



Ofcom Strategic Review of Digital Communications

TalkTalk response to July 2015 discussion document

October 2015

NON CONFIDENTIAL VERSION

This is TalkTalk's response to Ofcom's Strategic Review of Digital Communications: Discussion Document published on 16 July 2015.

1 Summary

- 1.1 The UK needs a first rate telecommunication network, built to serve and adapt to the constantly evolving needs of a fast moving, globally connected society. It has been clear for some time that the strength of our economy, and the quality of life of the people in this country, increasingly relies on high quality data connections. Our social and cultural development, the success of our businesses, our national security, even Britain's place on the world stage, depend upon it.
- 1.2 It is a strong indication of how willing and capable the UK is to rise to this challenge that our economy has developed such particular strengths in hi-tech, creative and professional services industries in recent years - all industries relying heavily on telecommunications. However, the digital revolution has already spread far beyond these core sectors and is now a powerful driving force behind many of our ambitious plans for future competitiveness, productivity and growth.
- 1.3 It is not possible to conceive today of the multitude of future innovations and advances this technology will facilitate, nor how it will enhance the success of our businesses and the richness of our everyday lives. What we can be certain of, however, is that the opportunities will come, and the UK must be in the best possible position to take advantage of them. We must move beyond standards which meet only the bare minimum required by the country today, and look to what will be required over the next decade and beyond. The UK is engaged more than ever in a global race. If innovation and investment cannot find a home here in Britain, it will surely find one elsewhere.
- 1.4 The question of how to ensure that UK businesses and households reap the full rewards of the digital future is therefore of critical importance, and TalkTalk welcomes Ofcom's Strategic Review as a valuable opportunity to make certain it is answered effectively. Success will depend on creating a regulatory framework and market structure which incentivises all participants to invest and innovate, to be as efficient as possible in their own businesses, and to treat all customers well.

The opportunity for transformational change

- 1.5 The current Strategic Review is extremely timely, occurring at a key juncture in the development of telecommunication technology. The old copper canals of the 1900s must be replaced with the fibre-optic railroad of the 21st century. Demand and supply side synergies are leading to the likely convergence of mobile and fixed data communication and businesses. Countries and innovators around the world are rolling out new infrastructure and technology at an extraordinary pace. It is abundantly clear that the outcome of this review cannot be merely to remedy the problems of today's market, nor to set yet more minimum standards which will

barely cater to the needs of today's customers, let alone those of the future. The benchmark of our ambition should not be to compare well against the average of our European counterparts, nor to solve yesterday's problems. Rather, we need to be bold in creating a world leading market which is fit for purpose for the next generation and beyond.

- 1.6 This is an ambitious goal, requiring a candid and critical analysis of where we are today, and a determined, cohesive approach to the future. Building a fit for the future, state of the art network is no small endeavour. It will not be simple and it will not happen without clear vision and bold action. Above all, TalkTalk believes it cannot be delivered without a truly competitive market.

Effective competition

- 1.7 Ofcom identifies efficient investment and effective competition as its twin objectives. We strongly agree and, unlike some market participants, we see no tension between these objectives. Effective competition is the best driver of efficiency, investment and innovation.
- 1.8 TalkTalk entered the UK market as a competitive challenger to BT, a former national monopoly which inherited a state funded infrastructure network and 100% of UK customers through the privatisation process. Our objective was to ensure that affordable access to telecommunication services, which had previously been a privilege, became a right for everyone. We have remained absolutely committed to this goal over the last decade, and our position as a competitive challenger has not only benefitted our customers; it has helped to drive down prices and spur innovation across the whole market.
- 1.9 However, 30 years after privatisation and despite the full competitive force of challengers like TalkTalk, the UK market remains dominated by the ex-monopoly incumbent, BT. BT is still owner of the copper network, which connects over 80% of all homes and businesses and its retail division accounts for 70% of all superfast broadband connections over BT's FTTC network. BT also secured 100% of state funding for the fibre broadband rollout. If its merger with EE goes ahead, BT will gain one third of the mobile market and its dominance will increase still further.
- 1.10 An incumbent of this size or reach will never have a strong enough incentive to invest in transformative new technology and infrastructure. Instead, as history has shown and BT's plans confirm, BT's motive is to extract as much value as possible from its existing copper assets and prioritise capital investment in other group activities such as the acquisition of TV sports rights and of the mobile network operator, EE. We cannot expect this approach to change whilst customers on its old networks, largely insulated from competition, continue to generate healthy returns.

Where is competition under threat today?

1.11 To deliver the infrastructure which underpins the UK's digital future requires effective competition in four places where it either does not exist currently, or is under severe threat:

- **A level playing field for competition in infrastructure.** Openreach's investment and commercial decisions are primarily driven by a combination of regulation and the demands of BT Retail. Neither of these two drivers will produce sufficient incentive for Openreach to be pushed to the limits of its extensive experience and potential. Separating Openreach from BT would allow Openreach greater freedom to partner on investment with other retail providers without the fear of vertical abuse; and would simultaneously free up BT Retail to collaborate with other infrastructure builders. This level playing field is much more likely to drive innovation and investment.
- **Retail competition to provide superfast and ultrafast broadband.** Ownership of Openreach has given BT retail a very substantial advantage particularly in superfast broadband, where it has manipulated its control over product design and pricing to secure a 70% share of all Openreach connections. Not only does this directly harm customers through higher prices, it also reduces competitors' ability to develop the necessary scale to invest in their own FTTH infrastructure, which would create incentives for Openreach to invest faster. An independent Openreach has a greater incentive than BT Group does to drive higher take up across all their customers, leading to quicker payback and greater investment in future.
- **Competition to offer compelling quad-play offering.** The quad-play market, combining content with fixed and mobile connections, is still nascent. However, the combination of huge increases in data demand and the development of offloading technologies like femto-cells, suggest quad play will capture a large part of the market, bringing substantial efficiency gains and quality improvements. However, for consumers to benefit from quadplay, we must have strong competition between quadplay providers. This requires a market structure which does not allow foreclosure of any one element of the package.

The current course of consolidations is therefore deeply concerning and we share Ofcom's view that four mobile network operators are required to safeguard competition and ensure customers are treated fairly. If allowed to progress unchecked, the outcome of the currently proposed mergers will mean substantial competitive harm, both to market participants and to their customers, and will significantly reduce incentives to innovate and invest across the value chain.

Openreach separation will help, but it will be equally important to ensure that consumers have meaningful choice of fixed and mobile providers; are able to easily switch between quad play providers; and are not paying for products they do not want because they are not regular switchers. The market is increasingly promotion-led, with the result that large groups of customers who

do not choose (or are unable) to switch, are in effect subsidising promotional offers for the small minority of the market which does. We fully support Ofcom's emphasis on empowered consumers, as this is a crucial element in any competitive market to ensure providers are efficient, innovative and above all treat customers fairly.

- **There are no competitive drivers for better service provision.** Consumers and businesses are experiencing unacceptably low (and in some areas worsening) levels of service quality from Openreach, due to inadequate investment and the skewed incentives of Openreach, both caused in large part by ownership of Openreach by BT. Openreach's pledges on service in its recent 'Charter' amounted to little more than promises (which have been made since 2006) to meet minimum service levels. This is a poor reflection of the high degree of experience and expertise of Openreach as an organisation. As an independent organisation, Openreach would be fully focussed (both operationally and in terms of investment) on the provision of the best possible service for customers.

Arguments against separation are unconvincing

1.12 We do not think BT's arguments provide a sufficiently robust case against structural separation. It is also important to bear in mind that the question of whether Openreach separation is the right outcome for the UK must be kept separate from the question of whether it would require time and effort to deliver:

- **BT argues that Openreach needs BT Retail as an 'anchor customer'**. However, structural separation will allow Openreach to have many different anchor customers, not just one. More collaboration with its wholesale customers and more competition between them can only be positive for an infrastructure provider. This will unlock Openreach's potential, offering the chance to develop new models of working and sharing innovation, research and development.
- **Openreach's success is not dependent on BT Group, as BT suggests** – far from it, Openreach can easily access finance and R&D support elsewhere. Analysis by Redburn Partners, based on international comparisons, suggests separation as a 'risk reduction strategy' would increase value for investors. Openreach's current strategy is necessarily constrained by its role as an adjunct of a large corporate focused on aggressive expansion of its retail and mobile businesses. This will only intensify if the BT/EE merger proceeds and BT Group becomes focused on integrating Britain's biggest mobile provider. This risks relegating Openreach to a back office business, starved of the management focus and capital required to transform Britain's digital infrastructure.
- **A unified BT is not the best route to the infrastructure of the future.** In fact, BT is deliberately taking a cautious, staggered approach to rolling out faster network technologies, which risks leaving the UK behind. This is ostensibly in order to offset risks and provide capital for investors elsewhere in its business

model, but is ultimately a drag on customer adoption, as it requires upgrades on a periodic basis with each new technology.

- **Implementing separation will not be as complex as BT claims**, since most of the difficult steps have already been completed in order to reach the current functional separation model. Demergers such as these, including the treatment of pensions, are a well-trodden path. BT itself spun off Cellnet in 2002, (at the time, the largest rights issue in UK history) in a process which took a matter of months. A demerger would allow for regulatory simplification through lifting regulation aimed at preventing vertical abuse, and making the remaining regulation more easily enforceable.

Additional concerns and remedies

1.13 Aside from market structure, Ofcom's review also raises a number of additional factors which may well create barriers to the sector's future development and result in harmful outcomes for customers. Many of these are 'no regrets' policies which would yield some benefits, regardless of the outcome on Openreach separation. These are considered below:

- Consumer engagement is weak (and worsening); with the consequence that far too many consumers are getting poor deals. Ofcom should extend gaining-provider led switching across bundles and encourage more switching making offers easier to understand and compare.
- The level of litigation in the sector has become an impediment to progress. The proportion of decisions appealed is simply too high, resulting in expensive litigation which delays important regulatory developments and increases uncertainty for market participants. In the interests of the industry and its customers, the Government should push ahead with the appeal reforms proposed in 2013.
- BT has been able to achieve excessive returns on wholesale prices, of at least £6bn, resulting in high retail prices and weakened competition. This is a staggering sum and a terrible outcome for customers. The causes must be fully understood and firm action taken to ensure it is never repeated.
- Wholesale price caps should be imposed on fibre products. Since 2009, BT has been able to set prices of at least twice costs, to the detriment on consumers and competition.
- Openreach should be required to offer a full range of passive remedies to allow 'deeper' models of competition, providing customers with lower cost and more innovative services.
- As described above, quality of Openreach service remains a major problem impacting customers. Quality regulation must be strengthened, including potentially: linking price rises to quality levels; more optionality of service levels; and ensuring that the copper network delivers adequate quality to deliver broadband services.

- Competition in mobile is weak, and investment is lagging. The mergers, if approved without major remedies will significantly exacerbate these problems. Depending on the outcome of the merger reviews, Ofcom should promote entry of a new mobile network operator. It should also review the impact of the current mast-sharing JV's on competition and incentives to invest

1.14 Our response is laid out as follows:

- In section 2 we describe our vision for how investment and competition should evolve in the UK's digital communications sector
- Section 3 discusses evidence and our view on the case for structural separation. We also discuss the alternative strategy that Ofcom has raised of strengthening the existing model ('functional separation plus') [Ofcom Question 13, Q14, Q15, Q16]
- In section 4 we outline our view on the role of different models of competition particularly access based (active and passive) versus end-to-end competition and whether and how regulation should promote these different models [Q6, Q7, Q8]
- In section 5 we discuss how regulation may need to adapt in the future to address tight oligopolies [Q5], set wholesale prices for risky investments [Q11, Q12] and ensure good quality of service [Q20, Q21]
- In section 6 we discuss some ideas on how consumers can be empowered to enjoy the benefits of competition particularly as bundling increases [Q10, Q17, Q18, Q19]
- In section 7 we address a number of other issues that Ofcom raises in its consultation
 - Ensuring high availability [Q3]
 - Opportunities to reduce regulation (including *ex ante* regulation) [Q22, Q25]
 - Role of regulation during network migrations [Q23]
 - Implications of the rise of OTTs [Q24]
 - BT's excessive returns
- There are a number of annexes at the end which include additional data and sources

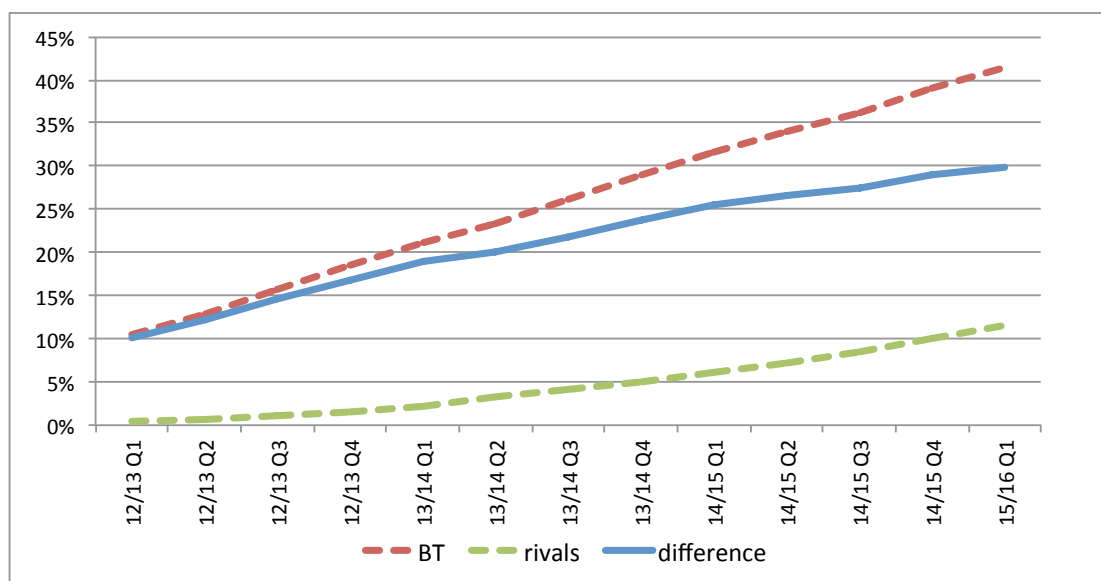
2 Current issues

- 2.1 In this section we provide evidence on the current health of the UK telecoms market and whether it is fit to deliver the innovation, investment and choice that we will need in the future.
- 2.2 The first two sections focus on the fixed sector. Following Ofcom's 2005 strategic review which introduced functional separation and equivalence, the UK market has performed well for consumers. However, over the last few years performance has deteriorated significantly, reaching a point at which the country is now poorly placed to achieve this vision.
- 2.3 In the third section we discuss the situation in mobile which has also experienced a decline in the health of the sector in recent years.

2.1 Fixed competition is weakening fast

- 2.4 In this section we present a range of evidence which provides a strong indication that competition in the fixed sector is weakening:
- BT's exceptionally and unjustifiably high share in retail superfast broadband
 - BT's rapidly increasing share of all retail broadband
 - BT's abnormally high share of retail SME market compared to other operators
 - The low level of market entry
- 2.5 BT has gained an abnormally and unjustifiably high share of superfast broadband (SFBB) customers. Its uptake of SFBB (of its broadband base) is almost four times that of competitors and consequently BT currently accounts for 70% of Openreach SFBB connections versus 40% for all connections. The trend is categorically not towards a more normal and competitive market structure – in fact, the gap in uptake is continuing to grow as the graph below shows.

SFBB uptake of total broadband



2.6 BT has argued vigorously that the low share of competitors is due to their rational commercial strategies. However, this is certainly not valid – for example:

- BT claim that competitors who are LLU operators (such as TalkTalk and Sky) wish to ‘sweat’ their sunk LLU assets by not upgrading customers on standard broadband (SBB) to SFBB¹. This is absolutely not the case since logical commercial behaviour ignores sunk costs (such as LLU assets). Therefore, BT’s claim is based on TalkTalk and Sky both simultaneously ‘falling for’ the sunk cost fallacy. This is not accurate in TalkTalk’s case and we consider it equally unlikely in the case of Sky. Notwithstanding this, the usage of LLU assets is the same whether a customer takes SBB or SFBB², so staying on SBB does not in any sense ‘sweat’ the asset more. Furthermore, BT’s competitors who do not have LLU assets (such as EE) also have a low share of SFBB
- BT has claimed that the difference in SFBB uptake is due to different customer mix though it has presented no evidence to support this claim.
- BT claims, erroneously, that competitors are not marketing SFBB. For example: “[o]ther providers including Sky and TalkTalk have recently started active marketing of superfast broadband”³. This is certainly not correct in the case of TalkTalk – TalkTalk started active marketing in 2012. Whilst TalkTalk began marketing SFBB a little later than BT Retail, it is totally implausible that the four fold difference in uptake in 2015 is caused by the slightly later start⁴.
- BT effectively argues that all its competitors independently chose commercial strategies that did not focus on SFBB. This is simply implausible. It is irrational

¹ Strategic Review consultation §10.28

² If a TalkTalk customer takes SFBB then they still use the LLU assets. In this sense, SFBB is a complement to LLU rather than a substitute.

³ Strategic Review consultation §4.25

⁴ TalkTalk started active marketing in 2012 whilst BT Retail started in 2010/2011 and Plusnet in 2012

for one operator to not focus on SFBB. The proposition that all of BT's major rival simultaneously adopted irrational commercial strategies is absurd.

- 2.7 It is clear that the difference in uptake cannot be explained by different commercial strategies of competitors. Nor can it be explained by BT increasing its share based on merit – there is no evidence that such a high uptake is warranted on the merits: for example, BT has the highest Ofcom complaint levels in the market.
- 2.8 Rather the only plausible explanation for the low uptake is that given the price that BT Retail sets in the market and the high VULA wholesale price (about £8), it is simply not profitable for BT's competitors to sell more SFBB. Further retail price reductions or greater marketing or discounts/promotions are simply not commercially viable. In contrast, BT can price SFBB at such a low level because the marginal cost it faces (about £1⁵) is hugely lower than the wholesale charge its competitors face.
- 2.9 It is important to also recognise is that there appears to be no imminent reversal of the current problem
- The gap in uptake is not closing – indeed the gap is widening further (as shown in the graph above). Curiously in its submissions to the FAMR⁶ in 2013 and 2014 BT claimed “*Fibre competition is ripe to increase rapidly*”. They could not have been further from the truth
 - There is no change in the circumstances that have caused the distortion and discrimination – there is no VULA charge control and the VULA wholesale price is substantially above FAC and marginal cost. VULA margin regulation is now in place but had not discernable effect on prices or uptake
 - Competitors have tried various different strategies to drive uptake – they have ‘nowhere to turn’
- 2.10 BT has grown its overall broadband market share by about 1.2 percentage points per year—growth that is principally driven by its unjustifiably high SFBB share. BT's share of broadband has risen from 26.0% in 2009 to 32.1% in 2015 Q1⁷, an increase of over a fifth.
- 2.11 The excessive wholesale prices – £8 is at least twice or three times the underlying cost of £2.50 to £4⁸ – has hampered uptake as well as competition. Six years after

⁵ The average cost per line of £4 or less includes sunk/fixed costs – see footnote 8. We estimate that the majority of the total FTTC network cost is fixed and therefore the marginal cost of an additional customer is small – probably less than £1.

⁶ Fixed access market review which concluded in June 2014

⁷ source: Ofcom Telecommunications Market Data Tables

⁸ WIK estimated that the cost per line in 2014 is £4.04 per line per month – this covers both the fixed/sunk cost and the marginal cost. This is far less than the average price, which is currently around £8.00. See “*Estimating the cost of GEA: 2013 restatement and 2014 update*” can be found at: http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Wik_Consult_-_Estimating_the_cost_of_GEA.pdf. The WIK analysis benchmarked BT's costs based on BT's estimate that it invested £2.5bn in FTTC (for the non-BDUK build). In practice BT

Openreach launched SFBB, overall uptake is just 23% and for competitors to BT Retail it is just 11%.

- 2.12 It seems likely that excessive wholesale prices are at the heart of this weakening of competition. Section 7.5 explains how over the last nine years wholesale prices have been on average 14% above underlying cost. In SFBB, the wholesale VULA prices are two to three times cost.
- 2.13 In the SME market, BT's retail share is five times that of the next largest provider (about 49% versus 9% for Virgin, the next largest player⁹). BT's share is seven times higher than the largest player that relies on BT's network (Daisy). Such a market structure will certainly not deliver good outcomes for business customers.
- 2.14 There is virtually no market entry, and the market is becoming increasingly concentrated and overly 'stable'. There have been no significant new entrants in the last five years¹⁰, while at the same time there has been a consolidation of existing major providers (for example Sky acquired O2's broadband base in 2010 and BT is likely to acquire EE base; before 2010 TalkTalk acquired those of AOL and Tiscali). Following the BT acquisition of EE, the four leading providers will control roughly 95% of retail broadband connections. It is abundantly clear we are facing a serious lack of meaningful competition in the retail market.

2.2 Fixed investment and quality is poor

- 2.15 Investment and innovation in fixed networks has been inadequate.
- 2.16 BT's overall spend on its access network has been virtually flat¹¹ despite a clear customer-driven need for increased investment for fibre networks. BT's strategy

probably invested less than £1.5bn (in the commercial build), in which case the underlying cost would be about £2.50—making the gap even wider. There are three pieces of evidence that indicate the investment was less than £1.5bn

- BT's RFS15*** include an increase in MCE in WLA of £1,065m principally due to moving VULA assets into WLA (from other). Given the capex timing and asset life it is implausible that the total capex has been more than £1.5bn.
- BT have said their FTTC capex run rate is £300-400m (see Annex E) and the commercial build took 4½ years; then again the likely capex is less than £1.5bn
- BT have said to analysts (see Annex E) that the maximum cumulative cash outflow (i.e. capex plus opex less revenue) from the FTTC programme is about £1.2bn in 2013. This is consistent with a capex of less than £1.5bn

*** see section 2.2 Change Control Notification in accordance with SMP Condition 21 of Ofcom's Regulatory Financial Reporting Final Statement published on 20 May 2014. Published 31 March 2015 <http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2015/ChangeControlNotification-31March2015.pdf>

⁹ Broadband services for SMEs: assessment and action plan June 2015 Figure 16

¹⁰ we cannot think of any new entrant in the last 7 years who has (organically) developed a customer base of more than 100,000 customers (which is about 0.4% market share)

¹¹ From BT's statutory accounts: FY2007: £1108m, 2008: £1073m, 2009: £951m, 2010: £907m, 2011: £1087m, 2012: £1075m, 2013: £1144m, 2014: £1049m, 2015: £1082m

appears to be to hold Openreach capex flat and that UK consumers should be grateful that BT has not reduced investment. For example, Gavin Patterson said recently in arguing why Openreach was performing well: “As part of the BT Group, Openreach has ... access to capital resulting in a consistent investment of £1bn a year for the last decade.”¹² This is a wholly unacceptable response from a company entrusted with the upkeep of one of the UK’s most nationally significant infrastructure assets.

