Fixed Access Market Reviews: Approach to the VULA margin

Draft Statement
Redacted for publication [✂]

Notified to the European Commission: 15 January 2015

About this document

This is a draft statement which is being notified to the European Commission for comments.

We set out in draft the obligations we are imposing on British Telecommunications plc (‘BT’) to regulate the margin between BT’s wholesale and retail superfast broadband prices.

Superfast broadband forms a growing part of the overall broadband market and we expect it to become more important, with take-up increasing over the next couple of years. Ensuring that there is effective retail competition in superfast broadband is therefore important to maintaining the UK’s competitive retail broadband market, which benefits consumers.

Communication providers have access to BT’s next generation, superfast broadband network through a wholesale product called Virtual Unbundled Local Access (‘VULA’).

We are concerned that BT could distort the development of competition in superfast broadband by setting an insufficient margin between its wholesale VULA and retail superfast broadband prices. Therefore, this statement sets out detailed requirements on the minimum margin that BT must maintain. Our approach is designed to ensure that other communication providers have sufficient margin to be able to compete with BT in the provision of superfast broadband packages to consumers. It also continues to provide BT with pricing flexibility for VULA that preserves its investment incentives in relation to superfast broadband.

Once this notification process is complete, we will take utmost account of any European Commission comments and then publish a final Statement to bring our decision into effect.

Contents

Section 1

Executive Summary

1.1 This statement sets out our approach to regulating the VULA[1] margin. The VULA margin is the differential between the price of the wholesale VULA input offered by British Telecommunications plc's ('BT') access division (Openreach) and the price of those retail packages offered by BT's retail divisions that use VULA as an input. Our approach seeks to promote competition in electronic communications services by ensuring that there is no distortion or restriction of competition.

1.2 The remedies set out in this statement form part of the overall suite of remedies imposed on BT to address the significant market power ('SMP') we have found in the Wholesale Local Access market ('the WLA market') [2], as set out in the 2014 FAMR Statement.[3]

1.3 We have undertaken a material change assessment as required by statute in order to identify whether there has been a material change to our determination that BT has SMP in the WLA market since publication of the 2014 FAMR Statement. For the reasons set out in Section 2 of this document, we are satisfied that there has been no such change.

1.4 The 2014 FAMR Statement set out Ofcom's view that BT should retain broad flexibility over the level of VULA prices during this market review period.[4] The remedies in this statement preserve that pricing flexibility, but seek to protect and promote competition at the retail level by clearly setting out the minimum VULA margin BT must maintain.

1.5 Our approach to the VULA margin covers the 2014 to 2017 market review period, which we consider likely to be an important period in the transition from standard to superfast broadband. It will thus be important in determining whether the effective retail competition currently observed in broadband services is maintained in superfast broadband services as this transition occurs. During this market review period there is a heightened opportunity for retailers (including BT) to compete to attract new

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[1] Virtual Unbundled Local Access ('VULA') provides access to BT's Next Generation Access ('NGA') network in a way that is similar to how Local Loop Unbundling ('LLU') provides access on the Current Generation Access ('CGA') network. However, rather than providing a physical line, VULA provides a virtual connection that gives communication providers ('CPs') a direct link to their customers and provides flexibility over how this link is integrated into their network and product offerings.

[2] We conclude in this statement that there have been no changes to the WLA market in the UK excluding the Hull Area since the publication of the 2014 FAMR Statement that would falsify to a material extent the forecasts made in the market analysis set out in the 2014 FAMR Statement.

[3] Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/. We do not specifically require KCOM Group plc ('KCOM') to offer VULA and therefore this analysis in this statement relates to BT in the UK excluding the Hull Area WLA market only.

[4] This was on the basis of competitive constraints (such as the pricing of standard broadband services and Virgin's superfast broadband services) on the level of VULA prices and the risk of Ofcom determining inappropriate price levels that would harm incentives for efficient investment.

subscribers. However, this competition could be dampened were BT to set the VULA price in a way that allowed it to distort competition.

1.6 We consider that there is a relevant risk of adverse effects arising from a price distortion. We therefore consider that it is necessary to intervene to ensure that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted.

1.7 We consider that this aim is most appropriately achieved in this review period by ensuring that BT does not set the VULA margin such that it prevents an operator with slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers.

1.8 Therefore, our conclusion is to put in place an SMP condition requiring BT to maintain a minimum VULA margin. The SMP condition:

- is based on an adjusted equally efficient operator ('EEO') approach, which uses BT's own costs and revenues, with the exception of two adjustments to reflect other communication providers' ('CPs') lower average customer lifetimes ('ACL') and bandwidth costs;[5]

- sets out that we use the LRIC+[6] standard to assess BT's costs; and

- is based on an assessment of BT Consumer's portfolio of fibre-based packages, rather than individual products or bundles.

1.9 We also supplement the SMP condition with guidance on how we intend to undertake our assessment of compliance with the condition. This guidance is intended to provide further clarity to BT on what is required under the SMP condition and also provides transparency to other CPs about our approach.

1.10 This guidance details our approach to the treatment of both upfront and ongoing costs and revenues. This includes setting out how we would allocate the costs of BT Sport to each superfast broadband subscriber.

1.11 The WLA market covers both residential and business consumers, and accordingly VULA can be used to provide retail services to both of these groups. However, this new regulation is specifically aimed at BT Consumer's portfolio of fibre-based packages. The general SMP conditions imposed on the 2014 FAMR Statement continue to apply to BT Business's services and we are therefore able to intervene in this area if that proves necessary.[7]

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[5] The SMP condition also includes a floor on the unit bandwidth costs used in the assessment. This effectively adjusts these BT costs in certain circumstances.
[6] i.e. long-run incremental cost plus a contribution to fixed and common costs.
[7] We will consider business services in future market reviews in the light of any further policy analysis, including whether any business-specific regulation is necessary in relation to VULA. In particular, we have published a call for inputs on the provision of communications services to Small and Medium-sized Enterprises ('SMEs') to identify particular issues in terms of the availability, quality and reliability of communications services available to SMEs in order to develop policies to address them where appropriate (see Ofcom, *Communication services and SMEs: Call for inputs*, 6 November 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/smes-cfi/summary/SMEs_CFI.pdf.)

1.12 We have carried out a revised indicative assessment of the VULA margin. It suggests that BT is currently [exceeding] the VULA margin boundary.[8]

1.13 Going forward, BT is required to provide details of the costs and revenues necessary to demonstrate its compliance with the VULA margin condition every six months. The first compliance report will be required two months after the condition comes into force, covering BT's first month of compliance. We will use this information to undertake a high-level internal assessment of BT's compliance. If there are reasonable grounds to suspect non-compliance, we will launch a formal investigation. We may also investigate potential non-compliance as a result of a dispute or complaint by a third party if we have reason to believe BT may not be compliant.

1.14 Following BT submitting its first compliance report, we will issue a statement that informs stakeholders whether or not we have reasonable grounds to suspect non-compliance over the first month assessment period. The intention is that this will provide a clear reference point for future assessments.

[8] This assessment is largely based on 2012/2013 data, but has been updated in certain respects. We have also considered scenarios that vary certain costs and revenues. This is explained more fully in Section 6.

Section 2

Introduction and background

2.1 In this section we set out:

- the purpose of this statement;
- the relationship with the FAMR and our no material change assessment;
- our impact assessment and equality impact assessment;
- a description of the Superfast Broadband Competition Act Investigation; and
- the structure of this document.

2.2 Under Article 7 of the Framework Directive[9], National Regulatory Authorities ('NRAs') are required in certain circumstances to notify their draft statements (comprising the draft measure and the reasoning on which the measure is based) to the European Commission, BEREC and other NRAs upon completion of their own national consultation (under Article 6 of the Framework Directive). The European Commission, BEREC and other NRAs may make comments within one month. The notifying NRA must take the utmost account of any comments from other NRAs, the European Commission or BEREC.

2.3 Therefore, having considered every representation made in response to the domestic consultation and having made modifications that appear appropriate, we are notifying our draft measures and an explanatory Statement setting out the reasoning on which the measure is based to the European Commission, BEREC and the NRAs in every other Member State in accordance with section 48B of the Communications Act ('CA03') (which transposes Article 7). This draft statement comprises that notification.[10]

Purpose of this statement

2.4 This statement sets out our conclusions on the regulation of the VULA margin[11] covering our reasons for imposing this regulation, including our regulatory aim and the detail of our proposed remedy to achieve this aim. We consulted on our specific

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[9] EC, *Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, as amended by Directive 2009/140/EC and Regulation 544/2009*, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:337:0037:0069:EN:PDF.

[10] We have made provisional redactions to the text of our indicative assessment in Section 6 of the published version of the draft statement in line with representations from relevant stakeholders. This is an interim position and we will be giving further consideration to whether additional disclosures can be made in the final statement.

[11] As defined in paragraph 2.6.

proposals to regulate the VULA margin on 19 June 2014 ('the 2014 VULA Margin Consultation').[12]

The Fixed Access Market Reviews

2.5 The approach set out in this statement forms part of the remedies we have put in place to address BT's significant market power ('SMP') in the Wholesale Local Access market ('the WLA market').[13] We consulted on these remedies in the 2013[14] and 2014[15] FAMR Consultations[16] and published our conclusions in the 2014 FAMR Statement.[17] These remedies include requiring BT to continue to offer local loop unbundling ('LLU') in relation to current generation access networks ('CGA') and VULA, sub-loop unbundling ('SLU') and physical infrastructure access ('PIA') in relation to next generation access ('NGA') networks.

2.6 The 2013 and 2014 FAMR Consultations included proposals on our approach to the *ex ante* regulation of the VULA margin, which is the differential between the price of the wholesale VULA input offered by Openreach and the price of those retail packages offered by BT's retail divisions that use VULA as an input.[18] Following responses to these consultations, we decided to consult on a set of revised

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[12] Ofcom, *Fixed Access Market Reviews: Approach to the VULA Margin*, 19 June 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/summary/VULA_Margin_Consultation.pdf.

