case, a charge control on 10G is obviously absolutely essential.

8.9 Even if a proper EOI obligation is imposed with tight RFS and IBMC deadlines it is highly unlikely that dark fibre will provide sufficient constraint during at least the first half of the market review period to negate the need for a charge control on 10G services:

- BT is unlikely to alter 10G prices until after material entry based on dark fibre has actually occurred. Pre-emptive reductions in prices are unlikely to deter entry since entry will be based on post entry pricing expectations
- Even if dark fibre is launched in April 2017 it is unlikely to be fit for purpose until BT starts using it after the RFS date (suggested Sept 2017)
- It will take some time for CPs to gear up to using dark fibre in volume and there may be delays if key CPs resources are diverted elsewhere
- BT may aggressively reduce the price of new circuits to address competition from CPs using dark fibre whilst retaining high prices on installed circuits therefore allowing excessive prices to continue

8.10 Therefore, even assuming proper EOI is imposed (with reasonable RFS/IBMC deadlines) we do not think entry based on dark fibre will materially constrain 10G prices until at best the last year of the charge control. More generally the level and timing of constraint is highly unpredictable.

8.11 We think there are two possible approaches to for a charge control covering 10G services:

- One option is to have a charge control basket containing just high bandwidth CISBO services (with the X reflecting the price change required to align prices to costs at the end of the charge control period). A one-off price reduction would also be justified. The charge control *could* be removed as soon as BT reached a particular volume of dark fibre circuits (say at least 5,000 external and 10,000 in total) or when dark fibre provides a demonstrable constraint.
- Another option would be inclusion of high bandwidth CISBO services in the Ethernet basket (with one-off price reductions). If during the price control period dark fibre does constrain (and reduce) 10G prices then BT could offset 10G price reductions with prices rises on other Ethernet services.

8.12 In both cases there is no consumer harm from imposing a charge control – if dark fibre becomes a constraint earlier than anticipated then the charge control becomes nugatory. Imposing a charge control on 10G is a almost zero cost way of mitigating a large risk to consumers interests and as such they are necessary and proportionate. We see no sound case for not imposing a charge control.

## 8.2 Charge control for dark fibre

8.13 Assuming that Ofcom opts for a cost-based approach for dark fibre there is a related question of the form of the charge control. One option might be to include dark fibre on the Ethernet basket or another to have a separate dark fibre basket.

8.14 We do not consider that including dark fibre in the Ethernet basket would be wise. BT would have a strong incentive to not allow sufficient margin between dark fibre and Ethernet products and a combined basket would allow it to do so.

8.15 We think that the clearly preferable approach would be a basket for dark fibre services. Ofcom would need to set the starting charge in year 2 of the charge control (which can reflect the active glidepath to ensure compatibility of dark fibre and active prices) and the X for year 3.

## 8.3 Two fibre strand pricing

8.16 Openreach provide some EAD services using two fibre strands (not one). The reason for this is that some active equipment is more expensive if the service is provided over a single strand. Ofcom propose[111] that Openreach must offer one and two strand dark fibre options. We agree.

8.17 Ofcom also propose[112] that the two strand option should be priced at twice the one strand option. We firmly disagree with this.

8.18 If CPs pay double the price then they will be placed at a material disadvantage versus Openreach and competition will not be on the merits. This is because the underlying cost to Openreach of using two strands (instead of one) will be close to zero but for a CP there will be a large additional cost (i.e. the increased wholesale charge). This means that CPs are likely to use a single strand and incur the higher active layer cost. This cost penalty will mean there is no level playing field and it will distort competition.

8.19 Ofcom suggests pricing two strand at twice the price of a single strand in order to avoid arbitrage by using the two strands to provide different circuits and to avoid inefficient consumption:

> *In particular, there is a risk that most customers would order two fibres, even if they only required one in order to benefit from the pricing structure. This could result in arbitrage as CPs may use the two fibres to provide different active circuits, as opposed to using them for the same circuit. It may also result in inefficient use of assets as two fibres may be ordered even though only one is required to deliver the service.* [113]

8.20 We think Ofcom's concerns are misplaced:

[111] BCMR May 2015 §9.39

[112] Leased line charge control June 2015 §8.81

[113] Leased line charge control June 2015 §8.85

- It is highly unlikely a CP would use two fibre circuits over the exact same route (since for instance if they required additional capacity they would use WDM over a single fibre). Furthermore, BT could contractually prohibit such usage.
- The inefficient consumption can be avoided by allowing a premium for the two strand option reflecting the additional incremental cost. Though, as Ofcom points out itself the additional cost is trivial

8.21 We consider that the case for pricing two strands at the same price as one strand (or one strand plus a premium to cover the LRIC cost differential) is far superior to Ofcom's proposed approach which would restrict and distort competition.

## 8.4 Other dark fibre pricing issues

8.22 Ofcom discusses[114] how BT's cost recovery will be reduced as a result of introducing dark fibre. We do not understand why there is a need for additional £4.6m of costs to be recovered by BT. For example:

- whilst OSA may be a lower contribution to non-avoidable costs, the overall contribution more than recovers total non-avoidable costs
- the majority of non-avoidable costs (e.g. fixed costs) are in the infrastructure layer not the active layer and therefore will not be affected the introduction of dark fibre.

8.23 We would appreciate a discussion with Ofcom to better understand its proposals.

8.24 Regarding the dark fibre product development costs[115] we have the following comments:

- We agree that the cost should be recoverable by BT and that it should be recovered across all active and dark fibre circuits (which is the effect of Ofcom's proposal). If it was only recovered from dark fibre it would distort competition and ultimately reduce consumer benefits
- The figure of £5 to £10 million seems excessive given that dark fibre is merely a sub-set of the existing Ethernet product. In essence it might be better viewed for these purposes as an EAD variant (i.e. EAD without the boxes) rather than a brand new product

## 8.5 Implementation of attribution changes

8.25 The cost attribution review is very welcome and long overdue since it should finally end BT being allowed to manipulate the regulated accounts which has inflated regulated wholesale charges by around £250m a year – a practice that has been going on for years. We will respond separately to the review's proposals.

