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August 2015

Response to Ofcom's Consultation

Business Connectivity Market Review:
Leased lines charge controls and dark fibre pricing



I. Foreword

As a leading provider of connectivity services Vodafone is a key stakeholder in this crucial £2Bn+ market; a market which acts as the circulatory system for UK commerce and government, underpinning the economic wellbeing of the nation. The services in this market are at the heart of our business: they allow us to connect our own mobile cell sites delivering 4G services to consumers; and they provide the connections that enable us to serve the United Kingdom's top companies, key public sector institutions and many other communications providers.

As we endeavor to deliver for all our customers we look to Ofcom in this market review to address the consequences of market failure that stem from the enduring economic bottlenecks in connectivity access. Without the right regulatory approach we cannot meet the needs of our customers, nor can we compete effectively, with a resulting consumer welfare loss. While UK end-consumers have little direct interest in the dynamics of this important market, being one step removed from its operation, they ultimately pay the price if the regulatory remedies imposed aren't delivering. Ofcom needs to regulate effectively for these consumers as well as for the businesses that directly rely upon affordable and evolving connectivity solutions in the UK to compete in increasingly competitive global markets.

As a result we believe that Ofcom should:

- Eliminate over-recovery as quickly possible through starting charge adjustments, bringing prices back in line with costs in 2016;
- Ensure the charge control baseline numbers are as robust as possible on market volumes, WACC and efficiency to prevent future over-recovery caused by modelling errors;
- Introduce safeguards to prevent pricing drifting well in excess of costs by making volume assumptions as robust as possible and through the re-introduction of cost orientation.

In recent years we've witnessed BT enjoy ever greater returns from business connectivity, these excess returns amount to over £1.5Bn over the last three reported years. Much of this excess profitability has been earned not through merit and the skillful management of cost and services; rather it has been earned as a result of a regulatory approach that has shielded BT from many of the commercial realities that it would face in a competitive market. The ongoing Quality of Service crisis in Ethernet products is entirely of Openreach's making and has had a very detrimental impact on service performance and the provisioning of new circuits in particular, with customers waiting over a year for circuit delivery. Astonishingly in this time BT's order book has grown. This isn't an exceptional display of brand loyalty; rather it is the practical reality of market failure. In a competitive market buyers would have voted with their feet long ago and gone elsewhere but BT is very often the only supplier available. As our customers wait, enduring the frustration that is Openreach ordering today, we must, through regulation, introduce remedies that better replicate competitive market outcomes, giving strong incentives around price and performance. This means BT shouldn't see the charge control as a



means of funding SLG payments or to fix staff resourcing issues caused by mismanagement in earlier financial years.

While we welcome Ofcom's decision to introduce immediate starting charge adjustments and a negative pricing glide path, this does not go far enough to eliminate BT's excessive profitability in these regulated markets. We believe Ofcom needs to go further. Long term under-recovery is clearly undesirable, however the risk of it occurring is small, with the checks and balances in the regulatory system ensuring that such an outcome is very unlikely (with any shortfall occurring part way through a control being remedied at the start of a subsequent control). The risk of under-recovery has previously been overstated; this has resulted in an overly cautious approach that has led to higher prices at every stage of charge control setting (from efficiency assumptions, through to setting the cost of capital). As a result industry and consumers have been dealing not just with higher prices, but fundamental distortions of competition which accompany long term over-recovery from one operator in the market.

We commend Ofcom for the work already undertaken in this BCMR, through the charge control proposals and in the review of regulatory accounting attribution, however we would urge Ofcom to be bolder when setting a new charge control, taking a truly balanced approach where the fear of under-recovery is put in context and the much more present danger of over-recovery is tackled head on. It is important for charge controls to create the right incentives and deliver an opportunity to out-perform them, with the ability to retain those additional returns. However, additional returns need to be earned through genuine efficiency savings and careful cost management, they shouldn't be achievable in the steady state because the price control framework isn't challenging enough. Indeed if the charge control framework doesn't deliver a challenge that tries to mimic competitive outcomes, then the overriding incentive effects it seeks to promote is muted, as a business already making a healthy return is less hungry to optimise than one that needs to remain competitive to survive.

Dark fibre is an important new remedy that has the potential to transform the UK business connectivity market from the rigid supplier orientated market of today where consumers of connectivity have terms dictated to them directly or indirectly by an SMP provider, to one that is far more customer centric, adapting to the needs of individual businesses and their locations, freeing them from a BT topology designed in the last century to something designed around efficient routing principles. A new service that is far more adaptable and puts control in the hand of the customers, avoiding the need to confront many of the problems associated with today's market such as migration and platform closure. There is however a real danger that with a pricing approach that is focused around the needs of the current generation of products rather than one which is sustainable in the future and reflects dark fibre itself, demand will be suppressed at all but the very highest bandwidths. We would urge Ofcom to be bolder in its pricing approach, making the new remedy as accessible to as wide a range of customers as possible, ensuring that real transformation occurs on the back of dark fibre availability, delivering customer centric connectivity for all levels of UK enterprise.

As one of BT largest external customers for TI services we consider that it is particularly important that we highlight the importance of TI services to particular end customers. Although clearly Ethernet forms the majority of future demand, TI services are, and will continue to be so for the period of this review and beyond, of significant importance for many customers, and form a substantial part of the installed base of Business



Connectivity lines. For some customers the unique performance characteristics of TI services mean that finding alternatives is particularly difficult, for others the change away from TI has massive knock on impact on cost that means it will be many years before such changes can be implemented. Customers know that eventually they must move away, particularly from sub 2Mbit/s services which will no longer be available after 2020, but even in the medium term many have no realistic alternative but to continue to purchase these services. It is vital that Ofcom continues to give these end users pricing protection, recognising that assets used to deliver these services have long since been written down. Ofcom should not permit BT to use pricing as the sole mechanism to force migration, when either through the lack of alternatives available, or concerns around the provision of new circuits it will not incentivise migration at all. Instead it will allow BT to exploit consumers who have limited options and little support to transition their services and may be reluctant to migrate at time when confidence in Openreach's ability to deliver new services is at an all-time low.



2. Introduction & Executive Summary

2.1 We warmly welcome Ofcom's charge control proposals, recognising the considerable thought and analysis behind them. We believe Ofcom have set out a comprehensive charge control framework that seeks to address issues relating to BT's significant market power in large areas of the business connectivity market. The issue of over-recovery has been recognised and we welcome Ofcom's attempt to address it through starting charge adjustments and glidepath price reductions.

2.2 Following the Executive Summary, the rest of this submission contains detailed comments on various aspects of Ofcom's proposals, with sections 3 to 7 focused on the following aspects of the Leased Lines charge control:

- iii. Approach to charge control setting & design;
- iv. Charge Control Assumptions
- v. Efficiency
- vi. Cost of Capital
- vii. Dark Fibre Pricing.

In the remainder of the document we set out answers to the questions directly raised by Ofcom in the LLCC consultation.

2.3 In addition we have three supporting annexes prepared by Frontier Economics, one on the proposed charge control design, the second on the efficiency opportunities available to BT in the next control period and the final report, which was commissioned by the PAG consortium reviews the proposed pricing approach for Dark Fibre.



Executive Summary

- We support Ofcom's decision to introduce across the board starting adjustments and a CPI-X control, with a range of sub-baskets and safeguard caps. Ofcom should tackling meritless over-recovery as quickly as possible through tougher starting charge adjustments.
- Cost Orientation has a firm place in charge control setting, providing the ultimate safeguard against over-charging while preserving efficiency incentives.
- Ofcom must not allow BT to over-charge customers on legacy services as a crude migration incentive, such an approach doesn't work in most cases and effectively results in Ofcom endorsed over-charging.
- Ofcom need to rethink the impact of the Local Access differential to reflect investment by CPs that has already been undertaken while at the same time challenging BT's scale in Ethernet delivery.
- Discounts have a place in the market but Ofcom need to ensure that they are reaching all market participants and further safeguards are needed to prevent market distortion.
- Ofcom's model assumptions for QoS resourcing should adjust out BT's inefficient yo-yo deployment of resources, preventing it from gaming the charge control by taking the benefit of cost cutting under one control, but getting funding to fix the resultant service crisis in the next.
- Project Services should be brought under price regulation with transparency around what is being provided to ensure it can be replicated by external CPs.
- In the absence of a volume error correction mechanism, Ofcom should look again at its Forecasting assumptions, in particular TI volumes may not decline at the rate suggested as we doubt BT has the provisioning capacity; Dark Fibre cannibalisation is over-stated as it will take some time before volumes take off; and Ethernet volume assumptions may be higher than predicted due to increase demand for bandwidth and lower pricing.
- Ofcom should reconsider how Dark Fibre development costs are recovered, with BT's lines of business picking up a fair share of the costs based on the expected distribution of benefits.
- Ofcom has been cautious in choosing the overall efficiency estimate, with Ofcom's proposal being at the lower bound of the range. Ofcom should avoid selecting an overly cautious efficiency assumption.
- Ofcom's proposed cost of capital is too generous. We believe there is a good case to reduce the proposed cost of capital by around 1 percentage point, taking into account a lower asset beta for LLCC and a lower inflation forecast.
- We warmly welcome Ofcom's proposed dark fibre remedy, believing it to be essential to combat market failure in business connectivity. The market has moved on considerably since 2001 when PPCs were first mandated and this next evolutionary step is necessary to safeguard UK business competitiveness.
- We believe that the optimal pricing solution for Dark Fibre is a cost based one as it provides for unambiguous pricing and would enable the remedy to be used for all bandwidths in the CI market.
- In the event that cost based pricing is not the pricing remedy that is implemented in this review, a timeframe should be clearly signaled as an option for the subsequent review.



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3. Charge Control: approach & design

We support Ofcom's decision to introduce across the board starting adjustments and a CPI-X control, with a range of sub-baskets and safeguard caps. However we feel Ofcom can improve the proposals set out by:

- Tackling meritless over-recovery as quickly as possible through tougher starting charge adjustments which address not just regulatory accounting anomalies but over-recovery earned not through efficiency improvements but past forecasting errors.
 - In light of BT's recently exposed regulatory accounting errors we feel that Cost Orientation has a firm place in charge control setting, providing the ultimate safeguard against over-charging while preserving efficiency incentives.
 - Ofcom must not allow BT to over-charge customers on legacy services as a crude migration incentive, such an approach doesn't work in most cases and effectively results in Ofcom endorsed over-charging.
 - Ofcom need to rethink the impact of the Local Access differential to reflect investment by CPs that has already been undertaken while at the same time challenging BT's scale in Ethernet delivery.
 - Discounts have a place in the market but Ofcom need to ensure that they are reaching all market participants and further safeguards are needed to prevent market distortion.
 - Ofcom's model assumptions for QoS resourcing should adjust out BT's inefficient yo-yo deployment of resources, preventing it from gaming the charge control by taking the benefit of cost cutting under one control, but getting funding to fix the resultant service crisis in the next.
 - Project Services should be brought under price regulation with transparency around what is being provided to ensure it can be replicated by external CPs.
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Introduction

3.1 We broadly welcome Ofcom's LLCC and recognise the detailed level of analysis that Ofcom has undertaken to arrive at its consultation proposals. We wholeheartedly support Ofcom's proposal to introduce starting charge adjustments across a range of key products, proposing a range of sub-baskets and safeguard caps to ensure the benefits of the charge control are spread fairly across a range of products that are purchased by BT and non-BT CPs alike.

3.2 We believe Ofcom's charge control proposals can be improved upon to deliver outcomes that better reflect competitive ones, further limiting the scope for over-recovery and ensuring that it is very difficult for BT to favour its own commercial operations. In this section we focus on a number of areas where we believe it is possible to improve on the overall design of the control.

A rethink on Cost Orientation

3.3 Since the removal of cost orientation in 2013 we've seen BT's returns climb in the BCMR with the current charge control proving too generous. We've also heard first hand from Ofcom's appointed consultants about the extent of mistakes (spreadsheet errors and incorrect cost category inclusion) and the amount

of 'Clearly Inappropriate' attributions that have occurred within BT's regulatory accounting output. The resulting proposals being consulted upon separately¹ is for £262M of costs to be annually removed from the regulatory cost stack and placed into BT's commercial operations. Taken together these represent very significant levels of over-charging that could have been both remedied and discouraged through a complementary cost orientation obligation.

- 3.4 It is time to revisit cost orientation and re-introduce this vital safeguard remedy to provide a strong long lasting incentive to deter future overcharging. In the inherently difficult world of charge control setting, where the uncertainties are many, cost orientation provides a back stop safeguard on pricing that means that from year to year and month to month the regulated business must not only ensure compliance with the charge control, but also ensure that any cost orientation obligation is likely to be met. This makes sure action is taken to address pricing in real time and reduces any opportunity for over-recovery.
- 3.5 Ofcom doesn't apply cost orientation mechanistically, any Ofcom investigation into compliance with the cost orientation obligation would take into account any action to comply at particular points in time, with any unexpected RFS movements viewed in that context. It is only when the obligation is ignored for a material period, or new information comes to light around the level of the cost base that action would be warranted.
- 3.6 Cost orientation obligations and charge controls have differing functions that complement each other to tackle the complex and numerous issues that arise from BT's SMP. In light of the findings within the Cartesian report there is overwhelming evidence to suggest that both remedies are needed and Ofcom should reinstate cost orientation in this BCMR. Cost orientation remains the simplest way to address concerns around overcharging; with a clear repayment obligation should prices prove to be set higher than the appropriate cost benchmark.