[13] We are not imposing a specific obligation on KCOM Group plc ('KCOM') regarding the VULA margin as we do not specifically require KCOM to offer VULA (although, as stated in the 2014 FAMR Statement, we consider that the general remedies imposed on KCOM would require it to offer VULA services on reasonable request). Therefore the analysis in this statement relates to BT in the UK excluding the Hull Area WLA market only.

[14] Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30: Consultation on the proposed markets, market power determinations and remedies*, 3 July 2013, http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-reviews/summary/fixed-access-markets.pdf.

[15] Ofcom, *Fixed access market reviews, Further consultation on notification periods, compliance with requirements on the VULA margin, and approach to pricing for TRCs and SFIs*, 16 January 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/famr-2014/summary/famr-2014.pdf.

[16] We also consulted on remedies not directly relevant to this statement in Ofcom, *Fixed access market reviews: Approach to setting LLU and WLR Charge Controls – Consultation*, 20 August 2013, http://stakeholders.ofcom.org.uk/binaries/consultations/llu-wlr-cc-13/summary/LLU_WLR_CC_2014.pdf; Ofcom, *Fixed access market reviews: Openreach quality of service and approach to setting LLU and WLR Charge Controls – Consultation*, 19 December 2013 http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-market-llu-wlr-charge-controls/summary/famr-2013.pdf; and Ofcom, *Regulatory Financial Reporting – A review*, 20 December 2013, http://stakeholders.ofcom.org.uk/binaries/consultations/bt-transparency/summary/BTRFS.pdf.

[17] Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

[18] Note that our approach in this statement is based on the wholesale input of VULA and the retail packages that use VULA as an input (i.e. VULA-based products). For ease of reading in this statement, we also use the terms 'fibre' and 'superfast broadband'. For the purposes of this statement, these terms generally refer to VULA or VULA-based products.

proposals (the 2014 VULA Margin Consultation[19]) and so the 2014 FAMR Statement did not reach any decision on remedies dealing with this issue. This statement now sets out our conclusions on regulating the VULA margin.

2.7 The 2014 FAMR Statement set out Ofcom's view that BT should retain broad flexibility over the level of VULA prices.[20] The approach set out in this Statement preserves that pricing flexibility, while seeking to protect and promote competition at the retail level by clearly setting out the minimum VULA margin BT must maintain.

No material change assessment

2.8 Section 86 of the CA03 provides that Ofcom must not set an SMP services condition by a notification that does not also make the market power determination by reference to which that condition is set unless the condition is set by reference to a market power determination:

- which has been reviewed and, as a consequence of that review, is confirmed in the notification setting the condition; or
- made in relation to a market in which Ofcom is satisfied that there has been no material change since the determination was made.

2.9 Given that we are imposing an SMP condition relating to the VULA margin after making a market power determination in the 2014 FAMR Statement, in order to satisfy the requirements of section 86 we need to assess whether there has been a material change over the period between the publication of the 2014 FAMR Statement in June 2014 and the publication of this Statement. In doing so, we are required to assess whether the forecasts made in the market analysis set out in the 2014 FAMR Statement are falsified to a material extent by events between the 2014 FAMR Statement and this Statement.[21]

2014 VULA Margin Consultation

2.10 We explained in the 2014 VULA Margin Consultation[22] that we did not anticipate any changes in the WLA market in the UK excluding the Hull Area (as determined in the 2014 FAMR Statement) between the publication of the 2014 FAMR Statement and this Statement that would falsify to a material extent the forecast of the market set out in the 2014 FAMR Statement. We therefore asked stakeholders:

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[19] Ofcom, *Fixed Access Market Reviews: Approach to the VULA margin*, 19 June 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/summary/VULA_Margin_Consultation.pdf.

[20] This was on the basis of competitive constraints (such as the pricing of standard broadband services and Virgin's superfast broadband services) on the level of VULA prices and the risk of Ofcom determining inappropriate price levels that would harm incentives for efficient investment.

[21] Court of Appeal, *TalkTalk Telecom Group plc. (Wholesale Broadband Access Charge Control) v Office of Communications [2013] EWCA Civ 1318*, http://www.catribunal.org.uk/238-7275/1186-3-3-11-TalkTalk-Telecom-Group-plc-Wholesale-Broadband-Access-Charge-Control.html.

[22] Paragraph 2.22, Ofcom, *Fixed Access Market Reviews: Approach to the VULA margin*, 19 June 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/summary/VULA_Margin_Consultation.pdf.

Q2.1	*Do you consider that there has been a material change in circumstances in the WLA market since the 2014 FAMR Statement? Please provide supporting evidence as necessary.*

2.11 None of those stakeholders that provided a response to this question considered that there had been a material change in circumstances in the WLA market since the 2014 FAMR Statement was published.

Assessment

2.12 In the 2014 FAMR Statement, we concluded that the scope of the relevant market is the provision of copper loop-based, cable-based and fibre-based WLA at a fixed location. We said that mobile, fixed wireless and satellite access lie outside the relevant market and that there are two distinct geographic markets: the UK excluding the Hull Area; and the Hull Area.[23] We also concluded that BT has SMP in the supply of WLA in the UK excluding the Hull Area.[24] We forecast this to remain the case until at least the end of the market review period in March 2017.

2.13 There is no evidence of events since publication of the 2014 FAMR Statement on 26 June 2014 (including significant changes in consumer behaviour, significant new investment by current or potential communication providers or any other factors) to suggest that the forecasts made in the market analysis set out in the 2014 FAMR Statement are falsified to a material extent.

2.14 In particular, we have reached the following views in relation to our market definition.

- We continue to consider that the focal product is the provision of WLA at a fixed location by a network that uses a mixture of copper loops and fibre.

- For the purposes of determining the boundaries of the relevant wholesale product market, as envisaged the key issue continues to be the extent of indirect constraints due to substitution at the retail level. Under the modified Greenfield approach, we consider that communication providers ('CPs') such as BT, Virgin Media Limited ('Virgin') and KCOM still remain unlikely to grant third party access to their networks, meaning direct constraints on the provision of the focal product are unlikely to be relevant. Similarly, there continue to be very high entry barriers to establishing a substantial new fixed network.

- We have considered whether there have been any changes that would affect our assessment that cable-based WLA is included in the WLA market but that mobile, satellite and fixed wireless access are excluded.

  - The retail products available over BT's network and over Virgin's network continue to have similar characteristics and intended use and to be priced at similar levels for comparable services. Therefore, cable and loop-based services compete at the retail level and consumers are likely to regard them as substitutable services.

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[23] Paragraphs 7.29-7.76, Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

[24] Paragraphs 7.84-7.91, Ibid.

  - o Mobile access remains unlikely to act as an effective retail substitute for fixed local access as consumers would need to be willing to cease buying fixed products and instead rely on mobile products. The evidence suggests that for most consumers mobile telephony continues to be complementary to fixed telephony.[25]

  - o There have been no material changes in the supply or purchase of fixed wireless access or satellite access that suggest a change to our product market definition.

- In considering the geographic market definition, there is no evidence to suggest a departure from our forecast in the 2014 FAMR Statement that there would be two distinct geographic markets: the UK excluding the Hull Area, and the Hull Area (taking account of the Hull Area, new build areas where BT is not present and areas covered by Virgin's cable network).

2.15 Similarly, we find no evidence warranting a change to our conclusion on market power.

- Market shares – data provided by CPs indicates that BT's share of the WLA market remains very high (over 80 per cent), and we again note that it has been stable for many years.[26]

- Barriers to entry – we continue to consider that entry barriers remain very high and that entry on a signification scale would be extremely risky, would take a considerable period of time and would require very high levels of investment. In particular, we note that any recent entry has tended to be small scale and focused on niche markets.[27]

- Countervailing buyer power – there has been no major new market entrant large enough to exert buyer power to a significant extent. Therefore, we continue to

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[25] Ofcom's 2014 Communications Market Report found that only 16 per cent of households relied solely on mobile telephony and only 4 per cent relied solely on mobile broadband; this represents only a 1 per cent year-on-year increase from 2013 and so it is unlikely that these proportions have changed significantly since the report was published in August. (See figures 5.56 and 5.59, Ofcom, *Communications Market Report 2014*, 7 August 2014, http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/2014_UK_CMR.pdf.)

[26] Q2 2014 broadband subscriber volumes from internal Ofcom data.

[27] For example, Hyperoptic focuses on providing fibre connections to new build homes and as of October 2014 covers just 75,000 households, with a target of 500,000 by 2018 (Hyperoptic, *Hyperoptic adds four new hyper-cities and doubles footprint in six months*, 6 October 2014, https://hyperoptic.com/web/guest/press?p_p_id=press_WAR_pressportlet&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-1&p_p_col_count=1&_press_WAR_pressportlet_render=article&_press_WAR_pressportlet_urlTitle=hyperoptic-adds-four-new-hyper-cities-and-doubles-footprint-in-six-months); similarly, CityFibre has mainly focused on small networks for businesses (for example, CityFibre, *Gigabit internet speeds to revolutionise business in Kirklees,* 5 November 2014, http://www.cityfibre.com/news/2014/11/5/gigabit-internet-speeds-to-revolutionise-business-in-kirklees), while its project with Sky and TalkTalk, though aimed at all types of residential and business, will only cover premises in the number of "*tens of thousands*" (CityFibre, *Sky and TalkTalk partner with CityFibre to launch ultra-fast broadband*, 15 April 2014, http://www.cityfibre.com/news/2014/4/14/sky-and-talktalk-partner-with-cityfibre-to-launch-ultra-fast-broadband).

consider that this is unlikely to be sufficient to constrain BT's position as a supplier of WLA, at either the retail level or the wholesale level.

Conclusion

2.16 Therefore, we conclude that there have been no changes to the WLA market in the UK excluding the Hull Area since the publication of the 2014 FAMR Statement that would falsify to a material extent the forecasts made in the market analysis set out in the 2014 FAMR Statement.

Impact assessment and equality impact assessment framework

Impact assessment

2.17 The analysis presented in the various consultation documents set out above constituted an impact assessment (as defined in section 7 of the CA03).[28] This statement sets out the corresponding decision having taken all representations into account.