- 2.17 BT’s fibre investment has been unimpressive. BT’s current and future strategy is focussed on sweating its copper asset, and on limiting investment by using fibre to the cabinet (FTTC) and G.fast technology rather than deploying genuinely transformational fibre to the home (FTTH) networks. For instance:
- In 2009 when BT launched its initial fibre plans, it stated that 25% of its commercial roll-out would be FTTH. In fact, it serves less than 1% of its customers on FTTH.
 - BT’s FTTH strategy was self-limiting from the outset, being based in large part on ‘fibre-on-demand’, whereby customers would have to pay the dig costs from cabinet to premise—costing up to £3,500 or more (in addition to an equally unaffordable £38 to £99 per month rental). In practice, BT’s ‘at risk’ investment was very limited and naturally, given the high costs to customers, demand has been very low.
 - In 2014, BT suspended even this limited ‘fibre-on-demand’ service¹³.
 - Even for new sites, Openreach is still deploying some copper/FTTC rather than FTTH.
 - BT’s much touted vision published in Sept 2015 (‘Building Britain’s Connected Future’) included no plan or commitment on FTTH – rather it was focussed on using G.fast.
 - Notably, all of Openreach’s investment was delivered within its existing CAPEX envelope of around £1bn. No new capital was pledged, or even mentioned.
- 2.18 BT’s strategy reflects a common approach among dominant incumbents to sweat their existing assets. Across Europe, it is non-incumbents that are leading FTTH deployment¹⁴ (even though incumbents are able to leverage passive assets to reduce the deployment cost). When incumbents do deploy FTTH, they only do so in response to competition.

¹² “Breaking up BT is not in Britain’s best interests” Daily Mail 6 October 2015

¹³ http://www.theregister.co.uk/2015/09/23/exbt_boffin_cochrane_blasts_telcos_vision/

¹⁴ See Analysis Mason report for ECTA: The digital single market and telecoms regulation going forward. 18 September 2015 p30. “Alternative operators have contributed heavily to the investments in FTTH. Together with cable operators, they often played a role as a catalyst of deployment, by being early adopters of new NGA technologies; whereas incumbents have often responded to these first moves by alternative operators and cable operators.”

- 2.19 BT's spend on the copper and leased lines network (i.e. excluding FTTC), upon which standard broadband and SFBB services depend, has been reduced by about 30-40%¹⁵ – a 50% reduction in real terms.
- 2.20 It is also notable that the majority (or at least a very large part) of BT's total fibre investment has come from tax-payers¹⁶. Furthermore, BT has also strategically avoided business parks and some business areas¹⁷ – ostensibly to avoid cannibalisation of their own high price and high margin leased line business.
- 2.21 Service quality has been extremely poor in recent years, mainly due to a reduction in investment and resources. For instance:
- In early 2013, repair completion to SLA was just 51.2% for WLR¹⁸ and 40.3% for MPF¹⁹, while provision lead times reached 25.4 days for WLR and 21.3 for MPF²⁰.
 - Ethernet provisioning performance has substantially worsened (and remains extremely poor). Lead times are too long and there are frequent unfavourable changes in delivery dates as outlined in Ofcom's recent BCMR²¹. TalkTalk's own experience has been that just [✕ CONFIDENTIAL ✕] of orders are delivered to their originally committed date, and just [✕ CONFIDENTIAL ✕] to the amended date.
- 2.22 In both these cases, the low quality was caused by a knowing decision to reduce or provide insufficient investment for preventative maintenance and engineering resources²². Once quality has been allowed to drop beyond a certain level, it has typically taken years to return to even moderately acceptable standards. Even today, service for Ethernet remains extraordinarily poor.
- 2.23 Notably in the case of Ethernet, Openreach has focussed much of its resource on avoiding paying compensation for its poor service (by manipulating the application of deemed consent – see §5.49 below) rather than on improving the service.
- 2.24 This low service quality has serious repercussions for the UK's future competitiveness and productivity. We cannot expect to improve the country's

¹⁵ Openreach says its NGA capex is £300-400m per year. This implies that non-NGA spend has declined from ~£1bn by £300-400m i.e. By 30-40%. See Frontier report for Sky which provides a more robust analysis of BT's capex

¹⁶ BT has invested less than £1.5bn – see footnote 8. The total BDUK investment in 'non-commercial' areas is £1.7bn (both central funds and local authorities). The BT investment in non-commercial areas is unknown.

¹⁷ For example regarding low/late SFBB availability in London's Tech City:
<http://www.ispreview.co.uk/index.php/2014/07/londons-tech-city-still-suffering-lack-superfast-broadband.html>

¹⁸ WLR – wholesale line rental

¹⁹ MPF – metallic path facility

²⁰ FAMR Statement Volume 1 June 2014 §11.28

²¹ BCMR Consultation May 2015 §13.40ff

²² BCMR Consultation May 2015 §13.59

economic prospects, or to compete internationally, if our firms are forced to do business online with one hand tied behind their backs.

- 2.25 It is not only economic competitiveness and the health of our businesses which is harmed by this poor quality. Competition in the market also suffers as a result, since consumers become unwilling to switch provider to get better services since the getting a new line or the existing line transferred takes too long and it too much hassle.

2.3 Mobile outcomes are poor

- 2.26 Ofcom appear to take the view that the current mobile market is working well for consumers²³. While this may have been true some years ago, we strongly believe that the current market is now failing consumers. We present a range of evidence in support of this point:

- Investment is insufficient to meet consumer demand expectations
- The wholesale market is functioning sub-optimally
- The retail market is not working in the interests of consumers
- Profit has reached excess levels

- 2.27 Investment is weak as evidenced by the level of mobile coverage and capacity which are now lagging both consumers' needs and international benchmarks. For example:

- 40% of people living in Britain have problems making and receiving mobile calls at home²⁴
- 10 years after the launch of 3G, indoor coverage nationally is only 76% to 93%²⁵ and in rural areas it is as low as 26%²⁶. Indoor coverage is most important to consumers as 70-80% of use on mobiles is indoors
- 4G coverage, at between 32% and 59%, is significantly behind most other major economies and 4G uptake is low
- satisfaction with service reliability is falling²⁷
- on consumers' actual experience of ability to connect their mobile devices, the UK ranks bottom or second bottom out of nine benchmarked countries²⁸

²³ Ofcom is not explicit of its view of the current situation Ofcom implies that the current situation is adequate. For instance, see Strategic Review consultation July 2015 §1.44, §4.26ff

²⁴ Global Wireless Solutions polled 2,000 mobile-phone users. See: <http://www.bbc.co.uk/news/technology-33146158>

²⁵ Ofcom Infrastructure Report 2014, December 2014 Figure 51 (premises / indoor coverage)

²⁶ Ofcom Infrastructure Report 2014, December 2014 Figure 52 (indoor premises coverage rural). 26% figure is for Vodafone

²⁷ The Consumer Experience of 2014 – Research report January 2015 Fig 174

²⁸ Answers to questions: "I always have a mobile signal when I want to make a call" and "I can always connect to the Internet when I want to". Ofcom International Communication Market Report 14 Fig 6.57. Countries were: UK, France, Germany, Italy, Spain, USA, Japan, Australia, China

- 2.28 Mobile virtual network operators (MVNOs) provide services but do not own or operate their own mobile network. They are a critical part of the sector, adding much-needed choice and competition at the retail level. It is notable that on average MVNOs provide higher customer satisfaction levels than mobile network operators' (MNOs). At the same time, customer satisfaction with MNOs has been falling²⁹. It is therefore extremely concerning that the wholesale market supplying MVNOs is no longer working effectively.
- 2.29 Despite their key role in the market, MVNOs are becoming increasingly marginalised:
- MVNO's share of the pivotal data market has halved since 2011 (from 14% to just 7% in 2014)³⁰.
 - MVNO's have only been able to offer 4G services a considerable time after they are launched by MNOs
 - There are high barriers to switching³¹ acting as a deterrent to changing provider
 - [✂ CONFIDENTIAL ✂]
 - [✂ CONFIDENTIAL ✂]³²
- 2.30 [✂ CONFIDENTIAL ✂]³³
- 2.31 [✂ CONFIDENTIAL ✂]
- 2.32 It's our opinion that the retail market is also not working effectively. For example:
- Engagement, considered switching and actual switching levels all materially declined in 2014³⁴. Actual switching fell from 11% to 7%;
 - capacity used is just 0.25 Gbyte per month³⁵. Assuming growth continues at the current trend of ~50% per year, it will take many years for the UK to come level with other countries are today for example USA (0.8 Gbyte per month), Japan (1.1), Sweden (2.3) and Korea (1.4)
- 2.33 Profit levels are excessive—around three times the cost of capital. Ofcom's own analysis indicates that EE's return on capital employed is an astonishing 27-28%

²⁹ <http://www.which.co.uk/technology/phones/reviews-ns/best-mobile-phone-networks/best-mobile-networks-overview/>

³⁰ Ofcom Infrastructure Report 2014 §5.89

³¹ IN some cases MVNOs are JVs with MNOs and so are effectively tied (e.g. Tesco, GiffGaff). For non-JV MVNOs switching costs are high since to be able to change MNO the MVNO needs to either:

- complete a universal SIM swap for all of its customers
- invest significantly in their own systems layer (i.e. a 'thick' MVNO arrangement)

³² [✂ CONFIDENTIAL ✂]

³³ [✂ CONFIDENTIAL ✂]

³⁴ The Consumer Experience of 2014 – Research report January 2015 Fig 155, 156, 157

³⁵ Ofcom International Communications Market Report, Dec 2014 Figure 6.1

(compared to its WACC³⁶ of about 9%), which means that retail prices are about 30%³⁷ above cost. Ofcom suggests that the RoCE³⁸ of other MNOs is likely to be similar³⁹. These high retail prices and excessive profits imply that competition at the retail and wholesale levels is weak. They also bely the claims of MNOs that the current market structure is not sustainable, additional investment is not viable and that consolidation is necessary⁴⁰.

2.34 We fully agree with Ofcom that the mergers (if permitted) would have a significant and detrimental effect on consumers of mobile services including quad play customers⁴¹.

³⁶ WACC – weighted average cost of capital

³⁷ See Annex G for derivation

³⁸ RoCE – return on capital employed

³⁹ Strategic Review consultation July 2015 §4.49-§4.50

⁴⁰ The return on marginal investment is likely to be higher than average returns on existing investments

⁴¹ Strategic Review consultation §1.45 which implies that Ofcom considers a reduction in competition would be negative for consumers (unless competition was unsustainable)

3 Structural separation

- 3.1 Our view is that the best strategic solution to deliver improved competition and investment in the fixed market is to structurally separate Openreach from BT. This will end the legacy anomaly whereby just one service provider – BT – owns the monopoly network infrastructure that other service providers and UK consumers have to rely on.
- 3.2 It is inconceivable that a policy maker starting with a blank sheet of paper would re-invent today's market and regulatory structure. Equally is it very difficult to imagine a competition authority sanctioning the merger of BT Retail with Openreach, any more than they might be expected to permit BA to acquire Heathrow airport, British Gas to acquire the National Grid, or one mobile operator to purchase a monopoly mast provider.
- 3.3 The problems caused by vertical integration appear most starkly in the SFBB markets. The current behavioural regulation model for SFBB combines functional separation, equivalence and latterly VULA margin regulation. This has in no way delivered a level playing field, as evidenced by the significant deterioration in competition – BT's SFBB uptake is almost four times that of its competitors (41% versus 11%), the gap is widening and BT's broadband share has risen by six percentage points – see §2.5 and §2.10 above. In practice, it is impossible, with a vertically integrated BT, to ensure both sufficient investment in fibre networks (both FTTC and G.fast or FTTH in the future) and effective competition.
- 3.4 We strongly believe that structural separation will deliver a level playing field and reverse the decline in competition by ending the retail market distortions and anti-competitive discrimination. Furthermore, structural separation will stimulate greater investment and quality of service. We discuss each below

3.1 Level playing field

- 3.5 Ofcom rightly highlight⁴² the fact that by dint of its vertical integration with BT, Openreach has the incentive and ability to discriminate in favour of BT's downstream operations (even with the presence of functional separation). Structural separation will put an end to this, removing distortion in retail markets and preventing other forms of anti-competitive discrimination such as in product development that hampers competitors.
- 3.6 The decline in competition in fixed telecoms is in a large part due to retail market distortions caused by vertical integration. There is clear evidence of this distortion and how it effects the retail SFBB market:

⁴² Strategic Review consultation July 2015 §11.25

- BT's marginal FTTC cost is about £1 per customer per month (the underlying cost), whereas the marginal costs for other CPs is about £8⁴³ (the wholesale GEA charge). This means BT's competitors have little incentive to upgrade customers to fibre
 - There is unquestionably a very significant difference in uptake of SFBB by BT versus other providers. BT's uptake is four times that of competitors and the gap in uptake is growing – see §2.5
 - As described above (see §2.6-§2.8) the difference in uptake cannot be explained away by different commercial strategies, only by the different marginal costs faced
- 3.7 The attached report by Frontier explores the harmful impacts resulting from vertical integration. The impacts are particularly harmful when wholesale prices are set above cost. However, harm will still occur even if wholesale prices are set at cost since the incentives to migrate to new technology will be distorted since the cost that competitors face (the wholesale price) is above the cost BT faces (the marginal cost).
- 3.8 Structural separation would fully remove the difference in marginal costs and so remove the distortion in the market. BT would face the same wholesale charges (and thus marginal cost) as its competitors. This one simple change will have a massive impact on the competitiveness of the retail market – particularly the SFBB market.
- 3.9 Though the distortion and discrimination in SFBB is particularly evident because wholesale prices are so far above marginal cost, vertical integration causes distortions in all markets.
- 3.10 Even if wholesale prices are set at cost (say LRIC⁴⁴ or FAC⁴⁵), then BT will have different incentives since it faces the marginal cost since the marginal cost will always be below LRIC+ or FAC. In practice, over the last nine years, prices of wholesale products have averaged about 14% above cost meaning that the distortion and discrimination is even worse.
- 3.11 As well as removing price distortions and discrimination, structural separation will also remove the many other forms of anti-competitive discrimination described below, which are pursued by Openreach to favour of BT. There will simply no longer be any incentive for Openreach to discriminate against BT's competitors.
- 3.12 Products have been designed, developed and provided in ways which favour BT Retail and insulate them from competition. Although there is no easily measurable KPI from which discrimination can be identified (as for instance, there is for time to repair) our actual experience over the last 10 years (including that of ex-Openreach

⁴³ Even if VULA prices (for FTTC and G.fast) were strictly charge controlled and set at cost, distortions would continue the marginal cost that BT faces is different to that which rivals face

⁴⁴ LRIC+ - long running incremental cost (LRIC) plus an allocation of common costs

⁴⁵ FAC – fully allocated costs

employees) leaves us in no doubt that we have been, and continue to be, discriminated against in this area.

- 3.13 In a number of cases BT has access to different products to those available to its competitors – for instance:
- Competitors use MPF, BT uses WLR/SMPF;
 - Competitors are forced to use rigid wholesale accommodation, backhaul and power products, while BT has flexibility to use the underlying assets in any way they see fit.

- 3.14 In these cases, Openreach has discriminated (and so protected BT Retail) by purposefully developing second-rate products for competitors that are inefficient, costly and inappropriate. More detail is provided in Annex A however the following examples provide an illustration:

- Even though Openreach was aware in 2007 that redesigning MPF to use a single jumper (SJ-MPF) would lower costs and be operationally simpler, it consistently refused to redesign the product. In fact, despite many requests, Openreach obstructed TalkTalk's attempts to quantify the benefits of the product and identify a roll-out strategy to the point where the opportunity has now been lost altogether as, given low future MPF growth, it is no longer viable to introduce SJ-MPF. If SJ-MPF had been introduced in 2007, the cost saving would have been as much as £150m. Similarly Openreach rejected a TAM-less MPF product which would have allowed the unnecessary TAM equipment to be removed thereby saving up to £40m a year⁴⁶. If BT Retail had used MPF, TalkTalk has little doubt that Openreach would have developed the product quickly to achieve these savings. We suggest that to gain a full understanding of this complicated issue Ofcom review the submission⁴⁷ TalkTalk made to Ofcom in December 2013 in the context of the FAMR which was reviewing this issue.
- Openreach refused to develop a voice-only MPF product that would have enabled TalkTalk to stop using WLR, enabling us to compete with BT Retail's voice-only customer base
- The accommodation and backhaul products were designed in such a way as to burden competitors with additional costs that BT itself did not incur. For instance, there were unnecessary restrictions on how equipment could be housed, with the result that competitors were forced to purchase more rack space than they required to achieve the necessary power
- In contrast to these examples is the case of SoGEA (single order GEA), which was requested by BT Retail. This SOR had no support from major CPs other

⁴⁶ There are about 8m MPF lines and the FAC cost of TAM is £5.15 (FAMR Statement Volume 2 June 2014 §5.54). Not all the £40m could be saved immediately since there would be an installed base of TAMs

⁴⁷ Implications of SJ-MPF Dispute Determination, TalkTalk comments, December 2013. Non-confidential version at: http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-llu-wlr-charge-controls/responses/TalkTalk_comments_regarding_SJ-MPF_noncon.pdf

than BT principally since: they had no need for the product; it would cause the diversion of a significant amount of Openreach development effort over a prolonged period; and it would impose a burden on all CPs to adapt their systems for it even if they didn't use SoGEA themselves. Nonetheless, Openreach has progressed the SOR. In our view, the approach Openreach took to SoGEA is clearly inconsistent with their approach to other SORs, and was certainly discriminatory.

- 3.15 There are many other examples where product developments TalkTalk requested were declined or significantly delayed such as: wires only GEA; face plate liberalisation; pair quality testing (PQT); harmonised repair; changes in VULA hold to term charges. More detail is provided in Annex A. In our mind the only logical explanation for the rejections appears to be because the development was unwanted by or would be undesirable to BT Retail.
- 3.16 Analysis by Sky has shown that product development requests by BT are more than twice as successful as those from non-BT CPs⁴⁸, and BT's successful requests are delivered more quickly.
- 3.17 BT has exploited the difference in product usage between itself and its competitors by discriminating on pricing. In some cases, wholesale charges for the products BT use and the products used by its competitors are charge controlled (for example WLR rental and MPF rental) and the ability to discriminate is limited. However, when the price regulation is absent or light, Openreach has used the flexibility to favour products that BT Retail uses. See Annex A for more detail:
- Openreach has consistently set the prices for ancillary services such as testing, connection, cease and new provide products for MPF significantly above their WLR/SMPF equivalents, even though minimal or no price difference was warranted. We provide several examples in Annex A
 - As Ofcom itself has highlighted in the BCMR⁴⁹, BT has 'gamed' the price of EAD-standard variant setting it too high versus EAD-LA⁵⁰. This discriminates against BT's competitors, which use proportionally more EAD-standard
 - We also believe this type of price gaming has been applied to other products, though we lack sufficient data to be able to identify these⁵¹. Ofcom can access the necessary data and we would encourage them to do so

⁴⁸ 54% delivered/in development for BT and 24% for non-BT CPs. Source: Openreach Statement of Requirement tracker

⁴⁹ BCMR – business connectivity market review

⁵⁰ BCMR May 2015 §10.18ff

⁵¹ To be able to do this would require (for each individual product) (a) average price, (b) average FAC and/or LRIC cost differences and (c) the % BT and % rivals buy. However, this information is not shown for the vast majority of products. For example: 'other WLA' in RFS15 (p40) looks suspicious since the margin (revenue less FAC) is far higher for rivals sales than BT sales – however, we have no way of interrogating further to understand the causes

- Until 2014, wholesale electricity charges (paid only by competitors, as BT doesn't use the wholesale product) were only weakly regulated – and BT used this flexibility to inflate prices
- Openreach introduced volume discounts on VULA in 2012. The break points for discounts were discriminatory since they were only achievable by BT Retail
- Openreach set BES backhaul charges substantially above cost between 2004 and 2009 – BT itself did not use BES. Over the same period, Openreach did not set the prices of WES as high as BES since it did use WES itself

3.18 Another recent example of discrimination is the introduction of the 55/10 GEA product (55Mbps download, 10Mbps upload) alongside the existing 40/10 and 80/20 products costing. The 55/10 product will cost £1 per month more than 40/10⁵². [✂ CONFIDENTIAL ✂]

3.19 Though Ofcom has introduced behavioural regulations to address these many forms of price and non-price discrimination, in many cases it has been unable to prevent harm before it occurred. There are a variety of reasons for this – for example: it is difficult to quickly detect discrimination; Ofcom lacks sufficient resources⁵³ to monitor and act; and Ofcom's procedures limit its ability to act quickly enough.

3.20 It is also relevant that Ofcom has never imposed penalties on BT when it has infringed regulation – see §3.76. This, in TalkTalk's view, is one of the major reasons why this discrimination will continue no matter what behavioural regulation is put in place. Regulation is of limited impact without the real possibility of enforcement and penalty; without this, there is no reason for BT to adopt different behaviours to those in which it is currently engaged.

3.21 Furthermore, we hold the view that even with a substantial increase in resources and a step change in approach to become quicker and firmer, it would not be possible to prevent discrimination. On the other hand, structural separation would immediately remove this discrimination.

3.22 BT's potential merger with EE will make discrimination more likely [✂ CONFIDENTIAL ✂] and more difficult to detect [✂ CONFIDENTIAL ✂].

3.2 Greater investment and improved quality

3.23 Separation will also deliver a properly functional and efficient market by removing the anomaly whereby the largest retail service provider owns the monopoly network provider. This will encourage investment and better quality of service through a number of mechanisms⁵⁴:

⁵² 40/10 is £7.40 per month and 55/10 £8.40 per month

⁵³ For instance, on SLG Ofcom has declined to proactively intervene even though it recognises that BT has bargaining power – for example, see BCMR Consultation May 2015 §13.256

⁵⁴ Though structural separation is likely to increase the value of Openreach, BT is not incentivised to implement structural separation since it will lose the competitive advantage from discrimination

- De-regulation will allow greater commercial flexibility, resulting in more effective collaboration (such as co-investment) and more product innovation
- Openreach will be freed from the constraints of its current status as an adjunct of a large corporate whose commercial objectives and priorities are focused elsewhere
- There will be more competitive infrastructure investment which will drive increased investment from Openreach
- Incentives for poor quality will be reduced

3.2.1 *De-regulation will allow commercial flexibility and more effective commercial relationships*

- 3.24 If Openreach were structurally separated, the extensive behavioural regulations⁵⁵ designed to tackle its anti-competitive discrimination could be lifted (for example equivalence requirements). This de-regulation would allow Openreach more commercial flexibility and a greater ability to innovate and engage in good discrimination that enhances welfare. Three main areas stand out where flexibility from de-regulation will lead to greater investment and improved quality:
- 3.25 First, Openreach could develop co-investment and risk-sharing agreements with multiple customers. This would reduce risk on new investments by tapping into additional funding from service providers. Such arrangements are normal practice in competitive sectors. [✕ CONFIDENTIAL ✕]. These types of arrangements are mutually beneficial, since they better align the incentives and risks of the supplier and customer, and thus allow investments to be made that otherwise would not have been feasible.
- 3.26 Such arrangements do not currently occur for Openreach access products, such as VULA⁵⁶. Rather the only possible commercial arrangement is ‘pay-as-you-go’. This is principally because Openreach has no incentive to offer attractive terms to competitors (BT Retail already effectively enjoys a co-investment arrangement by dint of being vertically integrated with Openreach).
- 3.27 More generally, structural separation would legitimately allow Openreach more flexibility in the structure of prices, since there would no longer be a concern that Openreach would use flexibility to discriminate against BT’s competitors (as it has in the past – see section 3.1 above). This could allow, for instance, wider baskets, more use of term and volume discounts, and fewer sub-caps, all of which would improve the viability of new investments.

