

Promoting competition and investment in fibre networks: review of the physical infrastructure and business connectivity markets

Volume 3: Leased Lines Charge Control (LLCC)

NOTIFICATION TO THE EUROPEAN COMMISSION

Draft Statement

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1. Introduction

- 1.1 The second volume of this statement sets out our assessment of market power in the provision of leased lines and the remedies we impose to address SMP.¹ In this volume we set out the details of a sub-set of these remedies: charge controls on BT's leased line services. This includes our overall objectives and approach, the design of the charge controls, their level and how they will be implemented.
- 1.2 In Volume 2 we identified two product markets for leased lines with separate geographic markets based on the nature and degree of network competition. The table below sets out the markets and SMP findings, with pricing remedies.

Table 1.1: High level summary of our pricing remedies

| Level of competition | CI Inter-exchange connectivity markets | | | CI Access services market | | | |
|---------------------------------------|--|------------|--------------|-------------------------------------|------------|--------------------------|------|
| | BT Only ⁽¹⁾ | BT+1 other | BT+2 or more | BT Only | BT+1 other | BT+2 or more (HNR areas) | |
| | | | | | | Outside CLA | CLA |
| <i>All services at all bandwidths</i> | Cap at current prices for stability | | None | Cap at current prices for stability | | Fair pricing | None |
| <i>Dark Fibre⁽¹⁾</i> | Price at cost | None | None | None | None | None | None |

Note: (1) From BT Only exchanges, where no rival network is within 100m.

¹ <https://www.ofcom.org.uk/consultations-and-statements/category-1/business-connectivity-market-review/>.

Summary of decisions

Key decisions for charge controls on BT

Our key decisions are:

- a charge-controlled basket of active services at 1 Gbit/s and below, covering both the CI Access services and CI Inter-exchange connectivity services markets, where BT faces limited competition, with charges based on the average price of services in the basket for the prior year and capped at CPI-CPI;
- a charge-controlled basket of active VHB services at above 1 Gbit/s, covering both the CI Access and CI Inter-exchange connectivity services markets, where BT faces limited competition, with charges as at 1 October 2018 capped at CPI-CPI; and
- charge controls on dark fibre services in the CI Inter-exchange connectivity services markets for connections from certain BT Only exchanges, with charges calculated on the latest available cost information and kept constant in nominal terms over the review period.

We also impose controls on sub-baskets and ancillary services.

This overview is a simplified high-level summary only. The decisions we have taken and our reasoning are set out in the full document

- 1.3 In Volume 2 we explain that BT's market power gives it the ability and incentive to set prices that could restrict competition and harm consumers. In setting prices, we have considered maintaining incentives for rivals to invest in new networks and protecting BT customers from excessive prices. By capping prices at current levels, we have addressed both our immediate concern that BT could charge excessive prices, and our longer-term goal of promoting network competition.
- 1.4 For active services at 1 Gbit/s and below, we are prioritising investor confidence in current and planned investments over the static benefits of keeping prices tightly aligned to costs, while ensuring BT cannot use its market power to set excessive prices. We consider that a charge control at CPI-CPI best achieves this. We have modelled costs over the review period and do not believe that any potential risk of modest over-recovery of costs by BT outweighs the benefits of maximising investment incentives and balancing impacts on consumers through pricing stability. Our analysis indicates that CPI-CPI falls within our range of model outputs.
- 1.5 For active VHB services, we have not undertaken similar modelling work. Demand for these services is forecast to increase over the review period as networks expand and data consumption increases. Our main pricing concern is that BT would increase prices in areas with limited or no competition to fund price reductions in more competitive areas (or where it considers rivals may build). To prevent this, we impose a safeguard CPI-CPI cap at current prices.

- 1.6 In Volume 2 we also impose a remedy giving access to dark fibre for inter-exchange connectivity for all connections from certain exchanges where BT has no competition for backhaul services and there is no rival network within 100m.
- 1.7 As well as protecting consumers from high prices, we expect our dark fibre remedy to promote investment by reducing barriers to network expansion and supporting competition in areas where alternative network build would otherwise be less likely. We are setting the charges for dark fibre based on the latest available cost information. Thereafter, for the second year of the control, we are capping prices at CPI-CPI. We do not believe there will be a material misalignment of cost and revenue under this approach, and it has the advantage of minimising volatility in price differentials between active and passive services.
- 1.8 The tables below set out our charge controls on active services at 1 Gbit/s and below, active VHB services, relevant ancillaries services and inter-exchange dark fibre services.

Table 1.2: Baskets for active services at 1 Gbit/s and below

| Baskets | Services within scope | Level of control |
|------------------------------------|--|------------------|
| 1 Gbit/s and below services basket | Connection, rental and Main Link charges for Wholesale fibre-based Ethernet services at 1 Gbit/s and below Interconnection services and Cablelink | CPI-CPI |
| Cablelink sub-basket | Cablelink services ² | CPI-CPI |
| Sub-cap on all charges | Each individual service within this basket | CPI+5% |

Table 1.3: Baskets for active VHB services

| Baskets | Services within scope | Level of control |
|------------------------|---|------------------|
| VHB services basket | Connection, rental and Main Link charges for Wholesale fibre-based Ethernet and WDM services at VHB | CPI-CPI |
| Sub-cap on all charges | Each individual service within this basket | CPI+5% |

² We note that the same Cablelink charges will apply to dark fibre inter-exchange services and active services.

Table 1.4: Baskets for exempt ancillary services, accommodation services, ECCs and TRCs

| Ancillary service | Baskets | Services within scope | Level of control |
|--|------------------------|--|-----------------------------|
| Exempt ancillary services | Sub-cap on all charges | All ancillary services excluding Cablelink, Interconnection services, ECCs, TRCs and Accommodation services | CPI-CPI |
| Accommodation services, i.e. to rent space in BT Exchanges | Accommodation services | Access Locate Administration Fee | CPI-CPI |
| Excess Construction Charges | Direct ECCs | Blown fibre, cable (fibre or copper) including any jointing required, blown fibre tubing in duct, internal cabling, overblow services, fibre cable and survey fee/planning charges | CPI-CPI |
| | Sub-cap on all charges | Each individual Direct ECC | CPI+5% |
| | Contractor ECCs | Construction activities that Openreach provides through an external contractor | Basis of charges obligation |
| Ethernet Time Related Charges | Ethernet TRCs | Each individual relevant Ethernet TRC | CPI-CPI |

Table 1.5: Maximum charges for inter-exchange dark fibre services

| Inter-exchange dark fibre service | Single fibre circuit | Dual fibre circuit |
|--|--|--------------------|
| Connection (per circuit) | £375 | £637 |
| Rental (per circuit per year) | £106 | £212 |
| Main link (per metre per year) | £0.124 | £0.248 |
| Cessation charge (per cessation request) | £167 | £167 |
| RWT charge ³ (per applicable RWT fault) | £305 | £305 |
| TRCs for inter-exchange dark fibre | Same charges as TRCs for active services (controlled at CPI-CPI) | |

Structure of this volume

- 1.9 The remainder of this volume is structured as follows.
- Section 2 sets out our objectives and approach in setting charge controls.
 - Section 3 sets out details of our charge control design for active services. We also set out particulars of the basket design for active services and determine how these baskets will work in practice.
 - Section 4 sets out the details of our charge control on dark fibre in the market for CI Inter-exchange connectivity.
 - Section 5 sets out how our decisions will be implemented in our legal instruments and how they meet the relevant legal tests.
- 1.10 In addition to these sections, there are four annexes setting out the detail on various aspects of the charge controls.
- Annex 18 sets out the cost modelling which has informed our approach for setting the charge control on active services at 1 Gbit/s and below.
 - Annex 19 sets out details of our base year adjustments.
 - Annex 20 sets out details on the pricing of inter-exchange dark fibre.
 - Annex 21 sets out the details on cost of capital.
- 1.11 Unless stated otherwise, throughout this volume and the related annexes above, all references to sections relate to sections within this volume.⁴

³ Note, the inter-exchange dark fibre services have a distinct RWT charge, which is separate from the active RWT charge.

⁴ Unless stated otherwise, all references to information we have gathered using our formal powers (s.135 notices) is to information collected under the leased lines charge control project.

- 1.12 We have also published a version of the inter-exchange dark fibre pricing model and the findings of an external review undertaken by Cartesian Ltd of this model and the base year adjustments model.
- 1.13 In addition, we have published two reports on the cost of capital by Europe Economics and NERA.

2. Objectives and approach in setting the leased lines charge control

2.1 This section discusses our objectives in setting charge controls. It then sets out the form and duration of the charge controls we set in light of these objectives.

Summary of our decision

2.2 In summary, we impose:

- a CPI-CPI price cap on active services at 1 Gbit/s and below in the CI Access services market where BT faces limited competition (BT Only or BT+1 competitor) and in the CI Inter-exchange connectivity services market at exchanges where BT faces competition from fewer than two competitors;
- a CPI-CPI price cap on VHB active services in the CI Access services market where BT faces limited competition (BT Only or BT+1 competitor) and in the CI Inter-exchange connectivity services market at exchanges where BT faces competition from fewer than two competitors;
- cost-based starting prices for inter-exchange dark fibre, which are then fixed in nominal terms for the duration of this review period; and
- CPI-CPI price caps for accommodation services, Excess Construction Charges (ECCs), and Time Related Charges (TRCs).

Overall objective in setting charge controls

2.3 Our overall objective when setting charge controls, as prescribed by the Communications Act 2003 (the Act), is to set such conditions as appear appropriate to us for the purposes of promoting efficiency, promoting sustainable competition and conferring the greatest possible benefit on the end-users of public electronic communication services.⁵

2.4 In Section 10 of Volume 2 we set out how our approach to price regulating wholesale leased line services addresses our competition concerns in the markets where we find BT has SMP. We also set out how it is consistent with our strategy to secure investment in fibre networks by both BT and other companies by promoting network-based competition.

2.5 We explain that, when designing pricing remedies, we balance a range of considerations, some of which may point in different directions. In our judgement the long-term interests of consumers are best served by promoting network-based competition, in line with our duties, by securing investment in fibre networks, while also providing an appropriate level of protection for access seekers who rely on wholesale products from Openreach.

2.6 In deciding on a pricing approach for active services at 1 Gbit/s and below, we have prioritised investor confidence in current and planned investments over the static benefits

⁵ Section 88 of the Act.

of keeping prices tightly aligned to costs, while ensuring BT cannot use its market power to set excessive prices. For VHB services, our pricing approach is designed to address our specific concern that BT could increase prices in areas with limited or no competition to fund price reductions in more competitive areas.

Form of the controls

A cap at current prices for active services at 1 Gbit/s and below

Our proposals

- 2.7 In the Consultation we proposed a CPI-CPI price cap on active services at 1 Gbit/s and below in the CI Access services market in BT Only and BT+1 areas, and in the CI Inter-exchange connectivity market at BT Only and BT+1 exchanges.
- 2.8 We noted that in principle there are several ways we could implement flat prices in the charge control. In particular, we said we could propose a cap in real terms (i.e. a CPI-0% control) or in nominal terms (i.e. a CPI-CPI control). On balance, we considered a cap in nominal terms best suited our objectives. We also referenced the outputs of some cross-check cost modelling we had done to inform our proposal.

Stakeholder responses

- 2.9 As set out in Sections 10 and 12 of Volume 2, some stakeholders (including Openreach, Virgin Media, CityFibre, the the Infrastructure Investors Group (IIG) and Zayo) agreed with our approach to setting the charge control, stating that the objective to keep prices stable to maximise investment is the right regulatory approach.⁶ Others (such as TalkTalk and Vodafone) disagreed with our proposal to maintain stable prices and argued for a cost-based price control.⁷
- 2.10 Some stakeholders (such as Openreach, Virgin Media and Three) agreed with our proposal to implement price stability by capping charges in nominal terms (CPI-CPI).⁸ Openreach also stated that a CPI-CPI control is even more central to the potential range of outcomes than our cross-check modelling implies.⁹

⁶ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 11; Virgin Media's response to the 2018 BCMR Consultation, page 21; CityFibre's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraph 8.2.1; The IIG's response to the 2018 PIMR, 2018 BCMR and 2018 BT RFR Consultations, paragraph 7.4.1; Zayo's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraphs 4.1.22-4.1.24.

⁷ [X]; Sky's response to the 2018 BCMR Consultation, paragraph 19; Telefónica's response to the 2018 BCMR Consultation, paragraph 25; TalkTalk's response to the 2018 BCMR Consultation, paragraph 5.5; Vodafone's response to the 2018 BCMR Consultation, part 3, paragraph 6.24; UKCTA's response to the 2018 BCMR Consultation, paragraphs 22-24.

⁸ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 89-90; Three's response to the 2018 BCMR Consultation, paragraph 8.2; Virgin Media's response to the 2018 BCMR Consultation, page 21.

⁹ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 90.

- 2.11 However, CityFibre, the IIG and Zayo argued that it is more appropriate to cap charges in real terms by setting a CPI-0% control.¹⁰ CityFibre and Zayo support the IIG’s position that capping charges in real terms removes the unknown factor of CPI. This is said to be particularly relevant for the next few years, which may be a period of economic uncertainty due to Brexit and other factors. The IIG also suggested that high inflation or deflation would lead to either substantial reductions or increases in real prices, which defeats the objective of providing price stability to investors.
- 2.12 Similarly, TalkTalk argued that a CPI-CPI cap is arbitrary and exposes Openreach and other providers to a real risk of inflation volatility. It stated that, if Ofcom can make a soundly reasoned case for prices above cost (e.g. informed by a proper cost-benefit analysis), then prices should be set above cost by a certain amount (e.g. 15%).¹¹

Our reasoning and decisions

- 2.13 We have decided to implement our consultation proposal and impose a CPI-CPI price cap on active services at 1 Gbit/s and below in the CI Access services market in BT Only and BT+1 areas, and in the CI Inter-exchange connectivity services market at BT Only and BT+1 exchanges. For current prices, we are using average price of services in the relevant basket for the prior year.
- 2.14 We remain of the view that a price cap at current prices is better suited to achieve our regulatory objectives than a cost-based charge control, for reasons explained in more detail in Section 10 of Volume 2. We explain that we expect our dark fibre and infrastructure access remedies to be in use by the end of this review period. A price cap at current prices still provides important protection for consumers during the transition period as networks are built and greater competition emerges.
- 2.15 As noted above, we could, in principle, implement price stability in the charge control either by capping charges in nominal terms (i.e. a CPI-CPI control) or in real terms (i.e. a CPI-0% control). To inform our decision on how best to implement price stability, we have undertaken some modelling to understand the likely evolution of BT’s efficiently incurred costs and the implications on BT’s cost recovery. This analysis (explained in more detail in Annex 18) is largely based on the same methodology and models as used to estimate BT’s costs in the 2016 LLCC.¹²
- 2.16 Our analysis shows that prices for active services¹³ at 1 Gbit/s and below are expected to be broadly aligned to cost by the end of the current charge control period (i.e. April 2019). Based on the likely evolution of efficient costs up to April 2021, our modelling implies that, were we to set a cost-based charge control (on a fully allocated cost (FAC) basis, as in previous reviews), it is most likely that prices would need to fall in nominal terms. The

¹⁰ CityFibre’s response to the 2018 BCMR and 2018 BT RFR Consultations, paragraph 8.2.5; The IIG’s response to the 2018 PIMR, 2018 BCMR and 2018 BT RFR Consultations, paragraph 7.4.5; Zayo’s response to the 2018 BCMR and 2018 BT RFR Consultations, paragraphs 4.1.27-4.1.28.

¹¹ TalkTalk’s response to the 2018 BCMR Consultation, paragraph 5.46.

¹² 2016 BCMR Statement, Volume 2.

¹³ Services currently included in the Ethernet basket.

modelling suggests that capping prices in nominal terms could be expected to lead to BT recovering around £15 to £25m more than if we were to set a cost-based charge control.

- 2.17 If we consider a wider range for key input parameters (as we normally would to inform our decision on the final value for the X for a cost-based CPI-X control), the over-recovery for BT could be greater in the low-cost scenario (up to £80m) or some under-recovery is possible in the high-cost scenario (around £40m). The details of our low and high-cost scenarios are provided in Annex 18. Recognising this uncertainty in inputs, CPI-CPI falls within the range of outcomes in our modelling. However, we acknowledge that on balance, some modest over-recovery for BT might be the more likely outcome.
- 2.18 Therefore, we disagree with the proposal by CityFibre, the IIG and Zayo to cap prices in real terms. Given the results of our modelling, we do not consider it would be in the interests of consumers to relax the charge control by capping prices in real terms. As shown below, CPI inflation is forecast to be positive over this review period. Hence, a CPI-CPI control would be expected to result in lower prices than a CPI-0% control.
- 2.19 We consider the concern that a CPI-CPI cap would expose Openreach and other providers to material risk of inflation volatility is overstated. The official forecasts for inflation are close to the Bank of England’s official target of 2%, with the Office for Budget Responsibility (OBR) forecasting CPI of 2.1%, 1.9% and 2.0% for 2019, 2020 and 2021 respectively.¹⁴ The OBR also forecasts the range of possible outcomes for CPI, which shows that the probability of deflation or very high inflation is very low. We therefore do not believe that a CPI-CPI control unnecessarily exposes Openreach and other providers to inflation risk.
- 2.20 While our cross-check modelling gives us a broad sense of magnitude of the potential impact of our pricing decisions on BT’s cost recovery, it is not intended to provide a central forecast of BT’s efficiently incurred costs in providing the relevant services over the period. Therefore, we do not consider TalkTalk’s suggestion of setting prices at a fixed mark-up above cost to be appropriate. We have explained in detail in Section 10 of Volume 2 how we reached our decision to keep prices flat and why we consider that the benefits of this approach outweigh the cost of possible higher prices in the short-term.
- 2.21 In summary, we remain of the view that capping prices in nominal terms is an appropriate way to strike a balance between maximising incentives to invest and limiting the short-term pricing impacts on consumers through pricing stability.

Safeguard cap for VHB services

Our proposals

- 2.22 Active VHB services are not currently subject to charge controls. In Volume 2 of the Consultation, we noted that our main concern about the pricing of VHB services is that BT would increase its prices in areas with limited or no competition to subsidise price

¹⁴ OBR, *Economic and fiscal outlook – March 2019*, Chart 3.18, p.45. https://cdn.obr.uk/March-2019_EFO_Web-Accessible.pdf.

reductions in more competitive areas. We therefore proposed a safeguard cap at current prices in nominal terms (i.e. a safeguard cap at CPI-CPI) on active services above 1 Gbit/s in the CI Access services market in BT Only and BT+1 areas, and in the CI Inter-exchange connectivity services market at BT Only and BT+1 exchanges.

Stakeholder responses

- 2.23 As set out in Section 10 of Volume 2, several stakeholders (such as Sky, TalkTalk and Vodafone) disagreed with our proposal to cap VHB services at current prices, calling instead for a cost-based charge control.¹⁵
- 2.24 Telefónica was one of the stakeholders who preferred a cost-based charge control, but it also suggested that, as an alternative, we should at least consider making a starting charge adjustment to VHB prices.¹⁶ UKCTA also argued that we should apply an adjustment to VHB prices in order to align them with cost.¹⁷
- 2.25 Some stakeholders (including Openreach and Virgin Media) agreed with our proposals.¹⁸ Openreach stated that a CPI-CPI cap is a practical measure.¹⁹

Our reasoning and decisions

- 2.26 We have decided to implement our consultation proposal and impose a cap on current prices in nominal terms (i.e. a safeguard cap at CPI-CPI) for active services above 1 Gbit/s in the CI Access services market in BT Only and BT+1 areas, and in the CI Inter-exchange connectivity services market at BT Only and BT+1 exchanges. For current prices, we are using charges as at 1 October 2018.
- 2.27 Active VHB services are not currently subject to charge controls. As explained in more detail in Section 10 of Volume 2, we consider it inappropriate to bring the prices of these services to cost as this would reduce the ability for operators to compete for the high-value connections and for the increasing number of new customers of these high capacity services. This could undermine existing and planned investments, and therefore risk undermining our strategy to promote network-based competition.
- 2.28 Our primary concern when it comes to the pricing of VHB services remains the risk that BT could increase prices in areas with limited or no competition to subsidise price reductions in more competitive areas (or where it considers rivals may build).
- 2.29 We consider that a safeguard cap at CPI-CPI is a proportionate way to address this concern and we do not agree that it is necessary to impose a cost-based charge control or to impose a one-off starting charge adjustment on VHB prices.