Migration Incentives

- 3.7 We have concerns around Ofcom's proposals to provide BT with continued pricing flexibility in an effort to encourage migration. In theory using pricing flexibility to encourage customers to move off end of life platforms may have some merit where unit costs have increased considerably and platform shut down is imminent. However the reality for consumers is very different, with customers over-charged or persuaded to move on to potentially unsuitable products years before platforms are actually closed. We have covered the issue of migration at length in our BCMR policy consultation response and its associated annex, but it is worth emphasising this from a customer perspective as it illustrates very clearly just how market failure is impacting UK businesses and how existing regulation isn't safeguarding their interests, or indeed the wider consumer interest.
- 3.8 Take for example the very considerable number of low bandwidth PPC customers in the utility sector who make use of these circuits for telemetry to monitor and control remote sites. These are usually circuits that are essential to support critical services to consumers using energy or water networks. They are involved in monitoring normal operations as well as providing a safety function that prevents

¹ <http://stakeholders.ofcom.org.uk/consultations/cost-attribution-review/>



occurrences like power surges both within electricity substations or in customer homes, preventing serious damage or even loss of life occurring. In 2004 amid the fanfare of BT's ill-fated 21CN venture the first indications were given that that this low bandwidth platform would be closed. The utility sector rightly pointed out that there were no alternatives available as latency and jitter issues prevented Ethernet circuits being considered a suitable replacement.

3.9 A decade on, with 21CN almost forgotten, BT are continuing to pursue platform shut down, with utilities having their own long charge control related infrastructure investment cycles, they are embarking upon a scale circuit replacement program prompted almost entirely by BT's desire to close the low bandwidth PPC platform. However due lack of competitive forces, these customers aren't being effectively served, encountering a number of issues that would be unthinkable in a well-functioning market:

- I. The majority of telemetry sites utilise a 64kbit/s leased line, providing all the monitoring and control functionality required. While TDM emulation is now possible on Ethernet to overcome latency and jitter, this results in extra CPE costs and complexity.
- II. There is no like for like bandwidth swap-out available, 100 Mbit/s EADs are being ordered to replace 64kbit/s circuits as the nearest available service in cost terms, despite it being far more expensive (in some cases expensive microwave links might also be used to serve some sites). The expectation is that most of the new bandwidth will be left unused, but with no other regulated products available as a closer substitute, the end customer has little choice in the matter.
- III. The migration experience is a frustrating one, with the cease of the PPC required and a newly provided Ethernet service having to be ordered. The cease and re-provide can't be coordinated by BT, so the customer has to endure uncertainties over provisioning times.
- IV. As the Ethernet services are being ordered amidst a service crisis, massive delays have been encountered, with some circuits over a year late. This is despite the fact that the customer is merely responding to BT's own requests around platform closure.
- V. The circuit price differential between 64Kbit/s services and EAD100 means that BT could increase the pricing of the legacy product significantly and it would not add anything to the incentive impact on the customer. In putting its prices up on legacy services, BT are effectively increasing their returns while not offering a suitable alternative product that meets the direct needs of the customer. The motivating factor for the utility sector is the need to maintain network control, not the threat of higher pricing in the short run.

3.10 This experience is not untypical and it unsurprisingly causes significant resentment in the customers directly impacted by legacy prices rises, particularly when you consider that the assets involved have almost certainly been completely written down. This is compounded by the fact that no suitable migration product is available at a time when a service crisis means an already disconnected process is made even more infuriating. To allow BT to legitimately overcharge these customers in the guise of encouraging migration is disingenuous. In fact the incentives on BT to move the remaining customers off

a closing platform will be strongest in the last twelve months without any need to flex pricing up, as if it wishes to realise any savings from platform closure it needs to move all customer off the closing service.

3.11 In the case of low bandwidth PPCs 16 years will elapse since BT first mooted platform closure² (in 2004 it was thought closure would occur in 2012) and 2020 when the platform eventually closes (based on the current timetable). A considerable amount of that time has been given over to allowing BT to increase legacy pricing above other services to 'encourage' migration, the reality is that BT have been charging more to a captive customer base and generating excessive profits as a result. Ofcom must model the reality of the impact of this policy at first hand and not rely upon any theoretical benefits which will not be realised. The reality is that where any alternative costs considerably more (in both connection & rental terms and addition CPE), BT's pricing rising incentives do not work, but do provide yet more excessive profit opportunities for BT.

3.12 We would refer Ofcom to the report at Annex 1 of our BCMR submission which sets out the migration issues currently faced by CPs and consumers. There may be a case for modifying charge control design, adapting it to incorporate the costs associated with accommodating migration journeys resulting from platform closure. By including migration costs within the existing cost base this would safeguard continuity of supply and prevent consumers from facing a series of disruptive pricing hurdles (starting with end of life prices increases swiftly followed by cease and re-provide costs).

Spreading the benefit of Starting Charge Adjustments to WES

3.13 With no sub-caps or sub-basket measures in place to safeguard the pricing outcomes on the mass-market Ethernet offerings (EAD10, EAD100 and WES10 & WES100) we believe BT are likely to focus pricing reductions on the EAD variants, which in turn will provide greater benefit to their own lines of business who have moved off of much of the legacy WES estate. While alternative CPs have plans to move, the service crisis has made many think twice about the pace of those migrations, with WES being used longer than planned. We therefore believe it would be sensible and fair to ensure that starting charge adjustments were spread evenly across all WES products to ensure customers were not disadvantaged as a result of delayed migration due to concerns over the service crisis.

Treatment of Discounts within the charge control

3.14 We have a number of reservations around Ofcom's proposals to allow BT to offer discounts. Any opportunities to depart from standard pricing in a market where one player has significant market power presents customers with an additional level of risk that might not be immediately quantifiable. Difficulties arise in designing a framework sophisticated enough to permit the positive aspects of discounting, but guard against the adverse ones that are harmful to the long-term consumer interest.

3.15 Ofcom have tried to achieve this by categorising types of discounts and ruling them in or out of permitted use and charge control qualification. We believe this approach is only partially successful and doesn't go far enough to counter balance the very strong commercial incentives upon BT to favour its own downstream purchasers. In summary, Ofcom are proposing that:

² <http://news.bbc.co.uk/1/hi/technology/3791319.stm>



- Volume discounts offered on the basis of the total volumes bought by particular customers are not permitted (as in all likelihood BT will always have the highest volume).
- Geographic discounts offered for services consumed in particular geographic areas are allowed, but don't count when measuring BT's charge control compliance.
- Time-limited discounts offered for a limited period of time will be allowed and will count towards charge control compliance (this is the status quo – for example in 2013/14 BT offered a temporary discount on EAD 100Mbit/s services for a five month period where the connection fee was waived).
- Term products – offered for committing to buy a service for a certain period of time, typically beyond the standard contractual period – are to be allowed and will for the first time also count towards charge control compliance (however it is restricted to a maximum of three year total cost of ownership (TCO)).

3.16 BT lines of business have traditionally had the biggest take up of discounting opportunities, using discount windows to move services from legacy platforms such as WES to the current generation of Ethernet. These opportunities are of course available to other external purchasers, however it is often the case that competing CPs have more complicated supply arrangement in place, having to overcome added layers of complexity in circuit delivery, often having to manage a number of inputs which make up an end customer service (e.g. on-net capacity, other CP inputs used in combination with a key input from Openreach). Additionally there is also a risk that external CPs get stuck in discount plans, having less visibility of BT's group long term plans. For example by being a late adopter of a discount package, only to find a newer variant available (which BT itself is able to move to). This means external CPs lag BT in migrations and frequently aren't able to mobilise quickly enough to take advantage of discount windows, leaving downstream BT the only ones able to make a saving.

3.17 There are examples from the current price list where standard pricing is deviated from, in the form of term commitments, but the pricing set can actually be higher than standard terms (i.e. than pricing with no formal term commitment). It is unclear if this 'negative' discounting would be including within charge control compliance measurements or indeed if it would pass the obligation not to discriminate, as customers using this type of pricing (who were presumably locked in at a time when it looked advantageous) are clearly getting a raw deal and may not be permitted to move without triggering a contract breach (albeit one with a SMP supplier).

3.18 Ofcom's discounting safeguards need to go further and while we do not wish to prevent discounting from occurring (as it would occur in a competitive market) and it is entirely appropriate and even advantageous in some circumstance (such as assisting with customer centric migrations), there needs to be far more regulatory oversight over what is occurring and who the outcome beneficiaries are. We'd like to see a clear obligation that ensures that non-BT CPs (in aggregate) should be saving at least the same proportion as BT lines of business. We also need clear reporting that provides transparency on the BT / Non-BT split of discounting benefit as well as details of the discounts that have been made available.



3.19 BT can easily target discounts at its own lines of business and while they would be publically notified and available to all, in reality they may well be consumed on-mass by BT itself. This could occur through a geographic discount (e.g. BT wins a large local authority project requiring new supply) or a time limited discount where the window is sufficiently wide only to bring in BT's business (as has occurred in the past). We need to see firm obligations in place to ensure that external purchasers of services receive the same proportional benefit as BT (e.g. If BT lines of business buy 50% of total WES volumes and a discount offer is promoted for EAD100 connection, with £2M of saving taken up by the market, then at least, at least £1M of discount benefit should have flowed to external purchasers). This would prompt BT to offer fairer discounts with universal appeal (as is far more likely to occur in a competitive market) and not ones with one customer in mind. Such an approach retains the concept of discounts and the pricing freedom that goes with it, but ensures bias is removed.

3.20 Without these measures in place we will see further initiatives from BT that may on the face of it be open to all, but in fact translate into material commercial advantage to an integrated SMP supplier & internal purchaser. If BT is genuine over its approach to discounting, they should not fear the introduction of these safeguard which are entirely proportionate to the level of risk involved in retaining discounted pricing options within a regulated market. This may be an activity the EAB/EAO could oversee and report on to ensure equivalent outcomes.

Local Access Differential

3.21 We disagree with Ofcom's approach to resolving the unintended consequences resulting from the lack of cost orientation on the prices of EAD products and can't support the proposal to introduce a local access differential as it currently stands. Whilst we understand the theory behind the proposal, it ignores the investments made by CPs to address the differential. Since the last review CPs have invested in EAD LA presence and this investment remains to be recouped.

3.22 We would highlight that if Cost Orientation had remained an obligation it would have acted as a constraint on the quantum of the differential, encouraging the correct market investment signals over the period of the last charge control.

3.23 In the absence of cost orientation and the basket freedom afforded to BT, CPs have responded to the investment signals already in the market, investing in Local Access infrastructure to support the use of EAD LA. That investment is largely sunk, but unlike BT, CPs have not had the time to recoup their investment.

3.24 In proposing this differential, Ofcom need to be mindful of two key considerations:

- a) At the heart of this issue is the importance of CPs having equal opportunity to achieve optimal economies of scope and scale. The cost of backhaul is a key consideration, as once a BT exchange is set up to deliver LA circuits then backhaul costs to that exchanged are spread over those LA circuits ordered and any other services that can share that backhaul. If BT has more market share in LA circuits, it can then take advantage of those lower backhaul costs. This advantage is particularly pronounced when you take into account the very high bandwidth backhaul services which are unregulated. It is acknowledged that incremental wavelengths on



WDM equipment have low incremental cost. Therefore the cost and price margin between say 1Gbit/s and 10Gbit/s is not 1x10, similarly between 10Gbit/s and 40Gbit/s. This means economies of scale can accelerate as volumes climb. BT is also able to share backhaul between regulated products (eg. Between LLU and Ethernet) in a way that many other enterprise focused CPs can't (or at least without the scale to make an impact).

- b) Consideration has to be given to the investment already undertaken by competing CPs to compete with BT in the provision of local access circuits. Over the past three years CPs wishing to compete in this market have had no choice but to invest in LA capability and it is important that this investment is not compromised, even if it falls short of matching BT's ability to offer Local Access services. What is key here is the run rate of circuits being provisioned, not the percentages of circuits in situ. We consider that the data presented by Ofcom does not show an accurate picture of LA services in the market. ✂

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3.26 Previous investment should be taken into account in any policy intervention, with that investment having been made in good faith by communication providers in their desire to compete head on with BT, bringing wider consumer benefit.

3.27 The problem merits more investigation than to simply impose a cost orientation obligation between the two products without notice. Given the uncertainty (will prices go up or down?) that this brings to EAD and EAD LA Pricing and the impact it will have on Dark Fibre (which is pegged to EAD and EAD LA pricing), a full impact analysis of the solution should be carried out. This should take account of the likely shift in BT's pricing, the impact on already sunk investments and the likelihood of enabling further investments.

3.28 We recognise the problem Ofcom is trying to address, but we are keen to avoid any sudden pricing movements that have neither been signaled nor anticipated by the market. We have set out a range of possible solutions to address this issue and we would welcome further dialogue on the issue to support recent investment in Local Access preventing it from being undermined by well-meaning regulatory intervention which may have unintended consequences.



3.29 Once the analysis has been concluded, further refinement (possibly some or all of those set out below) could be used to mitigate unintended consequences:

Option 1 – do nothing

There is the option to do nothing. We do consider that Ofcom's concern is borne out of issues that have changed since the last market review.