⁵⁵ BT argues that Openreach since it is heavily regulated it need not be structurally separated – in fact, the opposite is true – it is exactly because Openreach is heavily regulated there are significant benefits to structural separation

⁵⁶ It could be argued that Openreach has a risk sharing arrangement with BT Retail since they are part of the same group and BT Retail effectively faces the risk of investments made by Openreach and faces the marginal costs of products

3.28 [✂ CONFIDENTIAL ✂]

3.29 Secondly, de-regulation could encourage more investment in product and process innovation – for instance, in new fibre products or different provision and repair services.

3.30 Equivalence obligations currently remove any opportunity for CPs to gain first mover advantage, thereby chilling the incentive to innovate⁵⁷. Furthermore, there is no opportunity for CPs to co-invest in product development, another limiting factor to innovation. Structural separation would allow equivalence obligations to be lifted, opening the door for new and different commercial arrangements between Openreach and its wholesale customers to develop new and attractive services for retail customers. In essence, Openreach could discriminate between its customers but, given the absence of an incentive to favour BT Retail, the discrimination would be welfare enhancing rather than anti-competitive.

3.31 Thirdly, structural separation will encourage a more collaborative relationship between Openreach and its customers. [✂ CONFIDENTIAL ✂]. Structural separation will improve collaboration in a number of ways:

- Non-BT operators will be able to engage more effectively with Openreach, without fear, for example, that: confidential information might be shared inappropriately with BT Retail; or that their development requests will be rejected due to the sort of discrimination described above
- Openreach will be more customer focussed, since it will no longer be able to rely on 100% of BT Retail's business as a captive customer
- This phenomena of independent/non-vertically integrated networks working more closely with downstream players and driving higher uptake can be seen in the mobile infrastructure market. Independent mast owners have on average 3.0 tenants per site, whereas MNO-owned towers only have 1.3. This occurs because independent owners have more incentive to gain new customers than MNOs, which would rather prevent competitors using their assets.

3.32 Other parts of BT will also benefit commercially from, for example, no VULA margin regulation and freedom to purchase from other infrastructure providers (such as CFH or COLT).

3.2.2 *Openreach freed from the constraints of BT Group*

3.33 Openreach's current strategy and investment capability is tightly constrained by its status as a subsidiary of a large corporate, focused on aggressive expansion of its

⁵⁷ Equivalence of input requirements chill innovation since it requires Openreach to provide the same product to all customers at the same time. This means Openreach cannot develop a product only for one customer (or earlier for one customer) and thus wholesale customers' incentive to request developments is dulled since they cannot gain any first mover advantage. See BCMR Consultation May 2015 A23.80, A23.86 and A23.110

retail and mobile businesses. As an independent, publicly listed company, Openreach will be in a much stronger position to focus on efficient delivery of high quality access infrastructure. Annexed to this submission is a report by Richard Feasey who provides his view on the impacts of vertical integration based on many years of experience in the telecoms sector with incumbents and challengers. We summarise the key points below.

- 3.34 A key constraint in any company is for capital and resources and Openreach is likely to be particularly constrained.
- 3.35 There will naturally be competition between Openreach and other BT Group divisions for capital/resources. It would be an entirely logical commercial behaviour for BT Group to prioritise investments outside Openreach, since the revenue growth, returns and share price growth are more attractive and investment in Openreach only partially benefits the BT Group, whereas the benefits of investment in BT Retail accrue solely to BT's shareholders.
- 3.36 This dynamic seems to have occurred in reality. For instance, no reason has been provided by BT for the lack of new CAPEX earmarked for the next decade's investment programme despite plummeting quality and the need for additional investment for fibre. It is hard not to conclude that this is a result of capital being diverted as a result of BT's acquisition of sports rights; investing in BT Retail; the losses at Global Services; or the acquisition of EE.
- 3.37 Other difficulties that a division will face include:
- It is not uncommon for divisions of large companies to be 'undermanaged' and not receive the senior management focus required to make major strategy and investment decisions quickly. As a result conglomerate businesses often trade at a discount to the 'sum of their parts' and underperform relative to more focussed companies. Openreach's poor performance suggest that this is the case with Openreach
 - The management team of a business division are also insulated from one of the most effective forms of scrutiny – that of external shareholders, and are therefore less accountable than they would be as the management of a separately listed entity. This may well be the case with Openreach
 - The effective management of a division can also be distorted by its participation in the group – for instance, divisions find themselves obliged to procure inputs from certain internal sources which they would not otherwise use if they were independent. Openreach is, we understand, required to 'buy-in' many services from BT Group such as systems development, R&D, revenue assurance and HR. A number of senior management have been transferred from other parts of BT
 - Divisions of large businesses can also find it difficult to attract the same kind of management talent as independent businesses.

3.38 These concerns are widely understood and have been recognised for some time. Nor are they new to BT. By way of example, it is widely recognised that the former BT Cellnet was significantly better managed after it was demerged and became O2 (and that O2 has in turn, underperformed since it was acquired by the Telefonica Group). The same would, we believe, happen if Openreach were to be demerged.

3.2.3 *Stronger infrastructure investment incentives for BT and competitors*

3.39 Structural separation will lead to greater infrastructure investment by BT's competitors. It will allow these businesses to be more competitive, resulting in increases in scale which will make investments in competitive FTTH networks more viable⁵⁸.

3.40 This will not only increase competitor FTTH roll-out, but it will also stimulate more investment by Openreach. After structural separation, there is also the prospect of BT Retail purchasing access from non-Openreach providers, further improving the viability of competitive infrastructure deployment.

3.41 Besides creating incentives for Openreach to improve its performance, investment by non-incumbents has a number of other benefits:

- The availability of new funding sources
- Increased innovation, since BT's competitors are likely to use a diverse range of different business models for example JV of Sky/TalkTalk/CityFibre Holdings, Gigaclear (community focussed self-build), Hyperoptic (EAD to reach apartments)
- A reduced risk of the UK being held to ransom by single player to provide high availability

3.42 Competitive pressure on Openreach is an important factor in support of separation, since it seems that Openreach (as part of BT) is committed to sweating its copper asset and limiting investment by using FTTC and G.fast, rather than deploying genuinely transformational FTTH networks – see §2.17 above.

3.2.4 *Reduces incentives for poor quality*

3.43 Structural separation will remove some of the incentive to provide poor quality services. Under the vertically integrated model, there is an incentive for poor quality to protect BT Retail (by slowing down market share erosion and causing a 'flight to brand'⁵⁹). Another positive impact will be that Openreach faces the cost of SLGs for all failures – currently SLGs are not paid to BT Retail and so the impact they have on incentives to improve quality are diluted. And there will be a further imperative to improve quality, since Openreach will no longer be able to hide behind the BT Group

⁵⁸ There are large scale economies in building infrastructure.

⁵⁹ 'Flight to brand' is when businesses favour the perceived 'safe' brand in the face of poor quality elsewhere—in this case BT, albeit irrationally.

3.3 Arguments against structural separation

3.44 BT have raised a number of arguments as to why structural separation would be not be good for UK plc. We discuss these below:

- Openreach needs BT Group for access to capital and R&D
- Openreach needs BT Retail as an ‘anchor customer’
- Only BT would have made the high risk FTTC investment
- Structural separation has not worked in Australia and New Zealand
- A demerger would be difficult, particularly relating to the BT pension scheme
- Separation will lead to extended litigation

3.45 We do not think these individually or collectively these present a strong case against structural separation. In fact in some cases the points that BT raise add support to the benefits of structural separation. We discuss these points below.

3.3.1 Openreach needs BT Group

3.46 BT argues that Openreach benefits from BT Group ownership. For instance, they have recently claimed:

“On investment, BT provides us with ready access to capital ... BT’s financial muscle.”⁶⁰

“Openreach has access to innovations arising from the wider company’s £500million annual research and development budget”⁶¹

3.47 These are weak arguments – there is nothing that BT Group provides to Openreach that cannot be provided by Openreach itself, or brought in from elsewhere probably at a lower cost:

- Well accepted capital theory says that the fundability of a project does not depend on its shareholders. Being part of the BT Group is not a necessary pre-requisite to accessing capital. If demerged, Openreach PLC would be a FTSE50 company with a steady cash flow, easily capable of raising finance
- Regarding R&D expenditure, the £500m figure is seriously misleading, since the vast majority of BT’s R&D is wholly irrelevant to Openreach, relating instead to downstream activities such as wireless, connected home, cloud services, and big data⁶². In fact, Openreach and its customers pay handsomely for BT Group

⁶⁰ <http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/digital-media/11862314/Openreach-boss-A-huge-mistake-if-Openreach-were-spun-off-as-an-independent-company.html>

⁶¹ <http://www.thisismoney.co.uk/money/comment/article-3260949/Breaking-BT-won-t-speed-Britain-s-broadband-says-chief-executive-GAVIN-PATTERSON.html>

⁶² for example from a BT presentation it gave the ‘themes’ of BT R&D as: security features, TV and connected home, wireless features, extending SFBB, proactive services, social media, optimising operation, sustainability and inclusion, smart communities, advanced test and diagnostics, big data, core networks, cloud services, network visualization, strategic. Of these 15 only one is directly

R&D (partly since BT has gamed the cost attributions). Additionally, if Openreach was structurally separated, it would not lose access to relevant R&D:

- The relevant expertise in BT's R&D activity could be divested to Openreach since BT would have little need for R&D in, say, G.fast technology once it had demerged Openreach)
- There is nothing unique about BT R&D – Openreach could buy-in or develop its own expertise, possibly at a far lower cost than it is forced to pay BT. Indeed most innovation in the sector is led by vendors and others, not by BT. Under the current cost allocation, Openreach picks up around a third of the total cost of BT R&D, even though a much smaller amount is relevant to it

3.3.2 *Openreach needs BT Retail*

3.48 BT argues that Openreach benefits from BT Retail as an anchor customer which underpins its investments. It is TalkTalk's opinion that Openreach will be able to share risk and avoid hold-up problems far more effectively as a structurally separate entity. A structurally separated Openreach could share risk with *all* its customers, rather than just one – see §3.25 above. This would be done via contractual arrangements, an approach explored in the CRA report commissioned by Sky⁶³ and provided to Ofcom. Experience across all sectors (including airports, gas and electricity) shows that vertical integration is not necessary to allow major investments. BT's argument that Openreach is better able to share risk as part of the BT Group is simply incorrect – in fact the opposite is true, Openreach will be better able to share risk as an independent company.

3.3.3 *Only BT has and would continue to invest in fibre*

3.49 BT has suggested that it alone made large and risky fibre investments when 'others' felt there was little demand. This is a distorted presentation of the facts:

- BT's commercial fibre investment was, in reality, less than £1.5bn – see footnote 8
- The investment was not particularly high risk– BT began rolling out FTTC long after many others (for example, Belgacom started in 2004) and, because BT staged the investment, roughly half of it occurred after 2012 when demand in the UK was well understood, risk was reduced
- The 'at risk' investment (in reality likely to be less than £1bn, or £200m a year) is of small order in comparison to other BT investments

relevant for Openreach (SFBB). <https://www.h2020uk.org/documents/9750396/15651731/EIT%20-%20ICT%20Labs%20and%20BT>

⁶³ The "hold-up problem" in vertically related industries, CRA, June 2015

- BT earned excess returns of £7bn over the last nine years – see section 7.5.1
- BT spends £500m a year on its sports rights and channels
- BT is spending £12bn to acquire EE
- BT invested no more overall in its access network to fund FTTC – it simply diverted investment from other parts of its network
- The low demand that other providers suggested might arise reflects the wholesale price they were being charged – indeed it has transpired that the at the wholesale VULA prices Openreach set demand is only about 11% after six years

3.3.4 *Structural separation has not worked in Australia and New Zealand*

3.50 BT has argued that the outcome from structural separation in other countries has been poor:

"The Antipodean experience points in favour of leaving BT Group as it is."

"In Australia, a new company was created to deliver fibre broadband. The result? Only about 10 per cent of premises have access to fibre compared with nine times that here. That programme has now been thoroughly revised, with key components modelled on the UK."

"New Zealand also tried splitting its main provider. The result is a far lower share of high-speed connections than in the UK, despite the fibre rollout starting at around the same time as here."

3.51 These comparisons are selective, misleading and wrong for several reasons:

- The Australian example was a nationalisation which is obviously a wholly different proposition to what is being suggested in the UK. As WIK points out in its report⁶⁴, in Australia the telco and cable assets were acquired by a government-owned company that subsequently became a highly politicised vehicle. This is wholly different to a demerger of Openreach – the equivalent in the UK would be the Treasury purchasing Openreach's and Virgin Media's assets. It's simplistic and ultimately wrong to draw lessons for the UK from the Australian experience
- In New Zealand, the evidence indicates that the process of separation has gone well. There were, predictably, no problems in the implementation of structural separation of Chorus (the access provider) which, like the UK, started from a position of functional separation. The sector now works well together. Regarding the fibre uptake, as WIK⁶⁵ point out in their report, there are many reasons why uptake may differ between countries, including infrastructure competition, cost factors and demand factors. For example, the lower take-up

⁶⁴ WIK SFBB report p60

⁶⁵ WIK report for Ofcom Competition & investment: An analysis of the drivers of superfast broadband July 2015 ('WIK SFBB report')

in NZ may be due to the fact that Chorus have deployed more FTTH, or that NZ is a more rural country, meaning higher roll-out costs (and prices) or the lack of local content to drive uptake. No evidence has been presented to convincingly attribute the lower uptake to structural separation

3.52 We strongly recommend that Ofcom considers other businesses and industries that have experienced structural separation or vertical de-integration to understand the impact of on competition and investment. We suggest these should include network industries where upstream investments are significant, such as airports, gas and electricity.

3.53 In its report⁶⁶, Analysys Mason stated about the Singapore and New Zealand separations that:

“In both cases, this structural separation is operational, but it may be too early to tell whether it is a superior model to the more “traditional” regulatory approaches (whether symmetric or asymmetric) over the longer term.”

3.54 Less evidence has proven available on the Singapore case study, but feedback we have received on New Zealand suggests that structural separation has been implemented without any significant problems and that the sector is working more effectively than previously. We do recognise that it would be difficult to conclude on whether separation has aided investment in that case, since there has been a high level of government subsidy.

3.3.5 *Implementation is difficult*

3.55 BT has suggested that the implementation of structural separation would be difficult and risky. In what can only be interpreted as a threat, the Chief Executive of BT stated in July 2015 that any attempt at structural separation would result in ‘10 years of litigation and arguments’. It is little wonder therefore that the Minister for Culture, Communications and Creative Industries, Ed Vaizey, recently expressed concerns that:

“I think full separation would be an enormous undertaking, incredibly time consuming [and have] lots of potential to backfire”⁶⁷

3.56 We must disagree with this this viewpoint on the grounds of both a weight of evidence to the contrary from comparable cases; and also because it appears to imply that the easiest solution is always preferable, which is patently not the case. Many positive, and ultimately correct, outcomes are achievable only through significant time, effort, and planning to mitigate against unintended consequences.

3.57 In any case, the evidence is that demerging Openreach is likely to be very doable. Demergers of companies are not unusual – notable demergers in the UK telecoms sector include:

⁶⁶ Report by Analysys Mason for Ofcom: International case studies, July 2015 p2

⁶⁷ <http://www.ft.com/cms/s/0/cbe4900c-6601-11e5-a57f-21b88f7d973f.html#axzz3ntCwyztH>

- BT demerged Cellnet (now O2) in 2002
- Carphone Warehouse demerged TalkTalk in 2010
- Sky sold part of its Easynet division in 2010

3.58 While a demerger is not a trivial undertaking, there are tried and trusted routes to effect such transactions. We are not aware of any unusual characteristics of this case which would make a demerger of Openreach particularly challenging. We provide evidence on the steps involved in Annex F. The notable conclusions are:

- The most time consuming steps in a demerger are the demarcation and establishment of the separate division, and the creation of systematised trading relationships with other parts of the company. However, in the case of Openreach these steps have already been completed in making Openreach 'functionally separate'
- Handling tax, employees, bank facilities and commercial agreements are all manageable
- There are a number of statutory procedures to implement a demerger – all well-trodden
- BT itself spun off Cellnet (now O2) in months after the announcement in Sept 2001

3.59 Some commentators have questioned how the BT pension scheme ('BTPS') would be handled under a demerger, particularly given the significant deficit. We attach a report by John Ralfe, an independent consultant who advises companies and trustees on pensions (Annex J). His conclusion is that a defined benefit pension scheme such as BT's is not an impediment to a demerger. We would particularly highlight that when BT de-merged Cellnet (now O2) in 2002, the pension issue was resolved simply and effectively in a short period of time. Perhaps the most straightforward way to manage the pension (and the approach that was used for the Cellnet demerger), would be for BT to retain the BTPS, and for a cash injection to be made in order to reflect that Openreach would no longer provide support for the deficit. Such a cash injection is a form of refinancing and would not affect the credit rating of BT.

3.3.6 *Extended litigation would be likely and unnecessary*

3.60 As noted above, the Chief Executive of BT appears to have threatened a decade's worth of litigation should BT be required to split up Openreach. He was quoted in the Daily Telegraph in July saying:

"This is a commercial enterprise and if there's uncertainty we will defend the rights of our shareholders, undoubtedly ... Do you want to look back at 10 years of litigation and arguments?"⁶⁸

⁶⁸

<http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/telecoms/11748358/BT-chief-warns-of-legal-quagmire-over-proposal-to-split-company.html>

3.61 We see no grounds for litigation in this case and Mr Patterson’s intervention appears to be a brazen attempt at bullying both the Government and the regulator into prioritising BT Group’s corporate or management agenda above the best interests of the general public. This behaviour is unfortunately symptomatic of the overly litigious attitude of BT, a matter discussed further in §3.68.

3.62 In any case, if the BT Chief Executive felt that his only interest was to defend the rights of BT’s shareholders he should consider that the value of the BT Group could be enhanced through separation as both Openreach and BT Retail will benefit from less regulation, increased commercial flexibility and the increased investment and growth in the sector.

3.4 Options to improve current model

3.63 Ofcom discusses⁶⁹ the option of ‘strengthening’ the current functional separation model (sometimes called ‘FS+’). We see a number of possible improvements across three areas:

- Increasing the degree of separation of Openreach (short of full separation), to prevent discrimination
- The introduction of more effective behavioural regulation, particularly to prevent discrimination by, for instance, being more decisive and creating stronger compliance incentives
- Addressing price-driven distortions in the retail market

3.64 We discuss each below.

3.4.1 *Increasing the degree of separation*

3.65 TalkTalk sees a number of ways short of full structural separation in which Openreach could be further separated from the rest of BT. These could reduce, though not totally eliminate, the incentive and ability to discriminate. We provide a number of ideas below:

Ways to increase Openreach's autonomy

- Openreach could be constituted as a separate legal entity and a subsidiary of BT Group
- Openreach could have a separate board, with a majority of non-executive directors (NEDs), none of whom has been a BT executive or non-executive director in the previous three years. At least one NED should be appointed by Ofcom
- Openreach’s CEO should report to the Openreach Chairman rather than the BT Group CEO

⁶⁹ Strategic Review consultation §1.37

- No BT Group staff member should have the power to hire or dismiss an Openreach staff member
- Openreach should have full autonomy over spending, with the ability to raise funds directly without the permission of BT Group
- Payments from Openreach to BT Group should be solely in the form of periodic dividends, which must be voted on by the Openreach board before being granted
- Full statutory accounts should be produced for Openreach including P&L, balance sheet and cash flow
- Openreach should provide its own investor relations function

Stronger Undertakings

- Ofcom should ensure proper equivalence on all Openreach products – for example Openreach should ‘own’/control exchange space and power. BT should also consume the same accommodation and power products as CPs
- Ofcom should ensure that all assets and support activities of products provided by Openreach are fully under Openreach’s control. We understand that certain essential activities that support Openreach products (such as product design, systems design, fault management, revenue assurance) are provided by the rest of BT
- Ofcom should introduce an obligation that no coordination or opportunity is made available to BT Retail that is not available to other CPs
- No BT Group staff (or at the least, very few) should be able to see Openreach information and/or influence Openreach (currently a long list are allowed – Undertakings Annex 2 list). In effect, this would mean that there should be no shared departments
- All services provided to Openreach by the rest of BT and the ‘terms of trade’ must be transparently documented
- EAB⁷⁰ should be strengthened as the monitoring and enforcement body
- There should be no BT members on the EAB

Fewer links between Openreach and BT

- Any reference to BT in the Openreach logo (for example on vans / cabinets / other materials) should be removed⁷¹
- Senior executives in Openreach should not have been employed elsewhere in the BT Group in the previous three years (and vice-versa)
- There should be no ‘single jobs market’ across BT Group, for example no cross-advertising of vacancies, no cross-group secondments. Notice periods and gardening leave should apply when moving from Openreach to other parts of

⁷⁰ EAB – equality of access board

⁷¹ this distorts competition since BT enjoys a benefit that is not available to competitors

BT. There should be no carry-over of accrued benefits cross-group and separate career transition centres should be established

- Pay levels of Openreach employees should not be linked in any way to the BT Group share price or KPI performance, and cannot be paid in BT shares
- There should be separate (and uncoordinated) Openreach and BT submissions to Ofcom and separate relationships made to Government
- Openreach and the rest of BT should conduct separate negotiations with unions
- All meetings and communications between BT Group and Openreach employees should be recorded in a transparency register
- Openreach staff should be banned from holding any shares in BT Group (and equally Sky, TalkTalk or Vodafone)
- BT must not be able to recover any regulatory lobbying costs in regulated product charges

3.4.2 *Making regulation more effective*

3.66 Ofcom suggests a number of potential improvements to behavioural regulation: *“more detailed monitoring and enforcement of cost allocation rules; charge controls that contain stronger incentives to improve quality of service; and more severe penalties for sustained non-compliance”*⁷²

3.67 In our opinion, Ofcom’s suggestions merit consideration. We have further suggestions for changes to improve the effectiveness of regulation. Many of these are applicable even if structural separation is implemented. We discuss these below.

3.68 We consider that the current appeals regime is a barrier to successful development of the sector. Too many decisions are challenged, resulting in expensive and extensive litigation which has a number of negative effects in addition to the obvious legal costs: Ofcom, naturally anticipating the high risk of appeal, are slower and less decisive in making their decisions; Ofcom’s resources are tied up defending previous decisions, sometimes up to a decade old; and, overall there is less certainty for all market participants. In one case, litigation relating to an overcharge that started in 2004 is still ongoing. We strongly suggest Ofcom and the Government consider revisions to the appeals regime. We believe that BT, in particular, has a strong strategic incentive to appeal Ofcom decisions, since the process diverts Ofcom’s resources from developing tougher regulation of BT. Mr Patterson’s intervention regarding litigation over Openreach separation seems indicative of the overall attitude of the BT Group to regulation and scrutiny, namely that in a battle between BT and the regulator (or the Government), BT will win.