¹⁵ Sky's response to the 2018 BCMR Consultation, paragraph 19; TalkTalk's response to the 2018 BCMR Consultation, paragraph 5.42; Vodafone's response to the 2018 BCMR Consultation, part 3, paragraph 6.57-6.58.

¹⁶ Telefónica's response to the 2018 BCMR Consultation, paragraph 25.

¹⁷ UKCTA's response to the 2018 BCMR Consultation, paragraphs 29-30.

¹⁸ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 9-10; Virgin Media's response to the 2018 BCMR Consultation, page 21.

¹⁹ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 9-10.

Inter-exchange dark fibre pricing

Our proposals

- 2.30 We proposed to require BT to provide access to dark fibre at cost for inter-exchange connectivity circuits from BT Only exchanges.
- 2.31 We noted that, in principle, we could adopt either a cost-based or an active-minus approach to the charge control. We explained that we proposed to set a cost-based charge control as we considered that prices should reflect the underlying cost. We also set out our view that the most practical and transparent option for a cost standard would be to start from BT's CCA fully allocated costs (FAC) and use data from BT's Regulatory Financial Statement (RFS) where possible when estimating the unit FAC for inter-exchange dark fibre services. We also proposed to keep dark fibre prices constant in nominal terms over the review period.

Stakeholder responses

- 2.32 Some stakeholders agreed in principle with our proposal to set cost-based based prices for dark fibre, as opposed to an active-minus approach, given the proposed scope of our dark fibre remedy.²⁰ Stakeholders' views on the proposed scope of the remedy (geographical and product markets) are discussed in Sections 10 and 12 of Volume 2.
- 2.33 Virgin Media noted that Ofcom's rationale for providing access to dark fibre at cost, which is based on the assumption that the areas where the dark fibre remedy will be available would not attract investment, is sound in principle. However, it suggested that there is an additional responsibility on Ofcom to ensure that the remedy does only apply in areas that are truly uncompetitive and that such conditions are enduring.²¹
- 2.34 TalkTalk and Vodafone agreed with our proposal for a cost-based dark fibre remedy using BT's costs.²² Vodafone stated that basing dark fibre prices on BT's FAC is the most practical and transparent option.²³
- 2.35 Openreach suggested that, in principle, it would be more in keeping with Ofcom's overarching objective of encouraging competition to set the price of dark fibre on an active-minus basis, as in the 2016 BCMR.²⁴ However, it accepted that in the context of the current proposals, the commercial impact is likely to be similar whether an active-minus or a FAC-based approach is adopted.

²⁰ TalkTalk's response to the 2018 BCMR Consultation, paragraphs 4.30-4.31; Vodafone's response to the 2018 BCMR Consultation, paragraph 6.71.

²¹ Virgin Media's response to the 2018 BCMR Consultation, pages 18-19.

²² TalkTalk's response to the 2018 BCMR Consultation, paragraphs 4.30-4.31; Vodafone's response to the 2018 BCMR Consultation, paragraph 6.71.

²³ Vodafone's response to the 2018 BCMR Consultation, paragraph 6.71.

²⁴ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 21.

- 2.36 Some stakeholders disagreed with our proposal to use BT's FAC as the cost standard. CityFibre, the IIG and Zayo argued that, rather than using BT's costs to set the price, we should use those of a reasonably efficient operator (REO).²⁵ They argued that our proposed dark fibre price cap would not allow sufficient economic space between dark fibre and PIA prices to justify investment in fibre cables by new entrants.
- 2.37 The Communications Workers Union (CWU) was concerned that our proposal to require BT to provide dark fibre at cost, combined with unrestricted PIA access, will not provide sufficient incentives for BT to commit high-risk long-term investment in new fibre optic networks, especially in harder to serve areas.²⁶
- 2.38 Finally, Openreach agreed with our proposal of keeping prices flat in nominal terms over the charge control period to aid stability²⁷, while TalkTalk argued that dark fibre prices should fall in the second year in line with costs, rather than stay flat.²⁸

Our reasoning and decisions

- 2.39 We have decided to impose a cost-based charge control for inter-exchange dark fibre services using BT's CCA fully allocated costs (FAC) as the cost standard.
- 2.40 As explained in Section 12 of Volume 2, we remain of the view that the price for inter-exchange dark fibre should reflect BT's efficiently incurred costs. The requirement for BT to offer dark fibre only applies from certain BT Only exchanges²⁹, where the prospect of infrastructure competition is low even with unrestricted PIA, weakening the arguments for alternative pricing approaches (e.g. an active-minus approach).
- 2.41 For the same reasons, we disagree with the arguments that we should use REO costs, since there is no rationale to set prices above BT's FAC (e.g. to realise longer-term dynamic efficiencies from infrastructure-based competition).³⁰
- 2.42 Since BT does not currently offer a dark fibre service, we need to work out starting charges for any such service. As in the Consultation, we base these starting charges on current cost accounting for fully allocated costs (CCA FAC) derived from BT's 2017/RFS. Section 4 explains in more detail our rationale for the chosen cost standard and how we estimate the base year costs for dark fibre, including any additional costs BT may incur in providing the new service. Section 4 also sets out our approach to any additional ancillary services BT will need to provide to support its dark fibre products.
- 2.43 In previous leased lines charge controls, we have set prices by forecasting the likely evolution of efficient costs over the charge control period and aligning prices to cost by the

²⁵ CityFibre's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraphs 7.2.1, 7.2.4; The IIG's response to the 2018 PIMR, 2018 BCMR and 2018 BT RFR Consultations, paragraph 1.2.11; Zayo's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraphs 4.1.20-4.1.21.

²⁶ The CWU's response to the 2018 BCMR Consultation, paragraph 8.

²⁷ Openreach's response to the BCMR Consultation (LLCC), paragraph 18.

²⁸ TalkTalk's response to the 2018 BCMR Consultation, paragraph 4.82.

²⁹ Defined as exchanges where our network analysis shows there is no rival network within 100m of the exchange.

³⁰ This is also discussed in Section 12 of Volume 2.

end of the period. We are introducing dark fibre as a new product and so we are setting prices using the latest available information on efficient costs.

- 2.44 Many of the costs of providing dark fibre are also incurred in providing active services. On the one hand, this suggests that unit costs of providing dark fibre might be expected to fall (in nominal terms) over the charge control period (consistent with our modelling of the cost of active services). On the other hand, there is uncertainty around how certain key drivers of dark fibre costs will evolve over time. In particular, there is considerable uncertainty over how service volumes will grow and the extent to which BT can achieve similar efficiency gains on passive network elements as on active network elements.
- 2.45 Given that this a short review period and prices will reflect the latest available cost information, we do not believe that there will be a significant misalignment of cost and revenue of dark fibre services over the charge control period if we keep prices flat in nominal terms. In this context, we also consider that it would be disproportionate to carry out a detailed forecasting exercise of dark fibre costs. We therefore do not agree with TalkTalk’s suggestion that it is necessary for us to assume that dark fibre prices should fall in the second year.
- 2.46 Keeping prices flat in nominal terms also ensures consistency with our charge control on active services. We therefore impose a CPI-CPI cap on dark fibre services for the second year of the charge control period, i.e. we keep prices flat in nominal terms.
- 2.47 As explained in Section 4, we set a maximum charge on each individual dark fibre service which would apply for the duration of this charge control.

Accommodation, ECCs, and TRCs

Our proposals

- 2.48 To use Openreach’s regulated wholesale leased line services (including dark fibre), telecoms providers require certain ancillary services such as accommodation, construction work or services outside Openreach’s terms of service (ECCs), as well as services such as fault repairs (TRCs).
- 2.49 We proposed that certain ancillary services should continue to be subject to a CPI-CPI charge control.

Stakeholder responses

- 2.50 Sorrento Networks and Virgin Media were in general agreement with our proposals for Accommodation, ECCs and TRCs.³¹

³¹ Sorrento Networks’ response to the 2018 BCMR Consultation. Virgin Media’s response to the 2018 BCMR Consultation, page 22.

- 2.51 Openreach broadly agreed with our proposals for ECCs and Accommodation services.³² However, it argued a CPI-0% control might be more appropriate for TRCs, given that TRCs are a charge for a set number of hours of labour, and as such are unlikely to benefit from productivity improvements over the period.³³
- 2.52 UKCTA argued that our proposal for ancillary services such as TRCs and Accommodation to be subject to a CPI-CPI control is unjustified. It also argued that it is unclear why prices above cost for ancillary services are required to incentivise investment, claiming that high price caps are likely to impede competitors' access to BT exchanges and services.³⁴
- 2.53 Vodafone disagreed with our approach to the regulation of Accommodation, ECCs and TRCs.³⁵ It argued that instead of focusing on pricing stability, Ofcom should focus on the current market review period to ensure the best outcomes for business consumers and industry.

Our reasoning and decisions

- 2.54 In Sections 13 and 14 of Volume 2, we set out our decision that accommodation, ECCs and TRCs should be subject to a price control in this review period. Applying our general principle of maximising investment incentives and balancing impacts on consumers through pricing stability in this review, we have decided to impose CPI-CPI controls on these services, in line with controls for active services.
- 2.55 We respond to specific points raised by stakeholders in relation to specific ancillary charges (such as TRCs and ECCs) in Section 3, where we set out the details of our basket design and specific decisions for ancillary services.

Duration of our charge controls

Our proposals and stakeholder response

- 2.56 We proposed that all the charge controls we set would expire on 31 March 2021. While we typically set charge controls for three years, we noted that both two- and three-year charge controls are consistent with the market review cycle in the Framework Directive.³⁶
- 2.57 We received limited stakeholder responses on the duration of the charge control.
- 2.58 In its response, TalkTalk proposed a three-year charge control, to avoid the risk of another lacuna in 2021.³⁷

³² Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 120-121.

³³ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 92.

³⁴ UKCTA's response to the 2018 BCMR Consultation, paragraphs 28.

³⁵ Vodafone's response to the 2018 BCMR Consultation, paragraph 6.53.

³⁶ Article 16 of the Framework Directive 2002/21/EC, as amended by Directive 2009/140/EC.

³⁷ TalkTalk's response to the 2018 BCMR Consultation, paragraph 5.56.

Our reasoning and decisions

- 2.59 As set out in Volume 2, this market review covers a period up to April 2021, and our charge control remedies will also apply for the same period, consistent with the duration of this market review. We have begun a holistic review of downstream markets with new downstream remedies expected to be in place from April 2021, and we therefore think another lacuna is unlikely.
- 2.60 Section 88 of the Act also requires us take a view on what appears to us to be appropriate for the purposes of (among other things) promoting efficiency. Given our focus on maximising investment incentives and balancing impacts on consumers through pricing stability ahead of a wider review of our regulation, we consider that a shorter than usual period is appropriate. This reduces the risk of costs deviating significantly from prices, while still supporting predictability to BT and other telecoms providers as to the regulatory environment that they face.

3. Charge control design

- 3.1 This section outlines our approach to our basket design and charge control structure for:
- active services at 1 Gbit/s and below;
 - active VHB services; and
 - accommodation services, ECCs and TRCs.
- 3.2 In Section 2 we set out our decision to impose CPI-CPI charge controls on active services at all bandwidths in the CI Access services market where BT faces limited competition (BT Only or BT+1 competitor) and in the CI Inter-exchange connectivity services market at exchanges where BT faces competition from fewer than two competitors, hereafter referred to as the ‘charge control areas’. In the following sub-sections, our controls and basket structure apply to the relevant markets as outlined here, unless specified otherwise. In Section 12 of Volume 2 we impose a requirement on BT to provide cost-based access to dark fibre for inter-exchange connectivity circuits from certain BT Only exchanges. The basis for dark fibre charge controls is explained in Section 4.
- 3.3 Consistent with our previous practice for leased lines, we continue to consider that there are benefits associated with broad baskets, such as giving BT the flexibility to set efficient charging structures, respond to changes in demand and costs and encourage efficient migration. However, a broad basket control alone may not offer sufficient protection for individual services, for example, the flexibility might be used to set charges in a way that harms competition. Therefore, where necessary, we impose sub-caps to address any competition concerns and to mitigate these risks. We note that in some cases it might not be practicable to construct baskets, for example, if we do not have appropriate weights.³⁸

Summary of decisions

1 Gbit/s and below services basket

- 3.4 We adopt a basket covering Ethernet services at 1 Gbit/s and below in the charge control areas, hereafter referred to as the ‘1 Gbit/s and below services basket’.³⁹ We implement a sub-basket for Cablelink and a sub-cap for all charges within the basket since we do not consider the basket-level control alone offers sufficient protection to address our competition concerns. Table 3.1 below summarises the structure of this basket.

³⁸ For example, we do not adopt a basket for dark fibre services, as explained in Section 4.

³⁹ Please note, in the legal instrument we refer to this basket as the ‘Ethernet (1 Gbit/s and below) Services Basket’.

Table 3.1: Baskets for active services at 1 Gbit/s and below

| Baskets | Services within scope | Level of control |
|---|--|-----------------------|
| 1 Gbit/s and below services basket | Connection, rental and Main Link charges for Wholesale fibre-based Ethernet services at 1 Gbit/s and below Interconnection services and Cablelink | CPI-CPI ⁴⁰ |
| Cablelink sub-basket | Cablelink services ⁴¹ | CPI-CPI |
| Sub-cap on all charges | Each individual service within this basket | CPI+5% |

VHB services basket

3.5 We adopt a basket covering Ethernet and WDM services at VHB in the charge control areas, hereafter referred to as the ‘VHB services basket’.⁴² We implement sub-baskets and sub-caps for all charges within the basket, since we do not consider the basket-level control alone offers sufficient protection to address our competition concerns. Table 3.2 below summarises the structure of this basket.

Table 3.2: Baskets for active VHB services

| Baskets | Services within scope | Level of control |
|----------------------------|---|-----------------------|
| VHB services basket | Connection, rental and Main Link charges for Wholesale fibre-based Ethernet and WDM services at VHB | CPI-CPI ⁴³ |
| Sub-cap on all charges | Each individual service within this basket | CPI+5% |

⁴⁰ As set out in Section 5 and Annex 26, prices in the first relevant year will be benchmarked to the prior year weighted average charges for the 1 Gbit/s and below services basket.

⁴¹ We note that the same Cablelink charges will apply to dark fibre inter-exchange services and active services.

⁴² Please note, in the legal instrument we refer to this basket as the ‘Ethernet and WDM (over 1 Gbit/s) Services Basket’.

⁴³ As set out in Section 5 and Annex 26, prices in the first relevant year will be benchmarked to prices on 1 October 2018 for the VHB services basket.

Separate baskets for exempt ancillary services, accommodation services, ECCs and TRCs

- 3.6 We adopt separate baskets for accommodation services, ECCs and TRCs.⁴⁴ We also remove exempt ancillaries from the main baskets and instead subject them to a sub-cap on each and every charge.
- 3.7 We implement sub-baskets and sub-caps for each individual charge within baskets where we do not consider the basket-level control alone offers sufficient protection to address our competition concerns. Table 3.3 below summarises the structure of the baskets for these services and charges, together with our sub-basket and sub-cap constraints.

Table 3.3: Baskets for exempt ancillary services, accommodation services, ECCs and TRCs

| Ancillary service | Baskets | Services within scope | Level of control |
|---|------------------------|--|-----------------------------|
| Exempt ancillary services | Sub-cap on all charges | All ancillary services excluding Cablelink, Interconnection services, ECCs, TRCs and Accommodation services | CPI-CPI |
| Accommodation services, i.e. to rent space in BT Exchanges | Accommodation services | Access Locate Administration Fee | CPI-CPI |
| Excess Construction Charges | Direct ECCs | Blown fibre, cable (fibre or copper) including any jointing required, blown fibre tubing in duct, internal cabling, overblow services, fibre cable and survey fee/planning charges | CPI-CPI |
| | Sub-cap on all charges | Each individual Direct ECC | CPI+5% |
| | Contractor ECCs | Construction activities that Openreach provides through an external contractor | Basis of charges obligation |
| Ethernet Time Related Charges | Ethernet TRCs | Each individual relevant Ethernet TRC | CPI-CPI |

⁴⁴ We discuss how these controls apply to different services in more detail below.

Principles for basket design – use of broad baskets

3.8 A charge control basket is a group of services that are subject to a common charge control restriction. Combining services in a single basket means that the price cap (e.g. CPI-X) would apply on average to the changes in the charges across all the services in the basket, weighted by revenue.⁴⁵

3.9 In designing the charge control baskets, we have been guided by the following principles⁴⁶:

- Where the services being considered share substantial common costs, a single basket is more conducive to efficient pricing and cost recovery.
- Where the services being considered face different competitive conditions or where downstream BT does not use the same wholesale inputs as its rivals, placing them in the same charge control basket may give Openreach an incentive to set charges in a way that adversely affects competition. In this case, we might consider introducing sub-caps or placing the services in separate baskets.
- Where it is appropriate for Openreach to encourage migration from a legacy service to a more efficient service through changing the relative prices of services, placing the services in the same basket would allow Openreach desirable pricing flexibility.
- Our design of baskets should account for other rules and ensure that it does not require BT to breach these other rules.

Our proposals

3.10 We proposed a broad basket for Ethernet services at 1 Gbit/s and below and a separate basket for Ethernet and WDM services at VHB.

Stakeholder responses

3.11 Openreach supported our proposals for broad baskets, arguing that they provide benefits such as giving it the flexibility to set efficient charging structures, respond to changes in demand and costs and encourage efficient migration.⁴⁷ Openreach also argued that the flexibility (afforded by broad baskets) to reduce VHB prices in the face of competition is a critical consideration for Openreach.⁴⁸

3.12 CityFibre argued that, if we retain our proposals to impose broad baskets, it is necessary to add more safeguards to the LLCC design. It also argued that our proposals allow Openreach very significant freedom to undermine pricing in competitive areas, and that we may wish to consider changing the LLCC design to restrict this freedom.⁴⁹

⁴⁵ As explained below, we use prior year revenue weights for this control.

⁴⁶ We used these principles in previous decisions, for example, in Volume 2 of the 2016 BCMR Statement.

⁴⁷ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 99.

⁴⁸ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 117.

⁴⁹ CityFibre suggested several options for changes, including moving to CPI+0%, changing the basket sub-cap to CPI+2%, the need for discounts to be cost justified and the introduction of price floors or other mechanisms to prevent anticompetitive pricing by BT. CityFibre's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraph 8.1.2.

3.13 TalkTalk argued that, while it broadly agrees with our comments regarding most of the advantages and disadvantages of baskets, we overlooked a key disadvantage of baskets that Openreach can use a basket structure to discriminate against non-BT customers. It gave the example that, “if non-BT customers consume a relatively large proportion of lower speed services (within the basket), price increases can be focused on these services, thereby increasing group wide revenue without increasing the costs faced by BT Group (i.e. profitable discrimination)”. TalkTalk argued that it was critical that we take measures to identify such behaviour.⁵⁰

Our reasoning and decisions

3.14 A broad basket gives Openreach the most pricing flexibility to determine the structure of prices to meet the charge control. Where relative prices can be set to reflect how demand responds to price changes, this pricing flexibility is more likely to result in charges that recover costs, particularly common costs, in an efficient way.⁵¹

3.15 A broad basket also allows Openreach to respond to changes in demand and costs by changing relative prices and re-optimising charges for new patterns of demand. Subject to sufficient constraint on its pricing at the basket level, BT is better placed to assess demand and set the prices for services.