[114] Leased line charge control consultation §6.92ff

[115] Leased line charge control consultation §6.118

8.26 However, we have concerns about how the results of the review are implemented in the leased line charge control, both the implementation of the attribution corrections and the data errors.

8.27 Rather than implementing all of the corrected attributions through a starting charge adjustment Ofcom has only adjusted for £22m of the total £55m correction required for leased lines (the remaining £33m will not be fully corrected for until 2018/19). The reason for this is that Ofcom have made a starting charge a adjustment for costs where the new allocation metric is a 'non-specific cost driver' (i.e. previously allocated IT costs).

8.28 Ofcom reasoning for this is brief and not fully clear:

> *… we consider it is appropriate to make a starting charge adjustment where we find that costs which are incremental to unregulated services have been allocated to regulated business connectivity services (and vice versa).* [116]
>
> *Specifically, where the June 2015 Cost Attribution Review has identified a specific cost driver, we propose to include this in our starting charge adjustment. Given that our economic test applies to incremental cost, we consider that where a cost category has been given a single driver, it is likely that BT's current attribution methodology allocates costs that are incremental to unregulated services to regulated Ethernet services.* [117]

8.29 It appears that Ofcom logic is that (a) Ofcom should only make the starting charge adjustment when a cost type is incremental to regulated/unregulated services and (b) that if the new allocation metric is a non-specific cost driver then the cost is not incremental.

8.30 This is an unsound and incorrect approach for two key reasons.

8.31 First, Ofcom is conflating an accounting exercise with the nature of costs. Ofcom has effectively determined whether a cost is incremental or not solely on how it has chosen to attribute that cost in the regulated financial statements. However, the driver chosen for the attribution says nothing about whether a cost is incremental or not. For example, under Ofcom's method Group finance costs are (since they are allocated using a non-specific metric: 'Previously allocated total costs') considered not incremental and therefore are not included in the starting charge adjustment. This is incorrect – finance costs flex with the size of a business. Most of the overhead costs being considered here are mostly incremental (85% to 100%) as shown by BT's own RFS[118].

8.32 Second, Ofcom should not ignore that fact that BT wholesale revenues have been excessive by about £250m for many years. Under Ofcom's proposals BT will be able

[116] Leased line charge control consultation §6.124

[117] Leased line charge control consultation §6.135

[118] Long Run Incremental Cost Model: Relationships & Parameters, 15 August 2014. CV168: General Management & Other – 100% variable. CV169: General Management & Other, legal charges & other fees – 85% variable. CV174: Personnel and administration – 96% variable. CV200: Pay Accounting & Management Services Costs – 100% variable

to continue to overcharging in the BCMR throughout 15/16 and by another £50m in 16/17 and 17/18[119]. It is unjust to allow BT to continue to reap the rewards of overcharging any longer than possible. Accordingly, it would be appropriate for Ofcom to alter its test of when to make starting charge adjustments to reflect the previous effects.

8.33 Ofcom has identified £19m of errors related to BCM products. The leased line charge control consultation is not explicit on the treatment of the £19m errors. However, the Cost Attribution Review consultation says that the errors have fed into the base year data:

> *As we explain in Section 7, we expect that all of the errors which we have identified will be corrected by BT in the 2014/15 Regulatory Financial Statements. They will therefore be taken into account in the 2014/15 base data for the 2016 BCMR and LLCC Statement. (§13.21)*

8.34 The effect of including the errors in base data is that the errors will be corrected in charges via a glide path over 3 years and BT will continue to gain from the errors until 2018 (which results in further excess profits of about £20m). We think that the full error should be corrected via a starting charge adjustment. We explain why below

- Ofcom itself says "*we proposed to apply the following principles in relation to starting charge adjustments: ... Excessively high or low margins driven by: ... changes in cost allocations (and accounting errors) between regulated and unregulated markets – we propose to impose a starting charge adjustment;*" (LLCC §6.120)
- The errors are errors in incremental costs (in deciding whether to correct attribution mistakes via a starting charge adjustment Ofcom method was designed to adjust for those where the mistake was in an incremental cost) (LLCC §6.124)
- It is unjust to allow BT to continue to reap the rewards of overcharging any longer than possible particularly when it seems that the errors did not arise inadvertently

## 8.6 Impact of sub-caps and sub-baskets

8.35 Ofcom has used various sub-caps and sub-baskets. Whilst they are better than no pricing constraints at all it appears that Ofcom considers that they are adequate to address excessive charging. They are not. For example:

- If they are set at the same X as the overall basket they allow existing overcharging to continue – they do nothing to prevent existing overcharging
- If they are set at a lower X than the basket (i.e. less negative) then it allows over-charging to increase

[119] This is based on the continuing overcharge being £33m (=£55m less £22m) in 16/17 and £17m in 17/18 due to the effect of the glidepath

8.36 Similarly we do not consider safeguard caps as being effective protection for consumer interests. By way of example, a safeguard cap (of RPI-RPI) applies on AISBO services in the WECLA yet BT's returns in this market are a staggering 48% – four times their cost of capital[120].

8.37 Ofcom should be cognisant of the weaknesses of sub-caps, sub-baskets and safeguard caps when deciding whether to apply them instead of a stronger charge control.

## 8.7 Inter-group common costs

8.38 Under Ofcom's current cost attribution approach some of BT's costs that are common between regulated and unregulated products are attributed to regulated products, allowing BT to recover some of these costs from wholesale charges. These inter-group common costs (IGCCs) will include a *portion* of central costs such as CEO, Treasury, audit etc.