⁷² Strategic Review consultation §1.37

- 3.69 The Department for Business, Innovation and Skills (BIS) consulted on a number of revisions in June 2013⁷³. TalkTalk agreed with much of what they proposed and we think their proposal provides a good starting point for future reform. In particular:
- We agree with the proposed modification to the standard of review, whereby there should be a presumption that appeals be heard on a judicial review standard, unless there are specific legal or policy reasons for a different approach
 - We strongly agree with BIS that ‘confidentiality rings’ should be introduced in the administrative phases to improve regulatory decisions, reduce the number and breadth of appeals, and to speed up the process itself
 - We suggest that appeals should be heard by specialist bodies (for example CAT and CMA) rather than general courts, to ensure higher quality and quicker decisions
 - We agree with certain restrictions in the ability to introduce new evidence. We do not believe that new evidence that has arisen subsequent to the regulatory decision should be admissible
 - There should be limits on the length of appeal submissions, and appeals that are unfocussed should be dismissed
 - We agree with the approach to cost awards, though we call for flexibility to adapt this approach in cases where a regulator has not been fully transparent
- 3.70 In our view, three year market reviews serve little purpose in some cases since the market will have not changed sufficiently. Extending the market review period to either four or five years would reduce the workload on Ofcom and allow it to make decisions with a greater degree of longevity and certainty.
- 3.71 Alongside appeals reform and extending market review periods, TalkTalk also sees merit in a number of other potential improvements to regulation.
- 3.72 Firstly, we see an opportunity to empower Ofcom to make decisions more quickly and more decisively. Below, we provide some examples which may be useful in identifying opportunities for improvement. These demonstrate that a delay in regulation tends to favour BT⁷⁴ and harm consumers since, in the absence of regulatory intervention, the default position tends to be one which has an in-built advantage for the incumbent. For example:
- The recent Cost Attribution Review has set cost attribution rules which will reduce the costs of regulated products by £220m. TalkTalk first raised concerns with how BT attributed costs in 2008 (and we repeated our concerns on a number of occasions subsequently). The final statement is not likely until 2016, fully eight years after the problem was identified. The cost to consumers is probably well over £1bn

⁷³ Streamlining Regulatory and Competition Appeals: Consultation on Options for Reform June 2015

⁷⁴ [✕ CONFIDENTIAL ✕]

- BT introduced automatically renewing contracts in Feb 2008. Even though TalkTalk immediately submitted a dispute (which Ofcom asked us to withdraw), it was not until Sept 2011 that these harmful contracts were banned.
- In a number of cases, charge controls have finished before the next charge control was introduced, thus leaving a hiatus (for example LLU 2012 and 2014). In this regulatory vacuum, Openreach had the flexibility to set prices, which it profited from by overcharging by tens of millions of pounds
- Ofcom has highlighted that it is sometimes minded to accept voluntary measures from BT, rather than imposing regulation⁷⁵. These measures tend to result in outcomes that are worse for consumers (for example higher prices) than if regulation was imposed
- On many occasions since 2008, TalkTalk has requested that Ofcom intervene on whether Openreach should develop a single jumper MPF product (see §3.14 above). Ofcom did not provide its final view until June 2014, by which time it was unfortunately too late to introduce the product
- Problems with very poor quality service for MPF and WLR began in 2010. However, the regulations setting minimum service standards were not introduced until 2014. In the intervening period, quality remained poor with consequent financial losses to providers and significant negative impacts on customers. Similarly, Ethernet quality deteriorated in 2013, but minimum service standards will not be introduced until 2016 (assuming the BCMR proposals are finalised).
- TalkTalk raised concerns with APCC⁷⁶ charges starting from 2007. However, it was not until 2015 that APCC charges will finally be set⁷⁷ at a reasonable level and even this required a formal dispute to resolve.

3.73 We believe Ofcom may be able to make decisions more quickly, requiring less resource, if it engaged with stakeholders in different ways. For instance, sharing emerging thinking, perhaps using ‘working papers’ such as those used by the CMA); or being more open in meetings. This would reduce the reliance on resource intensive consultations to share ideas, gather evidence, and test conclusions. Another option may be greater use of Directions mid-market review; or a legislative change empowering Ofcom to impose regulation in certain areas without the need for a full market review. For example, ‘stop-gap’ regulation could potentially have been proposed as a proportionate response to resolve the service quality problems by introducing ‘quick and dirty’ minimum service standards prior to completion of the market review.

3.74 Secondly, in making its decisions, TalkTalk believes Ofcom should be extremely cautious about giving BT *any* degree of discretion or flexibility whatsoever unless

⁷⁵ for example, see Leased Line Charge Control June 2015 §4.81

⁷⁶ Average porting conveyance charge

⁷⁷ Assuming the provisional determination in the current dispute is confirmed. CW/01161/07/15

absolutely justified. Though in many cases Ofcom sets tight regulations (for example the price ceiling on MPF rental charges), in other cases the obligations are less specific than they need to be. For example:

- When setting price regulation, Ofcom provides BT flexibility through the use of baskets, or by not imposing charge controls at all. BT's incentive is to use this to benefit itself – for instance by setting excess prices and/or discriminating against competitors. History has shown that BT has exploited this flexibility to its own benefit – see §3.17 and Annex A
- In the Cost Attribution Review, Ofcom has proposed that attributions will be based on BT's approach unless it is 'clearly inappropriate'. Such an approach allows BT to select the attribution approaches (within the range of appropriate approaches) that most inflates costs of regulated products. The presumption in this, and all other cases, should be that the regulator's approach is prima facie the correct one, unless BT raises a legitimate argument to the contrary. Instead the opposite appears to be true, which is particularly surprising in this case since Ofcom has recognised in the same document that BT has exploited this flexibility over the last decade
- Regarding dark fibre, Ofcom has proposed not to impose any obligation for Openreach to use the dark fibre product itself, optimistic that Openreach will deliver a reasonable quality product (even though BT has a long history of degrading products it does not use itself)
- On care levels, Ofcom has not imposed any price regulation, even though Openreach clearly have an incentive to price excessively

3.75 It may, in certain circumstances, be appropriate to allow BT some limited flexibility. However, in light of BT's past behaviour, the default should be no flexibility. If flexibility is afforded to BT, Ofcom needs to take a more realistic view of its motives and likely behaviour, since history has shown that BT exploits flexibility not to increase consumer welfare but rather to increase its profits.

3.76 Thirdly, Ofcom must ensure that its methods of enforcement of regulation create strong compliance incentives for BT. A number of identifiable cases exist where BT has infringed regulation, yet has escaped the imposition of any penalties, and has not been forced to repay any gains. Such an approach only encourages BT to continue infringing regulations, as it is more profitable to infringe than not to infringe. This is a broken system of regulation and enforcement and, while it persists, almost no increased degree of regulation will improve BT's conduct. We provide some examples below:

- In its cost attribution review, Ofcom found that BT has overstated costs by using 'clearly inappropriate' cost attribution rules. This inflated wholesale prices by more than £200m for at least 10 years (a total of at least £2bn). As far as we understand, Ofcom is:
 - not proposing to recoup any of this historic overcharge
 - not proposing to penalise BT for its behaviour

- and, is allowing some of the overcharge to continue for a further three years
- Analysis by Vodafone/Frontier showed that BT has earned excess profits of £4bn over the last nine years. It is not an analysis that Ofcom had proactively conducted. As far as we understand, Ofcom has not identified how it can avoid such excess profits in future, nor whether it should take steps to recoup this excess – we discuss this further in section 7.5
- In 2013, BT claimed it was unable to provide certain data to Ofcom – such data being required to identify the level of a wholesale price reduction. It subsequently became evident that BT was in possession of the data and was thus in breach of the formal information request. Ofcom has the powers to impose a penalty on BT, but chose not to do so
- In 2008/2009, it was found that BT had included retailing costs in the wholesale CPS⁷⁸ connection charge – an inclusion which was manifestly in breach of regulation. Ofcom required BT to repay CPs⁷⁹ back to when the dispute was raised, but not for the preceding period. This effectively allowed BT to retain much of the overcharge. No penalty applied either
- From 2003 up until approximately 2009, Openreach systematically overcharged on Ethernet and PPC connections. Following disputes, the overcharge was repaid, but BT has not been penalised for its behaviour even though it certainly profited by the weakening of competition during the period.

3.77 We recognise that recouping overcharging may require a change in legislation. However, we suggest that if this is the case, Ofcom identify what steps need to be taken to achieve this change as soon as possible. It cannot be correct that BT is able to effectively consider overcharging a valid extra profit stream without fear of either penalty or full recouping of the over-charge.

3.4.3 *Reducing distortions in the retail market*

3.78 As we describe above in section 3.1, one of the most harmful facets of vertical integration is discrimination and the distortion to the retail market which arises from BT paying the marginal cost of providing network, whilst competitors face the wholesale charge which is always substantially higher and in many cases above cost. The problem is particularly severe when wholesale prices are not regulated.

3.79 The distortion is most pronounced in the SFBB market, where BT's uptake is almost four times that of its competitors. The reason for this significant distortion is in large part due to the difference between marginal costs (about £1) and wholesale charges (averaging £8).

3.80 To fully address this distortion whilst Openreach remains vertically integrated, would require wholesale charges to be reduced to £1. Yet, if the price were at this level, BT

⁷⁸ CPS – Carrier pre-selection

⁷⁹ CP – communication provider

would not be able to recover its fixed/sunk costs. Therefore, whilst Openreach remains vertically integrated, it is impossible to fully remove the distortion. The Frontier report (Annex H) addresses this issue in detail.

- 3.81 The distortion for FTTC could be partially addressed by setting the wholesale price to equal FAC/LRIC+ cost, in which case the price would fall to between £2.50 and £4. This would at least go some way to reducing the distortion.
- 3.82 If future distortions are to be reduced, a wholesale charge control would also need to be applied to the G.fast VULA variant early in its lifecycle, and much earlier than was introduced for FTTC VULA⁸⁰.
- 3.83 Margin regulation has the potential to partially reduce distortions. However, VULA margin regulation was introduced in April 2015 and has had no effect on wholesale or retail prices and thus is unlikely to affect incentives and shares. Therefore, we can reasonably conclude that the regulation is inadequate to remove all the distortion. If Ofcom were to significantly recalibrate the margin, then possibly it may go some way to reducing the distortion.
- 3.84 We discuss in section 5.1 below whether and how wholesale charge controls could be introduced for VULA and the future need for margin regulation.

3.4.4 Summary

- 3.85 In the case that Openreach remains part of the BT Group, the harm that results from vertical integration *could* be reduced by a combination of increasing the level of separation; making regulation more effective; and reducing price distortions. However, these measures either individually or collectively will not deliver the benefits of structural separation.
- 3.86 At best, even if a wholesale charge controls (at FAC) are implemented for *all* new fibre investments from launch (for example G.fast from launch) there will remain harmful distortions since the wholesale price will be above the marginal cost that BT faces.
- 3.87 If Ofcom continues with its policy of no price regulation on new fibre investments in order to encourage investment, then the distortions and discrimination will continue and the decline in retail competition will be unchecked.
- 3.88 Investment and quality is likely to deteriorate. In particular, more regulation will create ever stronger incentives to divert capital and resources away from Openreach as returns will be restricted – see §3.35 above. Wholesale charge controls may also disincentivise efficient investment.

⁸⁰ the earliest that a VULA charge control could be imposed is eight years after launch (2017 versus launch in 2009)

3.89 Implementing this package of changes will require substantially more resources to deliver than structural separation – both in developing and monitoring the additional separation, as well as in stronger behavioural regulation to address the continuing incentive for discrimination.

4 Models of competition (E2E, passive, active)

4.1 In this section, we discuss whether Ofcom's regulatory strategy should promote particular models of competition over the various alternatives.

4.1 Context

4.2 There are a range of different models of competition (from 'shallowest' to 'deepest'):

- Reseller-based competition, in which operators purchase all their network from another operator
- Active-based competition, in which operators rely on (regulated) active assets (such as Ethernet, WBC or VULA)
- Passive-based competition, in which operators rely on (regulated) passive assets (such as duct access, dark fibre or LLU)
- End-to-end (E2E) competition, in which operators build their own networks and do not rely on regulated inputs from BT

4.3 There are substantial benefits for consumers from deeper forms of competition. In particular, they expose more of the value chain to competition, reducing the extent of BT's monopoly, while leading to greater and earlier innovation (for example ADSL2+ from LLU), more efficient investment and more pressure to reduce costs. Furthermore, as WIK⁸¹ identified, deeper competition creates incentives for incumbents to invest in fibre (particularly FTTH), which competition based on active remedies does not.

4.4 Contrary to the unfounded claims of BT, introducing access remedies (either active or passive) does not deter efficient E2E investment. Provided that the access products' prices are set at cost, E2E investment will be efficient.

4.5 Smaller operators (which might not use passive inputs products directly themselves) also benefit from deeper competition, since they are more likely to have access to a competitive supply of the active, or reseller, products they wish to purchase.

4.6 However, deeper forms of competition are neither viable nor efficient in many areas, due to the high economies of density inherent in telecoms networks.

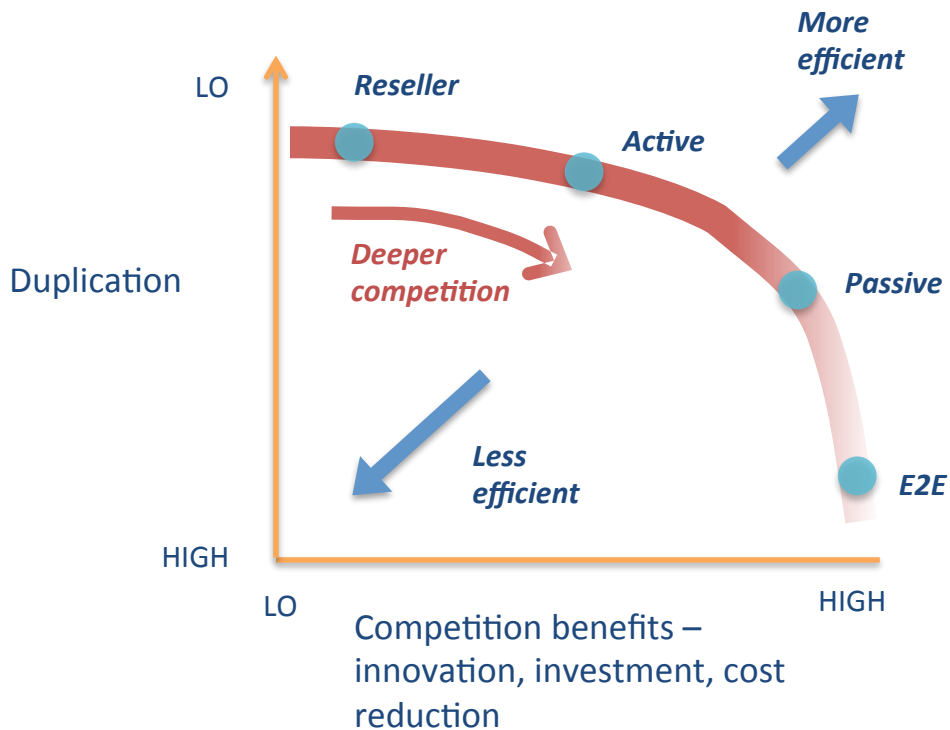
4.7 TalkTalk's roll-out of FTTH in York (in a JV with Sky and CityFibre Holdings) is a good example of a strategy of investing in deeper competition over time. TalkTalk provides most of its customers with superfast broadband services today using Openreach's VULA product (i.e. active based competition). [~~CONFIDENTIAL~~]⁸².

⁸¹ WIK SFBB report pl, pV

⁸² [~~CONFIDENTIAL~~]

4.8 [✂ CONFIDENTIAL ✂]

4.9 The impact of the different forms of competition on different aspects of economic efficiency is illustrated in the figure below:



4.10 Starting with reseller-based competition (top left) the duplication cost is low since the network is not duplicated; but the competition benefits are also low because little of the value chain is exposed to competition.

4.11 As the level of competition gets deeper, duplication costs increase but so do competition benefits. What is important is that the curve is *concave*: initially significant competition benefits can be achieved with little added duplication cost and thus efficiency improves. However, transitioning to the deeper forms of competition (for example passive to E2E), there are efficiency losses:

- Additional duplication costs are high, because there are very high scale/density economies in passive infrastructure such as poles or ducts
- However additional competition benefits are low, because there is little innovation potential in erecting poles or digging ducts

4.12 Ofcom noted this effect at §9.19 of its consultation.

4.13 This means that, for many cases of products or geographies, the forms of competition falling in the middle of the curve (i.e. passive and active) are most efficient.

4.2 General approach

- 4.14 It is clear to us that Ofcom's duty and role is to promote at least one form of competition which will serve consumer interests where BT is found to have SMP⁸³. Yet it is not prescribed *which* model(s) of competition Ofcom should promote.
- 4.15 Ofcom raises the question of whether it should focus on, or favour, particular models of competition⁸⁴. For instance:
- To encourage more use of passives, should Ofcom withdraw obligations on BT to provide active products, or make active products relatively less attractive by allowing active prices to rise, or removing non-discrimination obligations on active products? This type of approach was used in Spain and France
 - Should Ofcom withdraw any obligation on BT to offer active or passive products to encourage more E2E investment? This approach, often referred to as regulatory forbearance, has been adopted in the US and Canada
- 4.16 It is important to recognise that, in order to favour one model, Ofcom needs to effectively 'disfavour' another
- 4.17 However, rather than favouring one form of competition over another, we believe the most effective regulatory strategy would be to mandate BT to make available all forms of access (for example passive *and* active) in markets where BT has market power, and to set the wholesale prices of these products at cost⁸⁵. Market forces would then determine which model is most efficient for each service in each type of geographic area.
- 4.18 With prices for different forms of access set at cost, operators will invest in commercially optimal model(s) for instance, to minimise costs and/or allow control over innovation. This approach will deliver efficient outcomes, since there is strong alignment between the interests of operators and the interests of consumers⁸⁶. In effect, this policy would let market forces set the outcome – rather than placing the regulator in the difficult position of trying to decide which model of competition is best and setting 'distortive' regulation to attempt to engineer that particular outcome.
- 4.19 One of the benefits of this type of policy is that, once set, it is stable and predictable. Stakeholders will not be left guessing which model of competition Ofcom will support or oppose in future. This in turn will reduce risk and encourage investment. A further benefit is a reduction in any risk or perceived risk of regulatory capture.

⁸³ SMP – significant market power

⁸⁴ Obviously, if BT do not have SMP (say) in the market for certain products then Ofcom cannot impose any remedies

⁸⁵ At cost could mean either all wholesale prices at LRIC+/FAC or recovering all common costs in the most upstream product and price differences being set at LRIC

⁸⁶ There are two conditions for alignment (a) wholesale prices are set at cost (or more precisely the difference in wholesale prices equals the incremental cost differences) and (b) BT is only required to provide access at the levels where it has market power

4.3 Risk of regulatory failure

4.20 Our view is that an approach based on favouring a particular competition model is very likely to result in regulatory failure.

4.21 The risk of regulatory failure is high, because it is not only very difficult to identify the 'best' model in each different geographic area for each type of product, but also to adapt regulation to engineer the desired outcome.

4.22 Firstly, this requires Ofcom to be able to correctly identify which business model is most efficient. To do this objectively, and to avoid picking the wrong model, would be extremely difficult, requiring highly complex analysis including demand forecasts, willingness to pay data, forecasts of costs and cost structures, analysis of how these vary between different operators and technologies, potential future efficiency savings, the impact of future innovation and risk. In practice, it would be very difficult for Ofcom to robustly determine *ex ante* whether active-based competition, passive-based competition or E2E competition is most viable or most efficient (and in which geographic areas).

4.23 [✂ CONFIDENTIAL ✂]

4.24 Secondly, Ofcom needs to adapt regulation to favour, in an appropriate way, its chosen business model. This would require difficult decisions to be made on, for instance, whether to raise prices above costs and by how much.

4.25 The impact of regulatory failure is high. Unless the choice of model, and its regulation in each region, are both correct, inefficiencies will result through distorted 'build versus buy' signals and reductions in competition. For example:

- Choosing to not impose passives (to encourage more E2E competition) could induce inefficient E2E entry and deter entry based on passives that would have been efficient
- Raising the price of active products (to encourage more use of passives) will induce inefficient entry using passives, and deter entry based on actives that would have been efficient
- France and Spain both encouraged passive-based competition in part by withdrawing active obligations. Whilst passive-based competition has been reasonably successful in urban areas, the passive-based model is not viable or efficient in less urban areas and consequently there has been limited competition in these areas⁸⁷
- The USA and Canada both promoted E2E competition through regulatory forbearance and the consumer outcomes have been poor⁸⁸

⁸⁷ WIK SFBB report pX

⁸⁸ WIK SFBB report pl, pVIII, pXIII

4.4 Other issues

4.26 A possible concern with an approach under which BT makes all active/passive options available may be that it introduces additional costs. However, the cost to BT of simply making a product available (the essence of our proposal) is relatively small. A major cost will only result if:

- The product is industrialised to handle large volume at high quality
- BT is required to consume the product itself for supply of its downstream product (i.e. a must use/equivalence of input requirement). For example, if BT was required to use sub-loop unbundling (SLU) as an input into its GEA product.

4.27 We would not advocate that Ofcom impose such obligations and associated costs on BT, and ultimately consumers, unless there was material demand and the costs were justifiable. Therefore, the cost of having many options available is limited. However, once there is material demand for a particular product then that product should be industrialised and equivalence applied. This will avoid discrimination and so promote efficient entry, whilst deterring inefficient entry and encouraging overall efficiency.

4.28 Prior to imposing industrialisation and equivalence obligations, Ofcom must be willing, possibly using the OTA, to intervene to assist CPs who wish to use a particular product. [✕ CONFIDENTIAL ✕]

4.29 Downstream access regulation should only be withdrawn or weakened when BT no longer holds market power in that downstream market. Withdrawing downstream access prematurely to active products, for instance, would be counter-productive in several ways:

- It would allow BT to exploit market power and set excessive prices. We suggest Ofcom is in danger of making this mistake in the BCMR where it is proposing no price regulation on active products (for example, no 10G Ethernet price regulation) since it believes that dark fibre (a passive product) will constrain prices during the next three years. This is unrealistic for a number of reasons, not least that BT have every incentive and ability to degrade the dark fibre product, given it does not yet exist and there is no obligation for BT to use it itself. In fact, the lack of regulation on 10G prices will enhance this incentive to degrade dark fibre. Instead, 10G price regulation should only be withdrawn if, and when, it is clearly demonstrated that dark fibre constrains the active prices
- Withdrawing products will create distortions and inefficiencies where operators are forced to adopt an inefficient model (for example moving upstream or downstream or exiting)
- It will also prevent operators from moving upstream, since they lack the necessary scale to justify 'deeper' investment. In effect, the downstream products act as essential stepping stones to deeper investment; a concept sometimes referred to as the 'ladder of investment'. For example, it was viable for operators to invest in LLU because they had sufficient customers based on

using the downstream active products. Similarly, the reason that TalkTalk and Sky have been able to invest in their own FTTH is that they have a scale customer base that can be migrated. De-regulation of active and passive is sometimes proposed as a means of encouraging more E2E competition – in practice, it can have exactly the opposite effect

- 4.30 The market review process should be the vehicle for adapting access regulation, i.e. based on an assessment of BT’s market power. Even Ofcom concedes that competition law is insufficient to address the problems and promote competition⁸⁹.
- 4.31 Provided the prices of upstream inputs are set at cost (i.e. based on FAC or LRIC+), we would not, in most circumstances, advocate the use of *ex ante* margin regulation. Rather, *ex post* obligations could be used to address margin squeeze by a vertically integrated BT. However, such reliance on *ex post* would only be appropriate if Ofcom issued guidance as to how it would address *ex post* assessments and conducted Competition Act investigations more quickly (for example in less than 6 months).
- 4.32 The most efficient model will differ by area. For instance, urban areas may be able to sustain competition based on passive inputs, resulting in no market power at the active layer; whereas such competition is not viable or efficient in more rural areas as in WBA. Accordingly, Ofcom should develop its regulatory approach with greater use of geographic markets and geographically differentiated remedies in upstream markets (such as WLA).
- 4.33 The range of access products for existing volume products is only partially complete. New access products will be needed in future. The table below shows the various access products – the one underlined are not yet available.