3.16 Moreover, a broad basket allows Openreach to set charges in a way which sends efficient migration signals since it provides Openreach with the flexibility to set the relative prices of different types or bandwidths of service. Subject to sufficient constraint on its pricing at the basket level, we consider Openreach should be afforded the freedom to encourage efficient migration between different services.

3.17 Broad baskets also reduce the risk of regulatory failure such as the regulator becoming more involved in micro-managing detailed pricing decisions, where there may not be a clear basis for doing so, or when the information available to the regulator may not be reliable or may be particularly susceptible to change over time.

3.18 The main disadvantage of broad baskets is that, in some circumstances, the flexibility to set relative charges can be exploited to harm competition. Two sets of circumstances are particularly relevant:

- Openreach may have an incentive to price in a manner that favours BT Group’s downstream operations. Where downstream BT uses different wholesale services to its competitors to provide the same downstream service, Openreach may have an incentive to reduce the price of the service it uses most and increase the price of the service used by its competitors. Placing both wholesale services in a single charge control basket without further restrictions could give Openreach the ability to behave in a way that harms competition.

⁵⁰ TalkTalk’s response to the 2018 BCMR Consultation, paragraph 5.57.

⁵¹ In this case, efficient means a set of prices with mark-ups over marginal (or incremental) costs which least distort consumption relative to the consumption which would prevail with prices at marginal (or incremental) cost. This is known as Ramsey pricing.

- There may be differences in the intensity of competition that Openreach faces in the provision of different services. If competitive conditions differ between services within a single basket, Openreach may have an incentive to concentrate price cuts on the most competitive services and offset these with increases where competition is weaker.
- 3.19 In some cases, while it is possible for the competition concerns identified above to be addressed by using more narrowly defined baskets, sub-baskets and/or sub-caps on individual services within a basket can also be used. In this way, the potential harm to competition can be mitigated while retaining some of the pricing flexibility benefits of basket controls.
- 3.20 Where we identify specific sets of services that Openreach could favour BT's downstream operations or raise charges in a way that has a disproportionate impact on external providers, we impose additional controls beyond the controls on the wider basket. We set out our specific sub-cap and sub-basket decisions later in this section. We consider that in this control, we can impose sub-baskets and sub-caps in a way that effectively addresses our competition concerns while preserving the benefits of broad baskets.

Weighting price changes

- 3.21 A basket control limits the maximum weighted average increase in prices in any given year. The weighting we use is the amount of revenue earned by each service during a period (e.g. a financial year). When Openreach sets prices during the charge control year, we need to consider how the revenue weights for the services should be determined, e.g. whether they should be based on the previous year's revenues or a forecast of the current year revenue weighting.

Our proposals

- 3.22 We proposed to use prior year weights for the basket controls, consistent with our approach in the 2016 LLCC. Prior year weighting means the basket weights are set equal to the proportions of basket revenues accruing to the relevant services in the year prior to the one in which the price change occurs.

Stakeholder responses

- 3.23 Openreach stated that prior year revenue weights are a tried and tested approach to assessing basket compliance, a key benefit being that there is certainty on compliance at the point that price reductions are made. It noted, however, that when applied to broad baskets, composed of services with very different relative growth rates, such arrangements can risk gaming that would not be in the market's interest i.e. there is an incentive to focus price reductions on services which have declining volumes. It also noted that, by proposing

a broad basket with flat pricing and restrictive sub-caps, we limit the potential for such outcomes.⁵²

- 3.24 TalkTalk argued that we should monitor the basket for gaming such as increasing (relatively) the prices of higher growth products which exploits the prior year weighting method to gain excessive levels of revenue.⁵³

Our reasoning and decisions

- 3.25 Prior year weights enable Openreach to plan its charges in a given year with the confidence that it will meet the overall basket control.⁵⁴ As noted by TalkTalk, the main disadvantage of such an approach is that it is vulnerable to a form of gaming involving targeting price increases on services whose weights in the basket are growing over time, so that the prior year revenue weight understates the effect of the price increase on actual revenues.
- 3.26 Partly to mitigate this risk of gaming, we could set weights equal to the proportion of current year basket revenues accounted for by each service based on service volume forecasts. However, this approach has other disadvantages. It could give BT an incentive to overcharge in the short term and repay the ‘overcharge’ in subsequent periods (and there may be a cash flow incentive to do so unless interest is due on any ‘overcharge’). It is also possible that some telecoms providers could seek to game the control and try to influence BT’s pricing decisions by giving misleading forecasts. Using forecast current year volume weightings could also lead to volatile movements in prices, and this volatility could be harmful to customers. It would create uncertainty for telecoms providers using inputs from Openreach and limit their ability to plan.
- 3.27 Therefore, we consider that the advantages of using prior year weights outweigh its disadvantages, compared to alternative approaches. Consistent with our proposals, we impose a sub-cap on each individual charge in a basket where appropriate. We consider this partially mitigates the gaming concern identified by TalkTalk.
- 3.28 In addition, we consider the requirement to automatically make repayments to its wholesale customers of any amounts overcharged by reference to the charge controls fits well with prior year weights.⁵⁵ This is because at the start of each control period Openreach will know (to a significant extent) the prior year volumes/revenues and thus, will not be subject to a risk of being unable to recover the allowed revenues (and hence potentially costs) of a basket in that period or subsequent ones.
- 3.29 We therefore use prior year weights for the basket controls.

⁵² Openreach’s response to the 2018 BCMR Consultation (LLCC), paragraph 101.

⁵³ TalkTalk’s response to the 2018 BCMR Consultation, paragraph 5.67.

⁵⁴ As outlined in Section 5, BT must notify telecoms providers 90 days in advance for price increases and 28 days in advance for price decreases to existing business connectivity services. Therefore, when setting prices at the start of the new control year, BT relies on revenue data from the first nine months of the year and forecasts for the final three months.

⁵⁵ We set this requirement out in more detail in Section 5.

Overall basket design for active Ethernet and WDM services

Our proposals

- 3.30 We proposed separate baskets for Ethernet services at 1 Gbit/s and below and for Ethernet and WDM services at VHB in the charge control areas. We proposed that each basket would be controlled at CPI-CPI.

Stakeholder responses

- 3.31 Openreach argued that it is right and proper to have two separate baskets due to the different demand and supply conditions for VHB and services at 1 Gbit/s and below.⁵⁶
- 3.32 Sorrento Networks generally agreed with our proposals in relation to the design of charge controls for active services.⁵⁷ SSE T also agreed with the design of charge controls based on maintaining current pricing for connection, rental and Main Link and capping the price increase at CPI-CPI.⁵⁸
- 3.33 TalkTalk agreed that, under the proposed basket caps of CPI-CPI, it would be inappropriate to regulate these services within the same basket since this would allow Openreach to raise the average price of 1 Gbit/s and below services.⁵⁹
- 3.34 Virgin Media also agreed with our proposals for separate baskets for 1 Gbit/s and below services and VHB services given the different nature of the proposed controls.⁶⁰

Our reasoning and decisions

- 3.35 As explained in Section 10 of Volume 2, we impose a charge control on services at 1 Gbit/s and below and VHB services for different reasons. For services at 1 Gbit/s and below, we are prioritising investor confidence in current and planned investments over the static benefits of keeping prices tightly aligned to costs, while ensuring BT cannot use its market power to set excessive prices. For VHB services, our approach addresses the same trade-off and addresses the risk that BT would increase prices in areas with limited or no competition to fund price reductions in more competitive areas (or where it considers rivals may build).
- 3.36 We consider there are two reasonable options for designing baskets for Ethernet and WDM services. We could include them all in a single broad basket, covering services at all bandwidths; or we could place them into two separate baskets, one for active services at

⁵⁶ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 116.

⁵⁷ Sorrento Networks' response to the 2018 BCMR Consultation, page 11.

⁵⁸ SSE T's response to the 2018 BCMR Consultation, page 13.

⁵⁹ TalkTalk noted that, if both 1 Gbit/s and below and VHB services are price regulated at cost (including a starting charge adjustment on VHB services) then it may be appropriate to consider whether all the CI services should be regulated in the same basket (TalkTalk's response to the 2018 BCMR Consultation, paragraph 5.59). As set out in Volume 2 of this statement, we do not impose a cost-based charge control.

⁶⁰ Virgin Media's response to the 2018 BCMR Consultation, page 22.

1 Gbit/s and below and one for active VHB services, reflecting the different rationale for charge controlling services in these two different bandwidth categories (as explained above).

- 3.37 Under the current controls, active services at 1 Gbit/s and below have been charge controlled and prices will be reasonably close to costs by the end of the current control period.⁶¹ However, active VHB services have not been subject to a charge control and there are indications that Openreach currently earns higher margins on these VHB services compared to lower bandwidth services.⁶²
- 3.38 If we were to impose a broad basket for active Ethernet and WDM services across all bandwidths, then Openreach would have significant flexibility over the prices of these services and could in theory cut prices for VHB services and increase them for other services. However, given that volumes on active VHB services are low and growing, and given our decision to use prior year weights, we would expect the incentive for Openreach to adopt such a strategy to be quite limited.
- 3.39 Our main concern about the inclusion of all bandwidths within one basket is the risk of Openreach raising prices on non-competitive services to subsidise price cuts where Openreach faces more competition. We consider that a broad basket that included services at 1 Gbit/s and below and active VHB services would give Openreach too much flexibility to distort competition.
- 3.40 Therefore, we consider that affording Openreach the flexibility to rebalance prices across all bandwidths risks undermining our key regulatory objectives. We therefore impose separate baskets for active services at 1 Gbit/s and below and for active services at VHB.⁶³

Sub-baskets and sub-caps

- 3.41 We consider it is necessary to impose sub-baskets and sub-caps within both baskets to address our concerns that BT could use its pricing flexibility to adversely distort competition for certain services.

Cablelink

Our proposals

- 3.42 As set out in Section 14 of Volume 2, Openreach provides a ‘tie cable’ product in support of accommodation services called Cablelink. We explain that it is an essential element of the accommodation services that Openreach provides; it allows a telecoms provider to connect two remote licensed areas of the BT exchange building (i.e. two separate areas in which the telecoms provider has installed its equipment), as well as connect a telecoms

⁶¹ At the start of this control period we expect the prices of the basket of active services at 1 Gbit/s and below to be close to the FAC. See Annex 18 for more detail.

⁶² For example, as discussed in Section 12 of Volume 2.

⁶³ For the avoidance of doubt, each of these baskets includes the relevant volumes from across the UK (i.e. there are not separate baskets for the same bandwidths in separate geographic areas).

provider's external fibre cable located up to 100m outside a BT exchange to a telecoms provider's equipment inside the exchange.

- 3.43 We proposed to impose a separate sub-basket for Cablelink services within the 1 Gbit/s and below services basket that is controlled at CPI-CPI (the same level as the overall basket).

Stakeholder responses

- 3.44 Openreach argued that, on the basis of the 2018/19 management accounting data that it submitted, the Cablelink price is below cost and that there is little risk of excess pricing if the Cablelink sub-basket is removed. It argued that such flexibility would at least allow limited price increases (CPI+5% price increases) to deal with a Cablelink price that is misaligned with the costs of supply, and for Cablelink prices to be closer to direct incremental cost by the end of this review period.⁶⁴
- 3.45 Virgin Media argued that certain services, including Cablelink, need to be controlled within the basket to facilitate Virgin Media's and other providers' on-net connectivity with purchasing providers which are located within a BT local exchange. It argued that, if this is not part of the basket, BT could act to disincentivise connectivity utilising Cablelink products.⁶⁵

Our reasoning and decisions

- 3.46 As outlined in Section 14 of Volume 2, we impose a price control on Cablelink services. Given that Cablelink is an important input for telecoms providers, we disagree with Openreach and consider that a broad basket-level control would not offer sufficient protection for these services; instead, they should be subject to a tighter control.
- 3.47 We could either place Cablelink in a separate basket or control it through a sub-basket.
- 3.48 We would expect Cablelink to share some common costs with Ethernet services, which suggests it may be desirable to include these services within one of the two broad baskets for active services. This would give Openreach the flexibility to recover common costs in a more efficient way over the period of the control. As such, we do not think Cablelink should be placed in a separate narrow basket.
- 3.49 Since Cablelink is a single set of services which are not bandwidth-specific, we do not think it is appropriate to control Cablelink through both baskets, since this would involve splitting these services by bandwidth in a way that is inconsistent with the nature of the product. Consequently, we consider all Cablelink services should be controlled through a single sub-basket.
- 3.50 To address Openreach's claim that Cablelink prices were below costs, we reviewed the costs for Cablelink services within the RFS and sought further evidence on Cablelink costs.

⁶⁴ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 92.

⁶⁵ Virgin Media's response to the 2018 BCMR Consultation, page 22.

Based on the RFS data provided to us by Openreach we were not able to establish that Cablelink services are priced below cost.⁶⁶

- 3.51 We also requested data from Openreach on 2017/18 management accounting data for Cablelink services.⁶⁷ This showed a similar pattern to the part year 2018/19 data Openreach provided in its consultation response. Prices for the key internal Cablelink service variants, which cover roughly [X%] of demand, broadly covered costs.
- 3.52 However, costs for external Cablelink variants were loss making. The data also suggested that the overall loss in 2018/19 might have been much less than that in 2017/18 though Openreach told us the 2017/18 data was more reliable and would not be subject to timing differences that might have been present in the part-year 2018/19 data. The data does provide some reassurance that Cablelink revenues are comparable to costs, but we do not consider that the evidence is sufficiently robust to support a view that costs are higher or lower than costs.
- 3.53 The implied loss from the table Openreach presented in its evidence is less than £[X] and total Cablelink revenues in the two regulated CISBO markets was around £[X] (£1m to £1.5m) in 2017/18. Further, any costs that should have been attributed to Cablelink are almost certainly currently attributed to other Ethernet products so the risk of any cost under-recovery here for Openreach is very low.
- 3.54 Given the uncertainty around the costs that are allocated to Cablelink and the extent to which prices are aligned with costs and the low risk of any under-recovery, we maintain our consultation position and impose a separate sub-basket on Cablelink services set at the level of CPI-CPI.
- 3.55 The 1 Gbit/s and below services basket contains the majority of service volumes. Including the Cablelink sub-basket in this broad basket would provide Openreach with greater flexibility to rebalance prices to recover costs more efficiently than including it in the VHB services basket. We also note this is consistent with the current controls. Therefore, we set a sub-basket for Cablelink within the 1 Gbit/s and below services basket in the charge control areas.
- 3.56 As explained in Sections 12 and 14 of Volume 2, we apply the controls on accommodation services to dark fibre inter-exchange services and active services in the same way. Consequently, the same Cablelink charges will apply to dark fibre inter-exchange services and active services.

⁶⁶ As Openreach noted in paragraph 111 of its response to 2018 BCMR Consultation (LLCC): “We do not think the RFS is currently a robust source of financial data to assess the costs of Cablelink. We have identified a number of potential issues with the RFS treatment of Cablelink and there are a number of methodology changes being investigated that might lead to a more accurate costing of Cablelink in the RFS going forward”. That is consistent with our own analysis which suggested Cablelink costs in the RFS currently do not include the key costs of providing Cablelink services but include costs that should not be attributed to Cablelink.

⁶⁷ Openreach’s response to question 3 of the 12th LLCC s135 request dated 6th March 2019.

Sub-cap on ancillaries

Our proposals

- 3.57 We proposed to include all ancillary services, excluding ECCs, TRCs and Accommodation services, within the 1 Gbit/s and below and VHB services baskets.

Stakeholder responses

- 3.58 Openreach requested that we remove all ancillaries such as cancellations and migrations from the basket control and instead make them subject to a CPI-CPI cap on each item. It argued that this would have the benefit of reducing the administration of identifying revenues on a significant number of marginal items, provide adequate protection for customers in the form of a sub cap (which would match the CPI-CPI control of the main basket), and not significantly change the financial impact of the controls given the immateriality of the revenues.⁶⁸
- 3.59 TalkTalk argued that Openreach's Ethernet product portfolio could be improved with a stronger range of cost-based migration products between different bandwidths. It argued that, without these, a wide basket allows Openreach to exploit its dominance by altering rental prices but not allowing providers to move easily between products.⁶⁹

Our reasoning and decisions

- 3.60 In the Consultation, we proposed to subject ancillary services to both the overall basket cap and a sub-cap on each and every charge. This gave Openreach flexibility to set charges in an efficient way to recover common costs but prevented the risk of Openreach imposing significant price increases on those services which only account for a small fraction of basket revenues.
- 3.61 Following the Consultation, we gathered information from Openreach on the costs and revenues of its ancillary services, including migration charges between products of different bandwidths. We found that take-up of these products is currently very low. We also found that the reported unit revenues for these ancillaries are, in general, above the level of costs. However, it is unclear whether all the costs of providing these ancillaries are correctly allocated to these services, which may exaggerate the difference between the costs and revenues.
- 3.62 Removing ancillary services from the basket, and instead subjecting them to a CPI-CPI control on every charge, would reduce Openreach's flexibility to increase these prices while having negligible impact on BT's overall revenues. We agree with Openreach that the exclusion of these items from the baskets is likely to reduce administrative costs without having an adverse effect on consumers.

⁶⁸ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 109.

⁶⁹ TalkTalk gave an example of [] (TalkTalk's response to the 2018 BCMR Consultation, paragraph 7.4).

- 3.63 Furthermore, given the low level of revenues that these services account for, as well the uncertainty on the extent to which costs are in line with revenues, we consider that preventing any further price increases on any of these ancillary services is proportionate. In the interests of maximising investment incentives and balancing impacts on consumers through pricing stability during this relatively short review period, and given the relative size of the revenues of these ancillary services, we conclude that a CPI-CPI sub-cap on each ancillary service acts as a sufficient safeguard for providers wishing to migrate to different bandwidths or cancel their services.
- 3.64 We therefore remove Ethernet ancillary services (excluding accommodation, ECCs and TRCs) used to support Ethernet and WDM services from both the 1 Gbit/s and below basket and the VHB basket (as applicable) and impose a CPI-CPI cap on every charge.

Sub-cap on all charges

Our proposals

- 3.65 We proposed sub-caps on all charges within the 1 Gbit/s and below services basket and the VHB services basket at CPI+5%.