8.39 TalkTalk proposed that IGCCs should not be attributed to regulated products since this would improve economic efficiency.

8.40 Ofcom proposes in its consultation to continue its current approach which allows BT to recover some IGCCs from regulated products. Ofcom provides two primary reasons for this approach:

- preventing IGCCs being recovered through regulated charges "*increases the risk that other CPS are able to successfully compete with BT for non-regulated services despite having costs that exceed BT's long-run incremental costs of providing unregulated services*"[121]; and,
- preventing IGCCs being recovered from upstream access markets "*would have a detrimental impact on BT's upstream competitors*" [122].

8.41 The first point addresses competition in the downstream (unregulated) market. Ofcom seem to be arguing that not recovering IGCCs in regulated charges will increase the risk of inefficient entry in the downstream market. Whilst true in a narrow sense, this point is not relevant. What is relevant is whether recovering IGCCs in regulated charges leads to overall inefficiency – and it does.

8.42 Under the current approach where some IGCCs are recovered from regulated charges the position of the various competitors in the downstream market is as follows:

- BT only need to recover part of their IGCCs in the downstream market, with part being recovered through wholesale charges levied on other operators;

[120] In fact it appears that the safeguard cap was so weak that it was not binding – see BCMR May 2015 §4.161

[121] Leased line charge control June 2015 §5.30

[122] Leased line charge control June 2015 §5.31

- Competitors who rely on BT's regulated products both have to recover all of their own IGCCs[123] and pay, in wholesale charges, some of BT's IGCCs.

8.43 Clearly competitors to BT in the downstream market have to face higher costs per customer than BT faces. Consequently, competitors who have lower underlying costs than BT may not be able to compete with BT. Thus the current approach distorts 'on the merits' competition in downstream markets.

8.44 BT, by virtue of being vertically integrated with an upstream monopoly, has a unique and non-replicable structural advantage through it's vertical integration, which is unrelated to any concept of economic efficiency. By not allowing BT to recover IGCCs in regulated charges this advantage[124] is removed form BT and there is a more level playing field in the downstream market.

8.45 Though Ofcom's first point may be valid it is not really relevant. Ofcom is correct in suggesting that if IGCCs are not recovered in regulated products then there is an *increased risk* of inefficient entry. But if IGCCs are not recovered in regulated products then there is also an increased risk of inefficient exclusion. In this case, the risk of inefficient exclusion is a much greater than the risk of inefficient entry because competitors face higher costs. The natural consequence of Ofcom's logic of avoiding the risk of inefficient entry (only) would be to set an ever higher (and above FAC) wholesale price to limit any entry. Such an approach cannot be consistent with Ofcom's duties. Ofcom's mistake is that its objective is not only to reduce the risk of inefficient entry but rather to ensure overall efficiency by reducing distortions, which include both inefficient entry and inefficient exclusion.

8.46 Ofcom's second point which addresses competition in the regulated upstream market is partly correct but the weight that should be given to this point should be low.

8.47 If BT's upstream regulated charges do not include any IGCC then competitors that operate only in the upstream market would be disadvantaged and efficient operators with lower underlying costs than BT could be excluded. This is because such rivals would have to recover all of their IGCC from upstream market whereas BT would not need to recover any of their IGCCs.

8.48 However, and very importantly there will be no harmful impact on competing end-to-end providers who operate in both upstream and downstream markets (primarily Virgin Media, but also Vodafone/ Cable & Wireless). These operators can choose whether to recover their IGCC in downstream and/or upstream markets, and if necessary, can amend their recovery profile to match that of BT.

8.49 Therefore, there will only be inefficient exclusion of upstream only operators (such as CityFibre Holdings and Zayo) in regulated areas. This is relatively small concern for several reasons:

[123] When we refer to a competitor's IGCCs they are the costs that would be common across downstream and upstream markets though, of course, they have no upstream activities

[124] to be clear there are many other advantages from vertical integration that this does not resolve

- The vast majority of competition in upstream markets is by operators who are active in both the upstream and downstream markets (e.g. Virgin, COLT, Vodafone) and this competition is unaffected.[125]
- The market in the CLA is competitive and unregulated (under Ofcom's proposals) and so there will be no effect here. Notably the focus of many upstream only rivals is the CLA area. The market share of upstream only players outside CLA is probably much less than 1% of the total market.
- Arguably upstream only operators could enter the downstream market (like end-to-end operators and BT) to overcome any disadvantage. We understand that in some market CFH is active in the downstream markets e.g. direct retailing to some public sector and larger business customers.

8.50 Therefore, the overall impact of not recovering IGCCs in regulated products has positive and negative efficiency impacts:

- Improvement in efficiency in downstream market as distortions are reduced and inefficient exclusion is reduced
- Reduction in efficiency in upstream market as efficient entry by upstream only competitors outside the CLA will be reduced (if these operators choose not to enter the downstream markets)

8.51 Given the extensive downstream competition versus the relatively minor upstream only competition outside CLA we think the efficiency gains will significantly outweigh the efficiency losses from not recovering IGCCs in regulated products. Effectively under the current approach Ofcom is creating a large distortion in the downstream market to remove a small distortion in the upstream market.

8.52 Ofcom note[126] that the revision of cost attributions will *reduce* the share of central costs (and so IGCCs) that are recovered in regulated products making this concern of less importance. We agree. However, as Ofcom recognise the revised cost attributions will not 'eliminate' the issue about IGCC cost recovery. We still consider that Ofcom should fully address the current inefficiency by recovering no IGCC in regulated products.

## 8.8 Cost of capital

8.53 TalkTalk considers that Ofcom's assessment of the appropriate cost of capital for the leased line charge control review adopts a broadly sound overall approach, but that in several cases Ofcom has used inappropriate estimates of the parameters which have led to a materially excessive cost of capital estimate.