Retail product	Active	Passive
Line rental	WLR – available on EOI basis	MPF – available on EOI basis
ADSL broadband	WBC – available on EOI basis	MPF/SMPF – available on EOI basis
FTTC broadband	VULA – available on EOI basis	SLU – available but not EOI PIA – available but not EOI
G.fast broadband	VULA – likely to be made available	<u>SLU (G.fast)</u> – unclear (current SLU obligation applies to FTTC) PIA – available but not EOI
FTTH broadband (GPON)	VULA – likely to be made available	PIA – available but not EOI <u>GPON unbundling</u> – not available <u>Wavelength unbundling</u> – not

⁸⁹ For example in BCMR Consultation May 2015 Ofcom said: “Insufficiency of national and Community competition law. Our provisional conclusion is that national and EU competition law remedies would be insufficient to address the competition problems we have identified in each of the markets in which we have provisionally found SMP.” §7.14

		available
Ethernet leased line	EAD – available on EOI basis	<u>Dark fibre</u> – proposed to be introduced by highly restricted <u>Duct access</u> – proposed not to be introduced

4.5 Summary

4.34 In summary, it is TalkTalk’s view that Ofcom’s strategy and policy in respect to different models of competition should be:

- For Ofcom to support deeper forms of competition, including passive products which can deliver significant consumer benefits through lower costs and prices; faster and more extensive innovation; greater investment and greater choice
- BT should be required to *offer* all forms of access (including relevant passive products). Market forces would then determine which model is optimal and where . This will result in more efficient outcomes for consumers
- All products should be offered at cost to avoid distortions
- These access products would only need to be industrialised, and equivalence applied, if demand materialised
- Ofcom should not attempt to pick winners or favour particular models of competition. This is likely to result in regulatory failure and will increase uncertainty and risk
- Downstream products should only be withdrawn when BT no longer holds market power

5 Future developments in competition regulation

5.1 In this section we discuss how regulation may need to adapt in the future across three areas raised by Ofcom:

- Whether wholesale price regulation should be imposed on so-called ‘risky’ investments [Ofcom questions 11 and 12]
- How should regulation address tight oligopolies? [Q5]
- What regulation should be imposed to ensure good quality of service? [Q20, Q21]

5.1 Price regulation of ‘risky’ investments

5.2 In Section 10, Ofcom discusses potential approaches to the price regulation of more risky investments, such as FTTC, G.fast or FTTH. It is right for Ofcom to address this question, since the current approach of no wholesale price regulation has led to excessive prices, significant distortions and a major deterioration in competition – see section 2.4.

5.3 Wholesale prices of products based on ‘legacy’ assets which use the BT copper network (such as MPF, SMPF and WLR) are mostly set at cost, so that BT can recover its forecast efficiently-incurred costs (including incremental costs, a share of common costs and a return on capital employed). We consider this approach to be economically efficient, since it prevents excessive wholesale prices and monopoly rents, provides BT incentives for efficient investment and allows reasonably effective competition downstream.

5.4 In contrast, since VULA/GEA was launched in 2009, there has been no price regulation of VULA/GEA⁹⁰ – we refer to this as a ‘price regulation holiday’. In 2015, six years after launch, Ofcom introduced margin regulation which set a minimum margin between the wholesale and retail prices. This regulation has not resulted in any reduction in wholesale VULA charges or increase in margin.

5.5 Ofcom points out⁹¹ that there is a trade-off between imposing a wholesale price cap and allowing Openreach/BT wholesale price freedom:

- Allowing freedom can increase BT’s efficient investment incentives;
- However, freedom can lead to consumer harm as a result of excessive prices.

5.6 We believe the evidence is compelling that Ofcom’s price regulation holiday has resulted in significant harm to customers⁹².

⁹⁰ the exception is VULA-VULA migrations which are capped at £11. However, these only account for £1m of spend (BT RFS15 p40) or less than 0.4% of total VULA revenue

⁹¹ Strategic Review consultation Figure 28

⁹² In practice, it does not appear that Ofcom’s pricing approach on VULA (i.e. a holiday but prospect of the holiday ending) has reduced BT’s incentives to make efficient investments – we are not aware of

- 5.7 The lack of a wholesale price cap has led to wholesale prices significantly above cost. The wholesale price (£8) is at least twice the underlying cost (£2.50 to £4 – see footnote 8 above), resulting in both exploitation and exclusion. We would urge Ofcom to urgently conduct its own analysis on costs and prices to verify how much wholesale prices are in excess of costs, as they will have better access to relevant information.
- 5.8 The first and obvious impact of these excessive prices is that BT is earning monopoly rents, in a situation that is nothing short of exploitation. For BT's competitors, the excessive wholesale prices have resulted in excessive retail prices⁹³.
- 5.9 Equally importantly, excessive wholesale prices have also resulted in exclusion and caused a substantial distortion to competition in the retail market. The reason for this distortion is clear: whilst BT faces a marginal cost of about £1 (the underlying FTTC marginal network cost), BT's competitors face a marginal cost of £8 (the wholesale charge). This means that BT's competitors have a much lower economic incentive to sell superfast broadband. This is explored in the Frontier report (Annex H).
- 5.10 The impact of this distortion is clear also: BT Retail's uptake of superfast broadband is almost four times that of its competitors and the gap in uptake is widening. As we explain above §2.6 - §2.8, different commercial strategies cannot explain the distortion in the retail market except inasmuch as these different strategies are driven by the difference in costs faced by BT and its competitors.
- 5.11 Excessively high wholesale prices also indicate that the constraints on BT's wholesale price hoped for by Ofcom have not materialised:
- Ofcom suggests that cable and standard broadband may provide a constraint on wholesale prices⁹⁴, yet the outcome implies that this has not occurred, partly because, even if some constraint exists, it is indirect as it is exerted only at the retail level
 - Ofcom suggests that passive remedies and the threat of entry may provide a constraint⁹⁵. However, passive remedies have hardly been used⁹⁶. In any case, the amount of time required to roll-out alternative infrastructure (even using passive remedies) means that any constraint on VULA pricing is very weak

BT deciding not to make fibre investments as a result of this approach. Further, there is no evidence that price regulation would have disincentivised investment.

⁹³ Since BT itself does not pay the excessive wholesale price, their retail price is not directly affected by the wholesale price. However, the higher wholesale prices of competitors will allow it to raise its retail prices above cost.

⁹⁴ Strategic Review consultation §10.16

⁹⁵ Strategic Review consultation §10.16

⁹⁶ as far as we understand SLU was only used by Digital Region in Yorkshire and this project folded in 2013. We are not aware of any material use of PIA (i.e. duct access or pole access)

- Ofcom highlights that the Competition Act may provide protection⁹⁷. Again this appears to have had no impact. Indeed, elsewhere Ofcom has concluded that competition law does not address market power effectively to promote competition⁹⁸
- It appears that no undue discrimination rules (including EOI) have been unable to prevent excessive prices and distortions. Notably EOI only prevents some forms of non-price discrimination such as degrading the quality of products used by competitors. EOI cannot prevent excessive wholesale prices, margin squeezes and downstream distortions⁹⁹

- 5.12 Ofcom also suggests that its price regulation holiday approach could lead to experimentation¹⁰⁰. This has not happened¹⁰¹. The main charge levied on competitors is the rental charge and this has effectively remained static for six years¹⁰².
- 5.13 It is also becoming clear that the VULA margin regulation is not, in practice, preventing consumer harm or distortions. The margin rule was introduced in April 2015, but it has not resulted in any reduction in wholesale prices or increase in the margin. We do not expect it to address the distortions in the market indicated by BT's much higher uptake. This suggests that the VULA margin regulation as currently calibrated will not prevent harm¹⁰³.
- 5.14 Thus, in summary, there is strong evidence that the current price regulation holiday approach has allowed excessive prices and resulted in significant distortions, even when margin regulation was introduced.

⁹⁷ Strategic Review consultation Fig 28

⁹⁸ For example in BCMR Consultation May 2015 Ofcom said: *"Insufficiency of national and Community competition law. Our provisional conclusion is that national and EU competition law remedies would be insufficient to address the competition problems we have identified in each of the markets in which we have provisionally found SMP."* §7.14

⁹⁹ EOI can prevent discrimination on product performance e.g. provisioning times, fault rates, product features. However, EOI cannot in practice prevent discrimination on price (since BT does not pay wholesale charges). EOI also cannot prevent more subtle forms of discrimination e.g. favouring BT Retail on product developments

¹⁰⁰ Strategic Review consultation §10.16

¹⁰¹ It is incorrect to attribute any material benefit to price flexibility. Though in theory BT could use it to optimise demand and welfare and experiment, there is no evidence that they do either of these e.g. on former BT never provided any empirical evidence that its pricing improves welfare and on latter GEA rental price has been essentially the same for 6 years. Furthermore, most experimentation is about reducing prices to see how stimulate demand – this can be done under a price cap

¹⁰² 40/2 rental since 01/07/2009 £82.80 pa; 40/10 since 01/09/2011 £88.80; 80/20 since 10/04/2012 £119.40. In 2011 there was a temporary volume discount scheme but it was little used

¹⁰³ Margin regulation alone would only be sufficient to prevent excessive pricing if (a) there were strong constraints from non-VULA competitors (i.e. cable) in the retail market and (b) the margin is properly calibrated. We believe neither condition is true – one competitor in 50% of the country is insufficient to provide sufficient constraint and we do not think the margin regulation is properly calibrated. The fact that wholesale prices are significantly above cost suggests that retail prices are not constrained

5.15 Whilst structural separation will deliver significantly better competition outcomes in respect of riskier investments, such as fibre, by eliminating discrimination and distortions it is still necessary to impose wholesale price caps and margin regulation. Below we discuss our views on the timing of introducing charge controls and the approach that should be used.

5.1.1 *Timing of charge controls*

5.16 Wholesale price regulation should apply from much earlier in the investment lifecycle than it has applied for FTTC. For FTTC, the *earliest* that wholesale price caps could apply is eight years after launch, by which time BT will have reached payback on its investment (see Annex E) and very significant distortions will have occurred.

5.17 In the case of FTTC, we are now well past the point at which wholesale charges should be regulated, given that BT is vertically integrated. There are a number of reasons for this view:

- There has been significant harm to the sector already and the situation is worsening as overall uptake increases. The longer Ofcom allows this to continue, the greater the immediate damage, and the harder it becomes to remedy over the long term via the re-establishment of a properly competitive market. As Ofcom CEO, Sharon White, said in a recent speech, “*Once competition slips away, it is hard to re-establish especially in telecoms where barriers to entry for new firms are high*”¹⁰⁴
- Margin regulation is not, in practice, delivering more competition
- There is no sign of other prices constraining the VULA price, or of Openreach voluntarily reducing its prices
- According to a presentation by BT, BT will reach cash payback on its FTTC investment during calendar year 2017¹⁰⁵
- In reality, it is highly unlikely that a wholesale price cap will discourage future efficient investment by BT. BT has been allowed huge upside from its investment and its returns will have not been materially reduced. Furthermore, BT could not have *ex ante* expected to have more than eight years of pricing freedom
- The aim of regulation should be to replicate competitive markets. If FTTC was a competitive market and BT had been a first mover when it launched in 2009 (which is far from certain), then further entry would have been expected within a maximum of two to four years. Such entry would have constrained BT’s returns. BT would not have enjoyed eight years of unconstrained pricing in a hypothetically competitive market.

¹⁰⁴ LSE on 7 October 2015. <http://blogs.lse.ac.uk/mediapolicyproject/2015/10/07/consumers-and-consolidation-sharon-white-of-ofcom/>

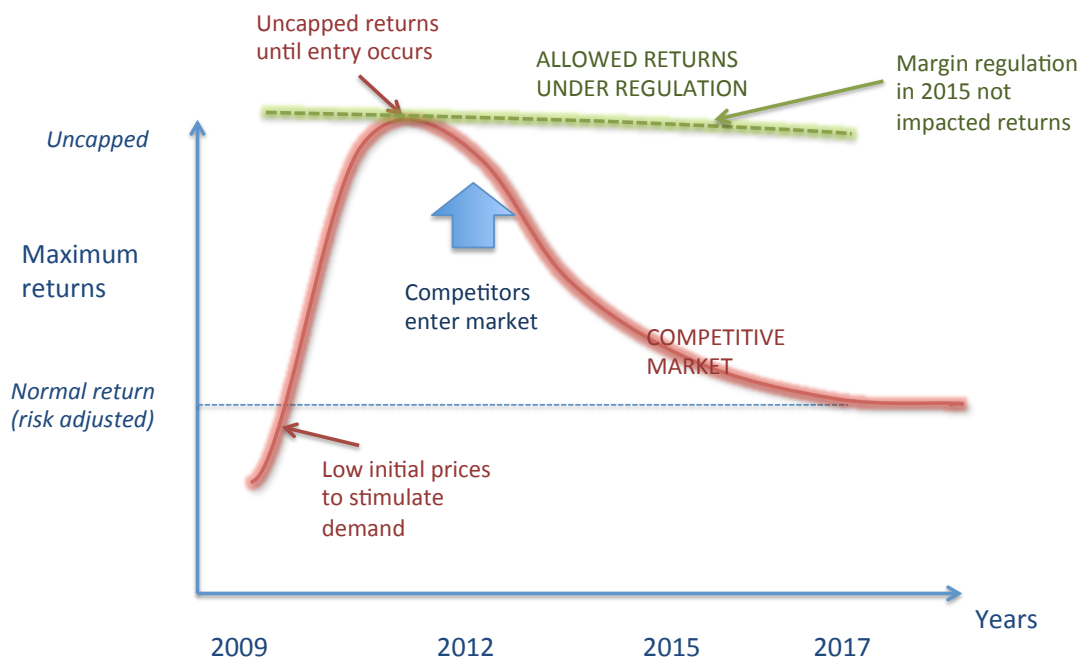
¹⁰⁵ See Annex E

- 5.18 For new technologies such as G.fast or FTTH, wholesale price caps must be imposed no later than three to five years after launch, and in some cases wholesale price caps should apply from launch.
- 5.19 Margin regulation also has a role, particularly during any period in which wholesale price caps do not apply. Accordingly, TalkTalk's view is that margin regulation should apply from launch. Furthermore, margin regulation should be revised so that it is effective in promoting competition¹⁰⁶.

5.1.2 *Approach to charge controls*

- 5.20 We recognise that setting wholesale price caps for risky investments may need to be done differently than for legacy assets/products. We provide some thoughts below on how this might be addressed.
- 5.21 As a general principle, wholesale prices (whether unregulated or regulated) should reflect the likely path that would have occurred if the market was competitive (for example if there were multiple providers of FTTC). There are a number of considerations which should inform how Ofcom addresses the question of whether and when to impose and calibrate wholesale price caps:
- In a competitive market, an early entrant is likely to initially set prices below average cost to stimulate demand
 - Upsides would be capped by entry, which would likely occur within two to three years of the first mover entering the market. Therefore, the fair bet principle does not mean that BT should enjoy unlimited upsides
- 5.22 This is shown in the figure below. The red line shows likely returns likely in a competitive market. Prices and returns are low to encourage uptake and then supernormal returns are enjoyed for a period but they are competed away by entry. The green line shows the returns that BT has been allowed under the price regulation holiday; effectively unconstrained super-normal returns far higher than would have been achieved in a competitive market.

¹⁰⁶ For example, the current margin regulation is calibrated using BT's customer base. However, this base includes a large portion of inactive customers (and thus are non-contestable) who have high call usage levels and margins. This means that a competitor could not profitably compete against BT



5.23 Further comments on the impact of wholesale price caps and how they could be derived are outlined below.

Impact

- Imposing wholesale price caps that are too low will only deter some efficient investment – there will be many areas that would still be viable even if a wholesale price cap is imposed. It would be useful for Ofcom to analyse the degree to which price regulation might disincentivise investment
- If Ofcom is concerned that it is difficult to forecast costs and volumes/revenues (and that attempts to do so risk disincentivising efficient investment), then it may be appropriate to impose a cost orientation type obligation, in which prices are capped based on *actual* costs rather than *forecast* costs, or actual +25%. Though basing prices on actual costs may reduce productive efficiency incentives, the improvement in allocative efficiency may justify such an approach
- If Ofcom considers that a standard wholesale price cap (for example at FAC) is not justified for certain investments, then Ofcom should consider imposing 'lighter' price regulation rather than nothing at all. For instance, prices should be no more than (say) 25% above estimated FAC costs. This would allow BT material upside, and maintain the 'fair bet', whilst avoiding the worst excesses and reducing the consumer harm resulting from the price regulation holiday.

Reflecting risk

- Unlike a player in a competitive market, Openreach faces limited market share risk given the limited competition
- Any assessment of the risk and cost of capital should reflect that investments are staged. The risk associated with later investments is lower, as, at the point

those later investments are made, costs and demand (the two main areas of risk) will be better understood

- The risk, and thus the cost of capital, may be different for different network components. For instance, in Belgium a risk premium was only applied to FTTC electronics equipment and not to new duct, which can be used/recovered elsewhere¹⁰⁷
- If a higher cost of capital is used for FTTC, then it would imply that the cost of capital for other parts of BT is lower¹⁰⁸

Other

- It is worth noting that, even if wholesale price caps were introduced at FAC, it would only partly remove distortions, since BT would, if there is no structural separation, still face different marginal costs to competitors¹⁰⁹
- Ofcom have suggested¹¹⁰ risk sharing or co-investment approaches could be adopted in order to reduce risk for Openreach. However, Ofcom is not clear what the implications of this might be for wholesale price regulation. Whilst we agree that risk-sharing might be suitable, we do not consider that the potential for risk-sharing is a reason not to regulate wholesale prices
- The cost of the FTTC network is recovered in the rental charge, whereas the connection charge recovers connection activities. Since there is very little risk in connection activities (as the vast majority of the cost is variable and not sunk), there is a case for connection charges to have wholesale price caps from launch.
- When wholesale price caps are introduced, there should be no glidepath, i.e. prices should immediately adjust to cost. This is because the reason to impose a glidepath (to allow BT to retain excess profits to incentivise productive efficiency) does not apply if the price has not been previously regulated as it has been for other services¹¹¹

¹⁰⁷ See WIK report section 3.6.3 Estimating the cost of GEA, March 2013
http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-markets/responses/TalkTalk_Group_second_addit1.pdf

¹⁰⁸ For instance, if the approach in the leased line charge control is pursued whereby there is a cost of capital for the non-copper UK activities (which includes FTTC) then if a higher cost of capital is assumed for FTTC then it implies a lower cost of capital for the other non-copper UK activities.

¹⁰⁹ Albeit the difference in costs would be lower than at the moment.

¹¹⁰ Strategic Review consultation §10.30.3

¹¹¹ For example, when a charge control was introduced for SFI/TRC services in the FAMR 2014 the price was immediately aligned to cost since *“it does not seem that BT’s high margin is necessarily the result of previous efficiency gains”* (FAMR Vol 1 §18.153). Also in BCMR May 2015 (§4.79) Ofcom gave reasons for making a starting charge adjustment: *“we propose that there are broadly two types of circumstances in which the balance of efficiency considerations could imply that one-off starting charge adjustments may be appropriate:*

- *where the risks to economic efficiency or competition from distorted pricing signals are particularly significant, and therefore outweigh the benefits of a glide path approach; and*
- *where prices are significantly above or below cost for reasons other than efficiency or volume growth.”*

5.2 Regulating tight oligopolies

- 5.24 Ofcom currently regulates BT on the basis of finding single firm SMP for BT across much of the UK (excluding Hull). Where BT does not have single firm SMP, there tends to be a high degree of competition for example WBA Market 2. However, there are prospects that markets develop in which BT does not have single firm SMP, yet are concentrated and not competitive. Ofcom asks in Question 5: *“Do you think that current regulatory and competition tools are suitable to address competition concerns in concentrated markets with no single firm dominance?”*
- 5.25 We discuss below how this issue may arise and potential approaches for Ofcom to tackle it. We use the example of the wholesale local access market, though the same principles apply to all markets.
- 5.26 At present, there are effectively 1.45 networks on a national basis (Openreach across the whole country, and Virgin across 45% of the country). Other operators are too small at present to offer any meaningful constraint to Openreach (or, indeed, Virgin). This creates a relatively simple situation: Openreach has a market share in the region of 80% on a national basis, and so clearly holds market power. This is particularly the case since Virgin does not supply third parties with access products, and so is not an active competitor in the wholesale local access market.
- 5.27 Where there is such clear unilateral market power, Ofcom's current regulatory powers are well suited to the task it has, and it is able to regulate in the interests of consumers. Such regulation – when undertaken effectively – can keep prices close to competitive levels and can ensure that a reasonable quality of service is delivered. As such, with a monopoly (or near-monopoly situation), Ofcom has, and should be encouraged to utilise, powers to ensure that outcomes in the market are reasonably competitive.
- 5.28 Conversely, where there are a wide number of national or near-national networks, it would be unlikely that Ofcom would need to impose regulation, as competition in the wholesale local access market would likely be sufficient to ensure that all operators were able to obtain supply on competitive terms¹¹². However, the economics of network provision mean it is unlikely that such a competitive outcome will arise.
- 5.29 In TalkTalk's view, there is potentially a point between these two extremes where no operator has single firm SMP and there are not enough firms to ensure a competitive outcome. In these cases (for example when there are three networks), consumers' interests will neither be fully protected by regulation, nor by competition; consumers may suffer due to networks' abuse of their unilateral or coordinated

We think both of these conditions apply in the case of VULA.

¹¹² The average number of networks per area to deliver sufficient competition will depend on a number of factors such as: how national the networks are; cost structures; and, marginal cost to expand. For instance, in the business connectivity market, Ofcom has found that in the CLA (Central London Area) there are six networks within 100m of 99% of customers. However, arguably BT still exercise market power.

market power. Paradoxically, more competitors can result in worse consumer outcomes.

5.30 There is potential for this situation to arise in a number of markets over the next ten years. For example:

- In WLA, if non-BT players deploy fibre infrastructure (for example Virgin's 'Project Lightning', TalkTalk/Sky/CFH's trial of FTTP), we may reach a no-single-firm SMP finding on BT particularly if geographic markets are used
- In mobile, if the 3/O2 merger is allowed there will only be three MNOs. In this case, it is possible no firm will have single-firm SMP, yet the market will certainly be insufficiently competitive to protect consumers' interests
- In the BCMR, there are geographic areas (the CLA) where, according to Ofcom, BT no longer has single-firm SMP, although the genuine range of competitive choice is limited

5.31 Therefore, we consider it very important that Ofcom, as part of the conclusions of its Strategic Review, sets out how it might address this type of regulatory lacuna.

5.32 It is well-known that there can be incentives for vertical leveraging, and for using the terms of supply of upstream inputs to partially or wholly foreclose potential downstream competitors. Such incentives may exist even if the firm engaging in foreclosure has a relatively low market share on a national basis. In particular, there may be product differentiation at the network level (which makes some wholesale providers better suited to serve particular operators than others); and product differentiation at the retail level, which means that some vertically integrated operators may gain disproportionately from foreclosing a particular downstream rival.