CPs take up of LA is impacted by being later to market – which is as a result of the more complicated issue of creating a LA point of presence compared to the activity BT needs to undertake.

CPs take up is also impacted by the lack of suitable migration for WES to EAD LA. Our legacy service base remains as full WES variants rather than WES LA. It is our understanding this is not the case for BT.

Option 2 – set a cap of where LA can be ordered or an average charge following connection at an optimal number of exchanges

Ofcom could consider looking at capping the maximum number of sites a CP has to connect to, to achieve universal LA pricing as we proposed in 2012 in the last BCMR policy consultation. This cap should be based on the level of investment undertaken thus far. With universal LA pricing becoming an assailable target for CPs willing to undertake investment (in a similar way to Ofcom's NCD formula for calculating NTS termination rates pre-2006, where the number of exchange connections determined the level of out payments, with a 100% rate achievable without needing to connect to all exchanges).

Vodafone believes there are strong policy reasons for limiting the number of locations that Communications Providers must interconnect at in order to get access to the lowest cost regulated inputs. If this is done correctly it will encourage investment in the CI market and drive stronger competition to the benefit of end users; without it we risk competition problems in downstream markets requiring further regulation. We also believe this should be done in a way that ensures the same locations are used for VULA and EAD LA.

Option 3 – glide to the differential

In order for CPs investments to be given time to repay and for adequate signaling for the change Ofcom could propose a glide path into the differential with a differential price reduction starting from March 2019.

We would welcome discussions with Ofcom on the options set out above once Ofcom has had an opportunity to consider the issues raised.

The Cost of QoS

3.30 We have concerns around the costs Ofcom is proposing to include to resource the minimum level of service proposed. In addition we have also put forward a proposal that would trigger consequences within the charge control should BT fail to meet the minimum standards. This proposal is set out in our policy consultation response to the BCMR and in particular we would draw Ofcom's attention to Annex 2 of our BCMR submission, a report by Frontier economics reviewing the approach to QoS in the UK



water and energy sectors (a report looking at the incentive approach around maintaining QoS by adjusting WACC to take account of QoS performance).

- 3.31 In respect of the arguments around the baseline costs assumed within Ofcom's proposed model around the assumed funding of resources to meet a certain level of QoS, we have previously advanced arguments that highlight BT's ability to remove costs and resources from its business under the guise of efficiency savings, but were in fact nothing more than blunt cost cutting that contributed to the current QoS crisis. This was coupled with the reallocation of resources away from BCMR products into BT's NGA Fibre roll out, further diminishing the resources available to service the UK's enterprise customers. This cost cutting and resource reallocation resulted in extra profitability for BT shareholders in the current charge control. As a result of the outcry over levels of Openreach QoS and the anticipated introduction of minimum standards BT has had to put back much of the resourcing previously lost in the form of significant amounts of new recruitment to fill the gap in an attempt to normalise service levels.
- 3.32 In the consultation Ofcom have rejected our argument that past additional profitability due to cost cutting should be recognised in any future control, saying this would amount to retrospection and a departure from best regulatory practice, albeit acknowledging that in hindsight minimum standards should have been introduced alongside the last charge control.
- 3.33 If Ofcom are not to progress with an adjustment that recognises past profitability due to cost cutting, they should at least take steps to recognise the inefficient way BT has gone about allocating resources. By offering voluntary leaving packages to its staff in the short term, reducing opex to return profits to shareholders, and then having to recruit back more new staff (or in some cases the same staff) in the years that follow, BT has not allocated its resources in an efficient way. Taking into account both the costs of replacement recruitment and the productivity that occurs when training and onboarding new employees, BT's yo-yo resourcing means that its shareholders are on point to take all the additional benefit in reduced opex, while its customers have to fund the predictable remedy of replacing lost staff resources through higher regulated charges.
- 3.34 In addition BT has made use of a considerable amount of largely unplanned sub-contracted labour in an effort to firefight as the service crisis deepened, largely as a result of past in-house resourcing mistakes. By BT's own admission this expensive sub-contracted short-term labour is less productive than in-house resources and BT now trying to reduce its reliance on sub-contractors. As highlighted in the Frontier Report on Charge Control design (Annex 1), Rikky Okker, BT's Head of Cost Transformation has made clear that *'every three subcontractors are getting replaced by just two BT employees, which drives the cost saving directly, as well as to reduce cost of failure from the quality improvement.'*³³
- 3.35 While we disagree with Ofcom, believing it would be entirely appropriate under the circumstance to make an adjustment to reflect past profitability due to cost cutting (as BT weren't staffing Openreach at the levels assumed in the last control), we think that Ofcom should at the very least recognise that BT haven't managed their labour resources in an efficient way, and introduce an adjustment to strip out the additional costs of recruitments and extra costs of sub-contracted labour, taking account of the productivity gap that has emerged due to new staff being deployed and trained or non-BT labour having to be deployed in the field. This outcome where the benefits of reduced resourcing flow to BT, but the costs to replenish those resources (in a less than efficient way) are borne through regulated charges is

³³ Frontier Report – Annex 1



not a fair outcome and it is counterproductive, undermining the efficiency incentives of the charge control framework.

- 3.36 This approach feels intrinsically wrong from a customer perspective, with Ofcom expecting UK businesses to not only endure a service crisis brought about through the removal of resources even although they were fully funded by the last charge control, but then to also fund the extra costs associated with bringing those resources back, when they should never have been removed in the first instance because they were never an efficiency measure only a management initiative to boost short-term profitability in a SMP market.

Extending pricing regulation to cover specific ancillary regulated inputs

- 3.37 We believe it is time to introduce a three year price control on Project Services. Project Services are an unaccountable service wrap that sit alongside regulated products. During the service crisis a number of CPs have felt the need for the sake of their customers to purchase this expensive overlay offering in attempt to do everything possible to assist their customers getting circuits delivered on time. This is despite CPs themselves having significant in-house project resources of their own, but find they cannot replicate BT's Project Service offering due to lack of equivalent access to order information and field force contact details.
- 3.38 While Project Services offers no guarantees and its ability to make any real difference to the order experience can be best described as patchy, the reality is that in a market where poor service has become the norm, CPs need all measures necessary to help deliver for their end customers and with a limited range of tools available, Project Services is one of the few measures open to CPs. Many orders for Project Services from external CPs have resulted from the direct frustration felt by both CPs and their customers over continued delays (and now the service crisis is the norm, the fear of delays) and the helplessness the CP feel trying to do their utmost to assist when they are unable to manage their supplier.
- 3.39 The ability of Project Services to secure more instances of direct labour (i.e. non-subcontracted labour) may make a difference and ensures that fewer jobs are abandoned (with the ability of the BT project manager to contact the field force directly, without the need to go through a sub-contractor's back office). We are uncomfortable with the parasitic relationship Project Services enjoys with regulated products, a relationship that has been enhanced during the service crisis.
- 3.40 This product has become more important during the service crisis and safeguards on pricing and replicability are needed while the QoS minimum standards ramp up. In a dark fibre world in all likelihood CPs would want to create their own version of this service and in order to do that they need a clear understanding of the product and its components. We believe Ofcom should intervene to both control the price of this offering and reduce the barriers facing CPs to replicate the offering using their own project resourcing. BT's ability to sell this product alongside a price controlled one is no more than an initiative to camouflage revenues that should be part of the charge control revenue base.



4. Charge Control Assumptions

While we are encouraged by the downward pricing trajectories set out for both Ethernet and TI services, we believe Ofcom's assumptions need to be modified in a number of areas that will have an impact on the charge control numbers, in particular we believe:

- TI volumes will not decline at the rate suggested by Ofcom. Our own forward look at volumes suggests that Ofcom are overstating the extent of decline in the TI Market. We also don't believe Openreach has the provisioning capacity to manage a large scale migration away from PPCs in the way that Ofcom's forecast proposes.
- Dark Fibre cannibalisation is over-stated in this charge control, as it will take some time before volumes take off, and it is unlikely to impact all new supply volumes within this control period.
- Ofcom should look again at its Ethernet volume assumptions as they may well understate future demand for new connections.
- Ofcom should reconsider how Dark Fibre development costs are recovered, with BT's lines of business picking up a fair share of the costs based on the expected distribution of benefits.

Adjustments to base year costs

4.1 Vodafone agrees with Ofcom's overall approach to adjusting base year costs, and the specific adjustments that have been made, subject to the items set out below. As set out in our response to Ofcom's Cost Attribution Review, Vodafone strongly supports the complete identification and correction of all errors and obviously inappropriate methodologies at the earliest opportunity. Vodafone has made some specific observations in that response, which we submit should be reflected in the LLCC Statement. These relate to:

- a) treatment of the employee broadband offer benefit in corporate costs;
- b) allocation of TSO support function costs;
- c) Openreach common costs;
- d) revenue from sales of property;
- e) revenue from sales of copper from the Backhaul and Inner Core networks;
- f) revenue from sales of copper from the Access network
- g) allocation of non-chargeable vacant space in buildings;
- h) allocation of vacant space in operational buildings with an MDF;
- i) unbalanced transfer charges
- j) allocation of Backhaul and Inner Core duct to regulated services;

- k) allocation of Access fibre costs between NGA and non-NGA fibre;
- l) identification and allocation of the common costs of Access duct; and
- m) allocation basis for copper and fibre Access duct.

Ethernet basket Modelled costs

Adjustment for future cannibalisation of very high bandwidth CISBO circuits by dark fibre

- 4.2 Very high bandwidth (VHB) CISBO services of above 1Gbps are not included within the scope of the Ethernet basket. However, Ofcom proposes a £4.6m increase in the modelled final year cost of the Ethernet basket, in order to recover the predicted future shortfall between:
- a) the forecast 2018/19 contribution to non-avoidable or common costs by VHB CISBO services in the absence of Dark Fibre Access (DFA); and
 - b) the forecast 2018/19 contribution to non-avoidable or common costs by the same volume of services, with a proportion of that volume "cannibalised" by DFA⁴.
- 4.3 In Vodafone's view, any such increase would be fundamentally incompatible with Ofcom's overall approach to charge control modelling.
- 4.4 As Ofcom makes clear, in setting charge controls, its overall approach does not seek to forecast future patterns of contributions towards common costs as between different groups of services. Instead, its modelling assumes that:
- "the total amount of fixed and common costs recovered from modelled services in the base year remains the same throughout the control, adjusted only for changes in efficiency and inflation"*⁵.
- 4.5 The consistent application of such an approach should mean that the forecast level of common costs contributions from VHB CISBO services in 2018/19, a set of services outside the control, should be entirely irrelevant to the modelling of the charge control.

As stressed by Ofcom:

"In considering whether to depart from the pattern of common cost recovery assumed within our modelled values of X we therefore draw a distinction between changes to the pattern of recovery between services within the charge control and outside the control. We do not propose to make changes to the pattern of cost recovery between services outside the control due to the risks associated with undermining the fair bet and therefore economic efficiency." ⁶

⁴ Paragraphs A6.113 to A6.132, Leased lines charge controls and dark fibre pricing consultation

⁵ Paragraphs 4.54 to 4.56, Leased lines charge controls and dark fibre pricing consultation

⁶ Paragraph A11.23, Leased lines charge controls and dark fibre pricing consultation



- 4.6 Therefore, under Ofcom's approach, what matters is that the Ethernet charge control basket reflects the pattern of common cost contributions in the base year, and the base year alone, as between lower bandwidth services in the Ethernet basket, and VHB CISBPO services.
- 4.7 If Ofcom were to adopt an alternative approach, which did take account of future patterns of common cost contributions, then the forecast common cost contributions from VHB CISBO services in 2018/19 might be a relevant consideration. However, under such an alternative approach, it would also be important to take account of other factors affecting future common cost contributions, and in particular the forecast growth of Ethernet volumes. It would seem manifestly inappropriate to base the level of common costs in the charge control basket for Ethernet services in a way that:
- a) takes account of 2018/19 volumes of services outside the charge control basket (VHB CISBO); but
 - b) takes no account of 2018/19 volumes of the services inside the charge control basket (Ethernet).
- 4.8 Vodafone therefore submits that if Ofcom wishes to rely on its overall approach to modelling common costs using the base year pattern of contributions, it should apply no adjustment whatsoever to the charge control basket for issues related to VHB CISBO services in 2018/19.

Adjustment for DFA development costs

- 4.9 Ofcom proposes a £5m to £10m increase in the modelled final year cost of the Ethernet basket, to reflect costs incurred in the development of DFA.
- 4.10 Vodafone believes that DFA development costs should not influence the cost of active Ethernet products, and should be recovered solely from DFA services and any equivalents used by BT internally.
- 4.11 DFA development costs are clearly incremental to DFA services as a whole, as they are only going to be incurred as a direct result of Ofcom's proposal that BT offers DFA. They are also clearly not incremental to active Ethernet products, which have been provided for many years without the need for DFA development costs. Ofcom stresses the importance of costs which are incremental to a service being allocated to that service and not to other services:



"cost attributions can also be changed in order to replace an approach that is not appropriate. In such circumstances, the new approach may better reflect cost causality and represent a more objective attribution. Where such cases occur it is possible that costs which are incremental to a specific service were previously included in another service FAC, which may have resulted in higher charges for the latter than if a more objective cost base had been used"⁷.