2.18 Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. This is reflected in section 7 of the CA03, which sets out that we have to carry out impact assessments where our proposals would be likely to have a significant effect on businesses or the general public or when there is a major change in Ofcom's activities. However, as a matter of policy Ofcom is committed to carrying out impact assessments in relation to the great majority of our policy decisions. For further information about our approach to impact assessments, see our impact assessment guidelines.[29]

Equality impact assessment ('EIA')

2.19 Annex 2 of the 2014 FAMR Statement[30] sets out our EIA for the FAMR. We consider that assessment to apply equally to the conclusions set out in this document (which themselves form part of our reviews of the fixed access markets). Ofcom is required by statute to assess the potential impact of all our functions, policies, projects and practices on race, disability and gender equality. EIAs also assist us in making sure

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[28] In its response to the 2014 VULA Margin Consultation (see paragraph 6.26-6.28, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf), BT submitted that we had not sufficiently weighed up the costs and benefits of our intervention. BT suggested, by reference to paragraph 5.76 of the HM Treasury Green Book on Appraisal and Evaluation in Central Government, that a proper attempt should be made to measure the costs and benefits of our intervention by quantifying these, where this is possible and meaningful. We are satisfied that the analysis presented in the various consultation documents referred to at paragraphs 2.6 and 2.7 met the requirement in section 7 of the CA03 to carry out an impact assessment and that it would not be meaningful to undertake a quantitative assessment in this case.

[29] Ofcom, *Better policy making: Ofcom's approach to impact assessment*, 21 July 2005, http://stakeholders.ofcom.org.uk/binaries/consultations/ia_guidelines/summary/condoc.pdf.

[30] Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30: Annexes*, 26 June 2014, http://stakeholders.ofcom.org.uk/binaries/telecoms/ga/fixed-access-market-reviews-2014/statement-june-2014/annexes.pdf.

that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.

2.20 It is not apparent to us that the outcome of our conclusions is likely to have any particular impact on race, disability and gender equality. Specifically, we do not envisage the impact of any outcome to be to the detriment of any particular group of society. Nor are we envisaging any need to carry out separate EIAs in relation to race or gender equality or equality schemes under the Northern Ireland and Disability Equality Schemes.

Superfast Broadband Competition Act Investigation

2.21 On 1 May 2013, Ofcom opened an investigation in response to a complaint from TalkTalk Telecom Group plc (‘TalkTalk’) that BT had, in breach of the Chapter II prohibition in the Competition Act 1998 (’CA98’) and Article 102 of the Treaty on the Functioning of the European Union, abused a dominant position in the supply of superfast broadband (‘the Superfast Broadband Competition Act Investigation’). Specifically, TalkTalk alleged that BT had failed to maintain a sufficient margin between its upstream and downstream prices, thereby operating an abusive margin squeeze.[31]

2.22 On 21 October 2014, we decided that there were no grounds for action in this case. The Superfast Broadband Competition Act Investigation was separate to our consideration of the appropriate *ex ante* approach to our regulation of the VULA margin.

Structure of this document

2.23 The remainder of this document is structured as follows:

- Section 3 covers our regulatory objective and aim with respect to regulating the VULA margin and explains why we consider there to be a relevant risk of adverse effects which justifies the imposition of our remedy;

- Section 4 sets out our consideration of appropriate remedies, including the appropriate compliance regime;

- Section 5 sets out the detail of the requirement we are imposing on BT to regulate the VULA margin;

- Section 6 provides a detailed discussion of the treatment of costs and revenues for the purposes of assessing BT’s compliance with the VULA margin control; and

- Section 7 sets out our overall conclusion on regulating the VULA margin and explains why this satisfies the applicable legal tests and how our approach is consistent with taking utmost account of the EC Recommendations and BEREC Common Positions.

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[31] Ofcom, *Complaint from TalkTalk Telecom Group Plc. against BT Group Plc. about alleged margin squeeze in superfast broadband pricing*, *CW/01103/03/13,* http://stakeholders.ofcom.org.uk/enforcement/competition-bulletins/open-cases/all-open-cases/cw_01103/.

2.24 The Annexes are as follows:

- Annex 1 – BT Sport strategy
- Annex 2 – Legal instrument
- Annex 3 – Guidance on assessment of the VULA margin
- Annex 4 – Sources of evidence
- Annex 5 – Glossary

Section 3

Regulatory aim

Introduction

3.1 As explained in Section 2, our decision on the VULA margin forms part of our forward looking review of the WLA market undertaken under the Common Regulatory Framework.

3.2 Under that framework, in the 2014 FAMR Statement we found BT to have SMP in the WLA market in the UK excluding the Hull Area. We consequently imposed a suite of regulatory conditions, including in relation to VULA, pursuant to our functions and duties under the CA03 (implementing Article 8 of the Framework Directive) which include:

- furthering the interests of citizens in relation to communications matters and furthering the interests of consumers in relevant markets, where appropriate by promoting competition;
- securing throughout the UK a wide range of electronic communications services;
- having regard to the desirability of promoting competition in relevant markets;
- having regard to the desirability of encouraging investment and innovation in relevant markets;
- having regard to the desirability of encouraging the availability and use of high speed data transfer services throughout the UK;
- promoting competition in relation to the provision of electronic communication networks and electronic communications services; and
- encouraging the provision of network access for the purpose of securing efficiency and sustainable competition, efficient investment and innovation and the maximum benefit for the persons who are customers of communication providers and persons who make associated facilities available.

3.3 We also determined in the 2014 FAMR Statement that it is not appropriate to regulate the absolute level of the VULA charge in this market review period. However, although we included proposals on regulating the VULA margin in the 2013 FAMR Consultation, in light of responses to that consultation we did not decide in the 2014 FAMR Statement whether we should regulate the VULA margin. We instead consulted on revised proposals in the 2014 VULA Margin Consultation.

3.4 Given that regulating the VULA margin involves imposing restrictions on BT's ability to set the VULA price, pursuant to section 88 of the CA03.

- It must appear to us from the market analysis carried out for the purpose of setting any condition on the VULA margin that there is a relevant risk of adverse effects arising from price distortion. In the context of this decision, this requires us to assess whether BT might so impose a price squeeze as to have adverse consequences for end users of public electronic communications services. A price squeeze occurs where the difference between the dominant provider's retail prices and the interconnection prices charged to competitors who provide similar retail services is not adequate to ensure sustainable competition.[32] [33]

- It must also appear to us that the setting of the condition is appropriate for the purposes of: promoting efficiency; promoting sustainable competition; and conferring the greatest possible benefits on the end-users of the public electronic communications services.

- When setting an SMP condition falling within section 87(9), we must take account of the extent of the investment in the matters to which the condition relates of BT.

3.5 Given that we conclude in Section 2 of this statement that there have been no changes to the WLA market since the publication of the 2014 FAMR Statement that would falsify to a material extent the forecasts made in the market analysis set out in the 2014 FAMR Statement, we assess and decide in this statement whether it is appropriate to impose an SMP condition to regulate the VULA margin.

3.6 In this section, after summarising our provisional conclusions in the 2014 VULA Margin Consultation and responses to that document, we assess whether, in light of the legal framework and our market analysis, there is a relevant risk of adverse effects from price distortion in this case. Having found such a relevant risk, we determine that our regulatory aim should be to promote competition by addressing this relevant risk. We then go on to consider the options for achieving our regulatory aim in this case. We consider separately in section 7 whether the requirements of section 88(1)(b) and section 88(2) are satisfied.

Summary of provisional conclusions from 2014 VULA Margin Consultation

3.7 In the 2014 VULA Margin Consultation, we considered that there is a relevant risk of adverse effects arising from price distortion and, as a result, provisionally concluded that our regulatory aim should be to ensure that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted.

3.8 We then identified three ways we could achieve our regulatory aim:

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[32] Recital 20, Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities, www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:108:0007:0020:EN:PDF.

[33] BT suggested that Ofcom did not adequately analyse the nature of the behaviour which, if realised, could put in jeopardy the attainment of Ofcom's objectives. In particular, it stated that the means by which a price squeeze may be implemented are varied and could result from BT raising its GEA prices, reducing its retail pricing for superfast broadband, and/or keeping its retail pricing for superfast broadband constant despite increases in the costs of those services (see paragraphs 6.30-6.31, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf). As explained in this section, we have considered whether there is a relevant risk of adverse effects arising from price distortion and, in particular, that BT might so impose a price squeeze as to have adverse consequences for end users of public electronic communications services.

- Option 1 – ensure that BT does not set the VULA margin such that it prevents an operator with the same costs as BT being able to profitably match BT's retail superfast broadband offers;
- Option 2 – ensure that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably match BT's retail superfast broadband offers; and
- Option 3 – ensure that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably significantly undercut BT's retail superfast broadband offers.

3.9 We provisionally considered that our aim would be most appropriately achieved in this review period by Option 2. We considered that this would provide an appropriate and proportionate approach to achieve our regulatory aim, in the interests of citizens and consumers, by striking an appropriate balance between preventing a distortion to competition and the potential negative effects of requiring BT to set a larger VULA margin.

Summary of stakeholder responses

3.10 In the 2014 VULA Margin Consultation, we asked the following question:

Q3.1 Do you agree with our proposed regulatory objective for the VULA margin? Please provide reasons in support of your view.

3.11 We now set out a summary of responses we received.

Advisory Committee for Wales ('ACW')

3.12 The ACW considered that Ofcom's proposals had "*the potential to keep consumer prices higher than necessary*". It also considered that the "*preservation of retail margins*" could create pricing practices that were anti-competitive.[34]

The Bit Commons

3.13 The Bit Commons stated that we could be underestimating the changes in business models required when moving from LLU to VULA (in particular, the writing off of LLU assets and investments earlier than expected), arguing that BT Consumer had an early mover advantage in switching to superfast broadband over those CPs with LLU investments as it did not need to consider LLU depreciation.[35]

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[34] *ACW Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Advisory_Committee_for_Wales.pdf.

[35] Page 3, *The Bit Commons Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/The_Bit_Commons.pdf.

BT

3.14 BT did not challenge our regulatory aim. However, it fundamentally disagreed with the means proposed to achieve it.[36]

3.15 BT considered that:

- we had not adequately demonstrated that there was an actual or potential competition problem in the retail supply of fibre broadband;
- existing constraints are sufficient to prevent BT from distorting competition;
- it does not have the ability or incentive to distort retail competition;
- the assessment of the risk of adverse effects for competition and consumers in this review period was incorrect;
- the proposals would raise retail prices and damage competition; and
- the assessment of Option 2 was "*inadequate*".