5.33 These unilateral incentives to foreclose can be reinforced by coordinated effects. When, for example, there are only three networks, there may be strong incentives to coordinate behaviour. This is particularly the case as these networks are likely to be owned by vertically integrated entities, which will have significant multi-market contact with one another, reinforcing the opportunity for coordination. Moreover, the markets to supply retail fixed-line operators are likely to be particularly transparent, especially regarding which fixed networks are supplying which retail fixed line operator. This will again reinforce coordination.

5.34 In order to address this lacuna, TalkTalk believes that Ofcom should give as strong a steer as it can, within its public law obligations, regarding the manner in which this issue will be addressed in the future. In our view, the best approach would be the following:

- For Ofcom to indicate that its rebuttable presumption would be that where a firm had greater than 50% share, it would find single-firm SMP in that market. In the WLA market, this would likely mean that there would continue to be regulation until there are either two fully national networks, or a fully national network and two other networks covering half or more of the country.

- If there are no networks with a market share in excess of 50% nationally, for Ofcom to look at whether there are any enduring pockets of monopoly power in particular geographic areas, where one operator holds a market share of 100%. Any such areas should be subject to regulation.

5.35 However, this would not solve problems that may emerge if, for example, there are two national networks with a market share of around 45% each, and a smaller sub-national network, covering only a quarter of the country, with a market share of around 10%. In such a case, depending on if and how geographic markets are defined, there may be no areas of local monopoly, thus no sub-national regulation, and no single firm with a share in excess of 50%, thus no national regulation either. The result could be the elimination of fixed-line retailers which are not vertically integrated into a network. Ofcom should consider, and provide guidance on, what would happen in such an instance. Obviously one tool in assessing market power is the use of geographic markets. These could be defined so as to reduce the incidence of areas where this lacuna exists.

5.36 There are a number of other factors that Ofcom should consider:

- When determining whether regulation should be continued (or potentially switched between networks, if one becomes larger than another), Ofcom should take account of any lock-in of existing downstream customers due to the costs of switching between different networks (for example systems, equipment)
- In addition, when considering regulatory structures, Ofcom should be cognisant that there will be significant complexity costs to adopting a mixed regulatory structure, with different firms regulated in different parts of the country. This will result in a need for retailers to integrate their systems with a range of different operators, increasing costs, and potentially making it harder for retailers to set national prices. The increased costs caused by this systems integration can be seen from the fact that neither TalkTalk nor Sky sell fixed line products in Hull, due to the presence there of KC rather than BT
- Furthermore, to provide stability for investment by operators such as TalkTalk, Ofcom should signal as strongly as possible, given its public law obligations, that even where an operator moves from holding SMP to not holding SMP, there will be a lengthy transitional period to permit retailers using that network to make alternative arrangements. In TalkTalk's view, such a period should be no shorter than the standard three-year regulatory cycle and in some cases longer, to permit a smooth transition between networks.

5.3 Quality of service

5.37 In Section 13, Ofcom discusses the role of quality and options to promote better levels of quality. We think that Ofcom is right to address this important issue. Our response focuses on quality delivered by Openreach.

5.38 Service quality is self-evidently important to consumers. Long provision times, excessive faults, or delays for fault repair, hamper consumers' and businesses' ability to conduct their lives or business activities, particularly as broadband and internet access become an ever more critical part of our daily lives. As well as the harm to consumers, poor quality has a number of other negative impacts:

- It adds costs to CPs, which are passed onto customers in inflated retail prices.
- It weakens competition through a number of mechanisms – something that Ofcom has recognised¹¹³:
 - It can create barriers to efficient entry and make expansion more difficult. For example, slow provision of exchange space protects BT Retail from LLU competition; and slow provision of new lines and migrations discourages customers from switching providers to get better services
 - When quality is poor, there tends to be a 'flight to brand' where businesses favour the perceived 'safe' brand of BT, albeit irrationally.

5.39 Particularly in the last five years, UK telecoms and consumers have suffered from unacceptably poor levels of service quality.

- Dating back to 2006, TalkTalk has experienced intermittent problems with the availability of a range of critical products, including: accommodation; TAMs; frame; power; and, and tie cables that were required to simply be able start offering LLU based services
- In 2007/2008, TalkTalk suffered from very poor service quality that slowed expansion. In particular, migrations to MPF were late and/or had very high levels of 'dead on arrivals' or 'early life failures'
- In 2010, service quality on LLU/WLR provisions, fault levels and repair (i.e. copper products) fell to unacceptable levels and did not improve until 2013/2014
- Since 2012, the level of quality on Ethernet provisions has steadily worsened and remains very poor

5.40 Certainly in the last two cases, the low quality was caused, in large part, by Openreach reducing preventative maintenance and engineering resources. Furthermore, in all these cases repeated 'get well' plans were missed.

5.41 We consider that the primary cause of poor quality is that it is more profitable for BT/Openreach to deliver low quality; and that a range of perverse market features means that this low quality actually protects BT Retail. It should be noted that:

- Unlike in competitive markets, poor performance is not punished by a loss of market share

¹¹³ For example, BCMR Consultation May 2015 §13.87 *"We consider it unlikely that the impacts of Openreach's performance has had no effect on competition at the retail level. We do, therefore, provisionally conclude that the deterioration in Openreach's provisioning performance at the wholesale level has had a detrimental effect downstream"*

- No fines have ever been imposed for poor performance
- SLGs paid out are too low to incentivise acceptable performance

5.42 Ofcom’s response to these recent quality crises has been to introduce minimum service standards (MSS) which, if breached, could result in Openreach paying an unspecified penalty. For LLU/WLR, the obligations were introduced in 2014 (four years after the problems started); and in Ethernet the proposed obligations will, if confirmed, be introduced in 2016, three year after the problems first started.

5.43 Though we consider MSS a step in the right direction, we believe that there are additional regulations that could be introduced to further improve BT’s incentives to deliver good quality.

5.44 Firstly, we believe that structural separation would improve Openreach’s service quality through a number of mechanisms: greater commercial flexibility; more collaboration with customers; reduced incentives to degrade quality; and, greater focus and control over capital and investment decisions. These are explained more fully in section 3.2 above.

5.45 Secondly, Ofcom could introduce an ‘incentive scheme’, whereby price rises and falls would be in part determined by quality levels (similar to the Service Incentive Mechanism introduced by OFWAT)¹¹⁴. This would have a number of benefits over the MSS model:

- The pay-out for poor quality would be transparent and automatic. Currently under the MSS, there is no fine unless Ofcom finds a breach and then the quantum of the fine is unknown. The incentive for Openreach to improve quality is likely to be more effective if the financial implications of poor quality are clearly known
- Under MSS, the fines for poor quality go to the Treasury. Under an incentive scheme, any pay-out by Openreach for poor quality would effectively be paid to CPs. Given downstream competition, these pay-outs are likely to be competed away through compensation to customers. Thus, the effect would be that customers would be compensated for poor quality rather than the Treasury. We suggest this would be fairer scheme
- Linking prices to quality would create an incentive for continual improvement. Under MSS, once Openreach has met the standard, there is no financial incentive to exceed it. It seems to us that under the MMS regime Openreach is doing just enough to meet the standard and is not aiming to achieve the higher quality levels that it agreed to deliver to CPs

5.46 Thirdly, consumers’ interests would be best met if Openreach offered a choice of several service levels *and* priced these at their cost differences. Though there are options for some services, for example for fault repair speed, Openreach charge very high margins for higher service quality. For instance, £500 for a single fault to be

¹¹⁴This would be in addition to minimum service standards.

fixed 24 hours more quickly¹¹⁵, while the proposed additional charge of £50 for a quicker new provide in three to six days was more than 10 times the additional cost.

- 5.47 Setting the price of other service levels at their incremental cost will allow consumers a greater choice of different services, and allow different consumers to choose services that fit their needs. It will also reveal the markets' preferences and willingness to pay. This would mean that the MSS or incentive scheme could be based on customers' actual preferences rather than being based on Ofcom's estimate of customers' preferences.
- 5.48 Having a range of quality options priced at cost will also improve efficiency:
- Consumers will be able to make more efficient choices of service levels – today they are forced to choose inappropriate quality levels for their needs
 - Setting price differences to reflect incremental costs will prevent BT over-recovering its costs for higher quality services as it does today.
- 5.49 Fourthly, SLGs play an important role in encouraging quality, though by themselves they are insufficient. Ofcom typically leaves these to commercial negotiation. However, Ofcom needs to be cognisant that the results of this are rarely efficient:
- Openreach holds a more powerful negotiating position than other CPs¹¹⁶, meaning they are able to impose unfair terms
 - Openreach have imposed unreasonable conditions to avoid paying SLGs. One example is the condition whereby if CP's forecasts are inaccurate, no SLGs are paid, even though in most cases forecast inaccuracy leads to no cost to Openreach
 - Openreach have 'cheated' the deemed consent process to avoid paying SLGs. Deemed consent allows BT to avoid paying SLGs in certain specific circumstances. Yet BT have applied deemed consent in many inappropriate cases, for wholly illegitimate reasons, and retrospectively without justification. For example, deemed consent was applied (and an SLG not paid) because an Openreach engineer had forgotten his boots and could not cross a muddy field¹¹⁷
- 5.50 Ofcom must tackle inappropriate SLGs including, where appropriate, the backdating of revised SLGs.
- 5.51 Fifthly, Ofcom should be willing to implement revised quality levels much more quickly and if necessary mid-market review. It has typically taken Ofcom three to

¹¹⁵ See TalkTalk response to FAMR Sept 2013 §1.9 and §3.2 for examples.

http://stakeholders.ofcom.org.uk/binaries/consultations/regulated-access-market-reviews/responses/TalkTalk_Quality_of_Service.pdf

¹¹⁶ For example, see BCMR Consultation May 2015 §13.256

¹¹⁷ <http://www.computing.co.uk/ctg/news/2425393/is-bt-hiding-broadband-failures-vodafone-gets-ofcom-to-investigate>

four years to put in place measures to address poor quality after it has first occurred, meaning that consumers suffer for an extended period without remedy.

5.52 Another area of quality which merits consideration is that of broadband faults. Currently, if the voice service does not work on a line (defined by the line not meeting the quality standard SIN349), the fault is repaired for no additional charge. But when the broadband quality is inadequate, but voice quality is acceptable, the approach is very different. Firstly, there is no quality standard for defining whether the line is good enough. Secondly, the repair of the fault is charged separately—usually through a special fault investigation (SFI) charge which is typically £90 or more. Charging separately creates perverse incentives where, for instance, CPs look to avoid sending an Openreach engineer, since it incurs a high charge and Openreach have no incentive to reduce the number of faults or repair the faults quickly since they are paid by the hour. This system is a hangover from 15 years ago when broadband was nascent and copper lines were used predominantly for voice only. However, in today's market, where almost all lines are used for broadband and voice is a minor use of the line, these arrangements are unsatisfactory. We are now belatedly making progress with Openreach on this issue and we hope that it can be resolved without regulatory intervention.

6 Consumer empowerment

- 6.1 TalkTalk welcomes Ofcom's considerations and proposals for increased consumer empowerment and protections. We originally entered the market as a challenger business, with the aim of making communications services more affordable and accessible for all UK consumers. We have remained dedicated to that goal, from the launch of free broadband in 2006, through to providing value-for-money TV services, and now to scaling value-for-money mobile services.
- 6.2 We are acutely aware that there currently exist features of the market which, though they may provide short term commercial benefit for providers, are not in the best interests of customers, nor conducive to the long term health of the market. We therefore advocate a number of radical changes to regulation in this section on which we feel providers, ourselves included, must actively embrace in order to ensure telecoms does not go down the route of the energy market, where a gradual erosion of public trust has brought the industry to a virtual standstill.
- 6.3 Empowered customers are not only able to secure better deals for themselves, they also critical to improving the overall health of the market. An active, engaged customer base increases competitive pressures on providers, which in turn delivers positive outcomes in terms of service, value for money and product innovation. In contrast, as discussed in the Competition and Market Authority's recent investigation into the energy industry, a market characterised by low levels of switching means some suppliers are fully aware they don't have to work hard to retain customers.¹¹⁸ Those customers will experience higher prices and worse service the longer they remain loyal to their provider. For the market as a whole, this means less product innovation, less investment and a reduced incentive to uncover cost efficiencies.
- 6.4 It is clear from Ofcom's own research that low levels of switching remain a problem in the UK¹¹⁹ and that switching levels are reducing. We are particularly concerned that there are a large number of disengaged customers who have never switched communications provider and are likely being penalised on price as a result.
- 6.5 There are many reasons why customers may have not switched, or even considered switching. They may be concerned about the 'hassle' or complexity of changing provider, or the potential interruption to service. It may also be that customers are confused, or put off, by the number of providers and choices in the market, or by unclear pricing. Trust in providers to act in their best interests may also be an issue. As a result, these customers languish on unsuitable or legacy tariffs, which are expensive relative to other comparable products on the market. Any regulatory intervention needs to be informed by these considerations to be able to tackle these issues in an appropriate way.

¹¹⁸ Energy market investigation, notice of possible remedies, CMA, 7 July 2015.

https://assets.digital.cabinet-office.gov.uk/media/559aac8eed915d1592000023/EMI_Remedies_Notice_-_Final.pdf

¹¹⁹ Strategic Review consultation Figure 34

- 6.6 This situation is being exacerbated by the pricing dynamic in the market, [✂ CONFIDENTIAL ✂]. The customers most likely to be harmed by this are those not interested in consuming the premium content which is driving up the total costs for triple- and quad-play packages, but which appears to us to be funded by “back-book” price increases. This dynamic is endemic across the industry in what is termed “high low pricing”: high back-book price increases compensated for by deep promotional discounts for new customers or existing customers upgrading to larger packages.
- 6.7 Therefore, we would ask Ofcom to consider remedies that will ensure customers currently less willing to engage are encouraged and facilitated to make active, well-informed decisions. Ofcom should also consider specific remedies for those customers who may be less, or wholly, unable to engage to ensure they are not excluded from the benefits of competition. Particular concern should be paid to the most vulnerable customers within this group.
- 6.8 Below we describe some potential remedies.

6.1 Improve the process for switching bundles

- 6.9 Ofcom should prioritise its work to improve the process for switching bundles that include pay-TV and mobile. The current switching process creates barriers to switching which harm competition and the interests of customers as a whole. Rather than encouraging providers to offer the best deals to all customers, a losing-provider led system encourages providers to reserve these offers only for those customers who have demonstrated an inclination to switch.
- 6.10 It is also logical to conclude that the process would be more efficient and less onerous for customers if it were led by the provider with the incentive to ensure the switch happens, and happens smoothly; rather than the provider with the incentive to ensure it does not. The process for switching such bundles should therefore be gaining-provider led (including all components of the bundle) and there should be a clear ban on any save activities until the customer has gone live with their new provider.
- 6.11 It has taken almost 10 years for the industry and Ofcom to implement a fully gaining-provider led process for dual play services on the Openreach network. In the meantime, however, the market has moved on considerably, [✂ CONFIDENTIAL ✂]. The direction of travel is absolutely clear and regulation needs to catch up as a matter of urgency.

6.2 Encourage customers to switch

- 6.12 We believe that more could be done to encourage customers to switch, or consider switching at the end of their current contract with their existing provider. There are various alternatives that might be considered, for instance a requirement on providers to draw the customer’s attention to the possibility of switching on their bills, or on the customer’s online account page. Alternatively or additionally,

providers could proactively encourage customers to switch through separate communications such as emails or texts.

- 6.13 A simpler proposition, perhaps, is for customers to be provided annually with a detailed summary of what services they have with their provider and how much they have spent with them in the previous year. This summary should be sufficiently detailed and easy-to-understand that the consumer can use the information to discern whether they may be better off with a competing provider. This model appears to have worked well in financial services.

6.3 Improve customer understanding of prices and products

- 6.14 We believe a range of measures exist which could improve customer understanding of prices and products, thereby increasing customer confidence in the market and incentivising customers to consider switching. Some of the problems and solutions are considered in further detail below.

- 6.15 'All-in pricing': It is apparent that providers tend to exercise more caution in increasing package prices (for example broadband or TV package prices) while the current market structure provides a rational incentive to focus price increases instead on the separate line rental charge. Although current marketing standards require providers to display the price of the line rental in a prominent fashion, this has not prevented this relatively common pricing behaviour from emerging. This may reduce the competitive pressures in these retail markets because providers are not competing on all key price points, which ultimately harms all consumers. Also, it is worth noting that those consumers who purchase only a landline service suffer disproportionately because they do not draw any benefit from competitive pressures on package prices and are in effect paying more for less.

- 6.16 This constitutes an emerging market failure which Ofcom should address by requiring all providers to publish a single 'all-in' price for package and line rental combined as prominently as they publish the package price. TalkTalk has adopted this pricing strategy in our FTTP joint venture in York and believes it is ultimately better for customers and for competition.

- 6.17 [✕ CONFIDENTIAL ✕]

- 6.18 Introductory offers: We believe more could be done to improve customer understanding of the overall impact on their personal finances when signing up to a new contract, as well as during the course of their contract. It is common practice among providers (including TalkTalk) to offer introductory discounted monthly charges in an effort to attract new customers. There is nothing inherently wrong with this practice, however it becomes harmful the more difficult it is for customers to estimate the actual cost over the lifetime of the contract after the introductory discounts have lapsed.

- 6.19 Therefore, we believe there should be a requirement on providers to supply the total cost of the lifetime of the contract in advertising, and for this to be reiterated at the

point of sale. This would enable consumers to assess the true value of discounts and the financial impact of signing up to a particular package of services.

- 6.20 Finally, a specific area of potential consumer harm is charging for broadband usage above a specified limit. We believe that customers should be able to have access to correct, up-to-date information about their broadband usage and prominent warnings should be provided when customers are about to go over their limit and incur charges. Unlike voice calls (charged per minute), consumers are not aware of how much capacity (Mbytes) they have used. Similar regulation has been effective in the financial services sector to warn customers when they have reached their overdraft limit. Given customer demand for data is increasing by 50% year on year, giving customers information and control over their usage will become ever more critical going forward.

6.4 Correcting imbalance between loss-making new offers and price increases for dormant customers

- 6.21 As mentioned above, we are seeing a worrying dynamic in the market, [~~CONFIDENTIAL~~]. This “high low pricing” means that high back-book price increases are directly or indirectly funding deep promotional discounts for new customers or upgraders to larger packages.
- 6.22 This is precisely the issue that Ofgem and the CMA have been wrestling with in energy, so far with limited success. In telecoms, the problem is worsening, as competition for high value premium triple- and quad-play customers intensifies, and is in part subsidised by price increases which disproportionately impact the dormant single and dual-play base. TalkTalk acknowledges that a sustainable regulatory intervention is by no means a certain or straightforward solution, but given the impact this has on the vast majority of UK customers who do not switch each year (approximately 89%) we believe Ofcom needs to seriously review its options before the issue becomes endemic as it has in the energy retail market. Of particular concern is the wealth of data in energy suggesting that customers who do not switch are far more likely to be from socio-economically deprived or otherwise vulnerable backgrounds. These customers need extra help and protection
- 6.23 One option (as has been proposed by the CMA in the proposed remedies from its energy market investigation) might be to impose a transitional safe-guard price cap on providers to protect their back book customers, whilst further improvements to switching processes and customer transparency are being implemented. Once an increase in switching levels can be observed as a result, the safe-guard price cap could be removed, either immediately or in stages. We would suggest that such a regulatory solution may well pass the statutory hurdles of being both proportionate and necessary to achieve the objective of removing this consumer harm.

6.5 Empower customers to take action if prices increase during their contract

6.24 Providers must have the commercial freedom to increase prices, but should do so in a way that is fair and transparent to consumers. We see the potential for some key improvements that warrant further investigation to determine whether they could feasibly be turned into formal, and proportionate, regulation.

6.25 Although Ofcom has already published guidance in relation to price increases under GC 9.6, we would argue that consumers and providers would benefit from more detailed guidance and clarity. For example, the guidance should set out in more detail how key price increases should be communicated to consumers. Also, we believe that there is still confusion around how the “right to leave” message should be formulated in a sufficiently clear fashion. Under the current guidance, we have observed that providers have adopted very different approaches (for example some providers list key price increases upfront, whereas other require customers to click through to a webpage to obtain the same information), which means some providers benefit unfairly because they do not provide as much information to their customers as other providers do. This causes consumer harm and competitive distortions.

6.6 Customer prompt regarding appropriate tariff

6.26 Finally and separately, we believe there should be a requirement on providers to inform customers once a year whether they are on the cheapest tariff available from their existing provider. If they are not, customers should be advised that they may be eligible for cheaper tariffs. It should be noted that, while we are supportive in principle of this concept, the version implemented recently in the energy retail market (an arguably simpler proposition given the homogeneity of products) has resulted in some unintended consequences for customers, considerable administrative burden on providers and has not thus far led to greater switching. Therefore care should be taken in constructing a workable alternative for telecoms.

7 Other issues

7.1 In this section we briefly address some of the other issues and topics that Ofcom has raised in its consultation.

7.1 Models for investment in commercially unviable areas

7.2 There will inevitably be areas of the UK where investment in SFBB and UFBB is not commercially viable. We see the issue of how to serve these areas as predominantly a question for government – not least, since Ofcom does not have the powers to impose any remedy in this area. Notwithstanding this, our current views on this issue are that:

- It may be appropriate in some cases to allow higher retail prices than elsewhere in the UK, as a means of making otherwise unviable areas viable
- Investment in infrastructure should be made as contestable as possible and BT should not be allowed to crowd out competitors. This will:
 - minimise the extent of unbuilt areas that require subsidy – so long as there is no competition, BT may hold off building in viable areas in order to tap into subsidy (that is ultimately unnecessary)
 - increase competition for subsidy which is likely to reduce the level of subsidy required in any one area
 - allow a diversity of business models and technologies to be used, which is likely to reduce the cost and speed of roll-out
- Wherever subsidies are provided, a high degree of transparency must be guaranteed to ensure value for money for taxpayers
- We see central funds and not, for example, a levy on phone customers, as the appropriate source of subsidy. SFBB and UFBB are infrastructure projects akin to road, rail and hospitals and thus should be funded in a similar way. The energy industry provides another cautionary tale with the public backlash against so-called ‘green levies’ on energy bills. A similar outcome must be avoided here
- A universal service obligation (USO) arrangement (whereby, BT might be obliged to provide a minimum service nationally for a set subsidy) is likely to be overly inflexible. For example, it would be difficult to quickly modify target speeds to changing circumstances, or to leverage different suppliers and ensure high contestability. We would not, therefore, recommend this type of arrangement
- The providers of infrastructure developed using subsidy should be obliged to offer passive, as well as active, wholesale access products

7.2 Opportunities to reduce regulation

7.3 We broadly agree with Ofcom's position that the General Conditions (GCs) have over time created a largely proportionate framework for sector specific consumer protection alongside general consumer law. That said, we do believe that there are pockets of the GCs which would likely benefit from a review to clarify certain definitions, remove potential inconsistencies and provide meaningful guidance to providers. By way of example:

- It remains unclear how GC3 on the proper and effective functioning of the network should be interpreted alongside Section 105 of the Communications Act regarding network security and resilience
- It is unclear how GC3 should be interpreted in regard to FTTH, where line powering is not viable
- We believe that there are definitions within GC 15 on special measures for end-users with disabilities that need to be clarified to ensure a consistent application across industry.