- 4.12 Vodafone submits that Ofcom should follow its own principles for DFA development costs, and allocated those costs to DFA services and internal BT equivalents.
- 4.13 Vodafone notes Ofcom's observation that DFA development costs are not marginal to any individual connection. However, all that demonstrates is that such costs are common as between individual connections. It does not detract from the fact that such costs are incremental to DFA services as a whole and not incremental to active Ethernet services as a whole. Moreover, Vodafone notes that in assessing the appropriateness of cost allocations more generally across BT's cost base, neither BT nor Ofcom appear to attach any importance to the marginality of costs with respect to individual connections, as opposed to the incremental nature of costs with respect to services as a whole, or sets of services as whole. Doing so in this instance would lead to:
- a) an unwarranted departure from that general approach; and
 - b) a distortion in downstream competition resulting from an inappropriate balance between active and passive prices, which Ofcom stresses it wishes to avoid.
- 4.14 Vodafone also notes Ofcom's observation it expects most CPs that use active Ethernet products to use DFA. However, it cannot be assumed that every CP will do so equally, and to the extent that they do not, a failure to price on the basis of incremental costs will lead to a distortion of competition between CPs. Moreover, Vodafone again notes that in assessing the appropriateness of cost allocations more generally across BT's cost base, neither BT nor Ofcom appear to attach any importance to the purchasing patterns of CPs, as opposed to cost causality considerations specific to the services purchased.
- 4.15 It is important that downstream BT make a contribution to the costs of Dark Fibre development, even if they don't end up using them. Similar to Ofcom's treatment of PPC points of hand-over costs and LLU development costs, even when the nature of the incumbent business means that it doesn't have to consume a particular service, the distribution of benefits is such that BT lines of business should make a contribution.

⁷ Paragraph 4.106, Leased lines charge controls and dark fibre pricing consultation



Geographic cost adjustment for London Periphery

- 4.16 Notwithstanding the concerns expressed in our response to the BCMR policy consultation in relation to the London Periphery, Ofcom's adjustment to the model to include services in the London Periphery (LP) in addition to services in the non-WECLA incorporates an assumption that unit costs of LP circuits are:
- a) higher than unit costs of CLA circuits; and
 - b) the same as unit costs of non-WECLA circuits⁸.
- 4.17 Ofcom states:
- a) that it is reasonable to suppose that unit costs are lower in denser urban areas; and
 - b) that assuming that LP circuits have lower unit costs than non-WECLA circuits would introduce further complexity into the modelling.
- 4.18 Vodafone agrees that it is reasonable to suppose that unit costs are lower in denser urban areas. As a result:
- a) Vodafone also agrees that it is reasonable to suppose that unit costs of circuits in the LP (average business density 232⁹) are higher than unit costs of circuits in the CLA (average business density 1,767); however
 - b) Vodafone believes that exactly the same logic leads to the conclusion the unit costs of circuits in the LP (average business density 232) are lower than, rather than the same as, unit costs of circuits in the non-WECLA (average business density 14)¹⁰.
- 4.19 Vodafone acknowledges the desirability of avoiding additional complexity in modelling, but believes that the LP unit cost assumption can easily be refined in a way that avoids disproportionate complexity. For example:
- a) the relationship between unit costs and business density could be estimated on the basis of existing information on WECLA and non-WECLA unit costs, e.g. by assuming a proportion of unit costs is inversely proportional to business density¹¹ and calibrating that proportion against existing unit cost information;

⁸ Paragraph A6.109, Leased lines charge controls and dark fibre pricing consultation

⁹ Density is estimated on the basis of average business density per square kilometre, as set out in Table 4.4, *Business Connectivity Market Review: Review of competition in the provision of leased lines - Consultation*, Ofcom, 15 May 2015

¹⁰ Vodafone notes Ofcom's observation that unit costs in the non-WECLA include leased lines in other Central Business Districts; however this does not detract from the fact that on average, unit costs in the non-WECLA are likely to reflect much lower business density than in the LP.

¹¹ Reflecting both the proportion of leased line costs that vary in response to density, and the propensity for leased lines to be in above average density areas within any defined area (e.g. non-WECLA).



- b) this could be applied to existing data in the relative business densities in the LP and non-WECLA, in order to estimate the average unit cost in the LP as a percentage of the average unit cost in the non-WECLA; and
- c) that percentage could then be used when adding LP circuits to the non-WECLA circuit cost base.

Starting charge adjustments

Distorted pricing signals

- 4.20 Vodafone agrees with Ofcom's proposal that starting charge adjustments should be made where the risks to economic efficiency or competition from distorted pricing signals are particularly significant, and therefore outweigh the benefits of a glide path approach¹².
- 4.21 Vodafone does not however agree with Ofcom's proposal that the potential for distorted pricing signals be assessed on an aggregated basis, i.e. by comparing charges against cost benchmarks:
- a) for the aggregate of connection and individual rental components over a three year period; but not
 - b) for each disaggregated component individually (connection, local end, distribution, main link, etc)¹³.
- 4.22 Vodafone does not believe that an aggregated approach is a reasonable basis on which to judge the potential for distorted pricing signals for the very same reasons put forward by Ofcom in past decisions and supported by the Competition Appeal Tribunal (CAT).
- 4.23 In the 2013 LLCC statement, Ofcom concluded on a disaggregated approach (emphasis added):
- "if prices of individual services are out of line with costs to an extent which could distort competition, we may need to address this through one-off reductions...*
- if prices of individual services are out of line with costs they could give rise to distortions to competition"*¹⁴.
- 4.24 This is consistent with Ofcom's approach in the 2009 LLCC Statement, which resulted in individual starting charges adjustments for specific component services¹⁵.
- 4.25 In its 2014 Judgment on Ethernet overcharging, the CAT clearly recognised the distortions created by an aggregated approach, and the benefits of a disaggregated approach:
- "if BT were permitted to charge above DSAC for rental and below DSAC for connections, that would cause distortions as between CPs since some CPs would, in effect, be subsidising others..."*

¹² Paragraphs 4.79 to 4.91, Leased lines charge controls and dark fibre pricing consultation

¹³ Paragraph 4.92, Leased lines charge controls and dark fibre pricing consultation

¹⁴ Paragraphs 18.106 and 19.208, 2013 LLCC Statement

¹⁵ Paragraphs 4.167 to 4.185, 2009 LLCC Statement

In short, it is clear to us on the evidence that a distinction between the charges for connection and rental is meaningful in economic and commercial terms”¹⁶.

4.26 That conclusion supported Ofcom’s own view that an aggregated approach was problematic, since:

“circuit bandwidth downgrades and upgrades give rise to a mismatch of connection and rental charges between bandwidths.”¹⁷

“If cost orientation were assessed on an aggregated basis, this would allow BT to charge a high price for service A (relative to costs), and a low price for service B (relative to costs). While in aggregate prices might be similar to costs, those who bought relatively more of service A would be disadvantaged relative to those who bought relatively more of service B, and both groups of CPs would face distorted price signals...

the combination of connection charge and rental charge which CPs pay for circuits can and does vary... the split of rental and connections not only varies from year to year for individual CPs, it also, importantly, varies substantially between CPs within each year”¹⁸.

4.27 The importance of Ofcom’s own observations is well illustrated by reference to the declining T1 market (although the same issue arises in the opposite direction in the growing Ethernet market):

- a. the 2014/15 Current Cost Financial Statements (CCFS) disclose a total of 84,819 2Mbps local end rentals in the year¹⁹;
- b. at the steady state implied by Ofcom’s 3 year aggregated approach, that volume of rentals would imply a total of $84,819/3 = 28,273$ connections in the year; but
- c. the CCFS disclose a total of only 1,102 2Mbps connections: less than 4% of the volume implied by an aggregated approach²⁰.

4.28 As a result, an aggregated approach gives BT a clear opportunity to distort pricing signals significantly, by pricing rentals high, and connections low, relative to DSAC (or double FAC), in the knowledge that the aggregated analysis will give an vastly overstated weighting to connections prices. Indeed, this is precisely what the 2014/15 CCFS suggest. For example:

- a) for 2Mbps local end non CLZ rentals, revenue is 213% of FAC of (£79.2m v £37.2m);
- b) for 2Mbps link, revenue is 348% of FAC (£24.7m v £7.1m); and

¹⁶ Paragraphs 117 to 119, Judgment on cases 1205/3/3/13, 1206/3/3/13, and 1207/3/3/13, Competition Appeal Tribunal, 1 August 2014

¹⁷ Paragraph 117, Judgment on cases 1205/3/3/13, 1206/3/3/13, and 1207/3/3/13, Competition Appeal Tribunal, 1 August 2014

¹⁸ Paragraphs 8.57 to 8.61, *Disputes between each of Sky, TalkTalk, Virgin Media, Cable & Wireless and Verizon and BT regarding BT’s charges for Ethernet services: Determinations and Explanatory Statement*, Ofcom, 20 December 2012

¹⁹ Section 8.2.1, 204/15 Current Cost Financial Statements

²⁰ Section 8.2.1, 204/15 Current Cost Financial Statements



c) for 2Mbps connections, revenue is 31% of FAC (£2.4m v £7.7m)²¹.

4.29 Vodafone therefore submits that Ofcom should apply a disaggregated approach, in line with the 2013 LLCC Statement, its own arguments before the CAT, and the CAT's judgment.

Cost allocations and accounting errors

4.30 In view of the scale and breadth of inappropriate and erroneous cost allocations identified in the Cost Attribution Review, Vodafone believes it is imperative that the resulting overcharging for regulated services is eliminated at the earliest opportunity. Vodafone therefore supports Ofcom's proposal to make starting charge adjustments where prices are significantly above or below cost for reasons other than growth²².

4.31 Vodafone also agrees as reasonable and pragmatic, Ofcom's proposal to base those starting charge adjustments on the percentage difference between:

a) costs including all base year cost adjustments; and

b) costs excluding those cost adjustments warranting a starting charge adjustment²³.

4.32 Vodafone refers to the example set out in the consultation, where in the base year:

a) revenues are £150m

b) fully adjusted costs are £80m; and

c) costs excluding those adjustments warranting a starting charge adjustment are £100m²⁴.

4.33 Ofcom's proposed approach is to calculate the impact of the starting charge items, £20m, as a proportion of the costs excluding those items, £100m. This would lead to a 20% reduction, to be applied to revenues of £150m, i.e. a revenue reduction of £30m.

4.34 In Vodafone's view this results in a reasonable allocation of outperformance between starting charge items and non-starting charge items:

a) since the starting charge items lead to true underlying costs being overstated by 25% (£20m/£80m);

b) the natural assumption is that the erroneous inclusion of starting charge items in the cost base have caused revenues to be overstated by 25% (£30m/£120m); and

²¹ Section 8.2.1, 204/15 Current Cost Financial Statements

²² Paragraph 4.79, Leased lines charge controls and dark fibre pricing consultation

²³ Paragraphs 6.137 to 6.139 and A6.25 to A6.28, Leased lines charge controls and dark fibre pricing consultation

²⁴ Paragraph 6.138, Leased lines charge controls and dark fibre pricing consultation



- c) the fact that the £30m adjustment to revenues is greater than the £20m adjustment to costs simply reflects the fact that BT's opportunity to outperform the charge control is partly attributable to the erroneous inclusion of costs in the forecast cost base during the existing charge control.

4.35 Vodafone is concerned to ensure that the list of cost adjustments warranting a starting charge adjustment is complete, so that the starting charge adjustments calculated on this basis of this approach are not understated. Ofcom's current list includes cost adjustments relating to:

- a) accounting errors identified in the Cost Attribution Review;
- b) Access cards;
- c) BT's 2013/14 changes to its cost allocation methodology; and
- d) Corporate costs and TSO function costs.

4.36 However it seems clear from the Cost Attribution Review, including from the points raised by Vodafone in relation that review and mentioned above, that between now and the charge control Statement a large number of other cost adjustments warranting a starting charge adjustment are also likely to emerge. These may include:

- a) errors and obviously inappropriate allocations between regulated and unregulated markets, as targeted by Ofcom; and also
- b) instances where an error has consistently overstated costs over time, without necessarily affecting allocations between regulated and unregulated markets (for example, where depreciation across all markets may have been overstated as a result of inappropriate depreciation policies). There too, BT's opportunity to outperform the charge control is partly attributable to the erroneous inclusion of costs in the forecast cost base during the existing charge control.

Hypothetical on-going network

4.37 We support Ofcom's decision that no adjustment is needed for a declining market/depreciated assets (the 'hypothetical on-going network' adjustments). These adjustments are typically appropriate during a transition period from the legacy technology to a newer technology, helping to smooth the path of pricing over the period and ensure that customers face efficient migration signals. However, these adjustments are not appropriate in this case because BT isn't investing in new technology to provide TI services and some customers are already migrating, albeit some are content to remain on TI services for some time to come. The only certain outcome from the inclusion of such an adjustment would be the inevitable over-recovery that occurs as a result of BT's SMP.