Stakeholder responses

- 3.66 Openreach argued that flexibility is beneficial and supported the CPI+5% sub-cap.
- 3.67 CityFibre, the IIG and Zayo argued that, with a CPI+5% sub-cap, Openreach would have an opportunity to significantly decrease the price of 1 Gbit/s ethernet services while still maintaining the basket revenue at CPI-CPI, by increasing the price of lower speed services by CPI+5%. They argued that we had not presented any analysis to support the level of the sub-cap on all charges, but only stated that it is based on a regulatory judgement which balances Ofcom's objectives.⁷⁰
- 3.68 They further argued that, if 10 Mbit/s and 100 Mbit/s services were subject to a CPI+5% price increase in each of the two years of the charge control, then the prices of 1 Gbit/s services could be reduced by 39% over the two years, while still maximising the return for Openreach on services within the basket. They went on to argue that, were the price reduction restricted to 70% of BT's 1 Gbit/s EAD/LA customers, with the remaining 30% following the CPI-CPI basket average, then a price decrease of 56% would be possible, taking the 1 Gbit/s rental price to below half of the 100 Mbit/s rental price.
- 3.69 They then argued that we could address this risk by either applying the CPI-0% control instead of the CPI-CPI control, or by reducing the level of the sub-cap to CPI+2%.
- 3.70 TalkTalk argued that our CPI+5% sub-cap means that any individual customer (wholesale or retail) is likely to see considerable changes in both absolute and relative prices over the regulatory period, removing any benefit that might result from stable prices. It argued that

⁷⁰ CityFibre's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraph 8.3.1; The IIG's response to the 2018 PIMR, 2018 BCMR and 2018 BT RFR Consultations, paragraph 1.2.9; Zayo's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraph 5.1.12.

our proposals, in which average prices are known, but the individual prices to each business are uncertain, are likely to be considerably less beneficial to customers. TalkTalk further argued that the gap between the overall basket price caps, and the sub-cap on each individual price, is simply too great to provide businesses with predictability.⁷¹

- 3.71 UKCTA argued that there is a lot of flexibility in the sub-caps at CPI+5%, and that this could particularly hurt smaller competitors who take a small amount of services in the basket and do not see the offset benefit of a price reduction on a product elsewhere.⁷² [X] stated that its views were aligned with the views expressed by UKCTA in its response.

Our reasoning and decisions

- 3.72 A broad basket gives Openreach flexibility to set charges in an efficient way to recover common costs, however we impose sub-caps when we consider that this flexibility should be limited. If Openreach was subject to the basket-level control only, it would have the opportunity to game the charge control design (see above). Therefore, we impose a sub-cap on all services within the 1 Gbit/s and below services basket to mitigate the risk of the charge control being gamed and to limit BT's ability to increase the price of any individual service in a given year.
- 3.73 CityFibre, the IIG and Zayo's concern appears to relate specifically to BT's pricing of 1 Gbit/s circuits, and that Openreach will be able to maximise revenue under the control while still making significant price cuts to these services (or a subset of them).
- 3.74 Where we believe that Openreach has the ability and incentive to make targeted price changes to increase the competitiveness of downstream BT Group providers, we typically address this through targeted sub-baskets or sub-caps on the relevant services. We consider that this approach is likely to be more appropriate and targeted than a reduction in the level of the sub-cap on all services, which could have unintended consequences on services where no concerns exist.
- 3.75 The level of the sub-cap on all charges, to an extent, has to be based on regulatory judgement, since we do not have sufficiently granular data on demand and costs of each individual service offered by Openreach, and to collect and analyse such data would be disproportionate. However, we note that the difference between the proposed sub-cap level and overall basket control is broadly similar to those in recent controls, including those we set in the 2016 BCMR Statement.
- 3.76 We also note that a reduction in the sub-cap on all services to CPI+2%, as suggested by some respondents, would still allow Openreach to significantly cut the price of certain 1 Gbit/s services while maximising revenue over the control period. However, it would also reduce Openreach's flexibility to raise prices on individual services in response to market developments.⁷³

⁷¹ TalkTalk's response to the 2018 BCMR Consultation, paragraph 5.29.

⁷² UKCTA's response to the 2018 BCMR Consultation, paragraph 31.

⁷³ We address stakeholder comments on the potential for a CPI+0% control in Section 2.

- 3.77 We considered whether there is a concern in relation to 1 Gbit/s circuits such that further controls on these services (such as a sub-basket or sub-cap) is appropriate. We do not believe that this is the case.
- 3.78 We note that there is not currently a large gap between Openreach's prices for 100 Mbit/s and 1 Gbit/s rental services.⁷⁴ Any significant further reduction in the 1 Gbit/s rental price (potentially below the 100 Mbit/s price) could incentivise customers of other providers on the Openreach network to migrate to the higher bandwidth, which could in turn lead to lower overall revenues for Openreach than before it made the price changes.
- 3.79 Furthermore, given the relatively short length of this review period, Openreach would be unlikely to gain a large portion of any benefit until after the end of this review period. We could then take into account the implications of Openreach's behaviour for competition in the basket design in our next review.
- 3.80 We do not consider that any further controls are required specifically for 1 Gbit/s services. We also do not believe that there is a need to reduce the sub-cap on all services from CPI+5%. As we set out in the Consultation, the level of this sub-cap is based on a regulatory judgement as to what level appropriately balances our objectives. We consider that a CPI+5% sub-cap offers an appropriate level of flexibility to rebalance charges while preventing significant price increases for individual services.⁷⁵
- 3.81 In relation to the points made by TalkTalk and UKCTA, we recognise that telecoms providers which only buy specific categories of products and not others may see some variability in their overall prices paid over the control period. However, the majority of providers purchase a range of services and are likely to see a change in their prices consistent with the overall basket cap. Even for those providers who buy only specific circuits, we do not think that the gap between the sub-cap and basket level leaves providers with a large degree of uncertainty. As explained earlier, there are benefits to giving BT flexibility to adjust charges for individual services within a basket, and we continue to believe it is important to allow Openreach to retain this flexibility.
- 3.82 For the reasons outlined above, we also impose a sub-basket on all charges within the VHB services basket and set the sub-cap at CPI+5%.

Our proposals for accommodation, ECCs and TRCs

- 3.83 To use the regulated wholesale services that Openreach provides in the leased lines markets, telecoms providers require certain ancillary services.
- 3.84 Accommodation services, such as space and power in BT's local exchange, are necessary ancillary services. Similarly, ECCs are necessary to allow access network extensions that are

⁷⁴ For example, an EAD 100 Mbit/s circuit currently has an annual rental price of £1,698, with an EAD 1000 Mbit/s circuit having an annual rental price of £1,944. Openreach EAD price list.

<https://www.openreach.co.uk/org/home/products/pricing/loadProductPriceDetails.do?data=0d0zetWgShsjqKWjcN2Y5WJA8BGGqsBLxL7lgSM4fRpZ6rNZujnCs99NbIKJZPD9hXYmijxH6wrCQm97GZMyQ%3D%3D> [accessed 2 May 2019].

⁷⁵ See Section 5 for details on how these controls apply to services which have been withdrawn from supply.

specific to an individual customer. TRCs are paid-for services, such as out-of-tariff fault repairs and providing or rearranging services, where the work is not covered within Openreach's standard charges. In Sections 13 and 14 of Volume 2 we set out our decision to apply a charge control on these services.

- 3.85 In this sub-section, we explain our specific decisions which relate to basket design for accommodation services, ECCs and TRCs.⁷⁶

Accommodation services

Our proposals

- 3.86 We proposed to require prices for accommodation products used for leased lines to be set in the same way as for LLU Co-Mingling. We also proposed a CPI-CPI cap on the current Access Locate Administration Fee.
- 3.87 We proposed to subject any accommodation services required to support the dark fibre inter-exchange services to the same controls.

Stakeholder responses

- 3.88 Openreach agreed with our proposed CPI-CPI control on each service, and that items relevant for LLU and Ethernet providers should be regulated only once (under the WLA currently).⁷⁷
- 3.89 Sorrento Networks generally agreed with our proposals in relation to accommodation services.⁷⁸

Our reasoning and decisions

- 3.90 Openreach currently provides two types of accommodation services: Co-Mingling and Access Locate. Co-Mingling is exclusively provided in support of LLU while Access Locate enables telecoms providers to put site-specific communications equipment in BT's exchanges.
- 3.91 Access Locate and LLU Co-Mingling services are currently charged at the same prices.⁷⁹ This is because we regulate several overlapping Ethernet accommodation products in the same way as LLU Co-Mingling products and the charge control set by the 2018 WLA Statement applies to both. The controls applied to these services by the 2018 WLA Statement will continue to apply for this control period irrespective of whether the accommodation products are used by telecoms providers for leased line products or for LLU.

⁷⁶ For the avoidance of doubt, where we discuss these terms, we refer to ECCs and TRCs specific to leased line services.

⁷⁷ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 120.

⁷⁸ Sorrento Networks' response to the 2018 BCMR Consultation, page 11.

⁷⁹ Access Locate Accommodation and Access Locate Power are priced at the same level as LLU Accommodation and power. See Openreach, Price List, Access Locate and Access Locate Plus.

<https://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=q%2B2vpfgQQ99SiimXeC7QjskLe4HVN3IVHU%2BmY7RLKoBZ6rNZujnCs99NbIKJZPD9hXYmijxH6wrCQm97GZMyQ%3D%3D> [accessed 3 May 2019].

Accommodation products that overlap with LLU Co-Mingling products

3.92 We adopt an approach consistent with the 2016 BCMR, which sought to avoid the undesirable situation where overlapping products would be subject to two different charge controls. As such, we are not placing any additional price control on these overlapping products. Instead, we require prices for accommodation products used for leased lines to be set in the same way as for LLU Co-Mingling.

Access Locate Administration Fee

3.93 The Access Locate Administration Fee is payable by LLU operators who want to convert their Revised agreement for Access Network Facilities (RANF) to Access Locate and is not subject to the charge controls set by the 2018 WLA Statement.

3.94 The current Access Locate Administration Fee is priced at £215, which has remained at approximately the same level since the 2016 BCMR Statement. Given this price has remained relatively flat since 2010, a CPI-CPI cap is appropriate given our objectives.⁸⁰

Approach to controlling Excess Construction Charges

3.95 In the 2016 BCMR we imposed glide path controls on Direct ECCs and a basis of charges obligation in relation to Contractor ECCs.

3.96 In 2014 we issued a direction that allowed Openreach to exempt new provisions of EAD services from the first £2,800 of ECCs (the threshold charge) and to make up the resulting loss of its revenue with a charge of £548 (the balancing charge), which would be part of the standard connection charge for all other EAD new provisioning services. The rationale for this direction was that the change would significantly reduce the lead times for provisioning of most of the EAD orders which incur ECCs. We also carried out an analysis that showed the change was ‘revenue-neutral’.

3.97 In the 2016 BCMR we kept the ECC threshold charge fixed at £2,800 but allowed BT the flexibility to adjust its balancing charge to ensure cost recovery and revenue neutrality.⁸¹

Our proposals

3.98 We proposed to adopt a separate basket for Direct ECCs (ECCs for cable (fibre or copper) including any jointing required, blown fibre, blown fibre tubing in duct, internal cabling (including internal blown fibre tubing), overblow services, fibre cable and survey fee/planning charges). We proposed to subject this basket to a CPI-CPI control. We also proposed a sub-cap on each individual charge within this basket at CPI+5%.

3.99 We proposed that Contractor ECCs should continue to be subject to a basis of charges obligation.

⁸⁰ There has been very little variation (£0.30) in the Access Locate Administration Fee since 2010. For more detail, see the Openreach Price list, reported above.

⁸¹ To ensure Openreach used this flexibility appropriately, we required it to demonstrate that the balancing charge was set to ensure revenue neutrality.

- 3.100 We also proposed that Openreach should retain the flexibility to adjust the balancing charge, but not the threshold charge.

Stakeholder responses

- 3.101 Openreach broadly agreed with our proposals on ECCs and did not object to our proposed CPI-CPI control for Direct ECCs for this period on the basis that the prices for EAD and WDM services are controlled on a CPI-CPI basis.⁸²
- 3.102 Openreach noted that two ECC services (Overblow and Solid Fibre Cable) are in both the direct ECC basket and the list of Contractor ECCs regulated separately, due to the fact that they can be delivered either by direct labour or indirectly by contractors, depending on resource availability. Openreach argued that there is a material risk that complying with one control would breach the other control.⁸³ To deal with this, it suggested that these two services should be regulated under the category which reflects the predominant method of delivery: Overblow as a Contractor ECC and Solid Fibre Cable as a Direct ECC.⁸⁴
- 3.103 Openreach also argued that the draft legal instrument requires the balancing charge for the relevant year to be based on data from the prior year, and that it would not be possible to have a balancing charge in place at the start of the relevant year as the analysis would need to be started three to five months earlier, before the prior year data is available. It therefore requested that we amend the wording on the Balancing Charge, requiring that it is notified within three months of the start of the relevant year.⁸⁵
- 3.104 Sorrento Networks generally agreed with our proposals in relation to ECCs.⁸⁶
- 3.105 Vodafone argued that the increases in the balancing charge since we published our 2014 Direction are contrary to what logic would indicate. If Openreach is rolling out more fibre to business premises each year, one would imagine that the instances where Openreach needs to roll-out additional fibre network extensions would reduce as their business fibre footprint increases. Vodafone said that we should gather data as to the number of network extensions that have been performed from 2014 to 2018 to ensure that Openreach has a valid justification to increase the balancing charge.⁸⁷

Our reasoning and decision

- 3.106 Openreach levies ECCs when construction work is required to deliver a new leased line connection. It covers activities such as site survey, installation of new duct, blowing fibre, drilling through walls and provision of a footway box.

⁸² Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 125.

⁸³ Openreach gave the example of if the external costs of fibre cable provision increase beyond the CPI+5% cap, then they would need to breach either condition 10D.7 or 10D.9. Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 129.

⁸⁴ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 130.

⁸⁵ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 132.

⁸⁶ Sorrento Networks' response to the 2018 BCMR Consultation, page 11.

⁸⁷ Vodafone's response to the 2018 BCMR Consultation, part 1, paragraph 6.55.

Direct ECCs

- 3.107 Consistent with the 2016 BCMR, we impose a separate basket for Direct ECCs. We consider that it is not appropriate to include ECCs in the main Ethernet baskets since:
- ECCs share very few common costs with Ethernet services as they are mostly construction costs; and
 - ECCs represent a low value compared to the Ethernet baskets, meaning that putting them in a combined basket would not effectively control their prices without an additional sub-cap.
- 3.108 We agree with Openreach that it is not appropriate to have Overblow and Solid Fibre Cable ECCs in both the direct ECC basket and the list of Contractor ECCs. In light of information received from Openreach, we consider it appropriate for Overblow to be regulated as a Contractor ECC only, as this is the predominant method of delivery (with Overblow services being done exclusively by contractors in 2017/18).
- 3.109 In addition, we consider all Solid Fibre Cable ECCs should be subject to regulation as a Direct ECC. While we did not receive any further data on the predominant method of delivery of Solid Fibre Cable, we agree that the same service should not be subject to two different controls. Furthermore, since Direct ECCs are subject to a stricter control, and Openreach suggests that these services should be subject to this control in any case, we only include Solid Fibre Cable in the list of services controlled as Direct ECCs.
- 3.110 The direct ECC basket therefore covers ECCs for cable (fibre or copper) including any jointing required, blown fibre, blown fibre tubing in duct, internal cabling (including internal blown fibre tubing), fibre cable and survey fee/planning charges.
- 3.111 To inform our decision on the appropriate level of the cap for the Direct ECCs basket, we reviewed BT's RFS data on ECC revenues and costs. BT's latest RFS suggests that in 2017/18 it under-recovered its ECC costs (though this was the first RFS in which it had identified actual expenditure incurred on ECCs).⁸⁸ In previous years, BT had allocated costs to ECCs using the assumption that that they were equal to the price of an ECC job.⁸⁹ In 2017/18, matched costs (i.e. direct spend on ECCs, excluding attributed indirect costs) were very similar to ECC revenues. The shortfall in 2017/18 was therefore roughly equal to the attribution of indirect costs.
- 3.112 We could control ECC charges such that BT can recover these overhead costs through ECCs. Under the revised 2017/18 RFS data, this would lead to potentially large increases in prices

⁸⁸ For example, for the Low Bandwidth CISBO Rest of UK 2017/18 figures, the total ECC revenue is £52.9 million, the matched costs are £50.7 million, and the attributed indirect costs are £18.5 million. See BT, 2018 RFS, page 40.

<https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/2018/RegulatoryFinancialStatements2018.pdf>.

⁸⁹ BT, Change Control Notification 2017-18, page 21.

<https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/2018/ChangeControlNotification2017-18.pdf>.

for ECCs. However, this would be based on one year's cost data, under a new cost estimation process, which may not be stable.⁹⁰

- 3.113 Therefore, we instead subject this basket to a CPI-CPI control. In taking this decision, we implicitly assume Openreach can recover overheads attributed to ECC services from Ethernet services. We reflect this in our cost modelling of active services by reallocating ECC overheads (based on 2017/18 RFS attributions) to Ethernet services at 1 Gbit/s and below. This approach strikes the appropriate balance of mitigating the risk of excessive pricing with ensuring cost recovery.
- 3.114 Further, for the reasons outlined above, we impose a sub-cap on each individual charge, controlled at CPI+5%.
- 3.115 As we explain in Section 12 of Volume 2, ECCs should not be charged for as part of the provision of dark fibre services.

Contractor ECCs

- 3.116 We continue to consider that forecasting Contractor ECCs is difficult and there would be a significant risk of over- or under-recovery if we were to set the prices for Contractor ECCs. As such, we maintain our view that a basis of charges obligation is an effective approach to controlling Contractor ECCs and strikes an appropriate balance between mitigating the risk of excessive pricing while ensuring cost recovery. We therefore continue to apply a basis of charges obligation to Contractor ECCs.
- 3.117 As set out above, following information gathered from Openreach on the predominant method of delivery for each ECC, we have removed Solid Fibre Cable from the list of Contractor ECCs and all Overblow ECCs are subject to the basis of charges obligation.

Balancing charge and threshold charge

- 3.118 Our analysis in the 2014 ECC Direction showed that the balancing charge of £548 and the exemption threshold of £2,800 were consistent with revenue neutrality as the revenues Openreach earned from ECCs under the new charging structure were set to be the same as under the old structure. Revenue neutrality is important to ensure BT can recover its efficiently incurred costs.
- 3.119 As outlined above, we require Openreach to use this flexibility to maintain revenue neutrality. The balancing charge is currently set at £722 and is published on Openreach's price list.⁹¹ We continue to believe that there is a risk of Openreach not maintaining revenue neutrality and not recovering its efficiently incurred costs if both the threshold and balancing charge are fixed. Therefore, we consider that it necessary to afford Openreach with flexibility over either the exemption threshold or the balancing charge.

⁹⁰ ECC costs stayed flat in 2017/18 while revenues decreased by 15% (see BT, 2018 RFS, pages 40 and 45).

⁹¹ Openreach, Price List, Ethernet Access Direct (EAD) including EAD Enable.

<https://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=0d0zetWgShsjqKWjcN2Y5WJA8BGGsBLxL7lgSM4fRpZ6rNZujnCs99NblKJZPD9hXYmijixH6wrCQm97GZMyQ%3D%3D> [accessed 3 May 2019].

- 3.120 We do not see a compelling reason to deviate from the approach adopted in the 2016 BCMR, where we provided Openreach with flexibility over the balancing charge, but kept the threshold charged fixed at £2,800. We do not consider that the incidence or distribution of ECCs is likely to change to such a degree that the current approach becomes inappropriate.
- 3.121 As Openreach sets out in its response, it is unable to begin setting the balancing charge until it has the necessary data from the prior year, and some time is needed for processing the data and giving stakeholders notice of changes to the level of the balancing charge.
- 3.122 We therefore amend the legal conditions to allow Openreach two months after the end of the relevant period to calculate and notify the new balancing charge. Openreach will be required to maintain the existing balancing charge until the end of the notification period, at which point the new balancing charge must come into effect.
- 3.123 We recognise Vodafone’s concern in relation to increases in the balancing charge over recent years. We are reviewing Openreach’s data to assess whether Openreach has complied with its obligations in relation to ECCs. However, we continue to consider that it is appropriate to allow Openreach to use the mechanism introduced under the 2014 ECC Direction.
- 3.124 In conclusion, we are giving Openreach the flexibility to adjust the balancing charge, but not the threshold charge. This will ensure cost recovery and revenue neutrality in the event of changes in the distribution and incidence of ECCs. However, we are keeping the threshold charge fixed at £2,800. We note that Openreach has the freedom to remove the balancing charge and exemption threshold and return to its previous policy of charging for ECCs as they are incurred.