8.54 The key areas where we consider Ofcom needs to alter its approach and/or assumptions are:

[125] except inasmuch that rivals who operate in the downstream market will be able to compete more effectively with end-to-end providers

[126] Leased line charge control June 2015 §5.33

- The prices set for regulated products should reflect the WACC in each year of the charge control – not just the last year. Ofcom's approach unnecessarily introduces the risk of supernormal or subnormal returns and distortions
- Ofcom's assumption for the real RFR of 1.0% is not supported by any of the evidence. Even at the end of the charge control period a real RFR of 1.0% is highly unlikely
- Based on stated government policy the corporate tax rate should be 18% or 19%, not 20% as Ofcom have assumed
- Ofcom's forward looking cost of debt estimate of 5.4% is highly inconsistent with the current yields on BT debt of 2.6% given the lack of any reasoning provided as to why it might more than double in the next 3 years
- We agree with disaggregating BT's WACC into three units. However, we consider the third unit should only include the other regulated wholesale products and not include UK retail activities which results in a unrealistically high WACC for leased lines

### 8.8.1 *Ofcom's approach of estimating the WACC for the last year of the charge control*

8.55 It appears that in estimating the WACC used to calculate leased line costs and prices, Ofcom has sought to determine the cost of capital which BT will face in the final year of the charge control (i.e. 2018/19). This is not made fully explicit by Ofcom, but appears to be implicit, as demonstrated by Ofcom's comments:

> *In May 2015, HM Treasury published an RPI forecast of 3.2% for 2018 and 3.0% for 2019.The weighted average of these forecasts for the financial year 2018/19, the final year of the charge control, is 3.2% … We therefore propose to use an RPI forecast of 3.2% in our WACC calculation to derive the nominal RFR.*[127]
> *Given that we are attempting to estimate a real RFR appropriate for the end of the charge control period in 2018 …*[128]

8.56 We think such an approach can lead to systematic over- or under-recovery of costs over the course of the three year charge control period. Effectively, the final year estimated WACC is applied to each year in the charge control period even if the estimated WACC in year one or two is lower (or higher) as a result, say, of inflation being lower (or higher) than in year 3. Ofcom's approach introduces the risk of significant regulatory error and can be easily overcome[129].

8.57 There are two methods to correct this problem[130]:

[127] Leased line charge control June 2015 §A9.15-§A9.16

[128] MCT Review 2015-2018 March 2015 §A10.26

[129] Ofcom's preference for using a glidepath does not provide reason not to adopt this approach – adopting this approach will not in any way reduce BT's incentives to reduce costs.

[130] These two approaches should lead to the same average price over the regulatory period, although the path of prices will be different.

- Derive costs in year 3 that are used to set prices based on the average WACC across the three year regulatory period; or,
- Derive the costs based on the estimated WACC in each year and set a different X for each year.[131]

8.58 These methods will not only reduce the risk of under-/over-recovery but they will also improve the robustness of the charge control and reduce the risk of error since they will use more reliable data from earlier years – for instance, the inflation estimates for years 1 and 2 will be more reliable than that for year 3.

8.59 Assuming inflation: 2.65%, 3.63%, 4.15% (years 1, 2, 3) from HM Treasury; real RFR: 0%, 0.5%, 1.0%; tax 20%, 19%, 19%; and other assumptions as per Ofcom consultation then WACC would be: 8.2%, 9.3%, 9.9% (which averages 9.1%). Thus the average WACC (9.1%) would be 0.8% less than the year 3 WACC (9.9%).

8.60 Adopting this alternative method will have a material impact on prices. There are several parameters which are likely to be materially different in 2016 and 2017 than in 2018 – real RFR, inflation, cost of debt and tax rate. By using the average figures (rather than 2018 figures) the WACC could be lower by about 0.8% resulting in lower leased line charges by about £60m[132]. Therefore it would be disproportionate for Ofcom to not, at a minimum, fully consider this point.

### 8.8.2 *Reliance on mobile termination rate decision*

8.61 Ofcom's proposals deal very briefly with the issues of the estimated risk-free rate ('**RFR**'), the equity risk premium ('**ERP**'), the total market return ('**TMR**') and corporate tax rate, at §§9.9-9.17. Ofcom's stated reason for this is that these issues were considered and concluded on in the March 2015 MCT Statement. As a result Ofcom adopt the same assumptions with little discussion.

8.62 We disagree with Ofcom's approach. TalkTalk, in common with several other major fixed operators interested the WACC for leased lines, did not comment on the mobile call termination review. Therefore, if Ofcom wishes to read across the conclusions of a previous consultation it should have made clear its approach in advance of the previous MCT consultation so that interested parties could have participated.

8.63 We do not consider that there is any argument for Ofcom to adopt the same RFR, ERP, TMR and tax rate assumptions due to a need for consistency. The assumptions used in the leased line charge control decision should be based solely on their own merits rather than favouring assumptions because they have been adopted previously for the MCT Statement. That an assumption was adopted in the MCT

[131] The X would need to reflect the desired glidepath for prices.

[132] Assuming inflation: 2.65%, 3.63%, 4.15% (years 1, 2, 3) from HM Treasury; real RFR: 0%, 0.5%, 1.0%; tax 20%, 19%, 19%; and other assumptions as per Ofcom consultation then WACC would be: 8.2%, 9.3%, 9.9% (which averages 9.1%). Thus the average WACC (9.1%) would be 0.8% less than the year 3 WACC (9.9%).

Review can provide no material justification for adopting the same assumption in the leased line charge control; Ofcom should address the circumstances which pertain at the time of each review it undertakes.