<u>BT considered we have not demonstrated an actual or potential competition problem</u>

3.16 BT argued that we had failed to conduct a full and complete market analysis and therefore misunderstood the nature of competition across broadband services.[37] In particular, BT considered that the current supply of superfast broadband was (and will remain in this review period) highly competitive and so argued that there is no actual or potential competition problem in superfast broadband. BT provided a range of arguments for why it considered this to be the case.[38]

3.17 First, BT considered that we heavily relied on its forecasts to support the justification for regulatory intervention and argued that we should also obtain forecasts from a range of other CPs. Notwithstanding this, BT argued that actual and prospective superfast broadband consumers are served by a number of well-resourced companies with differing commercial strategies and incentives. Therefore it considered that the data on the number of current and forecast connections did not suggest an existing competition problem, but rather reflected the differing strategies of competing CPs.[39] For example, BT stated that its own strategy has been to actively upgrade its subscriber base to fibre and that Openreach has attempted to encourage fibre take-up by all CPs[40] in order to make its initial investment in the fibre network commercially viable (given the sensitivity to volumes).[41] Conversely, BT argued that Sky plc ('Sky') and TalkTalk made strategic decisions to focus on copper broadband in order to utilise their earlier investments in LLU infrastructure and

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[36] Paragraph 5.8, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[37] Paragraph 1.8, Ibid.
[38] Paragraphs 1.10-1.11, Ibid.
[39] Paragraph 1.11, Ibid.
[40] Measures by Openreach identified by BT include engaging with CPs to overcome technical and/or commercial problems associated with the provision of superfast broadband, resulting in the provision of a self-install option and fibre voice access. See paragraph 4.31, Ibid.
[41] Paragraphs 1.12(a), 4.11-4.18 and 4.31-4.34, Ibid.

advertising (rather than commit investments in what was a relatively new technology with more limited national availability).[42]

3.18 Relatedly, BT argued that other CPs were now increasingly offering (and promoting) superfast broadband services at a discount to BT's headline prices and that they were profitable.[43] BT argued that this relatively recent shift meant it is difficult to predict how competition will develop, although it did note that its share of net additions is already falling (from 84 per cent in 2012/13 to 69 per cent in 2013/14), and forecast data provided to Openreach shows an expected increase in net adds for other CPs.[44] It also argued that TalkTalk and Sky are well-placed to promote fibre given their large customer bases are heavily skewed towards urban consumers who can be readily connected, and that there is significant scope for other CPs to increase their superfast base since the majority of broadband subscribers still take standard broadband (even within BT's fibre footprint).[45] Finally, BT argued that factors such as the availability of self-installation, reductions in migration charges and minimum wholesale contract for migrating subscribers, and the reduction in the charge differential between Wholesale Line Rental ('WLR')+Shared Metallic Path Facility ('SMPF') and Metallic Path Facility ('MPF') will all incentivise take-up in this review period. Further, BT argued that self-installation and reductions in migration charges and minimum contracts put other CPs at a cost advantage relative to BT since the majority of its superfast broadband installations to date were carried out through the more expensive managed installation service and when migration charges were higher.[46]

3.19 Third, BT argued that there was increasing competition not based on VULA. In particular, it referred to growing infrastructure investments upstream by other operators[47] which it considered would lead to greater retail superfast broadband competition.[48] BT also considered that Ofcom had underestimated the competitive constraint exerted by Virgin, noting that [✂].[49] BT noted that Virgin had adopted a strategy to upgrade its customer base to superfast broadband and has announced network expansion plans, meaning it would continue to be a strong constraint on BT.[50] Indeed, BT argued that we had failed to reflect that its overall share of superfast broadband connections was 30 per cent in Q1 2014/15, which is both

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[42] Paragraphs 5.31-5.38, Ibid.
[43] BT also referred to this factor in response to TalkTalk's claims that it has an incentive to "*margin squeeze*". Paragraph 2.19, *BT Comments on responses to the 2014 VULA Margin Consultation*, 23 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf. BT also provided data on the increasing superfast broadband sales of TalkTalk and Sky (including references to TalkTalk's interim results) in support of its view that there is no existing competition concern in an email to Ed Richards, dated 16 November 2014.
[44] Paragraphs 1.12(b), and 4.22 to 4.49 *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[45] Paragraph 4.65, Ibid.
[46] Paragraphs 1.13, 4.50-4.56 and 4.59-4.64, Ibid.
[47] BT referred to a range of planned and potential investments by operators including Virgin, CityFibre, Sky, Hyperoptic, GTC, Gigaclear, Google and Geo Networks.
[48] Paragraphs 1.13 and 4.57-4.58, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[49] Paragraph 5.28, Ibid.
[50] Paragraphs 4.19-4.21, Ibid.

similar to its overall broadband market share and significantly smaller than Virgin's share.[51]

3.20 For all these reasons, BT considered that, rather than diminishing, competition for fibre broadband is set to increase rapidly over the current market review period, meaning there is no evidence that we should act now.[52]

BT considered that existing constraints would be sufficient to prevent a distortion

3.21 BT argued that existing constraints on its commercial freedom to set the VULA margin were sufficient to achieve Ofcom's aim of preventing a competitive distortion over the market review period.[53] In particular, BT referred to *ex post* competition law as well as the current SMP conditions to which it is subject (namely, the Equivalence of Inputs ('EoI') obligation, and its previous obligation to supply VULA on fair, reasonable and non-discriminatory ('FRAND') terms, conditions and charges), arguing that Ofcom had not reached the jurisdictional threshold for imposing its proposed VULA margin regulation.[54] It argued that this was the correct counterfactual against which to analyse the risk of adverse effects.[55] BT also referred to these conditions/obligations in response to TalkTalk's claims that it has an incentive to price squeeze.[56]

3.22 BT also argued that, to the extent that concerns emerged during this market review period, Ofcom could not only exercise its regulatory powers under this existing regime, but could potentially carry out an additional review in order to impose remedies within that period.[57]

BT considered that it does not have the ability or incentive to distort competition

3.23 BT argued that we had not properly shown that it would have the ability and incentives to impose a price squeeze. It argued that the evidence provided in its submission indicated this was not the case.[58]

3.24 It argued that Ofcom had not properly made out the theory of harm that BT could engage in a margin squeeze to the detriment of end consumers.[59] BT argued that the

[51] Paragraphs 4.19-4.21, 4.62 and 4.66, Ibid.
[52] Paragraph 1.14, Ibid.
[53] Paragraph 1.25, Ibid.
[54] Paragraph 2.3(a), *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[55] Paragraph 3.4, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf, and Paragraph 4.4-4.5, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[56] Paragraph 2.19, *BT Comments on responses to the 2014 VULA Margin Consultation*, 23 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf.
[57] Paragraph 3.6, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[58] Paragraphs 1.10 and 3.4, Ibid.

effect of section 88(1)(a) and the FRAND condition is that Ofcom is prohibited from imposing a section 87(9) condition unless it is able to demonstrate a risk of BT engaging in an "*exclusionary margin squeeze*" on the basis of a credible theory of harm (as supported by a specific market analysis), together with a clear likelihood of adverse consequences for consumers of superfast broadband services. BT stated that in each case the risk must be material (rather than purely speculative) and based on evidence which withstands profound and rigorous scrutiny.[60]

3.25 BT considered that we had not shown that it has an incentive to undermine competition. BT stated that the incentives to exclude require that a firm can (i) steal their competitor's downstream sales, and (ii) having excluded downstream rivals subsequently increase downstream prices. BT considered that our analysis on this point is insufficient and fails to recognise the following points.[61]

- Current levels of differentiation between broadband providers and the presence of loyal customers mean there is no guarantee that BT would acquire any consumers lost by its competitors as a result of exclusion.

- Openreach has an incentive to fully utilise its network, and given other CPs are able to differentiate their superfast broadband offers, they are able to provide fibre services to consumers that BT Consumer would not otherwise attract. Therefore excluding rivals would likely lose BT significant wholesale volumes.

- Superfast broadband services would be constrained by copper and cable broadband, so BT could not profitably raise its retail prices even if it did manage to exclude or marginalise downstream competitors.[62]

3.26 BT noted that we did not consider BT Sport when considering its ability and incentive to distort competition. It argued that BT Sport does not give it an ability or incentive to exclude or marginalise its competitors.[63]

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[59] Paragraph 2.3(b), *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[60] Paragraph 4.2, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[61] Paragraphs 5.21-5.25, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[62] BT also referred to the constraints from standard broadband and Virgin in response to TalkTalk's claims that it has an incentive to "*margin squeeze*", arguing that the degree of overlap between BT's (commercial) fibre network and that of Virgin is far greater than TalkTalk suggests. Paragraphs 2.10-2.11 and 2.19, *BT Comments on responses to the 2014 VULA Margin Consultation*, 23 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf.
[63] Paragraph 5.24, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

<u>BT argued that the assessment of risk of adverse effects for competition and consumers in this review period is incorrect</u>

Risk of distortion to competition

3.27 BT stated that while it did not disagree in principle with our "*largely theoretical assessment of the potential risks of distortion*", it considered that the high-level analysis in paragraphs 3.40 to 3.54 of the 2014 VULA Margin Consultation leads to the wrong conclusions.[64]

- **Role of current market review period**: While BT does not dispute that this market review period may be important *per se*, it argued that we had not demonstrated why this period is of particular importance. BT stated that its forecasts indicate that superfast broadband subscribers are likely to remain a distinct minority of overall broadband subscriptions in 2017 (less than [✂]). Further, BT argued that there is no evidence to support our claim that it is plausible that a consumer switching from standard to superfast broadband might be more willing to consider an alternative provider. BT considered that the opposite is equally plausible – consumers may be less willing to consider an alternative CP in such a scenario so that they can directly compare the difference in speed as a result of the upgrade (by staying with the same provider). Further, BT noted that CPs are expected to increase their sales of superfast broadband in this review period.[65]

- **Risks to effective retail competition**: BT argued that it should not be penalised for having a first mover advantage unless Ofcom can demonstrate that any advantage had been gained off the back of market distortions. It argued that our approach sends strong negative signals to industry, dampening incentives to make future pro-competitive investments.[66] BT also noted that our analysis suggested that adverse effects on rivals may be compounded if there are significant switching costs, but that the 2014 FAMR Statement had reduced switching costs by lowering CP to CP Generic Ethernet Access ('GEA') migration charges.[67]

Risk of adverse effects for consumers

3.28 BT argued that we had not considered the position of actual and potential superfast broadband customers in order to evaluate whether there is a material risk that they would suffer adverse consequences. It argued that, given the complexity of the broadband market, the uncertainty of developments in superfast broadband, and the differentiation of products offered by competing CPs, Ofcom should carry out a careful market analysis as to the likely effects on consumers.[68]

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[64] Paragraphs 5.9-5.38, Ibid.
[65] Paragraphs 5.11-5.15, Ibid.
[66] Paragraph 5.17(a), Ibid.
[67] Paragraph 5.17(b), Ibid.
[68] Paragraphs 3.4-3.5, Ibid.; and paragraphs 4.20-4.23, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.