TRCs

- 3.125 TRCs are levied for services such as out-of-tariff fault repairs and providing or rearranging services where the work is not covered by Openreach’s standard charges.⁹² TRCs are provided across different markets, including business connectivity and fixed access markets. They are generally charged on a per visit basis: the Standard Chargeable Visit rate, which includes travel and the first hour of the job; and the Additional Hour charge, with the charges varying depending on when the work takes place (i.e. within or outside normal business hours).

Our proposals

- 3.126 We proposed to apply charge controls to non-contestable TRCs in the charge control areas. We also proposed that TRCs incurred to support dark fibre inter-exchange services will be

⁹² Openreach, Price list, Time Related Charges (Including Shifts).

<https://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=pBzHTRfO4GXC12qz7DCzqUP54d5RrQ9TQD%2BRDuYwQUEIMnGHsqdC0vzO163bJmh34D91D7M0q8u%2FIISgtIFAKw%3D%3D> [accessed 3 May 2019].

charged at the same rate as TRCs incurred to support active services, with the exception of the Right When Tested (RWT) charge.

- 3.127 We proposed to adopt a separate basket for non-contestable TRCs and to set controls at a level of CPI-CPI.

Stakeholder responses

- 3.128 Openreach argued that TRCs are unlikely to benefit from productivity improvements over the period, as they are a charge for a set number of hours of labour and as such it is likely that a price that tracks wage inflation more closely would be more appropriate and proportionate. It argued that it might be better if the control was set at CPI-0% for labour-based services rather than CPI-CPI. It agreed that a control of CPI-CPI is appropriate for non-labour-based services.⁹³
- 3.129 Sorrento Networks generally agreed with our proposals in relation to TRCs.⁹⁴

Our reasoning and decision

- 3.130 In the 2016 BCMR we carried out an in-depth analysis of TRCs to calculate the appropriate level of control. This approach resulted in a controlling percentage of -0.15% per year for the period of the charge control, which we maintained in the Temporary Conditions.
- 3.131 TRCs revenue accounts for a very small proportion of Ethernet revenue.⁹⁵ If included in the main baskets for active services, absent additional controls, Openreach would have the flexibility to significantly increase the prices of these services and offset this with minor price-cuts to services that would carry a much larger weight. Therefore, given TRCs are a necessary ancillary service in some cases, we consider they should be subject to a specific control. We take a similar approach to the 2016 BCMR and adopt a separate basket for non-contestable TRCs.
- 3.132 We reviewed the proportion of TRC costs that are labour-based and non-labour-based. We found that a significant proportion of TRC costs are labour costs, either relating to the engineer undertaking the work or management overheads. We also considered whether prices are currently in line with costs and found that this is broadly the case.
- 3.133 We do not consider, however, that there is a need to amend our control on TRCs from the proposed CPI-CPI cap. While pay rates are likely to increase in nominal terms over the control period, we expect Openreach to achieve some efficiency savings on TRC overhead costs. Furthermore, to the extent that TRC costs do increase over this short review period, our control on TRCs does not pose any significant risk on BT not being able to recover its efficiently incurred costs, given our overall approach to setting prices for the main Ethernet and VHB baskets.

⁹³ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 136.

⁹⁴ Sorrento Networks' response to the 2018 BCMR Consultation, page 11.

⁹⁵ For example, in the 2016/17 RFS, Ethernet TRCs account for £4.3 million out of £775.4 million Total Revenue in CISBO Rest of UK. BT, 2017 RFS, page 47.

<https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/2017/RRD2017Final.pdf>.

3.134 Given this, we consider a CPI-CPI control is appropriate. We note that this level is broadly the same as under the current controls.

4. Inter-exchange dark fibre charge control

- 4.1 In this section we set out our approach to estimating costs required to set starting charges for the inter-exchange dark fibre charge control. Annex 20 provides additional detail behind our decisions.
- 4.2 In Section 12 of Volume 2 we impose a requirement on BT to provide access to inter-exchange dark fibre connectivity routes from certain BT Only exchanges and a charge control on the prices BT would charge for this access. As the inter-exchange dark fibre remedy will only be available in areas where there is no existing competition, and we believe the likelihood of additional competition over the review period is low in these areas, even with the availability of unrestricted PIA, we consider that a cost-based charge control is appropriate.
- 4.3 In Section 2 we set the form of the charge control. We explain that, since BT does not currently offer an inter-exchange dark fibre product, we need to assess starting charges based on our view of the efficient costs of providing it. We also explain that prices for dark fibre will remain fixed in nominal terms over the charge control period.
- 4.4 This section sets out our decisions for the following aspects of the inter-exchange dark fibre charge control having taken account of stakeholder responses to the Consultation:
- **Cost standard** – we set starting charges for inter-exchange dark fibre services based on fully allocated costs (FAC). When we use data from BT’s Regulatory Financial Statement (RFS), we use data prepared on a current cost accounting (CCA), as opposed to a historic cost accounting (HCA) basis. We estimate costs separately for new activities that Openreach will undertake when providing inter-exchange dark fibre services and that are not currently captured in its RFS.
 - **Inter-exchange dark fibre services** – we set prices for a set of inter-exchange dark fibre services using the same charging structure as for an EAD circuit: a connection charge, a fixed annual rental charge and a distance-related annual main link charge.
 - **Methodology for estimating efficient costs** – we identify three elements which make up the cost stack for each inter-exchange dark fibre service: passive infrastructure costs, other costs not specific to dark fibre, and dark fibre-specific costs.
 - **Adjustments to cost data** – we use BT’s 2017/18 RFS costs after making adjustments so that they are more suitable for estimating the efficient level of costs of providing inter-exchange dark fibre services.
 - **Pricing of ancillary services** – in Section 12 of Volume 2 we identify two new ancillary services specific to providing inter-exchange dark fibre services: a cessation charge and a right when tested (RWT) charge. We set prices for these services on a FAC basis using data provided by Openreach. Where existing ancillary services are relevant to providing inter-exchange dark fibre services (e.g. TRCs), they should be offered and charged on the same basis as for active services.
 - **Charge control design** – we set maximum charges for each inter-exchange dark fibre service as we do not consider a basket approach to be appropriate for these services.

4.5 The starting charges for inter-exchange dark fibre services for both single and dual fibre circuits are summarised in the table below.⁹⁶ Since we are keeping prices flat in nominal terms, this has the effect of setting the maximum charge for each service over the charge control period equal to its starting charge. For a single fibre circuit of average distance (7.1km)⁹⁷, we estimate that the cost of an inter-exchange dark fibre circuit over three years would be around £3,300 compared to around £11,500 for a comparable EAD 1 Gbit/s circuit.⁹⁸

Table 4.1: Maximum charges for inter-exchange dark fibre services

| Inter-exchange dark fibre service | Single fibre circuit | Dual fibre circuit |
|---|--|--------------------|
| Connection (per circuit) | £375 | £637 |
| Rental (per circuit per year) | £106 | £212 |
| Main link (per metre per year) | £0.124 | £0.248 |
| Cessation charge (per cessation request) | £167 | £167 |
| RWT charge ⁹⁹ (per applicable RWT fault) | £305 | £305 |
| TRCs for inter-exchange dark fibre | Same charges as TRCs for active services (controlled at CPI-CPI) | |

4.6 In the Consultation we presented indicative starting charges for connection, rental and main link services for a single fibre circuit of £733, £51 and £0.15 respectively. The main changes to our calculations (which we explain in detail in Annex 20) are that we have:

- used cost data from BT’s 2017/18 RFS rather than its 2016/17 RFS. This has the effect of reducing all charges (before making any other changes);
- revised our utilisation and overhead assumptions for estimating the cost of patch panels (the network terminating equipment for an inter-exchange dark fibre service). These revised assumptions increase the per circuit rental charge; and
- adjusted our assumptions on SLG payments to reflect our expectation that these payments are likely to be proportional to the rental charge (including main link) for an inter-exchange dark fibre circuit (as is the case for EAD circuits). This decreases the connection charge.

⁹⁶ In general, for the main inter-exchange dark fibre services (connection, rental, main link) we consider that the cost of providing a dual fibre circuit would be twice that of providing a single fibre circuit with the exception of initial testing costs (which we include in the connection charge) as discussed in Annex 20.

⁹⁷ See page 241 of BT’s 2018 Accounting Methodology Document which states an average circuit length for main links of 7.1km. <https://www.btplc.com/Thegroup/Policyandregulation/Governance/Financialstatements/2018/AMD2017-18.pdf>.

⁹⁸ The estimated cost of the inter-exchange dark fibre circuit over three years excludes non-domestic rates (NDRs) which the purchasing telecoms provider would be liable for. We discuss these later in this section.

⁹⁹ Note, the inter-exchange dark fibre services have a distinct RWT charge, which is separate from the active RWT charge.

Cost standard

Our proposal

- 4.7 We proposed to set cost-based starting charges for inter-exchange dark fibre services using a FAC cost standard. For costs covering activities that Openreach already carries out when providing active services, we proposed to base our estimates on BT's CCA FAC from its RFS. For costs covering new activities that Openreach will carry out when providing inter-exchange dark fibre services, and which are therefore not currently captured in BT's RFS, we proposed to estimate the relevant unit FAC separately.

Stakeholder responses

- 4.8 Some stakeholders commented on our proposal to set cost-based charges for inter-exchange dark fibre. We discuss these comments and our rationale for using a cost-based approach, rather than an active-minus approach, in Section 12 of Volume 2.
- 4.9 A number of stakeholders agreed with our proposal to use BT's costs in implementing cost-based pricing, while the IIG, CityFibre and Zayo considered we should use the costs of a reasonably efficient operator (REO), rather than BT's.¹⁰⁰ As explained in Section 12 of Volume 2, we consider using BT's costs remains appropriate, given the scope of the remedy.
- 4.10 We have not received any other detailed comments on our proposed choice of cost standard.

Our reasoning and decisions

- 4.11 In Section 12 of Volume 2 we explain our decision to set cost-based charges for inter-exchange dark fibre with reference to BT's costs of providing the relevant services.
- 4.12 We adopt a FAC cost standard using BT's CCA FAC from its RFS where possible when estimating the unit FAC for inter-exchange dark fibre services.
- 4.13 To inform our choice of cost standard, we note that setting charges at incremental cost would be consistent with achieving allocative efficiency.¹⁰¹ However, for a multiproduct firm with economies of scope, pricing all services at incremental cost would not be sustainable as the firm would not be able to recover its common costs. When common costs need to be recovered through charges, some (though not necessarily all) service prices need to be marked up above incremental cost.

¹⁰⁰ The IIG's response to the 2018 PIMR, 2018 BCMR and 2018 BT RFR Consultations, paragraphs 7.3.12-7.3.13; CityFibre's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraph 7.2.4; Zayo's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraph 4.1.21.

¹⁰¹ If charges are set at the forward-looking incremental cost, then purchasers who value the service at least as much as its incremental cost can purchase it.

- 4.14 Including a mark-up will lead to some inefficiency, and a pricing rule, such as Ramsey pricing¹⁰², can be used to minimise this inefficiency. However, using a Ramsey pricing approach has practical difficulties due to the amount of information on the elasticity of demand that is required. Regulators therefore tend to use other methods to set prices in practice, for example, by allocating common costs based on FAC or long-run incremental costs plus some mark-up for common costs (LRIC+).
- 4.15 FAC usually reflects using accounting rules and assumptions for the recovery of common costs for different services. When accounting data is prepared on a current cost accounting (CCA) basis, the data reflects forward-looking costs rather than the actual prices at the time the relevant assets were purchased, giving better signals for efficient investment and entry rather than historic costs. Costs on a LRIC+ basis also usually reflect forward-looking costs.
- 4.16 In practice there is often little difference between CCA FAC and LRIC+.¹⁰³ When setting charge controls on BT using BT's accounting cost data, we have typically done so based on a CCA FAC standard. Charges set on this basis should encourage entry where the entrant is as or more efficient than BT.
- 4.17 As in the Consultation, we therefore consider it appropriate to adopt a FAC cost standard using BT's CCA FAC from its RFS where possible. This approach also has the advantages of being transparent and practicable to implement as BT's costs are published as part of its RFS each year. As explained below, BT is likely to incur some additional costs specific to providing inter-exchange dark fibre services which are not currently captured in its RFS. We estimate the unit FAC of these additional costs separately and will be requiring BT to report its costs for these activities within its RFS.

Inter-exchange dark fibre services

Our proposals

- 4.18 We proposed to set prices for a set of inter-exchange dark fibre services using the same charging structure as for an EAD circuit: a connection charge, a fixed annual rental charge and a distance-related annual main link charge based on the radial distance (i.e. 'as the crow flies') between the two BT exchanges. We also proposed that charges for the dual fibre variant should be twice those of the single fibre variant (with some exceptions).

¹⁰² Ramsey pricing allocates common costs on the basis of relative inverse demand elasticity (a measure of how responsive demand is to price).

¹⁰³ For example, as discussed at paragraph 3.19 of Ofcom, 2012, *Charge control review for LLU and WLR services – Statement*. https://www.ofcom.org.uk/_data/assets/pdf_file/0024/53808/statementmarch12.pdf.

Stakeholder responses

- 4.19 Openreach considered that basing charges on its EAD product is reasonable as EAD makes up the largest share of its existing supply of circuits for inter-exchange connectivity from BT Only exchanges.¹⁰⁴
- 4.20 Openreach considered that the main link charge should be based on the route rather than radial distance between BT exchanges if the inter-exchange dark fibre remedy was not amended to specify distance or route limits. It provided an example of geographically close BT exchanges that were not connected such that the radial distance between them would be small but the route distance (after routing the circuit via other BT exchanges) would be large.¹⁰⁵
- 4.21 Vodafone agreed that inter-exchange dark fibre services should use the same charging structure as EAD circuits.¹⁰⁶
- 4.22 Virgin Media agreed that charges for dual fibre services should in general be twice those of single fibre services and also agreed with our proposed exceptions to this rule.¹⁰⁷

Our reasoning and decisions

- 4.23 In Section 12 of Volume 2 we note that most inter-exchange circuits from BT Only exchanges currently use Openreach's EAD products.
- 4.24 The typical charging structure for Openreach's EAD product is:
- a one-off connection charge;
 - a fixed annual rental charge; and
 - a distance-related annual main link charge which applies if the two ends of an EAD circuit are served by different BT exchanges (based on the radial distance between the BT exchanges).
- 4.25 We set starting charges for a corresponding set of inter-exchange dark fibre services: a connection, a rental and a main link. In relation to Openreach's view that, absent distance or route limits, the main link charge should be based on the route rather than radial distance between BT exchanges, we refer to Section 12 of Volume 2 where we set out that the inter-exchange dark fibre remedy will be subject to similar distance limits as those that apply to EAD circuits. As EAD main link charges are based on radial rather than route distances, we therefore continue to base the main link charge on the radial distance between the BT exchanges.
- 4.26 Finally, in Section 12 of Volume 2 we set out the requirement on BT to offer both single and dual fibre inter-exchange dark fibre circuits. In general, we consider that the charges for the dual fibre variant should be twice those for the single fibre variant as we have not

¹⁰⁴ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 24.

¹⁰⁵ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 36-41.

¹⁰⁶ Vodafone's response to the 2018 BCMR Consultation, part 3, paragraph 6.71.

¹⁰⁷ Virgin Media's response to the 2018 BCMR Consultation, page 19.

identified any material cost savings that would result from providing or maintaining two fibres on a circuit compared to one. There are two exceptions to this general principle which apply to the one-off connection charge and to the ancillary cessation charge. We provide more details on these exceptions below and in Annex 20.

Methodology for estimating efficient costs

Our proposals

- 4.27 We proposed to divide the cost stack for each main inter-exchange dark fibre service (i.e. connection, rental and main link) into three elements: costs relating to passive infrastructure (element A), other costs not specific to dark fibre (element B), and costs specific to dark fibre (element C).
- 4.28 We proposed to estimate the unit FAC of elements A and B using cost data for EAD 1 Gbit/s services in the Rest of UK from BT's RFS. We proposed to estimate the unit FAC of element C using an engineering-led approach building on that used by Openreach when preparing its 2016 Dark Fibre Access (DFA) Final Reference Offer for the dark fibre remedy set out in the 2016 BCMR Statement.

Stakeholder responses

- 4.29 Openreach stated that EAD 1 Gbit/s services make up the largest share of its existing supply of circuits providing inter-exchange connectivity from BT Only exchanges and considered that the costs of EAD 1 Gbit/s services therefore represent a reasonable starting point for estimating the costs of inter-exchange dark fibre services.¹⁰⁸ However, Openreach considered that as these are average costs across the Rest of UK they should “more properly be de-averaged” on the basis that the proposed inter-exchange dark fibre remedy applied only in a subset of the Rest of UK consisting of “smaller, mainly rural BT exchanges”.¹⁰⁹ Both Openreach and BT Group considered that unit costs would be higher in these areas than the Rest of UK average due to lower fibre utilisation.¹¹⁰
- 4.30 Openreach considered that the remainder of our proposed approach to estimating the FAC of providing inter-exchange dark fibre services was suitable in principle.¹¹¹ However, Openreach and BT Group expressed concerns relating to specific assumptions used in our calculations which they considered led to underestimates of the unit FAC of providing inter-exchange dark fibre services. We set out and address each of these concerns in Annex 20.

¹⁰⁸ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 25.

¹⁰⁹ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 6 and 16.

¹¹⁰ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 6 and 16; BT Group's response to the 2018 PIMR and 2018 BCMR Consultations, paragraph 5.35.

¹¹¹ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 27.

- 4.31 Vodafone did not comment on the appropriateness of our overall methodology for estimating the efficient costs of providing inter-exchange dark fibre services but did express concerns relating to specific assumptions used to calculate elements B and C of the cost stack. We address these comments in Annex 20.¹¹²
- 4.32 No other stakeholders commented on our proposed methodology for estimating the efficient costs of providing inter-exchange dark fibre services.

Our reasoning and decisions

- 4.33 Consistent with the approach set out in the Consultation, we construct the cost stack for each inter-exchange dark fibre service (i.e. connection, rental and main link) from the following three elements:
- Costs relating to passive infrastructure required for an inter-exchange dark fibre circuit (**element A**). For example, this would include the costs of the fibre that runs between the exchanges.
 - Other costs that are required for, but not specific to, an inter-exchange dark fibre circuit (**element B**). For example, this would include the costs of service centre staff who manage provision and maintenance queries or product management staff. The costs of such staff are generally allocated across a range of different services.
 - Costs that are specific to an inter-exchange dark fibre circuit (**element C**). For example, Openreach needs to install a patch panel to provide a termination point for the fibre within the exchange. Openreach does not have to install a patch panel when providing active services.
- 4.34 The approach we take to estimating the cost of each of these elements is very similar to that proposed in the Consultation. However, we have made some changes to assumptions used in our calculations (see Annex 20).
- 4.35 We continue to consider that the relevant costs that BT incurs when providing an EAD circuit provide the best reference point for estimating the likely costs of an inter-exchange dark fibre circuit. We are therefore using CCA FAC information on EAD services derived from BT's RFS to inform our estimates of elements A and B.
- 4.36 However, since Openreach does not currently provide dark fibre circuits, it is not possible to use information from within BT's RFS to inform our estimates of element C. Consistent with our consultation proposals, we therefore construct these cost estimates using an engineering-led approach, building on the approach used by Openreach when preparing its 2016 DFA Final Reference Offer based on the dark fibre remedy set out in the 2016 BCMR Statement.¹¹³

¹¹² Vodafone's response to the 2018 BCMR Consultation, part 3, paragraphs 6.72-6.73.

¹¹³ We discuss the approach to estimating these costs in more detail later in this section and in Annex 20.