8.64 We provide our comments on each of these parameters below.

### 8.8.3 *Real RFR*

8.65 For its estimate of the RFR in 2018/19, Ofcom refers to the March 2015 MCT review statement, which provided an RFR estimate of 1.0%. In the MCT Statement Ofcom summarised its approach as follows:

> *We continue to believe that caution is required in interpreting the evidence available since there may be certain factors, as noted above, that affect the demand for gilts and therefore gilt yields. Given that we are attempting to estimate a real RFR appropriate for the end of the charge control period in 2018 it would be inappropriate to simply adopt the current low rates on index-linked gilts without considering the reasons why they could be depressed. Such factors include the wider macroeconomic environment in recent years and the significant bond market intervention by monetary authorities – such as via quantitative easing. We have put more weight on longer run yields for index-linked gilts because we consider it difficult to conclude that the real RFR in the economy is negative and taking a longer-run view is consistent with our established methodology.*[133]

8.66 It seems Ofcom's approach is that it does not consider the current real RFR (of about -1.0%) as a sound estimate for 2018 since there are factors (such as the potential removal of quantitative easing) that may result in the real RFR rising over the next 3-4 years. However, even in light of these considerations we do not think the evidence supports the 1.0% assumption for 2018.

8.67 The key set of data used by Ofcom is yields on five and ten year gilts, with historic averages calculated over a range of periods. The data presented in the MCT review for January 2015 are reproduced in Table [ ] below.

**Table [ ]: MCT data on historic gilt returns (30 Jan 2015)**

| Averaging period | 5 year gilts | 10 year gilts |
|---|---|---|
| Spot | -1.2 | -1.0 |
| 1 Month | -1.4 | -1.1 |
| 3 Months | -1.3 | -0.9 |
| 1 Year | -1.1 | -0.5 |
| 2 Years | -1.3 | -0.6 |
| 5 Years | -1.0 | -0.2 |
| 10 Years | 0.3 | 0.7 |
| 15 Years | 1.0 | 1.2 |
| 20 Years | 1.5 | 1.6 |

*Source: Ofcom*

8.68 Notably, more recent real spot rates for 5 and 10 year bonds remain strongly negative. As of 4 August 2015, the yield for a 5-year gilt was -1.10%, while the yield

[133] MCT Review 2015-2018 March 2015 §A10.26

for a 10-year gilt was -0.86%. These rates are little changed from those presented by Ofcom in its MCT Statement seven months ago.

8.69 Given these data the only way in which this gilt return evidence would support a 1.0% real RFR assumption would be to use historic very long run averages of 15 years or more i.e. for a period starting before 2000 and so taking in much of the pre-crash period. We do not think that such an assumption is sound.

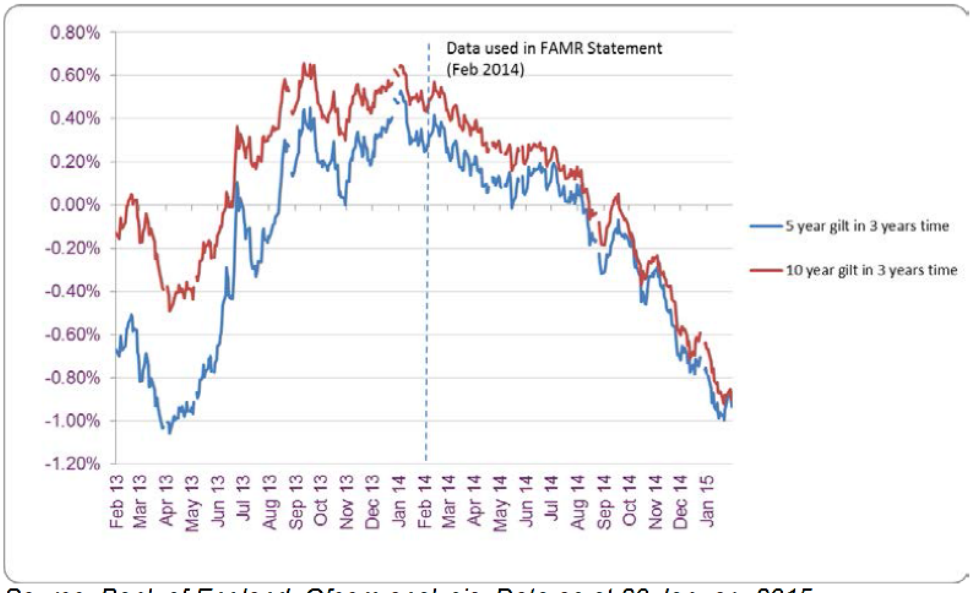
8.70 In particular, it is increasingly clear that it is not the impact of quantitative easing (QE) that has resulted in RFRs that are lower than those observed pre-2008. Even in early 2014, the CMA was noting that '*the prolonged period of low yields may suggest that long-run rather than temporary factors are at work*'. An intervening eighteen months with no material move of the RFR back towards positive territory only makes this conclusion stronger. In particular, there have been no asset purchases under QE since July 2012, meaning that such low real risk free interest rates have persisted in the absence of further policy support.

8.71 Therefore, it now appears, after a period of 7 years after the crash with persistently low RFRs that RFRs which could historically have been thought of as low are in practice normal, and should be expected to continue in the future or at least for 3 years.

8.72 Another source of evidence that strongly supports a real RFR substantially below 1.0% is the implied yield on 5 and 10 year gilts issued in 3 years time. This data provides an estimate of the yield that a borrower would face in 3 years time and thus is highly relevant for estimating the real RFR in 3 years. The yield estimate for debt issued in January 2018 is approximately –0.9% (as shown in the exhibit below copied from the MCT Review for 30 January 2015[134]).

[134] We do not have more recent data to update this analysis.

**Figure A10.2: Forward rates on 5 and 10 year gilts taken out in three years' time**




*Source: Bank of England, Ofcom analysis. Data as at 30 January 2015.*

8.73 This data reinforces that the appropriate real RFR in 2018 is much lower than 1.0%. We think there is no meaningful prospect that this RFR would be as high as 1.0%.