Volume Forecasts

- 4.38 We have a number of concerns about the volumes used to underpin Ofcom's modelling. While we appreciate that anticipating future demand levels is a notoriously difficult task in this market with so many interlinked variables in play (migration from TI to CI, Dark Fibre take up & the availability of potential alternative connectivity from other markets coupled with wider macro-economic factors within impacting the economy), it is essential that the assumptions used stand up to scrutiny. As Ofcom aren't proposing any error correction capabilities²⁵ within the design of the charge control, the volume forecast used have a significant bearing on both pricing and BT's level of profitability.
- 4.39 Our reservations around the volume assumptions used are three fold:
- i. Ofcom may have overstated the decline in TI services migrating to Ethernet. Due to a number of reasons we believe TI volumes will hold up more than Ofcom have anticipated.
 - ii. Dark Fibre volumes may be overstated. While we are firm supporters of this new remedy, we believe it will take some time to bed down and for confidence around the new product to grow. Demand may therefore be lower initially while the product proves itself with early adopters.
 - iii. We believe Ofcom may have understated future Ethernet demand (not withstanding a slower pace of migration from TI). We believe Ethernet services will continue to attract new growth outside of TI migrations, driven by growing bandwidth demands and in the absence of any scale business grade alternatives.

We will address each of these concerns in turn below.

TI Volumes holding up

- 4.40 We believe BT's TI volume forecasts used by Ofcom in its modelling overstate the extent of volume decline in this market. Our own internal planning assumptions suggests that decline in TI volumes would be around a 30% of the installed base of 2Mbit/s TI PPCs and RBS by the end of the control period, with BT forecasting a decline of 68% in the total number of sub-2Mbit/s and 2Mbit/s TI services. Indeed we have not started any TI migration planning and therefore all forecast volume reductions are as a consequence of customer initiated churn. In reality migration is likely to be back ended and would be programmed to start only once a definitive statement on platform closure was received, which is likely to be some way off, pushing scale migration to 2017 or beyond. There is also a practical concern that BT wouldn't be able to resource any large scale TI migration until the service crisis was brought under control, with BT simply unable to cope with the weekly order volumes that would be generated.
- 4.41 We are acutely aware that if Ofcom overstates the decline in TI volumes it would result in over-recovery of costs and in the absence of any form of charge control error correction mechanism we

²⁵ In respect of a volume error correction mechanism as proposed by Vodafone ahead of this consultation being published.



would welcome a review of the assumptions used to sanity checking them against both customer expectations and BT's ability to resource a scale migration whilst trying to return service levels to meet the proposed minimum standards.

Dark Fibre Volumes

- 4.42 We consider that Ofcom's assumptions around the dark fibre take up are potentially overstated. Ofcom assumes that by year 3, all new connections will be cannibalised by dark fibre at 1Gbit/s and above, however we consider this unlikely because:
- Uncertainties remain over the dark fibre pricing approach, with the addressable market potentially restricted to services above 1Gbit/s due to limited scope to deliver any compelling price differential based on Ofcom's price projections between the active and dark fibre products.
 - It remains to be seen if BT will be in a position to deliver a workable product by year 2 of the control, without a significant amount of involvement from Ofcom.
 - The poor Openreach QoS experience is now widely known and anticipated by many customers. It may well deter them from undertaking circuit changes or the adoption of an as yet unproven service until such time as it has had a chance to bed in.
 - We don't foresee much cannibalisation of BT's internal sales at this point in time, given BT are likely to want to stick to their own vendor supported offerings at least initially.

We are again aware that given the many uncertainties in play there is significant potential for error which, even with the most conscientious approach to forecasting can't be avoided. The consequences of actual volumes diverging from the model forecast have a direct bearing on pricing and Openreach profitability. We believe Ofcom should look again at its dark fibre forecast to ensure it is as robust as possible.

Ethernet Volumes

4.43 While Openreach's provisioning constraints and customers' positive attitudes to TI may well dampen the speed of migration from PPC to Ethernet within the next charge control, new demand for Ethernet is likely to come into the market. With only 29%²⁶ of UK businesses over 250 employees using Ethernet, there is considerable scope for growth. The lack of business grade alternatives and the ever increasing demand for bandwidth is contributing to this growth, with the benefits of Ethernet connectivity now more accessible than ever before, both in terms of availability and in pricing terms (with prices falling and continuing to fall under successive charge controls). This all points to growth, not just from TI migration, but new customers finding their way to Ethernet.

4.44 While Ofcom projections put the total number of Ethernet circuits growing from ~160,000 circuits to ~210,000 circuits by the end of the control period²⁷, we anticipate that actual growth could well be up to 15% higher, set against a backdrop of declining prices and growing demand for bandwidth.

²⁶ Source: Openreach

²⁷ Figure 8.26 LLCC



4.45 The reality is that neither stakeholders or Ofcom know at this point how demand will play out, however if Ethernet demand does transpire to be 15% higher than projected it will result in significant over-recovery. In our view these are sound reasons for introducing error correction, however given Ofcom's reluctance on this point we would urge Ofcom to review its forecast volumes before confirming the charge control to minimise scope for meritless over-recovery.



5 Efficiency

Ofcom have consistently overlooked the efficiency opportunities available in BT's business, with BT's regulated business having been sheltered from many of the everyday commercial realities of the competitive market, resulting in guaranteed rates of return that can be 'outperformed' with ease, even during a quality of service crisis.

BT retain a range of discretionary practices that are unique in our industry and are only made possible through the support of guaranteed returns within regulated markets.

Ofcom has been cautious in choosing the overall efficiency estimate, with Ofcom's proposal being at the lower bound 5% for the PVEO estimates and the RFS estimates (Averaging the estimates for TI and Ethernet). By choosing an overly cautious estimate rather than a central estimate with a balanced upside and downside, Ofcom will reduce the level of allocative efficiency, by setting the overall level of prices higher than necessary, with no clear offsetting benefits in terms of productive or dynamic efficiency.

BT's discretionary labour practices

- 5.1 We firmly believe Ofcom must set the efficiency assumption for the charge control at the top of the proposed range. Annex 2 contains a report by Frontier Economics reviewing Ofcom's approach to setting the efficiency range. We will set out a summary of Frontier's conclusions later in this section, however we would first draw Ofcom's attention to the very different behaviours and practices we see BT exhibit more generally, which contrast sharply with companies in the competitive sector. The existence of these practices illustrate just how many efficiency opportunity remain within BT's business and underline the fact that past charge controls haven't provided a sufficient incentive for BT to eradicate them, with BT continuing to make comfortable returns and thus avoiding the day when they are ceased, in sharp contrast to companies in competitive markets who need to evolve working practices in order to remain competitive.
- 5.2 These behaviours and practices are currently built into the regulated cost base, with other communication providers and consumers funding them through higher regulated charges in full or in part. We are not asking BT to change its labour practices - that is entirely a matter for BT Management and its shareholders. However we do believe Ofcom should either exclude discretionary practices from the cost base in the form of a cost adjustment, or set an efficiency assumption that results in UK consumers & businesses no longer funding them. If BT's returns in the market were a function of its effectiveness at competing in a competitive market, rather than supported by regulation as a result of market failure, then these practices would have been eliminated long ago.
- 5.3 BT remains a markedly different employer as a result of the regulatory regime which shields its business from many of the commercial pressure of a functioning market. In a former BT Group HR Director's words, if it were not for the existence of BT's generous voluntary redundancy scheme, 'you were more



likely to die in service than be fired'²⁸ BT's discretionary labour practices²⁹ are unique in our industry and are not replicated by any other UK CP. Indeed, even in the context of many other former state monopolies they are now becoming rare, with parts of the public sector itself now ending its commitment to provide a job for life and many parts of Government and its agencies (including Ofcom) having to implement compulsory redundancy programmes.

5.4 ✂

5.5 In BT's CFO, Tony Chanmugam own words³⁰, "*Further cost reductions have been earmarked for 2015 through to 2017, while the cost transformation team benchmarks against European telcos to identify further opportunities*". To his credit Chanmugam appears to recognise that perhaps European fixed line incumbent sector doesn't represent the leading edge of efficiency and differs from the competitive world when he goes on to say "*the sector isn't always the most efficient. If I look at customer service, I don't really want to be benchmarked in the sector as a business – I would rather be benchmarked compared with the Amazons of the world*".

5.6 Thirty years after the privatisation of BT it is unacceptable for BT's competitors to be funding discretionary supplementary benefits to BT staff which allows them to be rewarded well in excess of competitive industry benchmarks, while at the same time competitors have to make difficult decisions about the benefits afforded to their own staff. Such arrangements are outdated and entirely inappropriate. These costs should be borne entirely by BT shareholders and Ofcom should end this anti-competitive surcharge in the regulated cost base by ensure that the efficiency adjustment takes these practices into account.

Modeling Efficiency

5.7 In Annex 2 we set out a report by Frontier Economics reviewing the approach taken by Ofcom in setting the efficiency adjustment. The report considers how efficiency fits in Ofcom's cost modelling approach used to set the charge control, examines the available data on backward and forward looking estimates of the rate of efficiency gains as well as the supporting evidence on the likely level of future efficiency gains.

5.8 Frontier concludes that Ofcom's proposal to use efficiency assumptions of 5% for both the Ethernet and TI charge controls is conservative. By choosing a conservative estimate rather than a central estimate with a balanced upside and downside, Ofcom will reduce the level of allocative efficiency, by setting the

²⁸ <http://www.cipd.co.uk/pm/peoplemanagement/b/weblog/archive/2013/01/29/transition-centre-helps-to-redeploy-staff-at-bt-2010-11.aspx>

²⁹

A. BBC News Website: <http://news.bbc.co.uk/1/hi/business/8049276.stm> [Please refer to comments below the article].

B. BT Pays 1000 staff not to work: <http://www.contractoruk.com/news/004199.html>

C. BT Internal Comms - Managers urged to use large pool of skills: <http://www.btplc.com/today/art87803.html>

³⁰ <http://www.financialdirector.co.uk/financial-director/interview/2403890/interview-bt-group-fd-tony-chanmugam>



overall level of prices higher than necessary, with no clear offsetting benefits in terms of productive or dynamic efficiency. Estimation of past performance suggests that the rate of efficiency gains has been in a range with a lower bound of around 5%. The evidence on future efficiency gains indicates that there is no reason to expect that similar efficiency gains could not be made over the period of the next charge control. However by selecting a point at the bottom of the range Ofcom risks underestimating what is achievable.

- 5.9 While Frontier acknowledge that there are methodological and data issues which mean that there is a degree of variability in estimates of past and expected future efficiency, this in itself does not mean that Ofcom's objectives are best met by setting the efficiency assumption in the model at the low end. The risks related to setting the efficiency assumption too low leading to prices being set at too high a level, are significant. This would suggest using an assumption in the middle of the range of estimates.
- 5.10 Frontier suggests that Ofcom should attempt to further narrow the range around the backward and forward looking efficiency adjustments. In doing so Ofcom should take account of the inevitable information asymmetry between it and BT, where necessary setting the assumption above the mid-point of ranges produced by BT.



6 Cost of Capital

Overall, we consider that Ofcom's approach to estimating the beta based on the disaggregation of the BT Group beta is overly sensitive to the input assumptions. It results in a beta estimate for the 'other telecoms' activities of the LLCC that is too high and is not consistent with the available comparator evidence. We believe based on the evidence available there is a good case to reduce the proposed cost of capital by around 1 percentage point, taking into account a lower asset beta for LLCC and a lower inflation forecast.

Assessment of BT Group beta

- 6.1 Ofcom estimates the asset beta of the BT Group at 0.74, which it converts to an equity beta of 1.01 at a gearing level of 30%. This estimate is based on a single point estimate and does not take into account the broader evidence presented by Ofcom. Given that any point estimate will suffer from a degree of sampling variation, ignoring the wider evidence provided where this suggested that the point estimate is extreme will lead to an inappropriate estimate of the cost of capital.

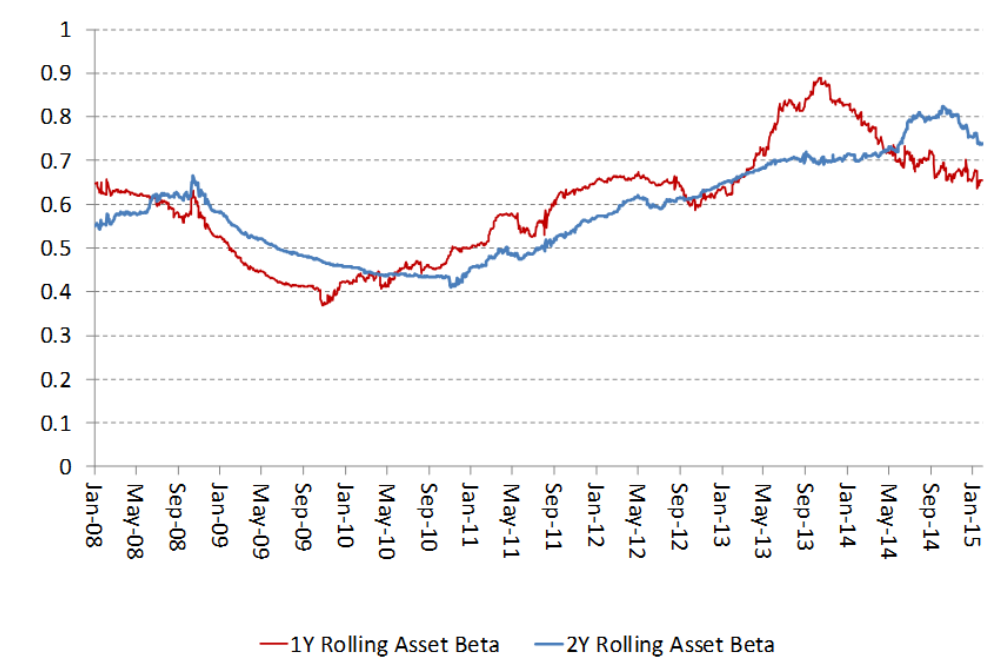
Undue focus on highest estimate from range

- 6.2 Ofcom summarises four estimates of the current asset beta (Table A9.3). These vary depending on the time period for the estimation and a benchmark stock market index (UK or World index). The estimates of asset beta vary between 0.58 and 0.74 (with an average of 0.66). Ofcom selects the figure of 0.74, the highest of the four options presented. Clearly even if Ofcom prefers one method, the other estimates have some information value or Ofcom would not have presented them. As such Ofcom should attach some weight to the evidence from the other methods.
- i. Ofcom should consider how the beta estimate varies depending on the time period. It should not just focus on the two year estimate that gives the value of 0.74.
 - ii. We agree that the estimates against the FT-Allshare may be more robust than the estimates against the World index. However, this does not imply that the evidence should be entirely disregarded.