Methodology for estimating elements A and B

- 4.37 To estimate elements A and B, we start from the CCA FAC unit costs within BT’s RFS for Openreach’s standard¹¹⁴ EAD connection, rental and main link services, broken down by component.¹¹⁵ We classify the components used to provide EAD services as relating either only to the active or passive elements of EAD services or as being ‘shared’ between the active and passive elements.
- 4.38 Active components (e.g. EAD Electronics Capital) are not required to provide an inter-exchange dark fibre circuit and so are not relevant to our cost estimates. However, some or all of the costs of passive components (e.g. Ethernet Main Links) and shared components (e.g. Openreach Sales Product Management) may be required to provide an inter-exchange dark fibre circuit. We explain in Annex 20 how we classify each component as being passive, active or shared, and then how much of the costs of passive components we include when calculating element A, and how much of the costs of shared components we include when calculating element B.
- 4.39 In its 2017/18 RFS, BT reported the costs of EAD services separately for each regulated combination of bandwidth (10 Mbit/s, 100 Mbit/s, 1 Gbit/s) and geographic market (‘Rest of UK’ and ‘Combined Geographic’).¹¹⁶ We base our estimates of elements A and B on the cost data for BT’s EAD 1 Gbit/s services in the Rest of UK market as per the RFS. This approach will allow stakeholders to understand the broad level of costs we use from data published in BT’s RFS.¹¹⁷
- 4.40 We use the costs for the 1 Gbit/s EAD services because our analysis shows that the resulting estimates of elements A and B do not vary materially depending on the bandwidth selected or if using a blended unit cost across all bandwidths. This is because differences in costs for EAD services by bandwidth are primarily driven by differences in the cost of active components, rather than differences in the cost of passive and shared components. In addition, as set out above, Openreach noted that the majority of its existing supply of inter-exchange connectivity from BT Only exchanges is made up of EAD 1 Gbit/s circuits.
- 4.41 We use the costs for the Rest of UK market because almost all BT Only exchanges are in this geographic market area. In principle, we recognise Openreach’s concern that, if unit costs in BT Only exchange areas are relatively higher than the Rest of UK average (e.g. due

¹¹⁴ The ‘standard’ variant of BT’s EAD service can be used to connect any two served locations. It consists of a ‘main link’ if the locations are served by different BT exchanges. It can also consist of up to two ‘local access’ segments depending on whether (and how many of) the two served locations require connecting to their corresponding local BT exchanges.

¹¹⁵ BT allocates costs to components which represent ‘discrete parts of [its] network’ such as EAD Electronics Capital, Ethernet Access Direct Fibre and Openreach Sales Product Management. Component costs are then attributed to services using usage factors. See page 201 of BT’s 2018 Accounting Methodology Document.

¹¹⁶ The 2016/17 RFS reflect the geographic market definitions adopted in the 2016 BCMR, while the 2017/18 RFS reflect the revised geographic market definitions adopted in the Temporary Conditions. Both sets of accounts report costs separately for ‘Rest of UK’; the precise area covered by ‘Rest of UK’ is slightly different, but we consider that this is the relevant geographic market to base our analysis on, regardless of whether 2016/17 or 2017/18 data is used.

¹¹⁷ Stakeholders are unlikely to be able to recreate our calculations exactly as we also reflect the base year adjustments outlined in Annex 19.

to lower fibre utilisation), then setting starting charges for inter-exchange dark fibre services with reference to costs averaged across the Rest of UK could, all other things equal, create a risk of cost under-recovery.

- 4.42 However, we consider that there could be several factors beyond fibre utilisation which could result in costs being lower than the Rest of UK average in BT Only exchange areas, such as the relative age of fibre cables and relative capitalised labour costs. Therefore, it is not clear that the costs in the areas where our remedy applies will be definitively higher or lower than average.
- 4.43 Further, to the extent that there is some risk of cost under-recovery, we consider that any under-recovery is likely to be small due to the limited scope of the remedy (inter-exchange connectivity from certain BT Only exchanges and a two-year charge control period). In addition, we expect our approach to pricing of active services to result in some cost over-recovery for BT (as set out in Section 2), which would likely offset any potential under-recovery from inter-exchange dark fibre services. Within this context, we consider that a detailed analysis of the underlying costs in BT Only exchange areas would be disproportionate for this review period.
- 4.44 Given the above, we therefore set starting charges based on average costs in the Rest of UK.

Cost data used for elements A and B

- 4.45 In Annex 19 we explain the adjustments we make to BT's 2017/18 RFS costs to better reflect our view of BT's efficiently incurred costs. We use the resulting adjusted 2017/18 costs as the base year when undertaking our cost modelling for active services (discussed in more detail in Annex 18).
- 4.46 We use the same adjusted 2017/18 costs when estimating elements A and B. The key adjustments that affect the starting charges for inter-exchange dark fibre services are that we have:
- Adjusted the valuation of BT's fibre assets using an approach which we consider to be the most suitable proxy for CCA valuation.
 - Adjusted BT's service level guarantee (SLG) payments in the base year to reflect our view of an ongoing level of SLG payments.
 - Excluded costs of Openreach's repayments programme. These relate to alterations requested or damages caused by third parties to Openreach's network. All repayments programme revenue is recognised in Openreach's residual markets and so we consider that the costs should also be recognised in residual markets, not regulated markets.
 - Excluded costs relating to the integration of EE following its acquisition by BT in 2016.
 - Adjusted BT's pension costs to reflect the change that is expected following BT's agreements with the trade unions in early 2018.
 - Adjusted one-off restructuring charges and property rationalisation provision costs to reflect a four-year moving average over the period 2014/15 to 2017/18. This reduces the year-on-year volatility of these costs.

4.47 We describe two other material adjustments in Annex 19 relating to BT’s cumulo costs and ECCs. However, neither of these adjustments has an impact on the costs of elements A and B because, for reasons outlined in more detail in Annex 20, we do not include BT’s cumulo costs or the costs of ECCs in the cost stack for inter-exchange dark fibre services:

- BT’s cumulo costs are the non-domestic rates (NDRs) that it pays on its rateable assets that include duct and fibre assets. NDRs are a form of property tax and legal precedent has established that it is the telecoms provider which lights the fibre that is responsible for the NDRs on the circuit. Therefore, we have not included any of the NDRs that BT pays in the cost stack for inter-exchange dark fibre services.
- The price of the EAD connection service includes a balancing charge for ECCs to cover construction costs up to a threshold, currently £2,800. However, we consider that most inter-exchange dark fibre orders will not require any new construction work and so we do not consider it appropriate to include a balancing charge for ECCs in the inter-exchange dark fibre connection service cost stack.

4.48 The base year FAC data that we use to derive estimates of elements A and B includes pay and non-pay operating costs, depreciation (on a CCA basis) and a return on capital employed. We have revised the return on capital employed to reflect our current view of the forward-looking cost of capital. As we are interested in BT’s efficiently incurred costs, we think it is appropriate to reflect our updated WACC estimates (rather than simply carry over the value included in BT’s RFS FAC data¹¹⁸).

4.49 In the Consultation we proposed to use our estimate of the Other UK Telecoms WACC within our disaggregation framework for BT Group WACC. As set out in Annex 21, in light of stakeholder responses and further analysis given to the circumstances of the market in which access to dark fibre is being required, we consider that the Openreach WACC will provide a better approximation of the risks in providing inter-exchange dark fibre services than the Other UK Telecoms WACC. We therefore use our estimate of the pre-tax nominal WACC for Openreach of 7.0% to estimate the return on capital employed.

Methodology for estimating element C

4.50 In the 2016 BCMR Statement we required BT to offer dark fibre services (in all markets where we found BT to have SMP) and provided guidance for how prices for the new dark fibre service should be set. We defined three components of the price within what we called the active differential, the third of which was “any objectively justifiable differences between the dark fibre product and the corresponding active service”.¹¹⁹ In Annex 25 of the 2016 BCMR Statement, we noted that some justifiable differences were likely and, for

¹¹⁸ BT’s 2017/18 RFS FAC would reflect the WACC estimated in the 2016 BCMR Statement, meaning it is several years out-of-date.

¹¹⁹ For example, see paragraph A23.117 of the 2016 BCMR Statement.

example, that different handover arrangements for dark fibre may require an additional piece of equipment (e.g. a patch panel).¹²⁰

- 4.51 Openreach published its DFA Final Reference Offer on 1 December 2016.¹²¹ This did not contain any breakdown of prices into the three components of the price as outlined in our guidance.
- 4.52 Openreach explained to us that it had included the costs of two main activities as part of the third component when setting its DFA Final Reference Offer prices: the costs of installing patch panels and initial testing costs. This was in line with our expectations in the 2016 BCMR Statement as noted above.
- 4.53 We estimate the costs of patch panels and initial testing activities using a similar methodology to that used by Openreach when preparing its prices for the December 2016 DFA Final Reference Offer. We estimate the direct equipment and labour costs (using standard labour rates) and then apply a mark-up for overhead costs to the labour rate to estimate FAC. We explain in more detail how we estimate these costs together with the underlying assumptions in Annex 20.
- 4.54 The most significant changes since the Consultation relate to our estimate of patch panel costs, where we have reviewed our port utilisation assumption and our treatment of overheads. We note that the costs of initial testing activities, which we include in the connections price, should be the same regardless of whether a one or two fibre circuit is installed. This leads to a connection price for a dual fibre circuit that is less than twice that for a single fibre circuit.

Summary of starting charges by element

- 4.55 The table below shows starting charges for the main inter-exchange dark fibre services broken down by elements A, B and C for a single fibre circuit.¹²²

¹²⁰ See paragraph A23.24 of the 2016 BCMR Statement.

¹²¹ Openreach, 2016, *Dark Fibre Access (DFA) Final Reference Offer Pricing document*.

<https://www.openreach.co.uk/org/home/products/darkfibreaccess/darkfibreaccess/downloads/DFAfinalreferenceofferpricing011216.pdf>.

¹²² The starting connection charge for a two fibre inter-exchange dark fibre circuit is £637 (less than twice the connection charge for a single fibre circuit), reflecting our assumptions on initial testing costs discussed in Annex 20. The starting rental and main link charges for a two fibre circuit are twice those for a single fibre circuit (£212 and £0.248 respectively).

Table 4.2: Starting charges for inter-exchange dark fibre services

| Element of cost stack | Connection (per circuit) | Rental (per circuit per year) | Main Link (per metre per year) |
|---|--------------------------|-------------------------------|--------------------------------|
| A: passive infrastructure costs | £2.39 | £0.00 | £0.1198 |
| B: other costs not specific to dark fibre | £260.01 | £22.82 | £0.0040 |
| C: costs specific to dark fibre | £112.50 | £83.09 | £0.0000 |
| Sub-total | £374.89 | £105.92 | £0.1238 |
| Final rounded starting charges | £375 | £106 | £0.124 |

4.56 We estimate that for a circuit of average length¹²³, the cost over three years of an inter-exchange dark fibre circuit would be around £3,300 based on the above prices, compared to around £11,500 for an equivalent EAD 1 Gbit/s circuit¹²⁴ based on current Openreach prices.

4.57 These EAD charges include BT's costs of non-domestic rates (NDRs), whereas those for the inter-exchange dark fibre circuit do not, because, as noted above, NDRs are the responsibility of the provider which lights the fibre. We estimate that a telecoms provider purchasing an inter-exchange dark fibre circuit of average length would be liable for around £2,100 in NDRs over three years, under current rating arrangements.¹²⁵

Ancillary services

Our proposals

4.58 We proposed that existing ancillary services that would be required to provide inter-exchange dark fibre services should be offered and charged on the same basis as for active services. We also identified two new ancillary services specific to inter-exchange dark fibre services and proposed to set cost-based (FAC) charges for these services, namely:

¹²³ See page 241 of BT's 2018 Accounting Methodology Document which states an average circuit length for main links of 7.1km.

¹²⁴ Three-year costs for dark fibre and EAD 1 Gbit/s circuits calculated as: connection charge + 3 * (rental charge + main link charge per km * 7.1km). Dark fibre charges used are as shown in Table 4.2 above. EAD 1 Gbit/s charges used are as shown in Openreach's EAD price list for a circuit with a 12-month minimum period (£1,850, £1,944 and £0.18 for connection, rental and main link respectively). See Openreach, Price List, Ethernet Access Direct (EAD) including EAD Enable: <https://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=0d0zetWgShsjqKWjcN2Y5WJA8BGGqsBLxL7lgSM4fRpZ6rNZujnCs99NblKJZPD9hXYmijxH6wr%0ACQm97GZMyQ%3D%3D> [accessed 2 May 2019].

¹²⁵ This estimate is based on the same assumptions as set out in the revised guidance that we gave in the 2017 NDR Statement for how BT should exclude NDRs from the price of the dark fibre services for purchasers of dark fibre circuits whose rates are assessed under the Direct Rental Comparison method. The annual NDR cost is calculated by: multiplying the 2018/19 English rate in the pound (£0.498); by the VOA's rateable value per km per annum for a single fibre for a telecoms provider with a network of 1,000km or more (£200 per km per year) from its Fibre Rent Tone (Valuation Office Agency, 2017, *Rating Manual*, Section 871: telecommunications fibre optic networks. <https://www.gov.uk/guidance/rating-manual-section-6-part-3-valuation-of-all-property-classes/section-871-telecommunications-fibre-optic-networks> [accessed 24 October 2018]); and a route distance of 7.1km.

- a cessation charge associated with the fact that an inter-exchange dark fibre circuit would need to be physically ceased by an engineer to stop it from being used when it is no longer being charged for; and
- a RWT charge intended to incentivise purchasing telecoms providers experiencing faults to carry out diagnostic tests eliminating their own networks and/or equipment as potential causes before reporting such faults to Openreach.

4.59 We estimated a FAC of £192 for the cessation charge and a FAC of £350 for a RWT charge based on 2016/17 labour rates and assumptions on the activities involved and how long each would take. We noted our intention to update estimates for 2017/18 labour rates in the Statement and to review our activities and timings assumptions to reflect stakeholder comments.

Stakeholder responses

- 4.60 TalkTalk agreed with our proposal to set a cessation charge and a RWT charge using a FAC cost standard.¹²⁶
- 4.61 Openreach argued that the costs of ceasing inter-exchange dark fibre circuits would be better recovered via the rental charge rather than a separate ancillary charge.¹²⁷
- 4.62 Openreach agreed that our proposed price for the RWT charge reflected FAC¹²⁸, but considered an additional premium would be required to discourage excessive reporting of faults to Openreach and inefficient use of Openreach engineering resources. It argued that either a fair and reasonable charges obligation or a 30% mark-up over FAC would be more appropriate.¹²⁹ Openreach also observed that our proposed RWT charge used the hourly cost of labour in standard working hours and noted that for out-of-hours RWT faults it would raise, in addition to a RWT charge, a supplementary charge for out-of-hours work based on the rate published on its TRC list.¹³⁰

Our reasoning and decisions

- 4.63 For BT to provide inter-exchange dark fibre services it would also need to provide ancillary services. These ancillary services can be divided into two groups:
- those that are equivalent to services that BT already offers for active services (e.g. TRCs); and
 - those that BT does not currently offer which would be specific to inter-exchange dark fibre services.
- 4.64 In Section 12 of Volume 2 we explain that ancillary services in the first group should be offered and charged on the same basis as for active services. We also identify two new

¹²⁶ TalkTalk's response to the 2018 BCMR Consultation, paragraph 4.82.

¹²⁷ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 86.

¹²⁸ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 79.

¹²⁹ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 84.

¹³⁰ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 85.

ancillary services specific to inter-exchange dark fibre services and propose to set cost-based prices for these services, namely:

- a cessation charge; and
- a RWT charge.

4.65 Below we summarise our pricing decisions for these two new ancillary services (more detail is provided in Annex 20).

Cessation charge

4.66 A dark fibre circuit needs to be physically broken by an engineer to stop it from being used when it is no longer being charged for. This contrasts with the cessation process for an active service, such as EAD, that can be ceased remotely using the active equipment.

4.67 We estimate a FAC of £167 for ceasing an inter-exchange dark fibre circuit based on 2017/18 labour rates and assumptions on the activities involved and how long each would take. We reject Openreach's argument that these costs would be better recovered through the rental charge (for reasons set out in detail in Annex 20) and therefore set a cessation charge of £167.

4.68 The charge does not vary with the number of fibres that are being broken in the circuit, i.e. for a dual fibre circuit, the charge is the same if one or both fibres are being broken.

RWT charge

4.69 Openreach's DFA Final Reference Offer proposed that faults reported to Openreach that were ultimately cleared as RWT by an Openreach engineer may be subject to a charge. The RWT charge is intended to encourage telecoms providers to carry out diagnostic testing before reporting a fault. This increases the likelihood that reported faults on dark fibre circuits relate to Openreach's passive infrastructure, rather than to the purchasing telecoms provider's electronic equipment or network.

4.70 Openreach's DFA Final Reference Offer specified that a RWT charge would apply only to RWT faults exceeding 6% of the overall fault volumes reported by a telecoms provider (assessed on a quarterly basis). Openreach stated that any RWT faults within this threshold would be charged using TRCs in line with the contract.¹³¹ In Section 12 of Volume 2, we set out that Openreach should be able to levy a RWT charge subject to this threshold and to set a cost-based price for a RWT charge.

4.71 We estimate a FAC of £305 associated with a RWT fault on an inter-exchange dark fibre circuit based on 2017/18 labour rates and assumptions on the activities involved and how long each would take. We explain why we disagree with Openreach's argument that a RWT charge at FAC does not provide sufficient incentives for telecoms providers to carry out their own diagnostic tests before reporting faults to Openreach in Annex 20. We therefore set a RWT charge of £305.

¹³¹ Openreach DFA Final Reference Offer pricing document, 2016, page 8.

- 4.72 Finally, we agree with Openreach’s observation that our labour rate assumptions reflect standard working hours and that it should therefore be able to raise supplementary charges based on its published TRCs for RWT faults handled out-of-hours.

Charge control design

Our proposals

- 4.73 We proposed to set maximum charges for each inter-exchange dark fibre service in each year of the charge control period. Given our proposal to keep prices flat in nominal terms over the charge control period, this had the effect of setting the maximum charge for each service over the charge control period equal to its starting charge. We did not consider a basket approach to be practical due to the uncertainty of demand for these new services.

Stakeholder responses

- 4.74 Openreach agreed that the uncertainty of demand for inter-exchange dark fibre services meant that a basket control would not be practical.¹³²
- 4.75 Vodafone said that it understood the difficulties of utilising a basket control for a new product and therefore agreed with our proposal to set maximum charges for each inter-exchange dark fibre service. It considered this approach would provide purchasing telecoms providers with “the most certainty as to prices, which is very important in the early adoption years”.¹³³

Our reasoning and decisions

- 4.76 Our approach to charge control design (as explained in Section 3) is generally to include services in broad baskets of related services, where appropriate, as the flexibility it provides is more likely to result in charges that recover common costs in an efficient way.
- 4.77 In Section 3 we set out our use of prior year weights (where feasible) when assessing charge control compliance. However, Openreach does not currently offer inter-exchange dark fibre services and so these services will not have associated volumes when they are first offered commercially. Therefore, we would not be able to use prior year weights to assess compliance in the first year of the control.
- 4.78 Moreover, to give Openreach sufficient time to set its year two price in compliance with the control, we would be unable to consider volumes across the entirety of year one of the control. Given this limitation, we think it unlikely that there will be sufficiently representative volume data on which to base prior-year weights and hence, allow Openreach to calculate charges that comply with the control.

¹³² Openreach’s response to the 2018 BCMR Consultation (LLCC), paragraph 18.

¹³³ Vodafone’s response to the 2018 BCMR Consultation, part 3, paragraph 6.71.