3.29 BT disagreed with Ofcom's analysis of the potential short term effects of any consumer detriment, for the following reasons[69]:

- BT argued that the first Ofcom concern (raising wholesale prices), could be addressed using either a FRAND SMP remedy or through competition law;
- BT considered that the second potential concern (stifling the ability of rivals to compete in non-price factors) was unfounded, noting that Ofcom had acknowledged that BT's rivals would have their own advantages over BT; and
- BT argued that the third potential concern (risk of consumer detriment if the broadband market splits) was also unfounded, noting that Ofcom had concluded in the 2014 Wholesale Broadband Access ('WBA') Statement that there would be a single broadband market until 2017; if Ofcom considered that this was no longer the case then it would be "*obliged to reappraise the appropriateness of the SMP remedies in place*".

3.30 BT argued that to the extent that adverse consumer effects might arise at some point after this market review period, there will be further opportunity in the next market review to consider whether it is necessary then to introduce regulation.[70] Therefore it considered there was no evidence in Ofcom's assessment pointing to a need to act now (beyond the existing constraints) in the current review.

BT considered that the proposals would raise retail prices and damage competition

3.31 BT argued that our proposals would effectively provide a transfer from BT to its well-resourced competitors. In particular, BT considered that its rivals would be provided with an unnecessary and unwarranted margin when competing against BT, which could result in higher retail prices than required to acquire customers profitably and support competition. BT argued that this would likely dilute the effectiveness of competition (by enabling its rivals to keep the extra margin or use it to "*unfairly*" undercut BT to win market share), resulting in static and dynamic inefficiency in the broadband market, causing consumer harm in the short and long term.[71]

BT considered that we had made an inadequate assessment of Option 2

3.32 BT considered that the analysis to support Option 2 was inadequate and that the reasons for rejecting Option 1 and choosing Option 2 were not clear and sustainable on the evidence due to the flaws in the analysis of existing competition.[72]

3.33 BT argued that, by not carrying out any comparison of CPs' overall costs in order to identify whether BT's perceived advantages are compensated (or even outweighed) by advantages of other CPs, our assessment is inadequate given the importance the decision over the choice of options has on the overall set of proposals. BT also

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[69] Paragraph 5.19, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; and paragraph 6.20, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[70] Paragraph 3.6, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[71] Paragraphs 1.5-1.8, 1.19-1.20, Ibid.
[72] Paragraphs 5.4 and 5.43, Ibid.

referred to the arguments it made regarding differing commercial strategies in response to our argument that current take-up data supports our view that Option 1 risks being insufficient.[73]

3.34 BT considered that we had not adequately assessed the effect of the proposals on its investment incentives. It argued that although there has already been significant investment in its fibre network, there is still scope for further rounds of investment (e.g. vectoring[74] and various types of network evolution[75] which could increase the potential speeds). BT argued that these types of investment have long payback periods and that it needs a stable regulatory environment for such long term investments to be made with confidence.[76]

3.35 BT also argued that no weight can be attached to the WIK report submitted by TalkTalk in justifying either the need for intervention or the form it might take. This is because the decision has been made not to impose a regulated wholesale pricing obligation, meaning that this consultation is purely focused on the question of what is necessary to ensure economic replicability, for which VULA price levels are not relevant. In addition, it raised concerns about the underlying assumptions used in the report.[77]

The Communications Workers Union ('CWU')

3.36 The CWU argued that there was strong growth in retail competition for fibre broadband. As such it did not consider that it was necessary to introduce a minimum VULA margin. However, it considered that if VULA margin regulation was to be introduced, Option 1 was most appropriate as BT's rivals already had large, profitable customer bases for fibre services and their own advantages. The CWU referred to evidence originally provided by Virgin in September 2013 showing other CPs' undercutting BT's retail prices. It also considered that Ofcom's primary focus should be to ensure that BT's incentives to invest in fibre broadband are maintained (which could be undermined by Options 2 and 3).[78]

KCOM

3.37 KCOM did not consider that regulation of BT's VULA margin was appropriate or necessary, particularly in light of our decision in the Superfast Broadband Competition Act Investigation.[79] It also argued that there was no issue to address as alternative operators providing VULA have lower retail prices than BT.[80]

[73] Paragraphs 5.51-5.53, Ibid.
[74] Vectoring can increase the speed of fibre-to-the-cabinet ('FTTC') by decreasing interference between copper lines.
[75] E.g. Fibre to the Remote Node, XG PON, G.FAST and VDSL acceleration.
[76] Paragraphs 5.56-5.58, Ibid.
[77] Paragraphs 2.21-2.29, *BT Comments on responses to the 2014 VULA Margin Consultation*, 23 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf.
[78] Pages 1-5, *CWU Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Communication_Workers_Union.pdf.
[79] Page 2, *KCOM Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/KCOM_Group.pdf.
[80] Page 5, Ibid.

3.38 KCOM considered that there were considerable risks were Ofcom to depart from an equally efficient operator ('EEO') test (akin to Option 1). KCOM argued that BT could respond either by decreasing wholesale pricing, by increasing retail pricing, or by cutting retail costs. It argued that the first option could affect BT's incentives to invest in fibre and that this could also affect the incentives of other fibre operators (including KCOM). It considered that the second option would result in consumer harm and argued that the final option would reduce BT's incentives to offer attractive applications at the retail level.[81]

Sky

3.39 Sky agreed that the market is in a period of transition from standard to superfast broadband services, meaning the development of a competitive market for the provision of superfast broadband services is a key issue.[82]

3.40 Sky also agreed that the combination of (i) BT's SMP in the market for WLA, (ii) its vertical integration, and (iii) the opportunity to re-establish a dominant retail market position afforded by the transition from standard to superfast broadband services creates the clear risk that BT will distort effective retail competition in the provision of superfast broadband. Sky went on to argue that, notwithstanding its view that an EEO approach would be appropriate for the VULA margin test[83], the proposals were a proportionate way of protecting against the risks that BT could distort competition at the retail level for superfast broadband (unwinding the benefits of competition in standard broadband to date). Sky also argued that the consultation makes it clear that BT is "*fully cognisant of the opportunity it currently faces to re-establish a strong downstream position in broadband services"*, noting that BT is currently winning a "*substantial*" share of VULA-based superfast broadband subscribers and expects to build a substantial base during the review period.[84]

TalkTalk

3.41 TalkTalk considered that BT has both the ability and incentive to engage in a price squeeze. It noted that, outside of the UK, BT has acknowledged that incumbents are likely to price squeeze in the absence of regulation (quoting BT's statements in relation to Eircom in Ireland).[85] In relation to BT's ability, TalkTalk considered that BT has "*in practice*" a free choice over the price of VULA and noted that BT is not subject to any regulation of retail prices.[86] TalkTalk also argued against BT's claims that existing legal and regulatory restrictions act as a sufficient constraint, stating

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[81] Pages 2-4, Ibid.
[82] Paragraph 2.1, *Sky Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
[83] Footnote 7, Paragraph 2.5, Ibid.
[84] Paragraphs 2.3-2.5, 4.1, Ibid.
[85] Paragraphs 2.2-2.3, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[86] Paragraphs 2.6-2.7, Ibid.

that, while these obligations do place some constraint on prices, they are insufficient to avoid distortions of competition.[87]

3.42 TalkTalk also considered that BT has incentives to engage in a price squeeze. It argued that raising its wholesale charges above cost allows BT to increase upstream profits and that, if these wholesale charges are at least partially passed on to consumers, then BT is also likely to gain customers from other retail operators. TalkTalk noted that there are likely to be relatively few costs in engaging in a price squeeze, commenting that there is likely to be little diversion to Virgin, since the latter's network only covers 40 per cent of the UK, and only a small loss to copper broadband as it is a weak substitute for fibre broadband.[88]

3.43 TalkTalk also responded to BT's arguments that it does not have an incentive to price squeeze, making the following counter arguments.[89]

- The incentives exist irrespective of the level of retail competition (i.e. constraints from Virgin and standard broadband). For example, even if BT's retail prices were constrained to the competitive level on an end-to-end basis, it would still have an incentive to raise wholesale prices (and price squeeze) since it would allow higher wholesale returns and eliminate downstream competitors reliant on VULA.

- The existence of customers loyal to other CPs does not undermine the incentive, as by setting a wholesale price above the competitive level to enact the squeeze BT will be able to make high wholesale profits from other CPs supplying them.

- The next step beyond MPF-based competition is the creation of stand-alone networks independent from Openreach (in which TalkTalk is starting to invest), [✂]. Therefore, BT's incentives to price squeeze are high [✂].