8.74 It is important to note that the CMA's decision in the NIE determination– the most recent CMA determination of a regulatory cost of capital– no longer has any meaningful relevance for Ofcom's current consultation, and so should be disregarded by Ofcom.[135] The CMA's determination in that case was made on 26 March 2014, fully two years before the new leased line charge control is due to come into force. Such a long elapsed period means that the CMA's view may have changed substantially in the intervening time, particularly given the volume of extra data that has emerged over that period, and the inconsistency of those data with the NIE determination. In any case, the CMA's determination is not binding on Ofcom.

8.75 Ofcom should revisit this aspect of its proposals, and revise the RFR substantially downwards. We think a more justifiable estimate would be no higher than 0% for 2018/19.

8.76 Furthermore, as we highlight above (at [§]) we think that Ofcom's approach should consider the WACC in each year, by for instance, using the average WACC over the period to derive costs and prices. It is very clear that the RFR in the first two years of the charge control (and therefore the average WACC) would be lower than the estimated RFR in the third year, and this should be reflected in Ofcom's determination.

[135] Competition and Markets Authority (2014), *Northern Ireland Electricity Limited price determination*, 26 March.

### 8.8.4 *ERP/ TMR*

8.77 Ofcom has estimated the ERP at 5.3%, primarily in order to retain the TMR at 6.3% in total. This TMR was felt to fit within a range of 5.5% to 6.5% that Ofcom considered to be appropriate.

8.78 As with the RFR, Ofcom's proposals deal with the ERP in cursory fashion. It notes that in the 2015 MCT Review Ofcom had proposed to increase the ERP from 5.0% to 5.3% in order to maintain the TMR at 6.3%, as in Ofcom's earlier proposals. It then states that '*there may be an inverse relationship between the real RFR and ERP*', and that Ofcom preferred to keep a '*relatively stable*' TMR. In the MCT Review, Ofcom therefore chose to increase its estimate of the ERP from 5.0% to 5.3% at the same time as it reduced its estimate of the RFR. Ofcom stated that the TMR of 6.3% fell within the appropriate range of 5.5% to 6.5%.

8.79 An estimated ERP of 5.3% is within the range of ERPs used by the CMA in recent decisions, as set out in Table A10.5 of the MCT Review determination. TalkTalk therefore considers that an ERP of 5.3% is within Ofcom's range of discretion.

8.80 However, TalkTalk considers that it would be difficult for Ofcom to justify an ERP above this level, as it would push the ERP well above the long-term average of 5% cited by Ofcom at §A10.51 of the MCT Review. Such a change would also move the ERP even further outside the range of 4-5% determined by the CMA in the NIE Review.[136] Moreover, Ofcom has considerable scope to allow the TMR to fall without it moving outside the range of 5.5%-6.5% that Ofcom has stated is appropriate. As such, if Ofcom reduces the RFR from that it adopted in the MCT Review (as it should), then it should not increase the ERP to offset the move in the RFR, and keep the TMR constant. Rather, as long as the TMR remains within the range of 5.5%-6.5%, the ERP should remain constant, and the TMR should reduce.

### 8.8.5 *Corporation tax*

8.81 Ofcom has assumed a corporate tax rate of 20% "*since this represents the best estimate of what the tax rate will be on a forward-looking basis*". [137] This is not correct (possibly because Ofcom did not reflect that the leased line charge control period is different to the MCT period).

8.82 In its July 2015 Budget, the Government announced that corporation tax would fall from its current 20% to 19% in 2017 and 18% by 2020. Therefore, the tax rate in 2018 will be either 18% or 19% (but not 20%). Ofcom should revise its estimate of corporation tax to reflect the government's policy announcement.

[136] As noted, however, the CMA's NIE determination is now somewhat outdated.

[137] Leased line charge control June 2015 §A9.10.

### 8.8.6 *Inflation*

8.83 Ofcom correctly sets its inflation assumption based around the RPI measure of inflation. Using RPI is appropriate because it is consistent with calculating the RFR based on index-linked bonds, which are themselves linked to the RPI index.

8.84 We agree with Ofcom's approach of using RPI as its estimate of inflation. However, as we describe above at [§] we consider that Ofcom should reflect the RPI inflation in each year in its calculations to prevent supernormal (or subnormal) returns.

### 8.8.7 *BT Group equity beta*

8.85 Ofcom proposes the following methodology to derive the equity beta (§A9.19):

- first derive the equity beta for BT Group using BT's equity returns relative to market equity returns over the recent past;
- second, derive the asset beta for BT Group by removing the effect of financial gearing; and,
- finally, derive a forward-looking equity beta by applying a forward-looking gearing rate for BT Group to the asset beta.

8.86 TalkTalk considers that this is an appropriate methodological framework for estimating the asset beta.

8.87 In Table A9.2, Ofcom presents four different estimates of BT Group's beta, ranging between 0.97 (a two-year beta against the FTSE All-Share) and 0.73 (a one-year beta against the FTSE All-World). As such, there is a considerable range of plausible values for BT's beta, which is therefore subject to significant uncertainty.

8.88 Where faced with such uncertainty, Ofcom should not attribute excessive weight to any particular value. In particular, when cross-checking the Rest of BT beta which is the residual after the Openreach copper and Other UK telecoms betas have been calculated, Ofcom should be relatively unconcerned if the figure is higher than relevant comparators. If Ofcom had chosen one of the other lower equity betas, each of which is arguably relevant to determining BT's 'true' equity beta, this rest of BT figure would be lower and therefore closer to the level of the comparator set.

### 8.8.8 *Gearing*

8.89 TalkTalk agrees with Ofcom's approach to calculating BT's gearing, and in particular with using a forward looking gearing level higher than BT's current ('*particularly low'*) level of gearing. We also agree that 30% is an appropriate forward-looking gearing level for BT.