- 4.79 One alternative would be to use current year weights to assess compliance with our controls on inter-exchange dark fibre services. However, given the disadvantages with this approach outlined in Section 3, we do not consider that it is appropriate. In particular, as explained in Section 12 of Volume 2, we recognise that dark fibre orders may take time to ramp up following launch and that the speed of take up is uncertain. Given the uncertainty associated with the introduction of new services, it would be even more difficult for us to assess BT's forecasts and therefore, there would be greater risk of the controls being able to be gamed.
- 4.80 Consequently, we do not consider it is practicable or appropriate to include inter-exchange dark fibre services in a basket. Instead, we set individual controls on each service.
- 4.81 In the Consultation we discussed two forms of individual controls: a target average for each charge over the year or of a maximum cap on each charge across the year.¹³⁴
- 4.82 Under a target average approach, prices are weighted by the proportion of the year that the price is in effect. Given the uncertainty around the growth of inter-exchange dark fibre volumes during the charge control period, we believe there is a material risk that the charge control could be gamed if we used a target average charge approach.
- 4.83 Therefore, to avoid issues associated with time weighting uncertain volumes over the year we set maximum charges for each individual inter-exchange dark fibre service. This is consistent with our consultation proposal, with which no stakeholders disagreed.
- 4.84 In Section 2 we set out our decision to keep prices flat in nominal terms over the charge control period. Combined, these decisions have the effect of setting the maximum charge for each inter-exchange dark fibre service over the charge control period equal to its starting charge (derived using the methodology described in this section). Table 4.1 at the beginning of this section summarises these maximum charges.

¹³⁴ We note that neither of these approaches limits Openreach from setting the prices of inter-exchange dark fibre services below the maximum charges we have set.

5. Implementation, compliance and legal tests

- 5.1 In this section we explain how the charge controls will work in practice. We explain how the legal instrument at Annex 26 gives effect to our decisions and how we will check that BT complies with the controls.¹³⁵
- 5.2 In addition, we explain why we consider that our decision to impose charge controls in the form set out in the legal instrument satisfies the legal tests set out in the Act and how, in making our decisions, we have complied with our duties. We also explain how we have taken due account of all applicable recommendations of the European Commission under Article 19(1) of the Framework Directive, and the BEREC Common Positions.

Implementation of decisions

- 5.3 SMP Condition 10 in Annex 26 has three key effects. It:
- sets charge controls to 31 March 2021 for the services specified;
 - ensures that average charges subject to CPI-CPI charge controls do not change by more than the value of the charge control formula, as specified, and/or charges do not exceed the sub-caps; and
 - requires BT to provide information annually to Ofcom to enable compliance monitoring.
- 5.4 In this sub-section, we discuss the practicalities of:
- how the charge controls will work alongside other regulation;
 - the baskets and services covered by the conditions; and
 - how we will ensure compliance with the charge ceilings created by the CPI-CPI controls.

Interaction with other remedies

- 5.5 In Section 11 of Volume 2 we impose remedies, in the form of SMP conditions, to address the competition concerns that arise where BT has SMP. The SMP conditions require BT to:
- provide network access on reasonable request, which includes that access must be provided on fair and reasonable terms and conditions (which includes charges in the absence of applicable charge controls or basis of charges obligations) (Condition 1);
 - provide specific forms of network access (Condition 2);
 - not unduly discriminate in relation to matters connected with network access (Condition 3);
 - provide network access on an Equivalence of Inputs basis, except in relation to existing network access not being provided on an Equivalence of Inputs basis as at the date of entry into force of the SMP condition and non-price elements of WDM services (Condition 4);

¹³⁵ Following Openreach's response to the Consultation, we have amended the legal instrument to clarify the drafting of certain conditions. See paragraph 154 of Openreach's response to the 2018 BCMR Consultation (LLCC).

- publish a Reference Offer (Condition 5);
- notify charges and technical information (Conditions 6 and 8);
- comply with all such quality of service requirements and publish quality of service KPIs as Ofcom may, from time to time, direct in relation to network access provided by BT pursuant to Conditions 1 and 2 (as applicable) (Condition 7);
- set out and follow a process in relation to requests for new forms of network access (Condition 9); and
- comply with rules on regulatory financial reporting (Condition 11).

5.6 The leased lines charge controls that we impose as SMP Condition 10 are designed to work alongside the conditions listed above to address, in a proportionate manner, the competition concerns identified in Section 10 of Volume 2. They do not duplicate other remedies, whether in part or in full, or combine with them to produce unintended consequences.

Baskets and services covered by the conditions

5.7 The structure of SMP Condition 10, which gives effect to the basket design discussed in Section 3, is as follows:

- SMP Condition 10A covers Ethernet services grouped into one of two baskets: the Ethernet (1 Gbit/s and below) Services Basket or the Ethernet and WDM (over 1 Gbit/s) Services Basket. It also covers a sub-basket for Cablelink services, sub-caps and controls on ancillary services. The annex to Condition 10A lists the groups of services that fall within each basket.
- SMP Condition 10B covers dark fibre services, with each service subject to an individual maximum charge (there are no dark fibre baskets). Condition 10B.1 lists the services that we expect to fall under this control.
- SMP Condition 10C covers accommodation services and overlapping accommodation services contained within the accommodation services basket. The Annex to Condition 10C lists the services that fall within this basket.
- SMP Condition 10D covers ECCs. There is a basket for Direct ECCs and a basis of charges obligation on Contractor ECCs. The annex to Condition 10D lists the services that fall within the Direct ECC Services basket and under the basis of charges obligation on Contractor ECC Services.
- SMP Condition 10E covers TRCs contained in one basket. The annex to Condition 10E lists the services that fall within this basket.

Formulae to determine how the Percentage Change is calculated for each service

Our proposals

5.8 We proposed to impose:

- conditions to set charge controls until 31 March 2021 for the services specified by means of a **Controlling Percentage formulae**; and

- conditions to ensure that average charges subject to charge controls are no higher than required by the Controlling Percentages, as specified by means of the **Percentage Change formulae**.

5.9 For the Controlling Percentage formulae used in the first year of the charge control, we proposed to use the CPI for the 12 months prior to 30 November 2018. For all subsequent years, we proposed that the value of CPI for the 12 months prior to 30 November immediately before the beginning of the relevant year should be used to assess compliance with the charge control.

5.10 We proposed not to use starting charge adjustments in our formulae.

5.11 Where a charge control has not previously been imposed, we proposed:

- for active VHB services, the base price is the price charged on 1 October 2018, excluding certain discounts as set out below; and
- for dark fibre, a base price for each controlled service has been established using data requested from BT.¹³⁶

Stakeholder responses

5.12 Openreach disagreed with the use of November CPI to set the controlling percentage for the following year, requesting that the October CPI be used instead.¹³⁷ It argued that, since the November CPI is not known until mid-December, there would not be enough time for it to notify price increases in time for the start of the compliance year (1 April).¹³⁸

5.13 Openreach also disagreed with our proposed use of prices as at 1 October 2018 for the controlling percentage for active VHB services and the use of a prior year weighted average price for the sub-cap. It argued that, for consistency, we should change the controlling percentage for active VHB services to match the sub-cap weighted formula.¹³⁹

Our reasoning and decisions

5.14 In line with our proposals, we have decided to impose SMP conditions which have the following effects:

- Set charge controls until 31 March 2021 for the services specified. This is done by means of the **Controlling Percentage formulae**.
- Ensure that average charges subject to charge controls are no higher than required by the Controlling Percentages, as specified. This is done by means of the **Percentage Change formulae**.

5.15 Where a charge control has not previously been imposed:

- for active VHB services, the base price will be the price charged on 1 October 2018, excluding certain discounts as set out below; and

¹³⁶ Our approach to dark fibre pricing is discussed in Annex 20.

¹³⁷ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 139-143.

¹³⁸ As set out below, BT has to give 90 days' notice for price increases.

¹³⁹ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 155.

- for dark fibre, we have established a base price for each controlled service using data requested from BT.¹⁴⁰
- 5.16 In the Consultation, we proposed to use CPI for the 12 months prior to 30 November 2018 for the Controlling Percentage formulae used in the first year of the charge control. As this would be at least four months prior to the start of the charge control, we considered that this would provide BT with sufficient time to implement price changes within the appropriate notification periods.
- 5.17 We agree with the point raised by Openreach and, given the need to allow Openreach sufficient time for governance between CPI becoming available and the price change notifications, we have decided to use the October CPI for the Controlling Percentage formulae used in the first year of the charge control. For the second year, the value of CPI for the 12 months prior to the 30 October immediately before the beginning of the relevant year will be used to assess compliance with the charge control.
- 5.18 We note Openreach’s response with regard to active VHB services and agree that it would be better to be consistent. However, we consider it appropriate to change the sub-cap test rather than the controlling percentage for active VHB services. As such, we have amended Condition 10A.10 of the legal instrument so that the sub-cap test for active VHB services is defined as the price on 1 October 2018, as opposed to the prior year weighted price, to be consistent with the controlling percentage calculation.
- 5.19 Table 5.1 below outlines the specific parts of the conditions where the charge control formulae relevant to each of the baskets and services are set out.

Table 5.1: Charge control formulae applied to baskets and services

| | Controlling Percentage | Percentage Change |
|---|------------------------|-------------------|
| Ethernet (1 Gbit/s and below) Services Basket | Condition 10A.4 | Condition 10A.3 |
| Cablelink Sub-basket | Condition 10A.4 | Condition 10A.3 |
| Each individual Ethernet (1 Gbit/s and below) Service | Condition 10A.8 | Condition 10A.10 |
| Ethernet and WDM (Over 1 Gbit/s) Services Basket | Condition 10A.4 | Condition 10A.3 |
| Each individual Ethernet (Over 1 Gbit/s) Service | Condition 10A.8 | Condition 10A.10 |
| Generic Resilience Facilities Fee | Condition 10A.8 | Condition 10A.10 |

¹⁴⁰ Our approach to dark fibre pricing is discussed in Annex 20.

| | Controlling Percentage | Percentage Change |
|--|--|-------------------|
| Each Exempt Ancillary Service ¹⁴¹ | Condition 10A.9 | Condition 10A.10 |
| Accommodation Services Control | Condition 10C.3 | Condition 10C.2 |
| Direct ECC Services Basket | Condition 10D.3 | Condition 10D.2 |
| Direct ECC Services Sub-cap | Condition 10D.8 | Condition 10D.7 |
| Ethernet TRC Services Control | Condition 10E.3 | Condition 10E.2 |
| Contractor ECC Services Control | Contractor ECC Services are controlled with a basis of charges obligation, as set out in Condition 10D.9 | |
| Dark Fibre Access Services | Dark Fibre Access Services are controlled with specific prices, as set out in Condition 10B.1 ¹⁴² | |

Rules used to determine compliance

Deficiency and excess provisions

Our proposals

- 5.20 Deficiency and excess provisions set out how any under or over-recovery in a charge control period should be dealt with. We proposed to use these provisions for the individual services and baskets of services which we proposed to charge control.

Stakeholder responses

- 5.21 Openreach argued that it is difficult to see how revenues are to be repaid given baskets with hundreds of items, and asked Ofcom to either specify how Openreach are to comply with the rule or to remove the requirement.¹⁴³
- 5.22 TalkTalk agreed with allowing prices above or the below the charge control to be offset in the following year, but noted that it considers Openreach has an incentive to overcharge since it does not have pay interest when it does so.¹⁴⁴

Our reasoning and decisions

- 5.23 We are using deficiency and excess provisions for the individual services and baskets of services that are subject to charge controls as part of this review. The provisions adjust the

¹⁴¹ In line with our decision in Section 3, following the Consultation, we have amended the legal instrument to remove Ethernet ancillary services (excluding Cablelink, Interconnection services, ECCs, TRCs and Accommodation services) used to support Ethernet and WDM services from both the 1 Gbit/s and below basket and the VHB basket, and impose a CPI-CPI sub-cap on each ancillary service.

¹⁴² Following the Consultation, we have amended the legal instrument to specify prices for two fibre services.

¹⁴³ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraphs 156-158.

¹⁴⁴ TalkTalk's response to the 2018 BCMR Consultation, paragraph 5.66.

controlling percentage for the charge control to ensure that prices are at the correct level in the second year of the control if there is any deficiency or excess in the first year (i.e. if BT charges below or above the cap in the first year of the control, prices are not held at that level in the following year). These provisions are set out in detail in SMP Condition 10A.6 and have two functions:

- Where BT charges below the cap, subject to the exclusion of certain discounts as set out below, they give the ability to use the deficiency created by setting charges below the charge control requirements within a given year towards the charge control compliance in the following year. Therefore, the deficiency avoids penalising BT for bringing forward a charge reduction or increasing charges less than permitted within the cap.
- Where BT charges above the cap, it is required to make up the excess the following year by charging less than the cap would otherwise have allowed. We expect any difference to be small and not adversely affect the pricing stability created by the CPI-CPI control.

5.24 We consider that symmetrical provisions remain appropriate, i.e. symmetrical with respect to whether BT charges below the cap or whether the control is exceeded, and we therefore continue to use deficiency and excess provisions for our charge controls.

5.25 We also continue to require BT to make repayments to other affected telecoms providers (as soon as is reasonably practicable) if it charges in excess of the cap in any given year for any services or basket of services, excluding dark fibre. In response to TalkTalk's point, this should provide Openreach with further incentive not to overcharge.

5.26 We do not consider there to be justification to remove the requirement for Openreach to make repayments in cases of overcharging. The text in the legal instrument gives Openreach the flexibility to decide how best to comply with the requirement if overcharging were to occur. Openreach can therefore choose the most appropriate mechanism on a case by case basis.

Use of discounts for compliance calculations

Our proposals

5.27 We proposed that time-limited, volume and geographic discounts should not be included in the calculations for determining compliance with our charge controls. However, we proposed to continue to allow three-year and five-year term products to count towards compliance.

Stakeholder responses

5.28 Several stakeholders agreed with the exclusion of time-limited discounts from BT's compliance with the charge control.¹⁴⁵

¹⁴⁵ The IIG's response to the 2018 PIMR, 2018 BCMR and 2018 BT RFR Consultations, paragraphs 7.4.6-7.4.8; TalkTalk's response to the 2018 BCMR Consultation, paragraph 5.64; UKCTA's response to the 2018 BCMR Consultation, paragraph 33; Zayo's response to the 2018 BCMR and 2018 BT RFR Consultations, paragraph 4.1.29.

- 5.29 However, Openreach disagreed in principle with the exclusion of time-limited discounts counting towards compliance, arguing that such discounts provide flexibility not otherwise available to it, which outweighs the risk to pricing stability.¹⁴⁶ Openreach argued that, for a short charge control period, the exclusion of discounts will have little impact.
- 5.30 Both the IIG and Zayo expressed a concern that the exclusion of these time-limited discounts toward compliance does not in itself prevent BT from using these discounts as a means to engage in anti-competitive pricing.¹⁴⁷
- 5.31 Openreach also requested that we broaden the definition of a three-year term product to include any product where the charges over three years are the same as the standard one-year term product and without the restriction that this does not include a connection charge.¹⁴⁸
- 5.32 TalkTalk argued that excluding geographic discounts from counting towards compliance would not remove Openreach’s incentive to price discriminate geographically since it may remain profitable to reduce prices only in competitive areas to deter competition.¹⁴⁹

Our reasoning and decisions

- 5.33 We have decided not to allow time-limited discounts (marketed as special offers) to count towards BT’s compliance with the charge control. This approach is consistent with our consultation proposals and our decisions in the 2018 WLA Statement.¹⁵⁰
- 5.34 These discounts are no longer being used to encourage migration from legacy to new technologies and, in previous years, have not led to permanent price reductions. The list price of services that have been the subject of time-limited discounts have remained relatively static despite frequent time-limited discounts.
- 5.35 In addition, we are concerned that time-limited discounts have caused frequent, and sometimes significant, fluctuations in the effective price of services. This does not align with the pricing stability that is important in encouraging investment.
- 5.36 We do not consider that excluding time-limited discounts counting towards compliance restricts Openreach’s flexibility. Openreach will have the flexibility to still offer a time-limited discount which is beneficial to it and its customers, with little risk of under-recovery (see Annex 18).
- 5.37 We understand the concerns raised by the IIG and Zayo with regard to Openreach’s ability to use discounts in an anti-competitive manner. However, for the reasons set out in Section 3, we do not consider that Openreach has the incentive to significantly reduce

¹⁴⁶ Openreach’s response to the 2018 BCMR Consultation (LLCC), paragraphs 144-146.

¹⁴⁷ The IIG’s response to the 2018 PIMR, 2018 BCMR and 2018 BT RFR Consultations, paragraphs 7.4.6-7.4.8; Zayo’s response to the 2018 BCMR and 2018 BT RFR Consultations, paragraphs 4.1.29-4.1.31.

¹⁴⁸ Openreach’s response to the 2018 BCMR Consultation (LLCC), paragraphs 104-107. In the 2016 BCMR, we allowed the three-year term product to include any product where the rental charges over three years are the same as for the standard one-year term, but with no connection charge.

¹⁴⁹ TalkTalk’s response to the 2018 BCMR Consultation, paragraphs 5.60-5.62.

¹⁵⁰ Ofcom, 2018. *Wholesale Local Access Market Review – Volume 2*, pages 81-82.

prices on any particular products, and so the risk to telecoms providers of allowing Openreach to offer time-limited discounts is fairly small. As also discussed in Section 3, where we do believe that Openreach has the ability and incentive to make targeted price changes to increase the competitiveness of downstream BT Group providers, we typically address this through targeted sub-baskets or sub-caps on the relevant services. In addition, we note Openreach's own response, wherein it states that the level of special offers in recent years has been exceptional and would not necessarily be repeated to the same extent in this review period.¹⁵¹

- 5.38 Having said that, given the way that Openreach has used time-limited discounts in the past and the lack of a need for these discounts to be used to encourage migration, we consider it appropriate to prevent these discounts from counting towards compliance.
- 5.39 We are continuing to allow three-year and five-year term products to count towards compliance. We allowed these products to count towards compliance in the 2016 BCMR and defined them in such a way that the total cost of the product should be related to the total cost of a standard one-year product that is consumed over a three or five-year term, with no upfront connection charge.
- 5.40 In response to Openreach's request to broaden the definition of three-year term products by removing the restriction for no connection charge, we do not consider it would be appropriate to do so.
- 5.41 When we allowed three-year term products to count towards compliance, the evidence obtained suggested that the majority of demand for three-year term products stemmed from telecoms providers wanting to spread connection charges over a three-year contract term in order to ease cash flow constraints. Aside from the customer request Openreach referenced in its response, we are not aware of any significant demand for a three-year term product with higher connection fees.
- 5.42 Furthermore, this approach is straightforward to implement and provides a compliance framework that is transparent and relatively easy for Openreach and its customers to understand. Broadening the definition by removing the requirement for no connection charge might allow Openreach flexibility to offer three-year term products that are better suited to the needs of customers, but is much more difficult to enforce in compliance terms and might not control the difference between one-year term and three-year term charges as tightly.
- 5.43 We are continuing to not allow volume discounts to count towards compliance. This is in line with our approach in the 2016 BCMR Statement.¹⁵² Volume discounts would favour downstream BT due to its high market share and these discounts could distort competition downstream. As such, we are not allowing them to count towards the charge control.
- 5.44 We are also continuing not to allow geographic discounts to count towards compliance. Geographic discounts could be used in an anti-competitive manner by enabling BT to

¹⁵¹ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 145.

¹⁵² 2016 BCMR Statement, Annex 34.

discount prices in competitive areas and cross-subsidise them by raising standard prices in less-competitive areas. The charge control will apply to all geographic areas in the UK where we have found BT to have SMP and our approach restricts Openreach's ability and incentives to use geographic discounts for anti-competitive reasons. However, competitive conditions and the costs of provision for leased lines are not the same in each geographic market and BT is therefore allowed to offer geographically differentiated pricing under the control (see Section 13 of Volume 2).