3.44 TalkTalk argued that there would be long run benefits for BT of engaging in a price squeeze. These include:

- the possibility of becoming dominant in the retail fibre market because of switching costs; the ability to gain a "*first mover advantage*";

- the possibility of smaller operators (outside of Virgin, TalkTalk and Sky) exiting the market; and

- [✂].[90]

[87] Paragraphs 3.24-3.29, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf. In light of the modified Greenfield context we adopt in this section (see paragraph 3.59), we discuss TalkTalk's arguments about the sufficiency of competition law and alternative regulatory obligations further in Section 4.
[88] Paragraphs 2.10-2.11, *TalkTalk Response to the 2014 VULA Margin Consultation,* http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[89] Paragraph 2.40-2.52, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.
[90] Paragraph 2.13, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

3.45 As well as arguing that BT has an ability and incentive to engage in a price squeeze, TalkTalk also argued that existing market shares indicate an existing competitive distortion. In particular, it referred to the fact that BT has a higher share of superfast broadband customers compared to standard broadband, that rivals' share of net additions "*has plateaued at around 30%*", and that uptake among BT's customers is significantly higher than its rivals (and is growing).[91]

3.46 TalkTalk also disagreed with BT's argument that because TalkTalk's retail fibre offers are "*marginally profitable*" there is not a competition problem.[92] To support this argument, TalkTalk argued that the comparison between products was not like for like (e.g. it excluded BT Sport) and that, in any event, a price squeeze test should be based on the profitability of a competitor offering BT's products, not the actual profitability of a competitor. Further, TalkTalk argued that for the market to be undistorted and effectively competitive would require not only that rivals can offer "*marginally profitable*" products but that these firms can gain a reasonable market share. However, rivals are not obtaining a reasonable market share, with TalkTalk having a 22 per cent share of copper broadband subscribers on the Openreach network, but only an 8 per cent share of fibre broadband subscribers.[93]

3.47 TalkTalk dismissed BT's arguments that TalkTalk's low share of fibre subscribers was driven by TalkTalk's commercial strategy, [✂].[94] Similarly, TalkTalk argued that the difference in take-up could not be fully explained by differences in customer mix (as argued by BT), given not all other CPs focus on value customers (e.g. Sky) and that superfast broadband is no longer such a new technology (meaning even if early adopters were focused with a particular CP, this is less likely to be relevant now).[95]

3.48 Further, TalkTalk argued that BT's claim that competition will rapidly increase is unlikely. It noted that BT made the same assertion one year ago, but its rivals' share has remained low since then and BT's own forecasts show it maintaining a high share. TalkTalk also disputed BT's claims that steps taken by Openreach would drive fibre adoption, saying it was not aware of any change that would materially change rivals' relative competitiveness in the future.[96] It also considered that the reduced migration fee would not significantly reduce switching costs and avoid a distortion (as argued by BT). The majority of customers in this review period will be upgrades from standard broadband (and so this fee is not incurred), while other – mainly non-

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[91] Paragraphs 2.1-2.8, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.

[92] Paragraph 2.26, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

[93] TalkTalk made similar arguments in *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.(see paragraphs 2.19-2.29). It also noted that, more recently, it has significantly reduced its superfast broadband prices [✂].

[94] Paragraph 2.27, *TalkTalk Response to the VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf. TalkTalk also made similar arguments in *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf (see paragraphs 2.11-2.18), where it disagreed with BT's arguments that other operators have chosen not to compete for superfast broadband subscribers.

[95] See paragraphs 2.9-2.10, Ibid.

[96] Paragraphs 2.35-2.39, Ibid.

pecuniary – switching costs for even those who do incur this fee are likely to be more significant.[97]

3.49 Finally, TalkTalk commissioned the technical consultancy WIK to estimate the wholesale costs of VULA. WIK estimated BT's costs to be around £4.04 per line per month. By charging an average price of around £8.10 per line per month, TalkTalk argued that BT appeared to be charging in excess of a price that a non-integrated monopolist would charge and that this was profit maximising for BT because it benefits from a high VULA price weakening competition.[98] TalkTalk considered that BT would be able to reduce its wholesale charges while still earning a return equal to or above its cost of capital.[99]

Vodafone

3.50 Vodafone agreed with Ofcom's regulatory objective of ensuring that BT could not use its SMP to distort retail competition. It also agreed that Option 2 was the best way of achieving this regulatory objective. It said that we should consider all relevant costs of a superfast broadband provider allowing sufficient recovery of costs, in light of substantial disadvantages in terms of economies of scale and scope.[100]

Confidential respondent [✂]

3.51 [✂][101] [102]

3.52 [✂][103]

Our analysis

Current market context

3.53 Before we discuss our regulatory objective for the VULA margin, it is useful to consider the existing market context in relation to superfast broadband. In particular, we consider how the market has developed to date and, given the forward-looking nature of this review, we have also sought projections from CPs of how this market

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[97] Paragraph 3.19, Ibid.
[98] Paragraph 2.19, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf. TalkTalk also argued that this excessive price for GEA was evidence that competition is currently distorted in *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf (see paragraph 2.34).
[99] Paragraph 2.21, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[100] Page 8, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf. Vodafone also argued that VULA should be price regulated (rather than the margin being regulated), but it recognised that this was out of the scope until the next market review (see page 3).
[101] [✂]
[102] [✂]
[103] [✂]

position may develop over this review period.[104] We recognise that, as superfast broadband is a fast-growing product, there are inherent uncertainties in any forecasts (which are ultimately subject to judgement), while uptake to date may reflect differing commercial strategies and/or customer mixes (as argued by BT, although we also note TalkTalk strongly disputed this claim – see paragraph 3.47[105]). We consider that this data provides useful context for our consideration of further regulation in this area (and, in particular, when considering the risks of a distortion to competition and adverse effects for consumers).

3.54 In the UK, effective wholesale regulation has enabled retail consumers to benefit from competition in the provision of broadband services through choice of provider, lower prices and product innovation. Currently, the large majority of consumers in the broadband market purchase standard broadband services, and a regulatory requirement on BT to provide LLU has supported the emergence of competition in these standard broadband services. However, an increasing minority are now purchasing superfast broadband, and a shift to superfast broadband will reduce the role of LLU as VULA is instead used to provide superfast broadband on BT's network.

3.55 Based on the evidence available to us, we consider there is a risk that the future structure of the superfast broadband segment could be very different even in three years' time to what we observe today in broadband as a whole. In particular, we note the following points.

- BT has to date been winning a substantial share of VULA-based retail superfast broadband subscribers (as set out in paragraph 3.18, BT achieved approximately 69 per cent of the net VULA additions in 2013/14, down from 84 per cent in 2012/13). While BT's share of net VULA additions is now lower, in Q3 2014 BT still achieved approximately 59 per cent of the new VULA connections supplied by Openreach and was retailing at least 74 per cent of all VULA connections.[106] This equates to a share of all superfast broadband subscribers (i.e. including Virgin) of approximately 36 per cent (with Virgin's share at approximately 51 per cent, and the rest sharing approximately 13 per cent).[107]

[104] During this process, BT has provided us with three sets of forecasts: one in December 2012 (the 'First BT Forecast', in response to question 2.8 of the s.135 notice of 26 November 2012); one in February 2014 (the 'Second BT Forecast', in response to question 1.1 of the s.135 notice of 12 February 2014); and one in October 2014 (the 'Third BT Forecast', in response to question 4 of the s.135 notice of 7 October 2014). We also requested forecasts from Sky, TalkTalk, Virgin and EE at the same points in the process and (contrary to BT's argument in paragraph 3.17) have used their data to cross-check BT's external volume forecasts (see below for further details).

[105] We also note The Bit Commons' argument that BT could gain a first mover advantage since it did not need to consider the effect of its sunk LLU investments.

[106] Based on BT having more than 2.5m retail superfast broadband customers (with net connections of approximately 203k), and Openreach connecting approximately 3.4m premises with fibre (with net connections of approximately 344k). BT, *Results for the second quarter and half year to 30 September 2014*, 30 October 2014, http://www.btplc.com/News/ResultsPDF/q214-release.pdf.

[107] Based on Virgin having approximately 3.6m superfast broadband subscribers (speeds above 30Mbit/s) as at 30 June 2014. See Note 19, *Q2 2014 Selected Operating and Financial Results*, 6 August 2014, http://investors.virginmedia.com/phoenix.zhtml?c=135485&p=irol-financial-results. Note, Q3 data was unavailable, so we have used Q2 for illustrative purposes (growth in Q2 was approximately 144,400 and so even similar growth in Q3 is unlikely to significantly affect the shares presented).

- Looking forward, BT itself expects to still be winning a large share of new retail superfast broadband subscribers by the end of the review period. In particular the Third BT Forecast implies its share of VULA additions in 2016/17 will still be [✂] per cent.[108] We also note that these subscribers are unlikely to be purely upgrades of BT's existing standard broadband subscribers ([✂]).[109] [110]

- Assessment of data received from stakeholders [✂] indicates that BT's retail share of VULA subscribers could still be [✂][111] in 2016/17, with its share of all superfast broadband subscribers (i.e. including Virgin) approximately [✂] (with Virgin's share at [✂], and the rest sharing [✂]).[112] This share of all superfast broadband subscribers is higher than it has achieved in relation to the retail broadband market as a whole (where, despite increases since 2005, BT's share of residential and small business retail broadband connections has consistently been below 31 per cent[113]). The forecast data thus suggests that operators are predicting that the retail supply of superfast broadband will be more concentrated than has historically been the case for broadband.[114]

3.56 It is against this market context that we now consider the legal framework discussed above and, in particular, whether there is a relevant risk of adverse effects arising from price distortion, before assessing our regulatory aim for the VULA margin.