### 8.8.9 *Debt premium and cost of debt*

8.90 TalkTalk considers that the approach Ofcom has adopted for determining BT's overall cost of debt is flawed.

8.91 At Table A9.5, Ofcom sets out the spreads of different maturities of BT debt instruments over gilts. This table shows that at present BT's debt has a risk premium of between 0.8% and 1.3% over UK gilts.

8.92 When combined with a spot yield on index linked gilts of around -0.9% (see [§] above), and an RPI inflation rate for July 2015 of 1.0%, this means that the nominal rate of interest on BT's debt is at present 1.0% to 1.5%. That can be considered a 'bottom up' estimate of the cost of BT debt, based on a combination of parameters.

8.93 The alternative is to use a top-down approach, looking directly at the cost of BT debt. This approach shows an average of 2.6% (which notably compares to an allowed cost of debt of 6.4% from the last leased line charge control), with lower yields on shorter term debt.

*Table: BT cost of debt*

| Bond | Maturity date | Amount | Yield to maturity |
|---|---|---|---|
| British Telecom 8.75% | 07/12/2016 | £700m | 1.59% |
| British Telecom 6.625% | 23/06/2017 | £500m | 1.67% |
| British Telecom 8.625% | 26/03/2020 | £300m | 2.39% |
| British Telecom 5.75% | 07/12/2028 | £600m | 3.58% |
| British Telecom 6.375% | 23/06/2037 | £500m | 3.94% |
| *Weighted average* | | *£2,600m* | *2.61%* |

*Data at 6 August 2015.*

*Source: Morningstar data, BT data, Ofcom*

8.94 However, Ofcom estimates BT's nominal cost of debt to be 5.4%. Ofcom offers no justification for why its estimated cost of debt on a forward-looking basis should diverge so far from the observable market data. This is a serious error. Even if Ofcom considers that BT's cost of debt will rise between now and the end of the regulatory period– and such an assumption is not stated in Ofcom's determination– then it should set out the reasons why this increase will occur, and justify the scale of the increase in the cost of debt which is estimated.

8.95 Ofcom notes this large gap between its cost of debt estimate and current yields at footnote 315 to its annexes. The only justification it provides for this large discrepancy is that it wishes to maintain consistency of approach between its approach to deriving the cost of debt and the cost of equity. However, this does not address the issue. Consistency cannot be a reason to knowingly ignore market data which allows a key cost parameter to be directly observed. Ofcom must set a cost of debt which adequately estimates the actual forward-looking nominal cost of debt facing BT by setting the debt premium facing BT as the difference between BT's (observable) current cost of debt, and Ofcom's estimate of the RFR and inflation, plus any amendment for Ofcom's estimate of parameter changes in each year of the charge control.

### 8.8.10 *Beta*

8.96 Ofcom estimates the asset beta and equity beta to apply to leased lines (and also LLU/WLR) by disaggregating the BT Group betas. We comment below on various aspects of Ofcom's approach and analysis.

8.97 Though we agree with Ofcom's approach to disaggregation we note that if Openreach was structurally separated from other parts of BT Group then the WACC for regulated products could be much more easily derived with much lower risk of regulatory error. This is because the vast majority of regulated products would be provided by a separate focussed business whose asset beta could be more accurately derived. It would not be necessary to bifurcate the betas and cost of capital for activities with significantly different levels of systematic risk. Consequently the estimated WACCs for regulated products are likely to be more accurate and so result in fewer distortions to investment and the retail market.

### 8.8.11 *Creation of a separate third WACC*

8.98 Previously Ofcom had created two WACC estimates for BT: Openreach copper, which is used for Openreach's legacy copper network and is used to set LLU and WLR charges; and Rest of BT (RoBT), which is the residual left after calculating the Openreach copper to obtain BT's overall group WACC. Ofcom has typically varied the asset beta and debt premium between these different units.

8.99 Ofcom now proposes to change this structure, and instead use three disaggregated WACCs for different parts of BT:

- Openreach copper (WACC applies to LLU and WLR)
- All other UK telecoms services (WACC applies to other regulated products including leased lines)
- The (new) RoBT(i.e. BT Global Services).

8.100 Compared to the previous approach, this structure will split BT's leased line and other non-copper telecoms businesses from BT's high-risk Global Services business.

8.101 TalkTalk strongly supports such an approach, which offers a better reflection of the different risk facing different parts of BT's overall business particularly leased lines. This change represents a substantial improvement in estimating the cost of capital facing BT's regulated activities. In particular, Ofcom rightly identifies that the rise in the BT group beta does not appear to be linked to any developments in the leased lines market. Rather, the rise in BT Group's beta appears to reflect the rising proportion of BT involved in activities such as TV, sport and more recently mobile rather than a traditional fixed line infrastructure.

8.102 Though we agree with the three part disaggregation we think that Ofcom has defined 'other UK telecoms services' ('**UKTS**') too widely and has included some high risk activities within UKTS. This will result in an overestimation of the asset beta and WACC for leased lines. For example, there is a considerable difference between:

- the relatively low-risk activity of providing wholesale leased lines in areas where BT holds significant market power; and,
- the much higher risk activity of setting up a new sports channel with high fixed costs to compete with Sky.

8.103 As it stands, BT Sport is, bizarrely, included within UKTS despite not being a telecoms service and having no meaningful similarities with the business of offering wholesale leased lines.

8.104 TalkTalk considers that UKTS should instead be confined to all non-copper regulated wholesale products (whether in Openreach or BT Wholesale). It would therefore be a beta for an upstream wholesaler of telecoms services in the UK, which is a much more focussed reference point for determining the cost of capital for BT's leased line business (and other regulated products). Data is available to allow such an approach to be adopted – for instance, the NRC for regulated products can be determined.