Use of prior period revenues to weight price changes by BT

Our proposals

5.45 We proposed to use prior year weights to assess compliance with the basket controls.

Stakeholder responses

5.46 Openreach stated that prior year revenue weights are a tried and tested approach to assessing basket compliance, a key benefit being that there is certainty on compliance at the point that price reductions are made.¹⁵³

5.47 However, Openreach did note that this approach is open to the risk of gaming when it is applied to broad baskets, made up of services with different growth rates, as it can foster an incentive to focus price reductions on services with declining volumes.¹⁵⁴ TalkTalk also argued that we should monitor the basket for gaming such as the increasing (relatively) of the prices of higher growth products which exploits the prior year weighting method to gain excessive levels of revenue.¹⁵⁵

Our reasoning and decisions

5.48 As set out in Section 3, we use prior year weights for the basket controls. Where we are using baskets, we weight each service within a basket to allow us to assess BT's compliance with the controls.

5.49 Our approach is consistent with the 2016 BCMR Statement. However, in contrast to the 2016 BCMR, we use RFS revenues as the basis for weighting services in this charge control, reducing the time lag for prior period weights by moving to prior year revenue in the financial year immediately preceding the charge control period. This is consistent with the approach we adopted in the 2018 WLA charge control. It will also be more transparent, as BT will use revenues and volumes reported in its RFS.

5.50 As noted by Openreach and TalkTalk, the main disadvantage of such an approach is that it is vulnerable to a form of gaming involving targeted price increases on services. Partly to mitigate this disadvantage, we to use a sub-cap on each individual charge in a basket where appropriate (see Section 3).

¹⁵³ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 101.

¹⁵⁴ Openreach's response to the 2018 BCMR Consultation (LLCC), paragraph 101.

¹⁵⁵ TalkTalk's response to the 2018 BCMR Consultation, paragraph 5.67.

Balancing charge and threshold charge for ECCs

Our proposals

- 5.51 We proposed that BT should be given the flexibility to adjust the balancing charge, but not the threshold charge, throughout the control period. We proposed that at the end of each financial year, BT should determine what its ECC revenues would have been in the prior period in the absence of a balancing charge for EAD connections.

Stakeholder responses

- 5.52 Openreach said that it would not be possible for it to implement the draft legal instrument because it would require Openreach to base the balancing charge for the relevant year on data from the prior year. This would require Openreach to use charges up until 31 March to calculate the charges it would apply from 1 April, which would leave no time for internal governance on setting the level of the charge, or for the relevant notification periods. Openreach said that this analysis would need to be started three to five months earlier, before the prior year data is available. It therefore requested that we amend the wording on the Balancing Charge, requiring that it is notified within three months of the start of the relevant year.¹⁵⁶

Our reasoning and decisions

- 5.53 As explained in Section 3, we give BT the flexibility to adjust the balancing charge, but not the threshold charge, throughout the control period. To ensure that BT uses the flexibility appropriately, it is required to demonstrate as part of its charge control compliance that its balancing charge is set to ensure revenue neutrality. Many of the difficulties associated with complying with a basket control also apply to setting an appropriate balancing charge. For example, ensuring revenue neutrality in the current year requires BT to forecast the incidence and distribution of ECCs.
- 5.54 At the end of each financial year, BT should determine what its ECC revenues would have been in the prior period in the absence of a balancing charge for EAD connections, i.e. if all ECCs were charged using the Openreach price list. BT should then divide the ‘exempted’ ECCs by the number of EAD connections in the prior financial year to arrive at the new balancing charge. Further details of this calculation are provided in Annex 26.
- 5.55 As Openreach set out in its response, it is unable to begin setting the balancing charge until it has the necessary data from the prior year, and some time is needed for processing the data and giving stakeholders notice of changes to the level of the balancing charge. We therefore have amended the legal conditions to allow Openreach two months after the end of the prior financial year to calculate and notify the new balancing charge. Openreach will be required to maintain the existing balancing charge until the end of the notification period, at which point the new balancing charge must come into effect.

¹⁵⁶ Openreach’s response to the 2018 BCMR Consultation (LLCC), paragraph 132.

BT may change list prices at any time and the formula accounts for the timing of those changes

- 5.56 BT can change standard charges for services at any time during a particular year. However, we are using a charge control formula which explicitly takes into account when changes to charges occur (subject to the exclusion of certain discounts discussed above).
- 5.57 If BT was to introduce a charge reduction on the last day of a particular year, it would be better off in revenue terms compared with making a charge reduction on the first day of the year. Our compliance formula adjusts for this. If BT reduces charges later in the formula year, the reduction would need to be greater to achieve compliance with the basket control, because their revenue prior to making the reduction would be greater than if the charge was reduced earlier in the formula year.

Notification periods for price reductions

- 5.58 We impose requirements on BT relating to the notification period for changes to charges, specifically 28 days' notice for new services or price reductions and 90 days' notice for all other changes, including price increases. We discuss our decisions relating to notification periods in Section 11 of Volume 2.

'Material changes' to charge-controlled services

- 5.59 We include general provisions which relate to material changes that could impact the charge controls' effectiveness. This is because we are setting controls with reference to a set of products that Openreach currently offers (except dark fibre services), recognising that they may be amended or removed (or new services relevant to the remedy introduced) within the charge control period.
- 5.60 These provisions give us the power to update the controls if such changes warrant it by giving a direction under these conditions, following a consultation under the relevant procedures under the Act.
- 5.61 The provisions are included in each of the SMP conditions and cover any material changes, other than to a charge, including to:
- the date on which BT's financial year ends;
 - the basis of the Consumer Price Index; and
 - a material change to any product or service, which can include the introduction of a new product or service wholly or substantially replacing the existing product or service.
- 5.62 For example, a single new service that falls within the scope of the relevant Ethernet basket cap should remain subject to that same overall basket cap for the duration of the charge control period, regardless of whether BT has altered the underlying technology used to provide that service. We consider that this provision ensures there is an incentive to introduce new, more efficient services, and protects the effectiveness of the remedies.
- 5.63 Where Openreach introduces multiple services that replace a previous existing service, the new services will remain subject to the same overall basket (and, where relevant, sub-

basket) control for the duration of the charge control period. In such a circumstance, the same form of charge control will apply to each individual service.

- 5.64 Completely new products (i.e. not a replacement product) which are introduced during the charge control period will not be subject to the charge control. If a product is withdrawn with no replacement, the prior year weight should be set to zero.

Information from BT

- 5.65 We require BT to supply information that we use to monitor its compliance with the controls. Consistent with the obligations in place in the previous charge controls, BT is required to provide this information annually to Ofcom, no later than three months after the end of the charge control year. This requirement is set out in SMP Conditions 10A.16, 10B.3, 10D.16 and 10E.7.
- 5.66 BT is also required to publish non-confidential compliance schedules, which we will set out in our decisions on regulatory reporting. The regulatory reporting obligations we impose on BT address the point raised by UKCTA that we should ensure that all stakeholders are able to assess whether BT is in compliance with its price control obligations given the flexibility it is awarded by the CPI+5% sub-cap.¹⁵⁷

Non-compliance by BT

- 5.67 We will carefully consider, and where appropriate investigate, any evidence of non-compliance. This evidence could come from a range of sources, such as information submitted by our stakeholders, our regular review of BT's RFS, information gathered as part of our market reviews, and through use of our investigatory powers. Any such assessment would be conducted in accordance with our enforcement guidelines.¹⁵⁸

Legal tests

- 5.68 We consider that each of the charge controls on wholesale leased lines services satisfies the legal tests set out in the Act and is made in accordance with our legal duties.
- 5.69 We set out below why we consider that each control:
- is authorised under section 87(9) and satisfies the related conditions in section 88;
 - fulfils the tests in section 47(2) of the Act;
 - has been formulated in compliance with our relevant statutory duties, particularly those under sections 3 and 4 of the Act; and
 - has been formulated taking utmost account of the EC Leased Lines Pricing Recommendation and BEREC Common Position.

¹⁵⁷ UKCTA's response to the 2018 BCMR Consultation, paragraph 31.

¹⁵⁸ Ofcom, 2017. *Enforcement guidelines for regulatory investigations*.

https://www.ofcom.org.uk/data/assets/pdf_file/0015/102516/Enforcement-guidelines-for-regulatory-investigations.pdf.

Authorisation under section 87(9); satisfaction of section 88 conditions

- 5.70 Section 87(9) of the Act authorises Ofcom to set SMP conditions which impose on the dominant provider:
- price controls in relation to matters connected with the provision of network access to the relevant network, or with the availability of the relevant facilities;
 - rules in relation to those matters about the recovery of costs and cost orientation;
 - rules for those purposes about the use of cost accounting systems; and
 - obligations to adjust charges in accordance with directions given by Ofcom.
- 5.71 Section 88 of the Act states that we may only set an SMP condition falling within section 87(9) where it appears from the market analysis that there is a relevant risk of adverse effects arising from price distortion, and setting the condition is appropriate for the purposes of:
- a) promoting efficiency;
 - b) promoting sustainable competition; and
 - c) conferring the greatest possible benefits on the end-users of the public electronic communications services.
- 5.72 Section 88 also requires that we must take account of the extent of the investment in the matters to which the condition relates of the person to whom the condition is to apply.
- 5.73 We consider that the SMP conditions that we have decided to set satisfy the tests set out in section 88 of the Act. Our reasoning is set out in detail in the relevant parts of this statement relating to the different charge controls. The points set out below should be read in conjunction with the more detailed analysis in those sections.
- 5.74 We consider that, in the absence of appropriate *ex ante* regulation, there is a relevant risk of adverse effects arising from BT fixing and maintaining some or all of its charges for the services we have decided to include in the controls at an excessively high level.

Promoting efficiency

- 5.75 We consider that each of the charge controls is appropriate to promote efficiency. In setting the controls, we encourage BT to achieve greater productive efficiency by allowing it to keep any profits that it earns from reducing costs over and above the efficiency gains we have assumed in setting the control.
- 5.76 We consider that each of our charge controls also promotes efficiency by, *inter alia*:
- ensuring BT cannot price excessively;
 - allowing BT to earn a reasonable rate of return (the cost of capital) if it is efficient;
 - providing BT with flexibility to change prices to meet demand conditions by recovering common costs in the most efficient manner across groups of services (subject to any relevant sub-caps); and
 - supporting incentives to invest for BT and others.

- 5.77 In the case of the controls on charges for active leased line services, we are placing greater emphasis on investor confidence in current and planned investments, with the aim to promote network-based competition. This should support the incentives for BT and others to invest by providing pricing stability, which in turn should encourage BT and other providers to deliver cost efficiencies in providing the relevant services.
- 5.78 In the case of the control on charges for Dark Fibre Access, by bringing prices to the current efficient level of cost, our charge controls will increase allocative efficiency. By fixing prices for the duration of the review period, we are also sending BT a strong incentive to reduce costs over the period, as well as to access seekers to achieve cost savings in their procurement of backhaul services from Openreach, improving productive efficiency.
- 5.79 As explained below, our charge controls have been designed to support our strategy to promote network-based competition, which we expect to deliver long-term dynamic efficiencies, ultimately benefiting consumers.

Promoting sustainable competition and conferring the greatest benefit on end-users

- 5.80 We also consider that each of the charge controls is appropriate to promote sustainable competition and to confer the greatest possible benefits on end-users of public electronic communications services.
- 5.81 In particular, each charge control prevents excessive pricing and promotes sustainable retail competition and network investment, which we consider is likely to confer the greatest benefits on end-users of public electronic communications services. We have identified the appropriate services to be subject to controls in Volume 2.
- 5.82 In the case of the controls on charges for active leased line services, the controls aim to provide pricing stability within a relatively short review period and ensure sufficient protection for access seekers that rely on buying wholesale products from BT. Our strategy places greater emphasis on investor confidence in current and planned investments by not continuing to reduce BT's wholesale prices down to a measure of cost. In turn, this aims to preserve incentives for BT and other providers to invest in the infrastructure necessary to support the latest communications technologies and so promote network-based competition which will lead to long-term benefits for consumers.
- 5.83 In the case of the control on charges for Dark Fibre Access, we impose a cost-based control set with reference to the relevant costs of BT's underlying passive infrastructure necessary for connections between exchanges. A cost-based control means that take up of the remedy, and therefore the benefits of dark fibre access for end users, identified in Section 12 of Volume 2, is likely to be greater than if a price premium were allowed for to incentivise investment by other networks.
- 5.84 The efficiency gains that we refer to above should, in the longer term, be passed onto consumers through reductions in prices and improvements in quality of service, either due to competition or subsequent charge controls.

5.85 Some of our charge controls apply to baskets, so we are imposing appropriate safeguards to ensure that BT does not use the pricing flexibility offered to it in a way that would harm competition.

Consideration of investment

5.86 In setting the charge controls, we have taken into account the need to ensure BT has the incentives to invest and innovate where it is efficient to do so.

5.87 In the case of the controls on charges for active leased line services, our consideration of investment has included the following:

- in deciding on our overall approach, we have placed weight on the benefits of pricing stability and have sought to account for the scope of new investment;
- we are supporting investor confidence in current and planned investments by not continuing to reduce BT's wholesale prices down to a measure of cost; and
- to inform our decisions we have also modelled BT's costs to ensure BT can make a reasonable return on investment.

5.88 In the case of the controls on charges for Dark Fibre Access, our consideration of investment has included the following:

- in modelling BT's costs, we have included BT's efficiently incurred costs and built in a reasonable return on investment; and
- we have ensured that the availability of cost-based dark fibre does not undermine the case for competitive network investment by appropriately limiting the scope of the dark fibre remedy.

5.89 We have also taken account of BT's investment in leased lines and have designed the controls to ensure BT retains the opportunity to make a return on its original investment.

5.90 Therefore, we consider that each of the charge controls appropriately balances ensuring BT's charges are not excessive with allowing appropriate incentives for BT to invest and innovate.

Fulfilment of section 47 tests

5.91 Any SMP condition must also satisfy the tests set out in section 47 of the Act, namely it must be:

- objectively justifiable in relation to the networks, services or facilities to which it relates;
- not such as to discriminate unduly against particular persons or a particular description of persons;
- proportionate as to what it is intended to achieve; and
- transparent in relation to what it is intended to achieve.

5.92 We consider that the SMP conditions satisfy the tests set out in section 47 of the Act. As in relation to sections 87 and 88, the points set out below should be read in conjunction with the more detailed analysis in other sections of this statement.

Objective justification

- 5.93 Given the SMP findings, in the absence of a charge control BT could set excessive charges, which could have an adverse impact on both the ability of telecoms providers to compete in the downstream provision of services and on consumer choice and value for money. Our charge controls are designed to address this risk while allowing BT the ability to recover its costs, including a reasonable return on investment.
- 5.94 As a result of our analysis set out in this statement, we consider the SMP conditions we have decided to set are objectively justifiable.

Absence of undue discrimination

- 5.95 We are satisfied that none of the charge controls discriminate unduly against particular persons or a particular category of persons, because any telecoms provider (including BT itself) will be able to access the services at the charge levels set by the controls.
- 5.96 We do not consider that the charge controls discriminate unduly against BT as the controls seek to address BT's specific market position, which gives rise to its incentive and ability to set excessive charges for services falling within the scope of the controls.

Proportionality

- 5.97 We are satisfied that the charge controls are proportionate because they will apply to an appropriate set of charges within those markets where we find BT has SMP. The controls are focused on ensuring that there are reasonable charges for those services, but they go no further than is necessary to ensure this.
- 5.98 The charge controls allow for BT to make a reasonable return on investment and provide both BT and others with incentives to invest and develop their networks. One of our aims is to provide price stability over the course of the relatively short review period, as keeping prices flat in nominal terms minimises disruption and change. This should be conducive to supporting a stable investment environment for BT and others.
- 5.99 We therefore consider that each of the charge controls is proportionate in that they do not impose controls that go beyond what is required to achieve the aim of addressing BT's ability and incentive to charge excessively for services covered.

Transparency

- 5.100 We consider that each of the charge controls is transparent in relation to what it is intended to achieve. The aims and effect of each of the controls are set out in this statement. The text of the SMP conditions has been published in Annex 26. We also set out the likely impact of the controls on charges for the duration of the control.

Consistency with statutory duties

- 5.101 We consider that each of the charge controls is consistent with our duties under sections 3 and 4 of the Act for the reasons set out in this section, and in this statement as a whole.

- 5.102 In particular, the charge controls will, in conjunction with the other SMP conditions, further the interests of citizens and of consumers in relevant markets by the promotion of competition in line with section 3 of the Act. Each control seeks to ensure the availability of electronic communications services, priced at an appropriate level, throughout the UK. We have had regard to the desirability of promoting competition and encouraging investment and innovation in relevant markets, as well as the availability and use of high-speed data transfer services throughout the UK.
- 5.103 We have taken into account further objectives, including ensuring that services are available at charges that are reasonably related to the efficient costs of supply (preferably as a result of effective competition), and investment and innovation (namely, the objective of promoting efficient investment in the development of new and innovative services by BT and other telecoms providers).
- 5.104 In line with section 4 of the Act, we consider that each of the charge controls, in particular, promote competition in relation to the provision of electronic communications networks and encourage the provision of network access for the purpose of securing efficiency and sustainable competition in markets for electronic communications networks and services.
- 5.105 Finally, in performing our duty to further the interests of consumers, we have also had regard to their interests in respect of choice, price, quality of service and value for money.

Leased Lines Pricing Recommendation and BEREC Common Position

- 5.106 The Leased Lines Pricing Recommendation relates to charging aspects of wholesale leased lines part circuits.¹⁵⁹ It includes recommended ceilings for leased line part circuits to “inform and guide a national regulatory authority (NRA) as to how to apply the best current practices in leased lines provision when devising regulatory remedies for leased line markets that are not effectively competitive in their territory” (page 6 of the Explanatory Memorandum).
- 5.107 While we have taken utmost account of the Leased Lines Pricing Recommendation, the ceilings are based on prices for leased lines part circuits from Member States in June 2004. Both prices and costs have since changed such that use of the ceilings could result in charges diverging from the efficient cost of provision.
- 5.108 We consider that the RFS data (as we have adjusted it where appropriate) is more directly relevant in controlling charges in the forthcoming period. By using up-to-date cost accounting data from BT’s RFS and other relevant inputs and assumptions, we consider that we have ensured that charge levels are efficient and consistent with the principles set out in the Leased Lines Pricing Recommendation.

¹⁵⁹ *Commission Recommendation of 29 March 2005 on the provision of leased lines in the European Union – Part 2 – pricing aspects of wholesale leased lines part circuits (C(2005) 951)* and the accompanying Explanatory Memorandum (the Leased Lines Pricing Recommendation). <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32005H0268&from=EN>.

5.109 In formulating our charge controls discussed above, we have also taken utmost account of the BEREC Common Position on best practice in SMP remedies including BP30, BP31 and BP32 which appear to us to be particularly relevant in this context.¹⁶⁰ BP30 states national regulatory authorities should provide a reasonable degree of price certainty; BP31 that they should incentivise efficient investment and sustainable competition; and BP32 that, where appropriate, they should require SMP operators to provide regulated products based on an explicit pricing obligation. We consider that our decisions are consistent with the best practice set out in the BEREC Common Position.

¹⁶⁰ BEREC, 2012. *Revised BEREC Common Position on best practices in remedies as a consequence of a SMP position in the relevant markets for wholesale leased lines*, BoR (12) 126.
https://bereg.europa.eu/eng/document_register/subject_matter/bereg/download/0/1096-revised-bereg-common-position-on-best-pr_0.pdf.