Relevant risk of adverse effects arising from price distortion

3.57 As discussed above, section 88(1)(a) of the CA03 provides that, in order for us to impose regulation on the VULA margin, it must appear to us from the market analysis carried out for the purpose of setting any condition on the VULA margin that there is a relevant risk of adverse effects arising from price distortion. In the context of this

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[108] [✂]
[109] [✂]
[110] As we also noted in the 2014 VULA Margin Consultation, if BT's rivals were able to compete effectively, we might expect BT to be winning proportionately fewer of the new superfast broadband subscribers towards the end of this review period (given it is likely to have already converted a significant proportion of its standard broadband subscribers to superfast by 2016/17), while, given Sky and TalkTalk are currently earlier in that conversion process, we might expect them to be winning proportionately more of those new subscribers as they upgrade their existing subscriber bases.
[111] [✂]. Replacing BT's forecast external VULA sales with the latest corresponding forecasts of TalkTalk, Sky and EE (as the largest competitors) [✂]. TalkTalk response to question 2 of the s.135 notice of 7 October 2014, Sky response to question 2 of the s.135 notice of 7 October 2014, and EE response to question 1.1 of the s.135 notice of 12 February 2014 and question 2 of the s.135 notice of 7 October 2014.
[112] Overall market share figures calculated by [✂] Note, replacing BT's forecast external VULA sales with the latest corresponding forecasts of TalkTalk, Sky and EE (as the largest competitors) [✂] TalkTalk response to question 2 of the s.135 notice of 7 October 2014, Sky response to question 2 of the s.135 notice of 7 October 2014, and EE response to question 1.1 of the s.135 notice of 12 February 2014 and question 2 of the s.135 notice of 7 October 2014.
[113] Based on data from Ofcom, *Telecoms Data Updates*, Q1 2005 to Q2 2014, http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/tables/.
[114] To illustrate, the Herfindahl–Hirschman Index ('HHI', which provides an indicator of the degree of market concentration on a scale of 0 to 1.0) for the superfast broadband segment could be approximately 0.32 in 2016/17 based on the individual forecast data of BT, Virgin, TalkTalk, Sky and EE (although this does not include smaller CPs, their market shares are likely to be relatively small and thus have limited impact on the HHI). This compares to an HHI of approximately 0.22 for all broadband subscribers in Q2 2014, which suggests an expected increase in concentration.

decision, this requires us to assess whether BT might so impose a price squeeze as to have adverse consequences for end users of public electronic communications services.

3.58 For the purposes of this decision, we consider that there is a relevant risk of adverse effects arising from price distortion where (absent regulation):

- BT has the ability to impose a price squeeze;
- BT has an incentive to impose a price squeeze;
- there is no other factor in the market which would remove this risk of a price squeeze; and
- if realised, this risk will have adverse consequences for end users of public electronic communications services.[115]

3.59 We now set out our considerations of each of these areas. In order to do this, we make this assessment in the absence of specific *ex ante* pricing regulation, including the requirements imposed on BT in respect of the provision of network access on fair reasonable terms, conditions and charges and no undue discrimination (which we understand BT refers to as the FRAND condition). We consider this is the appropriate counterfactual at this stage (contrary to the argument put forward by BT, see paragraph 3.24) as a consequence of the application of the modified Greenfield approach which is used in this context.[116] We then consider in Section 4 whether alternative regulatory obligations or indeed competition law would provide sufficient constraints to address any identified risk.

Ability of BT to impose a price squeeze

3.60 We consider that, in the absence of regulation, BT has the ability over the period of the market review to use its SMP in the WLA market to set the VULA margin such that it imposes a price squeeze.

3.61 First, the ability of other retailers to compete effectively in the provision of superfast broadband services in this review period is largely dependent upon access to wholesale inputs from BT (with the exception of Virgin and some more limited rollout plans by other CPs mentioned by BT (see paragraph 3.19)). As set out in Section 7 of the 2014 FAMR Statement, we have found BT to have SMP in the market for the supply of loop-based, cable-based and fibre-based WLA at a fixed location in the UK excluding the Hull Area. That analysis took into account the constraint imposed by

[115] We note that BT has argued that there is no existing competition concern in relation to superfast broadband and that it is not currently conducting a price squeeze (paragraph 4.19, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf). However, we do not consider it necessary to form a view on this for the purposes of assessing the need to impose regulation (paragraphs 282-297, *Hutchinson 3G (UK) Limited v Office of Communications (Mobile Call Termination)* [2008] CAT 11, http://www.catribunal.org.uk/files/Jdg_CAT11_1083_H3G_200508.pdf.

[116] Paragraphs 73-77, *Hutchinson 3G (UK) Limited v Office of Communications* [2009] EWCA Civ 683, http://www.catribunal.org.uk/files/1083_Hutchison_CoA_160709.pdf.

Virgin and other operators.[117] As set out in Section 2 of this document, there have not been any changes that would falsify to a material extent the forecasts made in the market analysis set out in the 2014 FAMR Statement. To address BT's SMP in this market we have imposed a requirement on BT to provide VULA to allow CPs to offer NGA services in competition with BT's downstream business. Given that Virgin operates a closed network that only covers approximately half of premises and the high barriers to CPs establishing a substantial access network, the only practical way for other CPs to supply superfast broadband is to purchase VULA from BT. Therefore, VULA is likely to be the key wholesale input for retail competition in superfast broadband in this review period.

3.62 Second, our finding that BT has SMP means that it is in a position of economic strength, affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers in relation to the wholesale VULA charge. BT's position as a vertically integrated firm with upstream dominance and control over a vital wholesale input for retail competitors means it is able to directly affect the ability of other CPs to compete in the downstream provision of superfast broadband. Influencing the retail margin available to its competitors by adjusting its VULA charge relative to its retail price is one way BT could do this. All else equal, the lower the differential, the harder it is for other CPs to profitably compete with BT's retail superfast broadband offers. Other CPs will thus find it harder to win and retain the growing segment of consumers interested in superfast broadband. The risks here are greater than in the case of standard broadband because we are proposing not to set a cost based charge control for the wholesale price of VULA in this review period, meaning BT has control over both the relevant wholesale price and its retail superfast broadband prices.[118]

3.63 Therefore, we consider that as a result of its dominance upstream in the WLA market, BT has the ability to impose a price squeeze in the UK excluding the Hull Area.

Incentives for BT to impose a price squeeze

3.64 Given the forward-looking nature of a market review, there is inherent uncertainty in assessing the incentives to engage in a particular behaviour. However, for the reasons set out below, we consider that in the absence of regulation there is a significant and real risk that BT has an incentive to impose a price squeeze. BT is vertically integrated and could set the VULA price with an eye to the impact that this will have on the ability of rivals to compete with it in retail markets. For example, raising the VULA price will raise BT's rivals' costs in supplying superfast broadband; if BT does not raise its own retail price then its retail businesses can win a larger share of downstream sales. Incentives to raise the VULA price may be enhanced if

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[117] See, for example, paragraphs 7.59-7.61, 7.85-7.86 and 7.89-7.90, Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

[118] Absent regulation of the VULA margin, BT could raise the wholesale VULA price to other operators while keeping its own retail superfast broadband prices unchanged. This is unlike the position in relation to standard broadband where the wholesale input price is regulated, meaning BT only has control over its retail price. As such, BT would need to reduce its retail price (and forgo the associated retail revenue) to reduce the margin available to its competitors on standard broadband.

that undermines the ability of other CPs to compete effectively in the provision of retail superfast broadband services in the longer run.

3.65 By setting a VULA margin so as to impose a price squeeze, BT undermines the ability of other CPs to compete, and therefore is more likely to retain those subscribers that are interested in superfast broadband and to win them from its rivals.[119] While there are currently several large competing operators to BT in the provision of broadband services, a degree of regulatory and market certainty is necessary to facilitate their ongoing investment, in particular in relation to providing superfast broadband (which is still a developing consumer proposition). Therefore if BT can undermine this such that the ability and incentive of these operators to invest in winning superfast broadband subscribers and to offer competitive retail propositions is reduced, it may be able to build a large share of retail superfast broadband subscribers in the longer run.[120]

3.66 If BT builds up a sufficiently large retail superfast broadband subscriber base by engaging in such activity, it might be able to obtain advantages over its rivals (e.g. in respect of marketing and economies of scale[121]). Conversely, the resulting low market shares of rival CPs may adversely affect their costs and/or ability to innovate and attract new customers relative to BT into the long term.[122] This effect may be compounded if there are also significant customer switching costs (for example, due to minimum contract lengths or subscriber inertia) as it will increase the costs faced by rivals to win customers back from BT in order to establish themselves as effective competitors in superfast broadband.[123] As such, the competitive constraint from these rivals in superfast broadband could be reduced. For smaller CPs with a lower existing (standard broadband) subscriber base, this may in turn cast doubt on the long term viability of those retailers (particularly if superfast broadband becomes essential for the majority of consumers). This may, at the extreme (for example),

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[119] We also note that raising the VULA price while holding retail prices constant may be a relatively low cost way for BT to effectively impede retail competitors. In particular, it would potentially allow BT to increase upstream profits for any external sales of VULA, while it is likely to gain retail customers if the higher wholesale charges are at least partially passed on by its retail competitors (an argument also made by TalkTalk, as summarised in paragraph 3.42). However, we recognise that setting a high VULA price relative to BT's retail offering may not be entirely costless to BT overall, as it will depend on the net effect on its upstream and downstream volumes (and therefore revenues) – we discuss this further in paragraph 3.82.

[120] In order to win a superfast broadband customer, an operator is likely to incur a number of up-front acquisition costs (e.g. marketing, connection, provision of a router etc.). That operator is likely to recoup those costs over the course of that customers' lifetime from the ongoing monthly margin that it earns. In the event that the ongoing margin were to fall then an operator may not recoup the up-front costs of acquiring that customer. The possibility that BT may reduce margins in this way may thus (absent regulation) diminish other operators' interest in seeking to win superfast broadband subscribers.

[121] We note that such advantages may not currently be visible, since BT's rivals currently have relatively large customer bases.

[122] For example, consumers may not perceive BT's rivals as major suppliers if they have low market shares, meaning a significant (and costly) marketing effort might be required to overcome this.

[123] We have reduced the CP-to-CP GEA migration charges, which will have the effect of reducing switching costs for those customers who incur this charge (as noted by BT). However, we do not believe that this change alleviates our concerns about a distortion of competition. As argued by TalkTalk (see paragraph 3.48), this particular charge will not be incurred for all new superfast broadband subscribers CPs are competing for in this review period (given many are upgrading from standard broadband). Moreover, other impediments to switching remain, in particular inertia and minimum contract periods for new VULA subscribers.

discourage their owners from making further investments in the business.[124] As a result, BT may face weaker competitive pressure than it has to date in standard broadband.

3.67 Therefore, by engaging in this behaviour BT could potentially build a strong retail market position which could endure into the long term, weakening the competitive constraint it faces from other CPs in the future (particularly relative to that observed now in standard broadband). Both TalkTalk (see paragraph 3.44) and Sky (see paragraph 3.40) noted the potential benefits that BT could gain from building a strong retail position.