7.3 Regulation during network migrations

7.4 Ofcom raises the question of potential issues and opportunities that may arise as new networks are deployed and old ones are closed – for instance, certain parts of the copper network or the PSTN network.

7.5 At this stage it is difficult to predict likely concerns since it will depend on how BT propose to conduct the migration – for example, product specifications, timings and commercial terms. Broadly we think most concerns can be managed commercially but with Ofcom providing backstop support in case BT is exploiting its market power.

7.6 Two concerns we would raise at this point:

- potential for discrimination in any migration since BT Group's incentives are unlikely to be aligned with those of competitors or consumers
- the treatment of windfall gains. BT recovered the copper from its MUCJ network (which had been used to provide regulated leased lines). However, none of this revenue reduced regulated prices. Ofcom needs to plan well ahead to ensure that this type of harm is not repeated

7.4 Implications of OTT

7.7 Ofcom has raised the question¹²⁰ of whether the increasing prevalence and use of OTT services – such as Facetime, Skype, WhatsApp and YouTube – reduces the need for *ex ante* regulation of traditional services such as voice and SMS.

¹²⁰ Strategic Review Consultation §14.28ff

- 7.8 In many cases, the markets served by these OTT services are unregulated or likely to be de-regulated in the near future. For instance, mobile call origination and SMS service are unregulated and fixed call origination may be deregulated in the near future. In these cases, OTT services will not alter the lack of need for *ex ante* regulation. The exception is in fixed and mobile call termination where all terminating operators have SMP. Whilst conceivably OTT services might provide alternative routes to terminate calls, this seems unlikely - particularly since the termination prices are so low (0.033 pence per minute¹²¹ (ppm) in the case of fixed and 0.680ppm¹²² in the case of mobile).
- 7.9 Ofcom asks whether any changes to the approach to net neutrality are required¹²³. Five years ago there was much lobbying for robust regulation to address potential anti-competitive behaviour by ISPs by imposing restrictions on them. Time has shown that simple rules on transparency and treatment of OTT services, combined with strong competition between ISPs, is sufficient to meet consumers' interests. We strongly support the continuation of this model. The success of OTTs depends on a wide choice of affordable products and high quality access. Similarly, the success of access providers depends on a range of attractive OTT services. This symbiotic relationship is healthy and is likely to continue.
- 7.10 Lastly, Ofcom considers the implications of OTT services (which are generally unregulated) providing similar services to traditional services offered by CPs (which are subject to various regulation). For example, there is an inconsistency between traditional voice services, which are subject to regulatory obligations such as fair and reasonable terms and protection of vulnerable customers, and Skype which broadly speaking is not. TalkTalk's positions on this include the following:
- We certainly do not agree with the calls of some incumbents to impose heavy regulation on OTTs, and to apply regulation to require OTTs to pay for 'carriage' on their operators' networks. Such an approach would be a barrier to innovation and progress.
 - As a minimum, OTTs should provide sufficient transparency such that consumers are aware of differences with traditional services, and can thus make informed choices
 - There are several options to address consistency of regulatory obligations: allow inconsistency to continue (with transparency); increase regulation for OTT services; decrease it for traditional voice services; or set the level somewhere in the middle.
- 7.11 It is worth noting that this issue bears a marked similarity to the current debate over the appropriate regulatory regime to apply to Uber, as opposed to licensed taxis. As a technology-led challenger business, TalkTalk is naturally supportive of new entrants offering products which benefit customers. It can never be the right answer

¹²¹ Review of the fixed narrowband services markets statement, September 2013 Table 1.1

¹²² <http://media.ofcom.org.uk/analysts/regulated-prices/>

¹²³ Strategic Review Consultation §14.38ff

to stifle progress if it is in customers' interests that it be embraced. We are optimistic Ofcom will resolve the issue of OTT regulation with more common sense and foresight than is currently being applied to the case of Uber.

7.5 Excess profits for BT

7.12 In 2013 and again in 2014 Frontier (on behalf of Vodafone) carried out an analysis of BT's regulatory financial statements. These showed that since 2004, BT's returns on regulated products were £5.5bn above the return required to cover their cost of capital. Ofcom has broadly agreed¹²⁴ with Vodafone's analysis, though they estimate the amount to be around £4bn of excessive profits. We discuss below what has caused this excess, the impact on the market, and the implications for Ofcom's future approach to regulation. First we explain why Ofcom's £4bn figure¹²⁵ excludes other sources of excess returns and how the true level of excess return is therefore materially higher.

7.5.1 Total excess profit and impact

7.13 Frontier's analysis of excess returns is calculated as follows:

$$\begin{aligned} \text{Excess return} &= \text{actual revenue} \\ &\quad \text{less reported costs} \\ &\quad \text{less RoCE (based on Ofcom's forecast cost of capital)} \end{aligned}$$

7.14 This materially under-estimates the true excess returns for two reasons:

- It is based on the costs for regulated products reported by BT in its regulated accounts. Ofcom has now found, provisionally, in its Cost Attribution Review, that BT has overstated the costs of regulated products in its regulated accounts by about £260m a year, due to 'clearly inappropriate' cost attributions and errors. This blatant rent-seeking activity has been going on for at least a decade. Thus the appropriate costs of regulated products are probably £2bn¹²⁶ less over the last nine years than reported and consequently the excess return £2bn higher
- Ofcom's cost of capital forecasts (upon which their figure of £4bn is calculated) have been consistently too high since the 2008 global financial crisis. Ofcom's forecasts of BT's WACC since then have generally presumed that certain components of the cost of capital calculation (for example risk free rate, cost of debt) would rise back to pre-crash levels. This has not occurred and thus certain parameters in Ofcom's WACC estimates have been higher than the actual out-turn. TalkTalk's contention is that the WACC has been over-estimated by about 1.0%, resulting in actual excess returns being higher by

¹²⁴ Strategic Review Consultation §4.51

¹²⁵ We do not comment on the accuracy or otherwise of Ofcom's figure of £4bn

¹²⁶ £260m per year x 9 years = £2.3bn

£120m per year (since 2008) or a total of about £1bn¹²⁷. Ofcom should have data available that will allow it to better estimate the excess more accurately than we have been able to.

7.15 Thus, we believe the true excess profit on regulated products is probably around £7bn (£4bn plus £2bn plus £1bn). This is a staggering amount of excess profit. It is hard to think of another single utility business which has been able to exploit its market power to such a degree. To put this figure into proportion:

- It means Openreach's all wholesale prices have been, on average, about 14% above the actual cost¹²⁸. The excess prices competitors paid may well be higher than 14%¹²⁹
- It amounts to around 60% of Openreach's underlying value¹³⁰
- The annual excess is about 80% of Openreach's annual capex¹³¹ – in other words, Openreach's capex is mostly funded by excess profits on regulated products
- It is approximately four times the amount Openreach has invested in FTTC¹³²

7.16 In our view, the impact on consumers and competition of this overcharge is highly significant and has thus far been drastically understated and under-communicated. Excessive wholesale prices result in higher prices, weakened competition, less investment and less choice for customers. It is important to properly understand the causes of the excess returns in order to identify steps to ensure it is never repeated. We discuss below our thoughts on the causes and possible protections.

7.17 The impending merger of BT and EE make this even more critical, since the potential for gaming by BT will be much enhanced.

7.5.2 Causes of excess profit

7.18 Ofcom has provided some explanation as to the causes of 'around two thirds'¹³³ of the £4bn. We do not think Ofcom's analysis as complete and would add the following comments.

¹²⁷ See Annex G for derivation

¹²⁸ See Annex G for derivation

¹²⁹ The impact on prices CPs paid may be greater than 15% since BT has the incentive and ability to raise prices on wholesale products consumed more by external customers. See FAMR Vol 2 §4.124. Also Ofcom has identified that BT has manipulated the prices of EAD-LA and EAD in order to game the difference in internal and external use (see BCMR May 2015 §10.18ff).

¹³⁰ Basing Openreach value as equal to the MCE of its regulated products which is about £12bn. The NPV of profits from regulated profits should equal the MCE

¹³¹ Openreach's annual CAPEX is around £1bn

¹³² Openreach's commercial investment in FTTC (excluding the BDUK programme) is about £1.5bn or less – see footnote 8

¹³³ Strategic Review consultation §4.58

7.5.2.1 Use of price caps

- 7.19 Ofcom is correct when it says that its use of price caps, and the ‘fair bet’ principle, means that BT can earn excessive returns if it is able to reduce unit costs below forecast costs. But using price caps should also mean that BT will sometimes earn returns below its cost of capital. However, in actual fact, over the last nine years BT has only ever earned above its cost of capital.
- 7.20 We believe that it is implausible that for nine out of nine years, BT has outperformed a fair/central estimate of their costs. Rather, it is much more reasonable to conclude that an underlying cause of this consistent excess is that Ofcom has repeatedly been inaccurate in its estimate of BT’s future unit costs. We believe the major causes are under-estimating future efficiency gains and future volumes. In fact, as far as we are aware, Ofcom has *never* over-estimated BT’s efficiency or volumes. Clearly Ofcom at no point intended to over-estimate BT’s future costs, and this phenomena is more likely the result of the informational asymmetry between BT and Ofcom.
- 7.21 Therefore, it is not Ofcom’s use of price caps alone which has contributed to the excess returns *per se*, but rather it is the combination of using price caps with the consistent over-estimation of BT’s future costs¹³⁴ that has led to excess returns.

7.5.2.2 Result of policy choices

- 7.22 Ofcom explains that a further reason for the excessive returns is specific policy choices, in particular policies designed to encourage entry, investment by BT or migration. For example:
- ISDN prices have not been charge controlled, and so were allowed to be set above costs, in order to encourage migration away from ISDN to new services
 - WBA services were not charge controlled, and so were allowed to be set above costs, in order to encourage entry based on LLU
 - VULA services have not been charge controlled, in order not to disincentivise BT investment
- 7.23 We concede that Ofcom made these policy choices¹³⁵ and that it was the decisions not to apply full charge controls which enabled BT to substantially increase prices above cost. However, we do not think it was necessary for Ofcom to allow BT the degree of pricing freedom and excess returns that they were allowed in order to meet Ofcom’s stated policy objectives.

¹³⁴ Ofcom makes a similar point at §4.66 when it says it is challenging making forecasts when there is an information asymmetry which may lead to inaccuracy. We agree in principle, however, inaccuracy should not lead to consistently excessive returns – rather there should be excesses in some years and shortfalls in others

¹³⁵ though in some cases we did not agree with these decisions

7.24 The ‘standard’ approach to prevent excessive returns is to apply a full charge control where prices are set to equal FAC costs¹³⁶. In cases where Ofcom chose not to apply a full charge control, it instead applied one of a number of alternatives. Each of these alternatives enabled BT to set very high prices, significantly above FAC, and to consequently earn excessive returns:

- Cost orientation or ‘basis of charges’ obligation, for example, in the case of Ethernet up to 2009. , According to Ofcom’s interpretation, this allowed prices of all individual products to be high as the DSAC cost¹³⁷, allowing some prices to be two to three times FAC¹³⁸, which in turn enabled significant excess profits.
- In other cases, Ofcom applied what they called a ‘safeguard’ cap. This typically prevented prices rising in nominal terms (for example an RPI-RPI cap). However, particularly where starting prices are significantly above cost and costs are falling rapidly, this type of cap allows very excessive returns. For instance, in 2013 a safeguard cap was imposed on AISBO products in the WECLA area – this enabled returns of more than 47%¹³⁹ and prices about twice the level of underlying cost.
- In other cases no price regulation is imposed at all. This is the case for care levels. We estimate that prices for care levels are five to ten times the underlying incremental cost – see §5.46 above

7.25 We cannot see that it is necessary for BT’s prices to be so much in excess of cost in order for Ofcom to meet its stated policy objectives. As far as we are aware, Ofcom has not conducted any analysis regarding how high prices need to be above cost in order to achieve objectives such as efficient entry, BT investment or migration.

7.26 Notably, Ofcom has stated that cost orientation obligations and safeguard caps are designed to prevent excessive returns¹⁴⁰, yet in reality it seems clear they do not.

7.5.2.3 Due to changes in cost allocations

7.27 Ofcom suggests¹⁴¹ another reason for excess BT returns is changes in the way BT in which allocates costs. This is not wholly accurate for the following reasons:

¹³⁶ FAC – fully allocated cost. Under this cost standard all of BT’s costs are attributed (only once) to each product. Thus if all prices were set at FAC, BT would recover all of its costs

¹³⁷ DSAC – distributed standalone cost. This is a cost standard that results in a much higher cost for a products than the FAC cost of the product since the same costs are allocated multiple times to different products.

¹³⁸ Ofcom has interpreted a basis of charges obligation to require that each and every charge is set below the DSAC cost of a product. For Ethernet products between 2004 and 2009 DSAC costs were sometimes two to three times FAC costs

¹³⁹ 47% from RFS15 p25. The actual return will be higher since the costs used to derive the return is based on ‘clearly inappropriate attributions’ which overstate the true costs

¹⁴⁰ BCMR March 2013 §13.79 “Price controls which can take a number of forms (charge control, cost orientation, safeguard cap) are intended to ensure that dominant operators do not price excessively.”

¹⁴¹ Strategic Review consultation §4.67

- The first example Ofcom¹⁴² refers to is the shifting of costs from products for which prices have just been set to products for which prices are about to be set. BT tried this ploy in its 2012/13 RFS, in order to inflate the LLU/WLR charges set in the June 2014 LLU/WLR Charge Control. Ofcom rejected these changes. This is indeed a way in which BT could have earned excessive returns
- Ofcom¹⁴³ also refers to its cost attribution review. This showed that the costs of regulated products were over-stated by about £260m a year. This is not an explanation of the cause of the £4bn excess profit, rather this shows that the £4bn understates the excess profit, since the £4bn figure is based on BT's over-stated costs (as we explain above §7.14)

7.5.2.4 Other causes of excess profit

7.28 In addition to the reasons that Ofcom has given, we suggest that there are a number of other reasons as to why BT has achieved such excessive returns:

- Ofcom has at various times chosen not to price regulate some regulated products such as: care levels, SFI, TRC, electricity, ceases, caller display, line testing, project management. Though individually relatively small, collectively these products account for a material amount. Unlike the decision not to regulate ISDN, WBA and VULA prices for 'policy reasons', Ofcom's reasons for not regulating these services are unclear¹⁴⁴
- Some of the excess was due to an unrealistic view of the strength of competitive pricing constraints. For example, in the case of AISBO in the WECLA area, Ofcom chose in the BCMR 2013 to only impose a safeguard cap to prevent excessive prices. It appears that part of the reason was that Ofcom felt that competition might constrain prices¹⁴⁵. This was despite BT's share being stable at around 45%¹⁴⁶ for many years, very high returns and no new entry expected. Returns reached 47% - clear evidence that competitive price constraints were ineffective
- In some cases Ofcom did not regulate prices of SMP products as it believed that other prices would act as constraints. For example, WBC prices were not price capped, as Ofcom suggested that IPStream prices would constrain them. It is not clear whether this constraint has been effective, as no data is available on the return on WBC products
- In some cases, Ofcom preferred to provide guidance rather than to regulate prices. This allows BT to set excessive prices. This happened in the case of APC

¹⁴² Strategic Review consultation §4.68

¹⁴³ Strategic Review consultation §4.69

¹⁴⁴ Ofcom may have chosen to not price regulate these because, for example, too much resource was required to impose a charge control

¹⁴⁵ BCMR March 2013 §9.132 "our intention in setting a safeguard cap is to allow developing competition to become the main source of downward pressure on prices."

¹⁴⁶ 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

charges and, subsequent to a dispute, it was found that BT had set excessively high prices

- BT has been able to reduce its costs below forecast and so earn excessive profits, by deteriorating quality (see §5.3). Ofcom has not recouped this excess profit
- BT has enjoyed windfall gains for instance in the case of the recovery of the copper in its MUCJ network which had been used for regulated products. However, the revenue was not used to reduce prices and thus it contributed to excess profit
- Ofcom has at times had to rely on inadequate and unreliable data from BT to set charges for example SFI and TRC¹⁴⁷, co-mingling basket¹⁴⁸. In these cases, it would have been relatively easy for BT to provide biased information to Ofcom to inflate prices above costs (for example by providing management cost data for SFI/TRC that were higher than the costs included in the RFS)
- BT could achieve higher than intended returns by gaming price baskets, whereby it increases prices more on faster growing products¹⁴⁹
- On a number of occasions, Ofcom has not completed charge controls on time, which has allowed BT to exploit the hiatus in charge control regulation to inflate prices. This occurred on LLU/WLR in 2009 and 2012 and may have occurred in other cases

7.29 We maintain there are a number of additional causes of the excess profit over and above those factors identified by Ofcom. We do not have sufficient information to be able to identify how much of the total excess is caused by each of the factors. Ofcom has, or can access, data to be able to identify and quantify the causes of the excess. We urge Ofcom to complete this very useful exercise so that steps to prevent a repeat can be properly initiated.

7.5.3 Possible approaches to prevent future excess returns

7.30 As we highlighted above, it is critical to the health of the sector and to consumer interests, that such excess returns are not repeated in the future. Based on the causes that Ofcom has identified, and the other causes we believe may have contributed to the excess return, we see a number of ways in which excess returns can be prevented in future. We describe these below.

7.31 At the outset, it is important to emphasise that structural separation will help reduce excess returns. Firstly it will avoid some of the causes of excess, such as the

¹⁴⁷ See FAMR Vol 1 June 214 §18.81 where Ofcom rejected using RFS data and used management account data instead since it had “*significant concerns with the reliability of this data*”. Management data is not reliable either since, for instance, it could result in the double counting of costs and is not based on transparent cost attribution methods

¹⁴⁸ See LLU WLR Charge Control consultation July 2013 §4.208ff

¹⁴⁹ See LLU WLR Charge Control consultation July 2013 §4.218

overstated costs of regulated products. Secondly, it will allow deregulation, which will free Ofcom's resources to pursue some of these initiatives.

7.32 TalkTalk's suggestions on possible areas for improvement are:

- The default position should be that all material wholesale products, where BT has SMP, should be charge controlled at FAC cost, unless there are strong reasons otherwise
- Where Ofcom does not impose a charge control at FAC, then:
 - The 'policy reasons' for such an approach should be clearly articulated (for example to encourage efficient entry or migration)
 - An assessment should be made of how far above FAC cost prices need to be set, in order to achieve the particular stated policy objectives. Ofcom has previously not engaged in this type of analysis, focussing on whether flexibility should be allowed rather than the appropriate degree of flexibility
 - A 'light' form of price regulation should be applied that constrains prices to the appropriate degree, for example prices capped at FAC + 25%. Cost orientation and safeguard caps, certainly as calibrated in the past, should not be used since they allow an unnecessarily high level of excess
 - Where over-recovery on a product(s) is allowed for policy reasons (i.e. prices above FAC to encourage entry), then this over-recovery should be offset by prices below FAC, but above LRIC, elsewhere¹⁵⁰
- Ofcom should consider how it can improve accuracy in making forecasts, possibly by addressing information asymmetry, for example by requiring BT to report annually on efficiency gains in a prescribed format. A further example might be Ofgem's incentives for operators to provide the regulator with 'good quality and timely information'
- Ofcom should make more use of starting charge adjustments if the starting price is significantly above or below costs. For example, in the current leased line charge control proposals, Ofcom is allowing some of the excess returns, due to 'clearly inappropriate' attributions and errors, to continue for three years¹⁵¹
- Ofcom should examine what steps it can take to ensure that it completes charge controls on time and avoid lacunas, for example by being more realistic about the time required to complete charge controls
- Transparency could be improved in a number of ways to help shed light on excess returns and their causes. For example:

¹⁵⁰ This could in effect be achieved by recovering more common cost from, say, ISDN (in the case that ISDN prices are set high for policy reasons) and less from, say, WLR/MPF. This would mean high prices on ISDN would be offset by lower prices on WLR but distortions would be avoided since the WLR price would be above WLR LRIC

¹⁵¹ see TalkTalk response to BCMR/leased line charge control August 2015 §8.25ff
<http://stakeholders.ofcom.org.uk/binaries/consultations/lcc-dark-fibre/responses/TalkTalk.pdf>

- Where Ofcom has chosen to impose light or no price regulation on a particular product, the actual returns earned should be clearly transparent in BT's RFS so that excessive pricing can be easily identified
 - Reporting aggregate price changes based on current year weightings, which will identify any gaming by which BT increases prices more on faster-growing products¹⁵²
 - After BT has produced its RFS, the excess return, or shortfall, should be clearly shown in the accounts and Ofcom should provide a commentary on the reasons for any excess/shortfall, along with any further actions Ofcom intends to take to address the situation
- Ofcom should publish a clear policy statement on its approach to charge controls (as suggested above)
 - Lastly, Ofcom should consider whether there is a need to be able to recoup excess profit retrospectively, with a change in legislation if required – for instance, if the total excess is beyond a certain threshold

7.5.4 Summary

7.33 In summary, we think that this level of excess profit (around £7bn) is a cause for serious concern. Given the scale of the problem, we propose that Ofcom should focus material effort and resource on fully and rigorously understanding the causes of this substantial excess and, as soon as possible, developing a robust approach to ensure it is never repeated.

¹⁵² We have recommended this on several occasions to Ofcom. Ofcom has seemingly ignored these suggestion though never given any proper reasons as to why (see for example TalkTalk response to BCMR/leased line charge control August 2015 §8.120 <http://stakeholders.ofcom.org.uk/binaries/consultations/llcc-dark-fibre/responses/TalkTalk.pdf>)

8 Annex A - examples of product and pricing discrimination

8.1 Below we describe some examples of product and pricing discrimination that TalkTalk and other CPs have suffered.

Product discrimination - accommodation

- 8.2 To house its equipment in Openreach exchanges TalkTalk (for example ADSL equipment, backhaul termination) is required to purchase accommodation products. In contrast, BT when it deploys similar equipment does not have to purchase the products. This in itself discriminatory. The discrimination is made more harmful since the products available to TalkTalk have been poorly designed resulting in TalkTalk incurring unnecessary costs. For instance, a particular size of rack comes with an allowable power output. However, for the equipment TalkTalk was using (which had a higher power density) it meant TalkTalk had to purchase twice as much rack space as was required in order to get the power output it needed. There have been some marginal improvements in the products but despite many requests BT has refused to change the design or allow space and power to be purchased separately. BT does not suffer the same costs since it can use the space and power in any way it wishes.
- 8.3 Similarly TalkTalk was not able to use the same space for LLU and EAD aggregation. Instead different forms of space had to be rented and connected together. This resulted in additional cost and also delay. BT does not suffer the same costs since it can use the space and power in any way it wishes.
- 8.4 Another problem and source of discrimination was in availability of accommodation space. We encountered a number of situations where space was unavailable since it was 'reserved' for 21CN. There was not initially any way in which TalkTalk could reserve space for a fee. Notably 21CN never happened. Also, there would not have been any payment by BT to Openreach for space reservation creating another source of discrimination.