Group beta has increased over time

- 6.3 The estimate of the group asset beta has increased in recent years and is at an unusually high level. Figure A9.4 plots the historic data on the asset beta for the group (reproduced below in Figure 1).

Figure 1. BT Group asset beta



Source: Ofcom consultation

- 6.4 This evidence does not support the higher beta value of 0.74. Over the past 7 years the asset beta has averaged around 0.6. In addition, the evidence from the one year beta values supports the view that the beta value has 'peaked' and therefore the chosen Ofcom value represents a high point in random variation around the underlying value.
- 6.5 There are clearly reasons why the asset beta may genuinely increase over time because of structural changes in the business or changes in investor sentiment. However, it is also the case that beta varies over time simply as a result of statistical fluctuation. In particular, the very large increase in estimated BT Group beta since the previous leased line charge control determination appears greater than would be expected given the rate of structural change in BT's business. The merits of the argument that the changes in estimated beta are driven by structural changes in the case of BT are considered further below. As a result, there is a strong case for taking a longer term view on the group asset beta of around 0.6.

Disaggregation of group beta

- 6.6 The next step in the Ofcom approach is to disaggregate the group between the three activities:
- Openreach copper;
 - Other UK telecoms – including leased lines; and
 - the rest of BT (RoBT).
- 6.7 Ofcom recognises that returns on regulated activities are systematically less risky than other activities carried out by BT. As such using the BT Group estimated cost of capital to determine the charge control



would lead to prices being set above a level required to adequately compensate investors. This would lead to a reduction in efficiency. Ofcom also considers that the systematic risk associated with the services included in the leased line charge control is greater than that associated with LLU and WLR services.

- 6.8 Ofcom has disaggregated BT's asset beta in order to determine the WACC suitable for setting the LLCC. However, Ofcom's approach to disaggregation is unsystematic and leads to the WACC for leased lines being set according to the WACC for an average of a wide range of BT activities, many of which Ofcom recognise have a higher systematic risk than leased lines.
- 6.9 In past charge controls Ofcom has grouped leased lines with a range of other activities with heterogeneous risk characteristics. Ofcom now recognises that its previous approach of simply de-averaging a BT Group cost of capital into estimates for two groups of activities: "Openreach copper" and "rest of BT" is unsustainable. This reflects the fact that the rise in BT's estimate asset beta and hence the implied de-averaged "rest of BT" WACC (assuming the Openreach copper WACC is constant) appears to be unrelated to increased risk in the charge controlled leased lines.
- 6.10 NERA set out a number of possible reasons why the overall BT asset beta may have increased (A9.57):
- i. BT Global Services;
 - ii. Move into pay TV/Sports;
 - iii. FTTC roll out;
 - iv. Contributions to the pension scheme.
- 6.11 We fully agree that the relative importance and riskiness of these activities will be unrelated to the risk associated with the provision of leased lines within a charge control. In most cases there are reasons to believe that the risk (in CAPM terms) of the activities is significantly greater than the risks associated with regulated leased lines. However we believe NERA may have overstated the risks associated with the FTTC roll out given BT's ownership of the access network and the fact take up has already surpassed BT's original business case assumptions.
- 6.12 As the cost of capital associated with three remaining activities identified is likely to be higher than leased lines, Ofcom should ensure that the WACC calculated for leased lines excludes the effect of these activities.
- 6.13 Ofcom's suggested approach to disaggregate the BT Group into three groups of activities rather than two appears broadly reasonable. However the choice of the three groups of activities does not reflect NERA's analysis of the potential factors driving BT Group's overall increase in asset beta. While Ofcom's approach has removed the effect of BT Global Services from the asset beta used to derive the cost of capital for the LLCC, the "other UK Telecoms services" group of activities includes BT Sports and the FTTC roll out. In addition no adjustment is made for the impact of the BT Pension Fund on the cost of capital for the BT Group.
- 6.14 The NERA analysis notes the issue of the pension scheme but states that the impact on the "asset beta is uncertain and difficult to estimate". This may be correct but there are strong reasons to consider that the effect of the pension scheme is to increase the observed beta of the group.

Nera seem to acknowledge this in a footnote to their analysis *"we estimate that the implied ratio of BT's Pension Assets to Operating Assets has been on the rise since 2009, increasing from 116% in 2009 to*



224% in 2014. Since pension assets have typically higher asset betas than pension liabilities, this would increase the risk contribution from the pension plan.”

This suggests that the group beta should be adjusted downwards to reflect the pension scheme.

A more reasonable disaggregation would be to split BT into three sets of activities as set out below:

Table 1. Proposed disaggregation

	Activities included
Openreach copper access	LLU+WLR
UK business and wholesale	Leased lines BT Wholesale BT Business FTTC
Rest of BT	BT Consumer (including Sports) BT Global Services Other BT Pension Scheme

6.15 Explicitly determining the weight to be attached to these three groups, which should reflect market valuations of each activity is challenging:

- Mean capital employed does not reflect market valuations of non-regulated activities. If price regulation is effective the market valuation of regulated business should equal the regulatory asset value. However for other activities the market valuation may differ significantly from book value of the assets as this will not take account of a range of intangible assets such as brand and customer relationships which will contribute to market valuations
- For activities which are predicted to grow faster than the business as a whole, for example BT Sport, backward looking data on EBITDA will tend to underestimate the weights that should be attached to these activities for the reasons set out by Ofcom.
- The treatment of the defined benefits pension schemes is complex but an extended balance sheet approach would suggest that this would increase the effective weight of the “RoBT” group.
- However the evidence points to an increased weight being assigned to more risky activities which should not be included with leased lines for the determination of BT’s cost of capital.



Interpretation of comparator data and overall conclusions on beta

Interpretation of comparator beta estimates

- 6.16 The analysis undertaken by NERA presents a range of asset beta estimates for comparator groups.
- i. UK network utilities – largely used as an input for “Openreach copper”.
 - ii. UK telecoms operators
 - iii. European telecoms operators
 - iv. US telecoms operators.
 - v. ICT comparators.
- 6.17 Ofcom has not fully considered the evidence from comparators in estimating the beta for LLCC activities. Given the uncertainty around the true level of the BT Group asset beta and the challenges surrounding disaggregating the BT Group beta material weight should be given to the comparators, rather than simply using them as credibility checks.
- 6.18 Ofcom’s disaggregated asset betas for different parts of the business are out of line with the comparator evidence, particularly the evidence for international benchmarks for similar telecommunications operators.
- i. The asset beta used for the LLCC of 0.75 is well above Ofcom’s averages for comparator companies in the UK, the EU and US with only one company in the sample with a higher asset beta – Comcast – whose beta is likely to have been inflated by M&A activity³¹ and which is not a good comparator for the leased lines business³².
 - ii. It is also at the upper end of Ofcom’s range of ‘UK telecoms’ asset betas (a sample of three companies). This upper bound is effectively the asset beta for COLT which derives less than 30% of its revenues from the UK. In addition COLT derives a significant proportion of its revenues from IT services which are more akin to the activities of BT Global Services which Ofcom recognises are more risky than regulated leased line services.
- 6.19 While the scope of businesses of the international comparators differs from BT, there is no evidence that this would lead the asset beta’s for these operators to be systematically below that of BT’s telecommunications activities. The international evidence supports an overall telecoms beta in the order of 0.44 to 0.54.
- 6.20 Assuming that the European and US telecoms operators could be used as a proxy for the average of the Openreach and other telecom beta (on the basis that these operators have less of the ICT or broadcasting exposure), highlights that Ofcom’s beta estimates of 0.5 for Openreach and 0.75 for other telecoms are too high.
- 6.21 The remainder of this section shows that it is possible to produce asset beta estimates for the disaggregated betas that are consistent with the comparator evidence, by making sensible adjustments to the BT Group beta figure and the weightings of the different businesses.

³¹ In particular the failed acquisition of TimeWarner Cable

³² Comcast’s business includes cable television networks, broadcast television, film studios and theme parks with a relatively low proportion of revenues derived from business telecommunications.

Sensitivity of disaggregated results to changes in group beta

6.22 The Ofcom results are very sensitive to the estimates of the group beta and the calibration against the Rest of BT implied beta.

Figure 2. Sensitivity on beta disaggregation

BT Group		0.7
Other telecoms	Openreach	ROBT
0.55	0.5	1.63
0.65	0.5	1.23
0.75	0.5	0.83

BT Group		0.65
Other telecoms	Openreach	ROBT
0.55	0.5	1.30
0.65	0.5	0.90
0.75	0.5	0.50

BT Group		0.6
Other telecoms	Openreach	ROBT
0.55	0.45	1.05
0.65	0.45	0.65
0.75	0.45	0.25

6.23 The Figure shows alternative calculations for different levels of the BT Group asset beta, ranging from 0.6 to 0.7. Note that 0.6 is the average of the asset beta over the past seven years. It shows that, with the 0.75 asset beta for other telecoms, the implied beta for ROBT is implausibly low once the group beta is 0.65 or below (even if the Openreach beta is reduce to 0.45).

Sensitivity of disaggregated beta to changes in weighting

6.24 Figure 3 below shows the effect of varying the weighting given to the RoBT group of activities.

This shows that even with an estimate of the overall BT Group asset beta of 0.74, the asset beta used for the determination of the WACC for the leased line charge control can reasonably be set at 0.65 if the weight of the RoBT group is increased to reflect the inclusion of all of the higher risk activities.

If the RoBT weight is increased to 35%, the implied asset beta for this group of activities is just over 1, lower than the RoBT asset beta of 1.1 under Ofcom's assumptions.

Figure 3. Sensitivity on asset weighting

Weighting			Asset Beta		
Openreach Copper	UK wholesale & business	Rest of BT	Openreach Copper	UK wholesale & business	Rest of BT
25%	60%	15%	0.50	0.65	1.50
25%	50%	25%	0.50	0.65	1.16
25%	40%	35%	0.50	0.65	1.01

This further supports the case that greater weight should be placed on the asset beta comparators when setting the WACC for leased lines.

Conclusions on beta

6.25 The analysis above indicates the following conclusions.

Taking a longer term view of the data and allowing for the impact of the BT pension scheme suggests a range of the BT Group beta of 0.6 to 0.65.

The disaggregated method can be justified using the following assumptions:

- i. An asset beta for Openreach in the range 0.45 to 0.50; and
- ii. A higher weighting for the RoBT activities.

This would support a range for the 'Other telecoms' asset beta of 0.6 to 0.65.

This range, when combined with the Openreach beta, is more consistent with the international telecoms evidence (though it is still relatively high). It is also consistent with the relative risk profile of Openreach and Other telecoms activities.

Market parameters

Total market return

6.26 The cost of equity involves three parameters: risk-free rate, equity risk premium (ERP) and beta. The beta is specific to the activity and discussed further below. The risk-free rate and ERP are market wide parameters that can be assessed against other regulatory decisions.

The consultation is based on the following values:

- i. Real risk-free rate – 1.0%;
- ii. ERP – 5.3%; and
- iii. Inflation (RPI) projection – 3.2%.

6.27 In examining the market parameters we start by looking at the sum of the two which makes up the Total Market Return (TMR). This is because it is the TMR (together with the equity beta) that ultimately

determines the level of the cost of equity. The absolute levels of RFR and ERP as two individual parameters are of less significance than the sum of the two.

6.28 We note that Ofcom's estimate of the TMR of 6.3% is within the range the CC/CMA identified for the TMR of 5% to 6.5% for the recent Northern Ireland Electricity case. It is similar to the figure of 6.5% used by the CMA in its most recent decisions (NIE and the provisional findings for Bristol Water), i.e. at the top of the range identified for NIE. As such we consider that the 6.3% figure used by Ofcom is reasonable.

Inflation forecast

6.29 "Real" risk free rates used in UK regulation have been traditionally set with reference to the Retail Price Index as the index linked gilts used to estimate the risk free rate are indexed against the RPI. In other regulated industries, regulatory asset values and charge controls are still determined using the RPI as the reference index. This results in internal consistency within charge controls as the real (RPI deflated returns) are independent of the level of RPI (and typically the financial modelling to set X is carried out in real terms).