### 8.8.12 *Benchmarks*

8.105 Ofcom has used benchmarks to provide comparators for the three different units making up BT Group:

- For Openreach copper: UK utilities
- For UKTS: other UK telcos
- For RoBT (i.e. Global Services): ICT providers

8.106 We have the following comments on this:

- In some respects the UK utilities comparators (which average 0.40 2 year to 0.44 1 year) would have higher risk than Openreach since they face competition in many parts of their business (e.g. retail) and unlike BT regulated services face both material input and output price volatility (e.g. in electricity and gas prices). Accordingly we consider that the 0.50 asset beta assumed for Openreach is too high.
- Ofcom seems to in part justify the assumed Openreach copper asset beta of 0.50 on the basis that it is below the BT Group beta (of 0.74). It is axiomatic that the Openreach copper asset beta will fall below the BT Group beta, as Openreach definitionally faces lower risk than the retail activities which it sits upstream of. In setting the Openreach copper asset beta the BT Group beta is almost irrelevant.
- If UKTS is redefined to only include regulated wholesale activities then we consider that the UK telecoms comparators would have a higher risk profile than UKTS since the comparators all operate in competitive parts of the market / value chain (whereas a redefined UKTS would, by definition, only include activities where BT has SMP).

### 8.8.13 *Weight given to Openreach copper*

8.107 TalkTalk considers that it is appropriate for Ofcom to reduce the weight given to Openreach's copper business when comparing the betas for different parts of BT with the overall BT Group beta. As set out in previous submissions to Ofcom in the context of other regulatory reviews, we continue to believe that Regulatory NRC/ EV is the most appropriate measure of the weight of Openreach copper and other units within BT Group. We agree that the MCE measure contains no meaningful information to be taken into account by Ofcom, and that it should therefore be given no weight in Ofcom's assessment.

### 8.8.14 *Debt premium*

8.108 TalkTalk considers that it is appropriate for the total cost of debt for UKTS to sit between the total cost of debt for Openreach-copper and RoBT. We consider that the cost of debt for UKTS should be lower than BT Group (and possibly the same as Openreach copper particularly if the unit is redefined to exclude retail activities).

## 8.9 EAD vs EAD LA

8.109 We agree with Ofcom's proposals to require BT to set the price difference as between EAD and EAD-LA to reflect the LRIC cost difference. The current price structure clearly demonstrate BT's incentive and ability to exploit the flexibility that it is given within baskets to discriminate against competitors (as shown by the higher returns on EAD which competitors use proportionally more[138]). We have the followings comments on the detailed proposals

- There is no reason for the change to take 12 months to implement[139] – Ofcom is effectively allowing BT to continue to reap the rewards of anti-competitive behaviour after it has been identified. Instead, BT should calculate the necessary correction in the lead up to the statement and for it to be implemented on 1 April 2016. If necessary it can be refined later
- There must be good transparency of how BT estimates the cost differences since it is clearly in BT's interests to exaggerate the cost of EAD versus EAD-LA to increase its profits
- Structural separation would remove Openreach's incentive to engage in this type of anti-competitive behaviour

## 8.10 Encouraging migrations from legacy products

8.110 Ofcom discusses the need for the design of price regulation to allow for incentives to be created to encourage migrations from legacy products[140]. We agree with this

[138] BCMR May 2015 §10.25

[139] As proposed at leased line charge control consultation §10.29

[140] Leased line charge control consultation §4.22

objective. The most obvious way of achieving this would be to include TI and CI services in the same basket. However, the undertakings prevent this.

8.111 An alternative approach might be to (re)allocate some of the common cost[141] that is currently attributed to AI services to TI products. This will allow:

- TI prices to be raised and AI prices to fall
- TI and AI prices to remain above LRIC
- BT's overall recovery to remain unchanged

8.112 We think that Ofcom should consider this approach.

## 8.11 Treatment of discounts

8.113 We broadly agree with Ofcom's approach[142] to which discounts can count to the charge control compliance. If, for example, discounts in certain geographic areas count then it allows BT to recover 'losses' in competitive areas with higher 'profits' in non-competitive areas. That would not be possible if all markets were competitive and would be anti-competitive if it were allowed.

8.114 It would be useful if BT provided details of average discounts applied within its *ex post* compliance reporting.

## 8.12 Others price control issues

8.115 Regarding tests for excessively low or high prices[143] we do not consider that DLRIC or DSAC are sound tests. They are arbitrary costs figures (since they depend on arbitrary increments). Ofcom has rightly moved away from using DSAC for testing cost orientation or basis of charges obligation. DSAC and DLRIC should have no further role in telecoms regulation.

8.116 We agree with the use of CPI.

8.117 Whilst we recognise that it Is easier for Ofcom if BT makes voluntary one-off price reduction[144] the consequence is always that there is a compromise and the reduction is not as much as is warranted. Effectively Ofcom has to give up some reduction in order to secure a voluntary agreement. Therefore we strongly caution to not rely on voluntary agreements given that it has strong powers to impose adjustments and other forms of regulation.

[141] that is common as between AI and TI services

[142] Leased line charge control consultation §5.51

[143] Leased line charge control consultation §6.122

[144] Leased line charge control consultation §4.181

8.118 Ofcom has chosen a base case efficiency assumption[145] (5%) that is not the mid-point of its range (4% to 7%). No reasoning is provided for this unusual assumption. We consider that Ofcom should use the mid-point of 5.5%.

8.119 In respect of the efficiency assumption we note that BT claim it will achieve £360m of efficiency gains through its proposed merger with EE. Some of these efficiency gains will come in central overhead a portion of which is allocated to Openreach. Therefore, the efficiency gain assumption should reflect the benefit of the merger.

8.120 Compliance statement show average price change under prior year weighting (which is used to assess compliance) and also under prior year weighting. This would provide useful information on whether BT is gaming the basket to achieve excessive returns by focusing price increases on growing products[146].

[145] Leased line charge control consultation §6.88

[146] Leased line charge control consultation §10.19