Product discrimination - backhaul

- 8.5 TalkTalk relies on Ethernet backhaul circuits from Openreach to connect its unbundled exchanges to its core network. There have been many problems with these backhaul circuits:
- Initially TalkTalk were unable to configure the circuits in the most efficient way for example daisy chaining between exchanges
 - The time to install circuits was very long – averaging over 100 days
 - The charges for Ethernet backhaul was substantially above cost – about 2½ times FAC. Pursuant to a dispute resolution Openreach was required to repay the overcharge though after appealing the decision and having lost in the CAT it is now appealing the same points in the Court of Appeal

- 8.6 Notably, BT itself did not use Openreach backhaul circuits. Rather it just used the underlying assets as it saw fit and therefore did not suffer the same usage restrictions, unavailability or excessive charges.
- 8.7 A more recent issue on backhaul has been the gaming on the charges for EAD-LA and EAD standard¹⁵³ whereby Openreach relatively raises the price on the product (EAD standard) that external CPs use more of (whilst complying with the overall basket).

Product discrimination - MPF

- 8.8 MPF is the core product that TalkTalk (and Sky) use to provide services to customers. In contrast, BT does not use MPF. This presents a significant opportunity for discrimination. We describe a number of areas of discrimination that have occurred over the last 7 years.
- 8.9 The first area of discrimination is that the MPF product is designed in a way that introduces unnecessary excess cost. MPF involves two jumpers on the main distribution frame (MDF) which adds about to its cost and adds operational complexity. However, two jumpers are not necessary. Rather the use of two jumpers is a hangover from the original design around 2000 when MPF volumes were very low and a two jumper solution was more efficient (since it allowed high equipment utilisation). However, once it was clear that MPF volumes were going to be significant then a single jumper solution (SJ-MPF) would be lower cost. Openreach did not proactively decide to re-design the product even though they were aware of the potential saving in 2007¹⁵⁴. Furthermore, when TalkTalk requested that they develop the product they rejected it and blocked providing TalkTalk the information that would allow them to fully build the commercial case. Unfortunately now that there is limited growth in MPF lines it is not viable to introduce SJ-MPF. The impact of Openreach blocking this has been to add about £50-100m of cost onto BT's competitors. BT uses WLR which only uses a single jumper and therefore don't suffer the same cost penalty.
- 8.10 A similar problem on MPF is the use of a TAM (test access matrix). When MPF was first designed around 2000 a TAM was a sensible approach to providing access to the line for line testing. However, test capability (that is superior to that which BT offers) is provided in the equipment LLU operators use. Therefore, the TAM is unnecessary. TalkTalk submitted an SOR for a 'TAM-less MPF' in 2010. However, like SJ-MPF this was blocked.
- 8.11 Voice-only MPF was a variant of MPF first requested in 2006 that would allow TalkTalk to offer voice only services on MPF (and another operator could take SMPF). This would allow us to serve TalkTalk voice-only customers (who were using WLR) using our own network and also compete for BT Retail's large voice only customer base. This product could also be used by BT as an input into WLR thereby ensuring

¹⁵³ BCMR May 2015 §10.18ff

¹⁵⁴ Openreach did in fact suggest implementing single jumper MPF it but on the basis that the CP would enjoy none of the cost saving and would incur other costs

proper equivalence. Openreach prevaricated on its development. Openreach only began to progress the development of the product in 2008 when BT Operate wanted a voice-only MPF product to be able to offer WVC (wholesale voice connect) product which was a 21CN version of WLR/CPS. WVC (and voice-only MPF) was subsequently terminated with the demise of 21CN. This discrimination against TalkTalk was particularly harmful since it limited competition for BT Retail's voice only base.

8.12 In 2007 we requested a MPF business grade product (which included out of hours provisioning, faster fault repairs and higher SLGs) to allow us to compete against other downstream products such as WLR, IPStream and PPCs. This product was never developed though a few of the features were in time partially delivered for example higher SLGs.

8.13 MPF (and consequently TalkTalk) has suffered as a result of the poor availability of TAMs at certain times. This is discriminatory since (a) the TAM is unnecessary and (b) WLR (which BT does uses) does not use a TAM.

Product discrimination - other development requests

Pair Quality Test

8.14 This is a requirement for Openreach to send CPs details of the Pair Quality Test (PQT) to CPs after an Openreach engineer visit. An engineer should use their hand held testers at the start and end of each repair, SFI and Broadband Boost job. This tells them if the line performance is Red, Amber or Green. CPs have asked to see that information with a date, time and stamp, so they can see if the engineer's actions have made any improvement and to help them manage customer queries. The SOR was initially for all repair, SFI and BB Boost jobs but was rejected by Openreach. However as all CP's challenged the rejection Openreach went away to review providing just on SFI and BB Boost. There was a paper based trial which Sky took part in which estimated significant benefits for industry in terms of reducing the need for CPs to make repeat engineer call out requests to Openreach. Openreach have still not given any commitment to deliver and have cited high system implementation costs as well as challenging the benefits stated by industry. It has now passed 1,000 days old and the OTA are facilitating a further workshop to discuss overcoming the impasse.

Harmonised Repair

8.15 The PQT SOR contrasts with Openreach's development of Harmonised Repair. This internal initiative is fast tracked for development in November of this year in Openreach systems after first being raised by Openreach in June. It will facilitate fast repair times on lines with a multi skilled voice and broadband engineer. It uses a different commercial model paid on an increased rental basis as opposed to call out transaction charge and has been likened to insurance. It seems to be targeted at SMEs and homeworkers. A trial in August seemed inconclusive to the benefits and no external BT CP has expressed interest at this stage. Additionally the commercial

arrangements are yet to be shared by Openreach. Nevertheless Openreach are progressing the required systems development terming the launch a national pilot.

Change in VULA Hold to Term and Cancellation charges

- 8.16 It's a moot point whether CPs need to raise such requests to a product's terms as an SOR or as a CFPCG agenda item. Now that FTTC is a mass market product we asked that the Hold to Term and cancellation arrangements be changed to align with other mass market products like LLU. After all the chances are that Openreach's FTTC kit will be used by another CP or customer in the short to medium term if a customer cancels with the original CP. We obtained industry backing and submitted our request via the CFPCG and the OTA. Openreach rejected our request, stating that the reason Hold to Term and Cancellation charges were not raised on the other mass market products was that they were regulated and they had no obligation to scrap these charges on FTTC as the prices weren't covered by charge controls. Openreach claimed that its FTTC business case had aimed to keep the connection and rental charges down to encourage take up and as part of that it was necessary to recover costs elsewhere such as from the Hold to Term and Cancellation charges. If those costs were not recovered separately OR would need to increase the FTTC rental and connection charges to offset their loss.

Business 2 Plus product

- 8.17 There was a request from business CPs (SOR 8383) for a 'business-grade care level' which would offer prioritised appointments and other enhancements without the full expense of the top-of-the-range Care Level 4. When the product was designed and delivered it had been tailored to suit BT Business, all of their WLR3 Premium circuits would automatically be migrated to the new Care Level and for a small increase in rental there were a number of significant benefits for example a dedicated business helpdesk, discounted premium appointment slots, no bulk migration charges. Furthermore, TalkTalk Business were required to carry out some last-minute systems changes and pay the increased rental on their WLR3 Premium circuits (around 500k lines) to accommodate the changes.

Wires only GEA

- 8.18 When it was launched in 2009, the GEA product included an Openreach modem. We considered this a backward step compared to standard (ADSL) broadband where the broadband access service excluded the modem allowing the CP (or customer) to self-supply a modem (or more likely a combined modem/router). We initially asked for a wires only version in 2008 as GEA was being developed. This was supported in time by other CPs. It was eventually made available in late 2013 five years after the request. We consider that the wires only version was eventually developed only because BT Retail requested it.

SoGEA

- 8.19 A contrast to the examples above is SoGEA (single order GEA) which essentially is a superfast broadband only product (without a voice line). This SOR had zero support

from CPs except BT. Further, because it is a major line variant (like MPF or WLR) it will require a significant amount of development effort over a prolonged period and will also require all CPs to adapt their systems even if they do not use it themselves. Despite this Openreach progressed the SOR. In our view the approach on SoGEA is clearly inconsistent with Openreach's approach on other SORs and is discriminatory.

Price discrimination

8.20 Openreach has consistently used any price flexibility it has been granted by Ofcom to relatively raise the prices of MPF versus WLR/SMPF. It has never as far as we are aware used price flexibility to 'favour' MPF. Some examples are given below

- Right when tested (RWT) up to 2009: MPF £39, SMPF £3.75. There was no material difference in the cost and MPF was reduced to £3.75
- Connection charges: for example in 2010/11 – MPF £38.64, WLR £34.86. These prices are now tightly regulated and MPF is £30.76 and WLR £34.73. In other words, the appropriate prices are for MPF to be cheaper than WLR but BT used the flexibility to make MPF more expensive than WLR
- New provide: for example
 - In 2009 – MPF £76.00, WLR £67.00
 - in 2010, MPF £75.01, WLR £55.74

Though BT created a £19 price difference under tighter regulation the price difference is only £4 (MPF £45.74, WLR £41.55)

- Stopped line restart¹⁵⁵: for example in 2009 – MPF £45.75, WLR £34.85. MPF was £11 more expensive though under tighter regulation the price difference is £3 (MPF £35.85, WLR £32.43)
- Cease up to 2012: MPF £5.37, WLR £0.00
- In Sept Openreach 2009 asked for a waiver to reduce WLR New provide from £88 to £67 in less than normal 90 days. No equivalent accelerated reduction was requested for MPF prices

8.21 In our view this is clear evidence of discriminating in favour of WLR/SMPF.

8.22 Electricity charges are paid by non-BT operators by means of a variety of charges including a 'Usage per kWh' charge. Up until the charge control imposed in June 2014 there has been no meaningful price regulation¹⁵⁶ on these electricity charges. Notably BT itself does not use the same electricity product/charge. It appears to us that BT has exploited the lack of regulation. For example in 2010, following significant falls in electricity prices in the open market (but not reduction in the wholesale charges we paid, we requested that Openreach provided transparency as

¹⁵⁵ this is where a re-jumpering is required i.e. not new WLR that was previously a stopped WLR or a new MPF that was previously a stopped MPF

¹⁵⁶ there was a cost orientation or basis of charges obligation but this was vague and imprecise in respect of electricity charges

to the costs and charges. Openreach refused to provide this (though it did do its own audit and surprisingly gave itself a clean bill of health!). Similarly in 2013 the wholesale charge did not fall even though prices did. We consider that Openreach has set excessive charges.

9 Annex B - [✂ CONFIDENTIAL ✂]

10 Annex C - [✂ CONFIDENTIAL ✂]

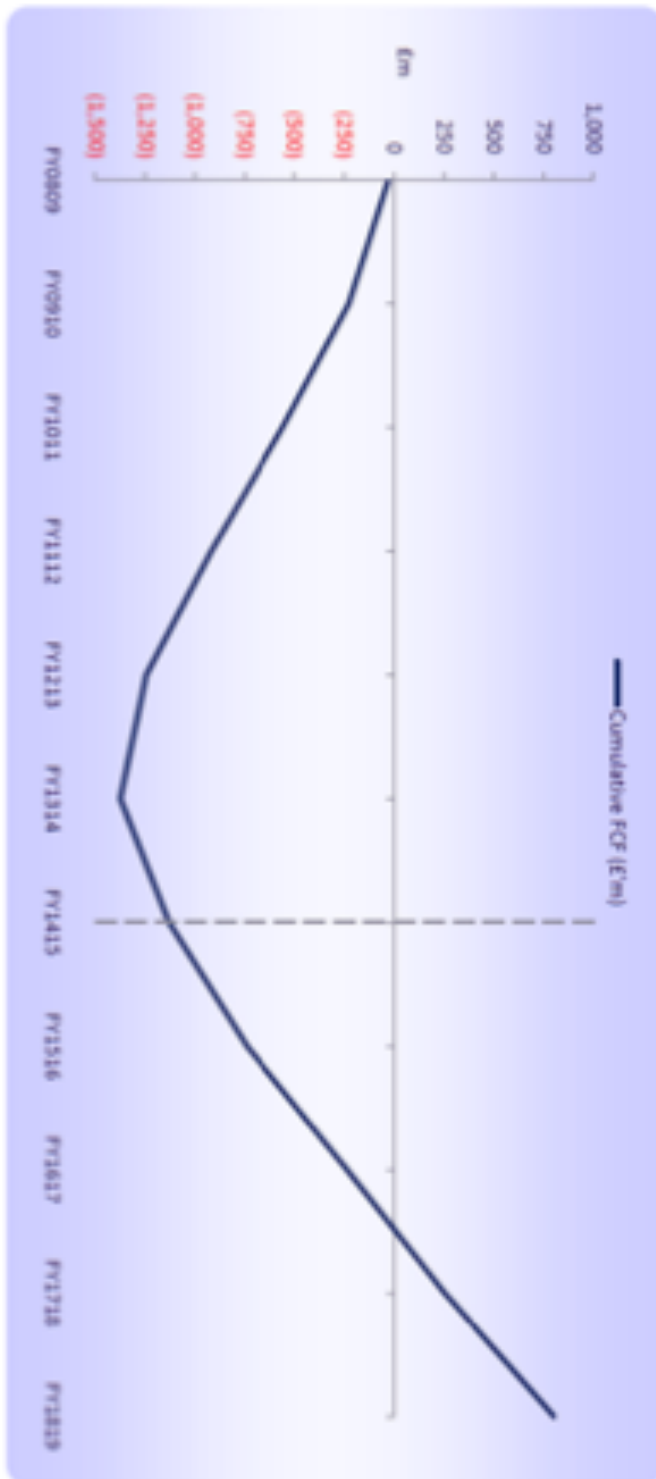
11 Annex D - [✂ CONFIDENTIAL ✂]

12 Annex E - BT fibre investment evidence

- 12.1 This exhibit was taken from an August 2015 RBC Capital Market report called UK Regulation – Stick or twist ? It appears that it was taken from a presentation by BT to investors.

Source: Company presentations

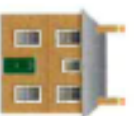
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78



Openreach - cumulative fibre programme FCF

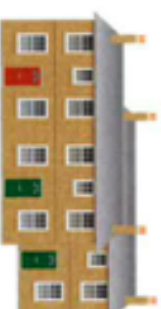
BT Q4 FY13 presentation Slides #2

Fibre – an Openreach scenario



c. 1.5m Openreach users

Run rate May 2013



4 – 5m Openreach users¹

3 – 4 years



Unit price p.a.	c.£85 – £90	c.£85 – £90
GEA Revenue ² p.a.	£100 – £150m	£350 – £450m
Capex p.a.	£300 – £400m	tens £m

¹ Assumes fibre passes >90% premises; an acceptable investment and regulatory environment

² Openreach GEA rental revenue only, some of which will be internal to BT Group. Does not include copper rental or connection

13 Annex F - steps required for demerger

- 13.1 The following summarises the key considerations and steps to be taken into account in respect of a proposed separation of BT Openreach (“BTOR”) from BT PLC (“BT”) which we would expect to be carried out by way of a demerger of BTOR out of BT PLC.
- 13.2 The result would be two companies with separate listings on the London Stock Exchange, one being the existing BT and a new company carrying on the BTOR business (“OR Newco PLC”). A shareholder in BT prior to the demerger will following completion of the demerger then have a share in each of BT and OR Newco PLC.
- 13.3 There are two general points to note. The below summarises the tried and trusted routes to affect demergers in the UK. We can see nothing unusual with BT that would mean any of the below would not be capable of applying in the ordinary course and any arguments from BT to the contrary should be thoroughly examined. More specifically, BT has affected a demerger previously when it demerged its wireless business Cellnet (now O2) and therefore it is familiar with the structures and processes involved.

13.1 Demerger Structures

- 13.4 There are many ways to carry out the demerger such there is no set prescribed one size fits all structure. However all of the structures use well followed statutory procedures set out in the Companies Act 2006 and the Insolvency Act 1986. The point being that each of them is well rehearsed and proven to work. We see nothing with in BT’s existing corporate structure to prevent any of these procedures taking place.
- 13.5 Although BTOR is currently ‘functionally separate’, it is not as far as we aware currently all contained within one separately identifiable subsidiary company of BT. Therefore as part of the demerger and before the statutory procedures were started, BT will first need to carry out an internal reorganisation so that all the material parts of BTOR are within a separate subsidiary company (“OR Newco”).
- 13.6 Intra-group reorganisations are very common and in the case of BT where BTOR is already a separate division such that part of the reorganisation is already in place, the final steps of such an internal restructure should be quicker and easier to complete compared to other types of reorganisations. The further steps required would include allocating the various asset and (operating) liabilities between the two different organisations, similarly allocating the various financing liabilities (and/or refinancing) and putting in place contracts between OR Newco and BT though for the main part this will simply reflect the contracts that BTOR already has with external customers.
- 13.7 OR Newco would then be demerged out of BT using one (or a combination of) the following statutory procedures:

- By way of a scheme of arrangement under Part 26 of the Companies Act 2006; or
- By way of a court approved reduction of capital under Section 641 of the Companies Act 2006; or
- By way of a dividend in specie under Part 23 of the Companies Act 2006; or
- By a voluntary liquidation under Section 110 of the Insolvency Act 1986.

13.8 Each procedure has its own prescribed route and timetable to follow and each is a tried and trusted way to affect a demerger. Typically a combination of the above procedures will be used.

13.9 When OR Newco has been demerged it will then need to be listed on the London Stock Exchange following the rules and procedures laid down by the UK Listing Authority giving rise to OR Newco PLC. Again, these are well rehearsed steps including the publication of a prospectus to shareholders.

13.10 The financial advisers to BT will determine the number of new shares in OR Newco PLC each existing BT shareholder will receive using the normal valuation techniques.

13.11 The listing process of OR Newco PLC would run concurrently with whatever demerger procedure (or combination) is followed such that it would be the final step to complete the demerger.

13.2 Tax

13.12 Tax will be an important consideration of the demerger and will potentially influence which demerger structure is used. However, there are a number of commonly used tax reliefs available depending on how the demerger structure is categorised from a tax perspective. Typically in order for the relevant reliefs to apply a demerger is either a statutory demerger or a scheme of arrangement (or both). From our knowledge of publicly available information given BT is a quoted company, there is nothing per se that would stop these reliefs from applying.

13.3 Employees

13.13 Another important consideration are the employees of both BTOR and BT. Given BTOR is already operating in material respects as a separate business to BT, those employees of BT who work entirely on the BTOR business should be readily identifiable. When the business of BTOR then transfers to OR Newco the law will protect these employees. The Transfer of Undertaking Regulations (commonly known as TUPE) will provide that their employment is automatically transferred to OR Newco. Consultations with employees, trade unions and other representative bodies will be required but these should not be prohibitive to the completion of the demerger.

- 13.14 With regard to those employees currently providing “shared services” to both BT and BTOR, again these should be readily identifiable and through a consultation process each business and the relevant employees can decide who they wish to work for in the future and have their employment transferred accordingly.
- 13.15 Employee share schemes would also need to be transferred so that they are then capable of being operated within OR Newco PLC. However, typically the rules of share schemes in public companies provide for restructuring and believe this will be the case in respect of BT.
- 13.16 All the above employment matters would take place as part of the pre-demerger reorganisation.

13.4 Pensions

- 13.17 Arrangements would be needed for the defined benefits pension scheme. This is discussed in the report by John Ralfe (Annex J).

13.5 Bank Facilities

- 13.18 The existing bank facilities of BT would need to be changed so that facilities were then provided to each of OR Newco PLC and BT. While we have no detailed knowledge of BT’s current facilities there is equally nothing in the public domain to suggest that there is anything unusual about BT’s existing facilities. We therefore believe it is reasonable to conclude that OR Newco PLC will be able to obtain the necessary new bank facilities and that BT would be able to main or enter into new facilities for its business.

13.6 Commercial agreements

- 13.19 As BTOR is already operating as a separate division within BT it should be straightforward to identify the key suppliers and customers of BTOR. Therefore the agreements in respect of BTOR should be easily transferrable from BT to OR Newco as part of the pre-demerger reorganisation.

13.7 Transitional services

- 13.20 It is quite possible that each of BT and OR Newco PLC will have certain services and areas that overlap. These may include property and routine IT services. It would therefore not be uncommon to have transitional service agreements between each of BT and OR Newco PLC in order for both businesses to continue operating in the months following the separation.

13.8 Time Period

- 13.21 We would expect the pre-demerger reorganisation, the actual demerger and listing of OR Newco PLC to all be carried out with 9 to 15 months from start to finish.

14 Annex G - Derivation of certain figures in the submission

14.0 Derivation of % excess mobile prices

14.1 32% derived as follows:

- EE RoCE 27-28%.
- Assume average industry RoCE 25%
- MNO WACC 9% (pre-tax real WACC in 2015 MTR 7%- MTR Review statement March 2015 §7.46)
- Excess return 16% (= 25% – 9%)
- Assume ratio of MCE to revenue is 1.5 (ratio for Openreach is 2.2) (BT RFS 2015 MCE £12.5bn, revenue £5.7bn).
- Assume revenue £1bn and MCE £1.5bn (the actual number do not matter – it is the ratio that matters)
- Excess profit £0.24bn (= 16% x £1.5bn)
- Revenue if no excess £0.76bn (= £1bn – £0.24bn)
- Excess price 32% = £0.24bn / £0.76bn

14.1 Derivation of excess return resulting from over-forecast of WACC

14.2 The amount of £1bn has been calculated as follows:

- For the LLU charge controls in 2009 and 2012 the nominal risk free rate (RFR) was over-estimated versus the out-turn by between 2% to 4% (we use a mid case of 3%). These ranges come from the data below taken from Ofcom documents:
 - In FAMR May 2009 Ofcom estimated the nominal RFR in 2012 at 4.5% and cost of debt at 7.5%
 - In March 2012, the real RFR varied from –1.4% (spot, 5 year bond) to +0.2% (1 year average, 10 year bond) and inflation was about 3% implying a nominal RFR of 1.6% to 2.8%. The cost of debt was around 4%
 - In FAMR March 2012 Ofcom estimated the nominal RFR in 2014 at 4.4% and the cost of debt at 6.65%
 - In June 2014 the real RFR varied from –1.5% (1 year, 5 year) to –0.1 % (spot, 10 year) and inflation was about @% implying a nominal RFR of 0.5% to 0.9%. The cost of debt was about 3%
 - Notably, Ofcom has concluded in assessing interest rates on over-charges that BT's cost of debt is Bank of England + 1% i.e. currently 1.5%
- We take a conservative assumption that changes in the RFR only affects the cost of debt and that the actual cost of equity is not affected by changes in the RFR

- Assuming that the cost of debt was over-estimated by 3% and assuming a gearing of 50% and tax rate of 28% implies that the WACC was over-estimated by about 1%
- The capital employed for regulated products is about £12bn implying the actual required return on capital employed is £120m lower than the forecast required return on capital employed
- It is seven years since the crash occurred (2008). Assuming £120m per year for seven years is about £1bn

14.2 Derivation of % excess wholesale prices

14.3 14% derived as follows:

- Excess return £7bn over 9 years so £0.8bn per year
- Average revenue in period (use 2009/10 as basis) £6.6bn (RFS10 p22)
- Revenue if no excess £5.8bn = £6.6bn – £0.8bn
- Excess price 14% = £0.8bn / £5.8bn

15 **Annex H - Frontier report on distortions resulting from vertical integration**

Provided as separate document

16 **Annex I - Richard Feasey report regarding certain effects for Openreach if vertically integrated**

Provided as separate document

17 Annex J - John Ralfe report on pension arrangements

Provided as separate document