6.30 Ofcom in contrast uses the CPI as the reference index in the charge control, although regulatory asset values are still indexed by the RPI. Ofcom carries out the financial modelling in nominal terms. As such when determining the RPI forecast to set the cost of capital, Ofcom needs to do more than simply ensure that the RPI forecast is robust and unbiased. Ofcom must also ensure that the RPI forecast used is consistent with other forecasts/parameters:

- i. The CPI forecast used in the charge control modelling;
- ii. The implicit deflator used to determine the 'real' risk free rate/total market return; and
- iii. The RPI forecast used for indexation of the RAV.

6.31 We understand³³ that Ofcom have used consistent forecasts for the RAV and for setting RPI for the closing year WACC³⁴.

Ofcom uses a survey of independent forecasts published by HM Treasury as the source of RPI forecasts basing the forecasts on the average of the independent forecasts. We understand this is also the basis for the CPI forecast used in the charge control modelling³⁵.

There are a number of issues in using this source for setting the charge control:

- i. These are not official forecasts and there is no assurance that the forecast, or the methodologies used to derive these forecasts are robust;
- ii. The sample of independent forecasters who provide data varies between years³⁶ and as between the CPI and the RPI series³⁷. This means that there is a lack of internal consistency between the average CPI and average RPI forecasts³⁸;
- iii. The RPI forecasts in absolute terms show a large degree of variability; and

³³ Paragraph A 9.17

³⁴ Although as the RAV model has not been supplied we have no visibility of this.

³⁵ Paragraph A 6.70

³⁶ For example Goldman Sachs do not produce forecasts for 2019.

³⁷ For example Daiwa produce CPI forecasts but not RPI forecasts.

³⁸ For example, even if all forecasters assumed the same 'wedge' between CPI and RPI of say 1%, if inconsistent samples of forecasters were used to derive average RPI and CPI could differ by more or less than 1%.



- iv. The implied forecasts of the 'wedge' between RPI and CPI, which is critical to the charge control, varies significantly between forecasters and fails to take account of the latest estimates of the expected size of this wedge.

Table 2 below illustrates these points.

Table 2. Comparison of Independent Forecasts of 2019 Inflation

	CPI	RPI	Implied "Wedge"
Capital Economics	-	-	N/A
Citigroup	1.7	3.1	1.4
Commerzbank	1.9	3.0	1.1
Daiwa CM	2.0	-	N/A
Goldman Sachs	-	-	N/A
ING	2.2	-	N/A
RBS Global Banking & Markets	2.0	-	N/A
Beacon Economic Forecasting	1.7	2.4	0.7
Cambridge Econometrics	1.6	2.2	0.6
CEBR	2.4	3.1	0.7
EIU	-	-	N/A
Experian	2.0	3.6	1.6
IHS Global Insight	2.0	-	N/A
IMF	-	-	N/A
Liverpool Macro Research	2.0	2.5	0.5
NIESR	2.0	3.6	1.6
Oxford Economics	1.8	3.4	1.6
PwC	-	-	N/A
BCC	-	-	N/A
European Commission	-	-	N/A
ITEM Club	1.9	3.5	1.6

Source: Forecasts for the UK Economy: May 2015

6.32 Given these serious methodological issues with the data source proposed by Ofcom we believe that it is not fit for purpose, due to the risk of inconsistency between the forecasts for CPI and RPI. Instead we would propose to use the Office of Budget Responsibility estimates of the long term wedge between CPI and RPI to set the relativities between the CPI and RPI forecasts. These were updated in March 2015³⁹ with the wedge being estimated at 1.0%. Using an estimate of the long term wedge provides a

³⁹ See Office for Budget Responsibility: Economic and fiscal outlook March 2015 pages 60 to 62

higher degree of regulatory certainty than using differentials for point estimates of RPI and CPI for a given year, which may be influenced by transient technical factors.

6.33 Based on the CPI forecast for the final year of the charge control of 2.0% the resulting RPI value would be 3.0%, reflecting the estimate of a long term wedge of 1.0%

Gearing

6.34 Ofcom adopt a forward looking gearing figure of 30%. This appears to be reasonable. We note that a higher figure could be supported based on the comparator evidence presented by NERA. At the same time the WACC figures are not very sensitive to reasonable variations in the gearing assumption.

Cost of debt

6.35 Ofcom use a methodology where the cost of debt is based on the same long-term parameters as the cost of equity. The implication of this is that the allowed cost of debt is currently very high relative to the market cost of new debt and also probably high relative to BT's actual cost of debt (even taking account of fixed rate issues)

We have a number of concerns about on this methodology:

First, there is a contrast between this and the approach adopted by other regulators – who either:

- i. Estimate a cost of embedded and new debt (CMA, Ofwat) or
- ii. Use a rolling index of a corporate debt yield (Ofgem).

Ofcom's approach is more generous than either of these methods.

Second, the justification for taking a long-term view on the cost of debt is not clear. In terms of the cost of equity taking a long-term view on equity parameters can reduce the volatility of equity returns which itself can lead to a reduction in risk and a relatively low WACC. For the estimation of the cost of debt the risk to the company depends on whether the approach mirrors a reasonable actual cost of debt, since any variation is a risk borne by equity investors. Ofcom's approach performs less well than the other methods outlined and therefore is more likely to increase risk and the overall WACC.

Overall WACC estimate

6.36 Table 3 shows the impact on the LLCC WACC of the two main changes identified in this paper:

- i. A lower asset beta for LLCC in the range 0.6 to 0.65; and
- ii. A lower inflation forecast of 3.0%.

Making just these two changes and using the other parameters as estimated by Ofcom results in a WACC of 8.9% to 9.2%, a reduction of around 1 percentage point in the cost of capital.



Table 3. Revised WACC estimate - LLCC

	Nominal pre-tax WACC
Ofcom estimate	10.1%
Revised estimate (3% inflation, 0.6 asset beta)	8.9%
Revised estimate (3% inflation, 0.65 asset beta)	9.2%



7 Dark Fibre Pricing

We warmly welcome Ofcom's proposed dark fibre remedy believing it to be essential to combat market failure in business connectivity. The market has moved on considerably since 2001 when PPCs were first mandated and this next evolutionary step is necessary to safeguard UK business competitiveness.

We believe that the optimal pricing solution is a cost based one as it provides for unambiguous pricing and would enable the remedy to be used for all bandwidths in the CI market.

In the event that cost based pricing is not the pricing remedy that is implemented in this review timeframe it should be clearly signalled as an option for the subsequent review.

- 7.1 We believe that the optimal pricing solution is a cost based one. A cost based approach provides for unambiguous pricing and would enable the remedy to be used for all bandwidths in the CI market. The PAG commissioned Frontier Economics to review the pricing approach which we include at Annex 3. Frontier too identifies the superior benefits of cost based pricing over active minus pricing and reassesses Ofcom's criteria taking into account wider evidence.
- 7.2 Frontier concludes that a cost based pricing approach is superior to an active minus one on three counts:
- i. Active-minus pricing based on a single reference product would result in only a small part of the market being contestable, as the dark fibre remedy would not be a commercially viable option for much of the market
 - ii. Active-minus lacks predictability compared to a forward looking cost based charge control
 - iii. To the extent there are benefits from allowing Openreach to set the structure of prices, these are unlikely to be realised under Ofcom's proposals.
- 7.3 Frontier revisits Ofcom's assessment framework and comes to the conclusion on appropriate analysis that cost based pricing ranks more highly. We replicate the summary conclusion below and refer Ofcom to the full report.



Criterion	Ofcom's assessment		Frontier's assessment	
	Cost based	Active minus	Cost based	Active minus
Allocative	0	2	0	1
Productive	4	2	4	2
Dynamic – Active	4	2	4	2
Dynamic – Infra	0	2	3	2
Active compatibility	0	2	3	1
Gaming Risk	4	2	4	2
Ease of implementation	2 ^[1]	4	4	3
Total	14	16	22	13

Source: Adapted from Table A26.8, BCMR May 2015

7.4 On this basis, active minus pricing doesn't look appropriate. Cost orientation is the most appropriate pricing structure.

Current proposals limit usage

7.5 In addition to the policy flaws of an Active Minus approach there are also implementation problems: Ofcom appears of the view that the scope for innovation using dark fibre is likely to be for bandwidths at and above 1Gbit/s. We disagree with this view. It may have appeared during the earlier consultation processes that CPs requirement for dark fibre were primarily at higher bandwidths. We acknowledge that the examples of the divergence of price between active services and a potential dark fibre price concentrated on high bandwidths. This was however a simple illustration rather than a deliberate proposal by CPs to limit the usefulness of dark fibre.

7.6 By tying the charge to 1Gbit/s Ofcom ring fences bandwidths below 1Gbit/s and ensures they cannot be provided using dark fibre. This unnecessarily limits the number of circuits CPs can address with dark fibre and reduces economies of scale dramatically for product development costs and network investment costs. Ofcom identifies that the mass market product for the coming Market Review is 100Mbit/s. Therefore the user connections demanded are likely to be 100Mbit/s for 70% of installations. BT itself will not face the issue of needing different inputs to serve different bandwidths and therefore will not suffer the consequences on economies of scale.

^[1] Assuming a bottom up modelling approach. Ofcom indicates that a top down modelling approach would lead to a similar score to the active minus approach.



Where dark fibre can be used to provide 1Gbit/s services

7.7 We consider that the dark fibre solution, as proposed, could be used where we would have otherwise provisioned our own service over the top of the Openreach Ethernet service. Ofcom is aware that CPs cannot remotely manage the EAD service; we have to additionally use extra equipment (that replicated the equipment already provided by Openreach) in order to do so. Dark fibre is clearly a more efficient solution than a dually managed Active Service.

The current proposals create a margin squeeze

7.8 For 1Gbit/s services for which we do not add additional equipment (replicating BT's) for service management it is likely that the active minus approach will not represent sufficient cost savings. As Ofcom only removes BT's LRIC of these costs our overall costs might be higher, because BT has SMP they can enjoy scale efficiencies that are beyond those of a hypothetically efficient (e.g. 25% market share) carrier. The risk is that active minus pricing proposal creates a margin squeeze for some 1Gbit/s usage scenarios and for use below 1Gbit/s.

Pricing that suits the product design

7.9 An appropriately specified dark fibre product is at the heart of creating more successful competition, encouraging efficient investment and innovation and as such improve downstream markets in the same way that we witnessed LLU rewrite competition in broadband markets. The key characteristics of dark fibre include:

- i. Dark fibre should be offered as the option of a two fibre solution, but not by charging EAD minus x2.
- ii. Where the dark fibre purchased is physically less than an EAD service there should be the option of a per meter charge.
- iii. Distance limitations should not be set on the basis of EAD which has shorter distances than OSA. A limit which relates to current equipment capabilities is more appropriate.
- iv. Connection option of inspan handover as well at exchange or PoP locations

7.10 Both a cost based and an active minus pricing structure are enhanced by the ability to purchase only the service components required.

7.11 Any pricing structure should ensure that competition is achievable on a fair and efficient footing as a consequence we propose the following which are relevant to cost based and active minus price proposals.

Price of a second fibre

7.12 It is debatable whether BT's single fibre working is the most efficient deployment for active services. Lower fibre costs are traded for higher equipment costs. It is clear that the cost of two fibres is not equivalent to 2 times EAD (on an active minus basis) and that a proposal to price in the manner unduly



favours BT's downstream approach. CPs would have to invest in single fibre work (a change to on-net practices today) and the LRIC difference offered via the active minus will be insufficient to enable such investment. We consider a middle ground which does not favour either BT or a CP is required. This would see the provision of the second fibre (where required) is offered at a far lower cost than EAD x2.

Pay only for what is provided

7.13 Ofcom makes proposals to allow in-span handover of dark fibre, for connection at places other than the customer site and the BT exchange. The pricing proposals however do not reflect that scope for deviation from the EAD product set. We consider that Ofcom has overlooked the fact the under dark fibre it is not essentially necessary for a fibre to traverse the BT exchange. Where the dark fibre is used over very short distances, we consider this should be reflected via a per meter charge. Ofcom should require BT to offer this.

Forward look

7.14 In the event that cost based pricing is not the pricing remedy that is implemented in this review timeframe it should be clearly signaled as an option for the subsequent review.

8 Answers to LLCC questions

Question 3.1: *Do you agree with our proposal to use an Inflation-X form of charge control? If not, what alternative would you propose and why?*

We support Ofcom's proposed charge controls. 'Inflation – X' type regulation has a number of desirable properties. If properly calibrated, it creates incentives for regulated firms to make efficiency savings, which are eventually passed on to customers in the form of lower prices. It also incentivises the regulated firms to make efficient investments as it allows them to earn a reasonable rate of return on their investment.

Question 3.2: *Do you agree with the use of CPI as the relevant benchmark for inflation? If not, what alternative would you propose and why?*

Yes, CPI is now the most widely used measure of inflation and we support its use in charge control setting.

Question 3.3: *Do you agree with our proposal for the duration of the charge controls to be three years? If not, what alternative would you propose and why?*

Yes, European Framework considerations & the opportunities for over-recovery mean a 3 year control is the maximum that should be permitted. Anything longer would risk prolonging over-recovery to the detriment of consumers. We remain of the view that a three year control should incorporate a volume error correction facility to avoid meritless over-recovery which remains a risk even in a control of this length.

Question 4.1: *Do you agree with our proposed five stage framework setting out the key economic principles that we propose to take into account in designing our proposed charge controls? If not, what alternative would you propose and why?*

We are broadly supportive of the step analysis approach undertaken by Ofcom; however we disagree with some of the conclusions, particularly around the applicability of starting charge adjustments. It is our view that over-recovery caused by inability to accurately forecast volumes should not go unchecked at the start of new control and the starting charge adjustment should take this account. Likewise Ofcom need to be more selective on how it categorises profitability related to efficiency improvements. Over-recovery due to cost cutting that gives rise to a QoS crisis isn't an efficiency saving, particularly when resources removed need to be reinstated (resulting in inefficiency) Ofcom should ensure that starting charge adjustments remove meritless over-recovery from the outset of a control, this would include regulatory accounting errors and forecast volume errors.

Question 5.1: *Do you agree with our proposal to adopt broad baskets for leased lines services, but separate TI and Ethernet baskets? If not, what alternative would you propose and why?*

We support separate baskets for TI and Ethernet recognising their different stages in the respective product lifecycle. Broad baskets need to be accompanied with safeguard measures (such as sub-caps) to ensure BT isn't able to favour the purchasing patterns of its own lines of business. While broad baskets provide a degree of pricing freedom, they also offer opportunities to favour internal purchasing. In the absence of cost orientation with no back stop pricing safeguards, the extensive use of sub-caps is needed. We believe that cost orientation, as the ultimate safeguard should be introduced to protect the wider consumer interest.

Question 5.2: *Do you agree with our approach to deriving our base year costs for Ethernet and TI services, including:*

a. *our proposal to forecast costs based on BT's costs of providing business connectivity services*

- b. our proposal to apply CCA FAC as our cost standard, and
- c. our proposal that the base year for the 2015 LLCC Model is the financial year 2013/14 and that our base year for the model for the 2016 BCMR Statement should be the financial year 2014/15?

If not, what alternative would you propose and why?

In setting a charge control we believe Ofcom should seek to replicate in as far as possible the outcomes that would be delivered in a competitive market, with prices reflecting competitive benchmarks. With SMP/Market failure that isn't possible so Ofcom should seek to base pricing on that of an efficient provider, either by building a bottom up model or adjusting BT's costs to reflect efficient provision. BT doesn't behave like an efficient provider in many respects, so Ofcom needs to take account of this when it sets the cost base, stripping out the many discretionary cost items that would never be retained within a competitive market.

CCA FAC is the most developed cost standard and we would support 2014/15 as the base year, with the necessary adjustments to reflect the efficient delivery of services.

Question 5.3: Do you agree with our approach to forecasting costs and revenues over the period of the charge controls for Ethernet and TI services, including:

- a. our AVEs and CVEs assumptions
- b. our input price inflation assumptions, and
- c. our WACC assumptions?

If not, what alternative would you propose and why?

We have made a number of detailed comments regarding the WACC and inflation assumptions used within the charge control model, believing them to be overly generous to BT.

Question 5.4: Do you agree with our proposals in relation to the types of discount that would contribute towards BT meeting its charge control obligations for Ethernet and TI services? If not, what alternative would you propose and why?

We have reservation around Ofcom's proposals on discounts as we feel they continue to offer BT the opportunity to create discounts that only suit BT lines of business. BT lines of business have historically been able to take advantage of discount in periods of mass-migration (e.g. WES to EAD), while external CPs have not and are still facing WES to EAD migration issues. If discounts are to count toward charge control compliance then the take up has to be proportional to the extent that external CPs purchase from BT. Ofcom should introduce a safeguard around the use of discounts that ensures the outturn benefits of discounts flow fairly to all purchasers. Any discounting freedom should be coupled with a new discount transparency obligation to ensure internal and external discount take up is reported to stakeholders.

Question 6.1: Do you agree with our basket design proposals for Ethernet services, including the need for sub-caps and/or sub-baskets? If not, what alternative would you propose and why?

We support Ofcom's approach. To the extent that certain types of Ethernet leased lines are more likely to be purchased externally (or to affect price of dark fibre), it would make sense to ensure that BT cannot re-balance prices to make these products relatively more expensive and therefore harm competition.

Ofcom does not propose to impose a sub-cap on BES and WES services despite the fact that external customers account for the majority of BES purchases. This is because BT needs flexibility to set prices to encourage migration to more efficient contemporary services.

We agree, in principle, that BT should have flexibility to encourage migration away from legacy products. However, in practice, migration is hampered by a lack of clear migration path and BT's slow response to customers willing to migrate. It is not acceptable that BT is allowed to charge relatively high prices for legacy products and at the same time it can deny its customers an opportunity to migrate. We suggest that Ofcom should consider imposing a sub-cap on these legacy products if BT is unwilling to commit to providing its customers with a clear migration path.

Question 6.2: Do you agree with our approach to deriving our base year costs for Ethernet services, including in particular:

- a. our proposal in relation to the technology assumed for supplying controlled Ethernet services for modelling purposes
- b. our proposed cost adjustments to BT's 2013/14 RFS to form the base year costs, and
- c. our proposed treatment of BT's costs relating to QoS?

If not, what alternative would you propose and why?

We have made a number of detailed comments regarding the cost adjustments proposed, including recommendations for further adjustments in order to create the correct efficiency assumptions or maintain consistency with past Ofcom decisions.

We have a number of reservations about Ofcom's approach to funding QoS and believe that adjustments are required to the cost base to reflect the inefficient practices that have occurred in the current control period, with BT's yo-yo resourcing reducing productivity and adding to underlying costs.

Question 6.3: Do you agree with our approach to forecasting costs and revenues over the period of the charge control in relation to Ethernet services, including in particular:

- a. our volume forecasting assumptions
- b. our efficiency forecasting assumptions, and
- c. our proposal to reflect the impact of the proposed dark fibre remedy? If not, what alternative would you propose and why?

We have number of concerns about the volumes used to underpin Ofcom's modelling. While we appreciate that anticipating future demand levels is a notoriously difficult task in this market with so many interlinking variables in play (Migration from TI to CI, Dark Fibre take up & the availability of potential alternative connectivity from other markets coupled with wider macro-economic factors within the wider economy), it is essential that the assumptions used stand up to scrutiny. As Ofcom aren't proposing any error correction capabilities within the design of the charge control, the volume forecast used have a significant bearing on both pricing and BT's level of profitability.

Our reservations around the volume assumptions used are three fold:

- i. *Ofcom may have overstated the decline in TI services migrating to Ethernet. Due to a number of reasons we believe TI volumes will hold up more than Ofcom have anticipated.*
- ii. *Dark Fibre volumes may be overstated. While we are firm supporters of this new remedy, we believe it will take some time to bed down and for confidence around the new product to grow. Demand may therefore be lower initially while the product proves itself with early adopters.*

iii. We believe Ofcom may have understated future Ethernet demand (not withstanding a slower pace of migration from TI). We believe Ethernet services will continue to attract new growth outside of TI migrations, driven by growing bandwidth demands and in the absence of any scale business grade alternatives.

In respect of Ofcom's efficiency assumptions we believe Ofcom have understated the efficiency opportunities available to BT, giving them the benefit of the doubt and prompting over-recovery.

Question 6.4: Do you agree with our proposals in relation to starting charge adjustments for Ethernet services? If not, what alternative would you propose and why?

Question 6.5: Do you agree with our proposals in relation to the value of X for Ethernet services. If not, what alternative would you propose and why?

We support a starting price adjustment for the Ethernet services. In 2013/14, BT's outturn returns were significantly above its cost of capital (29-30% vs. 10%) for reasons other than efficiency. A glide path approach would not be appropriate in this case as prolonged excess profits would be damaging for efficiency. However we believe the starting charges should be adjusted to remove all meritless over-recovery, not just changes to the regulatory accounting base. We have highlighted a number of issues around additional adjustment required and volume issues which would result in a changes to the value of X over the life of the control.

Question 7.1: Do you agree with our basket design proposals for TI services, including the need for sub-caps and/or sub-baskets? If not, what alternative would you propose and why?

We believe TI services need greater sub-cap protection. BT should not be able to exploit customers with few alternatives available to migrate in the medium term. We do not believe Ofcom is doing enough to protect TI consumers and BT has no incentive to help, implementing forced migrations. The design of sub-baskets should allow protect for TI users at all bandwidths.

Question 7.2: Do you agree with our approach to deriving our base year costs for TI services, including in particular:

- a. our proposal in relation to the technology assumed for supplying controlled TI services for modelling purposes, and
- b. our proposed cost adjustments to BT's 2013/14 RFS to form the base year costs?

If not, what alternative would you propose and why?

We are largely content with Ofcom's proposals in respect of base year TI costs; however we believe the further adjustments to the regulatory accounts highlighted in our submission on BT's attribution rules should also be incorporated before the charge control is set.

Question 7.3: Do you agree with our approach to forecasting costs and revenues over the period of the charge control in relation to TI services, including in particular:

- a. our volume forecasting assumptions, and
- b. our efficiency forecasting assumptions?

If not, what alternative would you propose and why?

As discussed above, we have concerns around the volume assumption used (TI migration is likely to be slower than Ofcom predict) and over the efficiency assumption, we believe BT has scope to make greater efficiency savings than has been assumed.

Question 7.4: Do you agree with our proposals in relation to starting charge adjustments for TI services? If not, what alternative would you propose and why?

Question 7.5: Do you agree with our proposals in relation to the value of X for TI services. If not, what alternative would you propose and why?

We welcome the proposed starting charge adjustment but believe it could be greater, taking account of meritless over-recovery based on past forecasting errors. A glide path approach would not be appropriate in this case as prolonged excess profits would be damaging for efficiency. We have highlighted a number of issues around additional adjustment required and volume issues which would result in a changes to the value of X over the life of the control.

Question 8.1: Do you agree with our proposals regarding dark fibre pricing? If not, what alternative would you propose and why?

We warmly welcome Ofcom's proposed dark fibre remedy, believing it to be essential to combat market failure in business connectivity. The market has moved on considerably since 2001 when PPCs were first mandated and this next evolutionary step is necessary to safeguard UK business competitiveness.

We believe that the optimal pricing solution is a cost based one as it provides for unambiguous pricing and would enable the remedy to be used for all bandwidths in the CI market.

In the event that cost based pricing is not the pricing remedy that is implemented in this review timeframe it should be clearly signaled as an option for the subsequent review.

Question 9.1: Do you agree with our proposals for charge controls for accommodation? If not, what alternative would you propose and why?

Accommodation is an SMP product that requires a price control. Alignment with LLU charge control makes sense from an administrative perspective as accommodation is used to support services in both markets, however any linkages with tie cable pricing needs to be addressed as it is outside of the scope of the BCMR.

Question 9.2: Do you agree with our proposals for charge controls for ECCs? Please explain your answer with supporting information.

We firmly support the continued price control on ECCs. However the industry needs clearer rules on their application. This isn't just an issue about the level of each charge category. BT has too much discretion on the application of these charges that needs to be removed. Given the limited opportunities CPs have to challenge these charges, it is essential that regulation is in place to make the charges fair, transparent and ensure that BT lines of business are paying their fair share.

Question 9.3: Do you agree with our proposals for charge controls for TRCs? If not, what alternative would you propose and why?

We welcome the propose a starting charge adjustment on Ethernet TRCs to bring them down to the charges currently set for WLR and LLU: a 28% reduction to hourly Ethernet TRCs and a 12.3% reduction to the visit charge.



Question 10.1: Do you agree with our proposals for implementation of the proposed new charge controls and for ensuring compliance with the proposed new charge controls. If not, what alternative would you propose and why?

We believe Cost Orientation is an essential remedy that is missing from these proposals. It provides a backstop remedy to prevent over-charging. There are still opportunities within the proposed charge control for BT to over-recover not through skillful cost management or efficiency savings, but rather through the exploitation of modelling errors. Ofcom must seek to replicate competitive market outcomes where it can, removing opportunities for over-charging and poor service. We are disappointed that error correction hasn't been taken forward, but we believe there is more to be done to ensure that forecast volumes are accurate as they can be.

Question 11.1: Do you agree with our proposals for BT's Regulatory Financial Reporting, including in particular:

- a. the proposed Consistency with Regulatory Decisions Direction, and
- b. the proposed Direction modifying requirements relating to the preparation, audit, delivery and publication of the Regulatory Financial Statements, and Direction modifying requirements relating to the form and content of the Regulatory Financial Statements?

If not, what alternative would you propose and why?

We welcome Ofcom's proposals in respect of regulatory accounting transparency. We have submitted a detail response to Ofcom's consultation on BT's attribution rules and would expect any changes made as a result of that consultation to flow into this charge control. Stakeholders require transparency if they are to hold BT to account where there is market failure and the more meaningful information that is disclosed the better. We have made specific comments regarding future audits of the accounting documents in our regulatory accounting response, believing the audit has some way to go before providing the level of assurance needed to satisfy both Ofcom and stakeholders.

- END -

Enclosures:

Annex 1: Frontier Economics: LLCC Charge Control Design

Annex 2: Frontier Economic: LLCC Efficiency Opportunities

Annex 3: Frontier Economics: Dark Fibre Pricing