3.68 We consider that the risk of this incentive is particularly significant in this review period given the following context:

- the transition from standard broadband and the future role of superfast broadband (and VULA); and
- the period covered by this market review is likely to be an important stage in this migration to superfast broadband, and competitive conditions in the future are likely to be affected by developments in this period.

3.69 As discussed above, effective wholesale regulation of LLU has enabled retail consumers to benefit from competition in the provision of broadband services. However, as an increasing minority purchase superfast broadband, the role of LLU will reduce as VULA is instead used to provide superfast broadband on BT's network.

3.70 This market review period is likely to see a further increase in take-up of superfast broadband services (and therefore demand for VULA) as consumers transition from standard broadband (a view echoed by the majority of stakeholders in various responses during this review[125]). Superfast broadband services are also expected to be highly important in the future, including beyond the period covered by this market review. Fast, reliable broadband is likely to benefit consumers and can help support economic growth. This is reflected in the targets that the Government has set in relation to superfast broadband, as well as targets set at the European level.[126] [127]

3.71 While there is clearly a degree of uncertainty, we expect the number of superfast broadband subscribers to grow significantly over the period covered by this market

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[124] TalkTalk argued that the risk of smaller firms exiting the market would provide BT with a long term benefit from engaging in a margin squeeze (see paragraph 3.44).

[125] See, for example, response summaries at the start of Section 3 of the 2014 VULA Margin consultation. In addition, this was noted by Sky in its response to the VULA Margin consultation (see paragraph 3.39).

[126] Government wishes to achieve "*a transformation in … broadband access*" with speeds of at least 2 Mbit/s available throughout the UK and with speeds of at least 24 Mbit/s available in 95 per cent of the UK. This is because "*Fast, reliable broadband internet access is essential for homes throughout the country to benefit from online services, and for UK businesses to compete globally*", DCMS, *Stimulating private sector investment to achieve a transformation in broadband in the UK by 2015*, http://www.gov.uk/government/policies/transforming-uk-broadband. The EU also has a series of targets in relation to broadband take-up and availability and the use of online services, http://www.ec.europa.eu/digital-agenda/about-our-goals.

[127] Indeed, one of Ofcom's priorities for 2014/15 is to ensure effective competition and investment in both current and superfast broadband. Figure 2, Ofcom, *Annual Plan 2014/15*, 31 March 2014, http://www.ofcom.org.uk/files/2014/03/Annual-Plan-1415.pdf.

review. This is supported by CP forecasts for the number of superfast broadband subscribers. For example BT's own forecasts indicate that by the end of this review period (i.e. March 2017) VULA connections may increase by around [✂] per cent from the level in Q2 2014.[128]

3.72 Given this context, we consider that the period covered by this market review is likely to be an important stage in the migration to superfast broadband, and competitive conditions in the future are likely to be affected by developments in this period. We note that BT has questioned this view, claiming that superfast broadband customers are likely to remain a minority in overall broadband subscriptions at the end of this review period (as summarised in paragraph 3.27). However, we still consider this growth to be significant. For example, the combination of BT and Virgin's forecasts imply there will be approximately [✂] superfast broadband subscribers in 2016/17. This compares with approximately [✂] retail superfast broadband subscribers in Q2 2014 (and a total of [✂] retail fixed broadband connections[129]), which would equate to growth of approximately [✂] per cent in this review period. Given the expectation that this growth will also continue longer term, we continue to consider that this period is likely to be important in whether effective competition in superfast broadband emerges.

3.73 This is particularly so since we consider that this period of high expected take-up of (and transition to) superfast broadband represents a disruption to the market and so is likely to present an opportunity for retailers to win customers from their rivals. This is because if a customer is considering switching from standard broadband to superfast broadband, this indicates that they are already engaged with the switching process. It thus seems plausible that a consumer will be more willing to consider an alternative supplier (although we do acknowledge that this will not necessarily always be the case, as argued by BT (see paragraph 3.27)). Accordingly, this market review period could see a heightened opportunity for retailers (including BT) to compete to attract new subscribers. This could in turn result in greater competitive pressures and incentives to innovate among CPs, to the ultimate benefit of consumers. However, competition in this disruptive period could be dampened if BT were free to manipulate the VULA price relative to its retail offering without adequate restraint, such that it could dilute or eliminate the ability of rivals to compete effectively in superfast broadband at the retail level during this time. This would likely raise concerns given the increased consumer activity expected during this transition period.

3.74 Therefore we consider that this market review period potentially represents a period where BT can win significant subscribers from its competitors and upgrade its existing subscribers (possibly locking them in for a minimum term). As such, we consider that this increases BT's incentives to impose a price squeeze.

[128] In relation to the number of VULA connections expected in 2016/17, the Third BT Forecast sets out that there would be [✂] (BT response to Q4(b) of the s.135 notice of 7 October 2014). There were more than 3 million homes and businesses connected to Openreach's fibre broadband network in Q2 2014 (page 4, BT, *Results for the first quarter to 30 June 2014,* 31 July 2014, http://www.btplc.com/News/ResultsPDF/q114-release.pdf).

[129] Q2 2014 broadband subscriber volumes from internal Ofcom data.

3.75 In light of the above, we remain of the view that there is a significant and real risk that BT has an incentive to impose a price squeeze.[130]

3.76 BT has stated that we have not considered BT Sport when considering its ability and incentive to distort competition (paragraph 3.26). As explained above (see paragraph 3.60 onwards), our concern stems from BT's SMP in the supply of WLA. BT has control over a key input in the supply of superfast broadband, namely VULA. In practice, superfast broadband services are supplied in bundles alongside other services such as voice telephony and television services. Competition in the supply of those bundles can be affected by the terms on which VULA is supplied. However, we emphasise that our concerns only apply to those bundles insofar as they use VULA as an input. This is considered further as part of establishing the scope of the test (including in relation to triple-play bundles) in Section 5. We also consider the wider impact on pay TV services and content acquisition in Section 7 as part of our analysis of proportionality.

Are there any factors which remove this risk?

3.77 We do not consider that there are other factor(s) in the market which would remove BT's ability to impose a price squeeze or the significant and real risk that it has an incentive to do so.

Existing legal and regulatory constraints

3.78 BT has argued that competition law and other regulatory constraints (in particular, the previously imposed requirements in respect of fair and reasonable terms, conditions and charges, no undue discrimination and EoI) would constrain its ability and incentive to engage in this behaviour (see paragraphs 3.21 to 3.22). However, consistent with the modified Greenfield context in which we conduct market analyses, we do not consider this to be the correct counterfactual at this stage. Instead, we consider whether competition law and/or alternative regulatory obligations (such as the requirements in respect of fair and reasonable terms, conditions and charges, no undue discrimination and EoI) would achieve our regulatory aim in Section 4.

Prospects for increased competition going forward

3.79 We note that BT considered that, rather than diminishing, competition for fibre broadband is set to increase rapidly over the current market review period, particularly as CPs increasingly promote superfast broadband services. It therefore argued that there is no evidence that Ofcom should act now (rather than potentially at a later stage). However, we do not consider that the reasons put forward by BT (summarised in paragraphs 3.18 to 3.20) remove the identified risk set out above.

- **Despite previous commercial strategies, CPs are now increasingly marketing their superfast broadband offers (including at a discount to BT's prices) and are well placed to promote superfast broadband:** ultimately, the ability (and indeed incentive) for other CPs to compete effectively in the retail

[130] BT argues (paragraph 4.16-4.18, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf) that our analysis of BT's incentives is inadequate. It is our view that we have established BT's incentives to the standard required.

provision of superfast broadband is directly affected by the VULA margin which (as set out above) BT directly controls. Therefore, while we recognise that this is a fast-moving segment with a large customer base yet to upgrade, we do not consider that BT's ability to impose a price squeeze or the significant and real risk that it has an incentive to do so is undermined by any change in CP strategies. Similarly, even if rival CPs are increasingly offering profitable VULA-based services at prices that are lower than BT's[131], we note that this is dependent upon the VULA margin and so any such offerings from CPs will be vulnerable to future changes BT may make to the VULA margin in the absence of regulation (either from a change in the VULA price or BT's retail offering).[132] Relatedly, while they may affect the process and costs of migrating customers to superfast broadband, we consider that the changes made by Openreach (such as the availability of wires-only installation) and regulation (such as reduced migration charges) would also not seem to remove the underlying ability or incentive. Moreover, as noted by TalkTalk (see paragraph 3.48), BT has previously argued that other operators are increasingly beginning to promote superfast broadband services[133] and yet BT has continued to account for a high share of new retail VULA subscribers to date (see paragraph 3.55).

- **Other CPs are now at a cost advantage relative to BT due to the availability of self-installation and reduced migration charges and minimum terms:** we do not consider this to be relevant to consideration of BT's ability and incentive to impose a price squeeze as all CPs (including BT) will face the same costs in these areas when competing for new subscribers.[134]

- **Increased competition not based on VULA:** we discuss in paragraph 3.82 our view that Virgin and other CPs with their own infrastructure are unlikely to be a sufficient constraint on BT's ability to price squeeze in this review period or the significant and real risk that it has an incentive to do so.

3.80 Moreover, we would expect BT's views about the effectiveness of other operators in promoting superfast broadband to be reflected in its internal forecasts. As discussed in paragraph 3.55, BT expects to still be winning a large share of new retail superfast broadband subscribers in 2016/17 and to account for a significant proportion of overall superfast broadband customers.

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[131] As argued by BT (see paragraph 3.18), the CWU (see paragraph 3.36), and KCOM (see paragraph 3.37).

[132] We also note that there is a need to be cautious when comparing headline retail prices since the composition of the retail offerings varies significantly. In particular, BT's superfast broadband packages include access to BT Sport for no additional charge, which increases both the attractiveness of BT's retail packages and BT's costs. As a result, it is likely that BT's retail prices are higher than they would otherwise be (in the absence of BT Sport). We also note that TalkTalk made similar arguments (see paragraph 3.46), and claimed its own fibre offering was [✂] (we have not sought to verify TalkTalk's claim).

[133] For example, in January 2013 BT stated that "*Most importantly we now have clear evidence of the success of the [VULA] product for large external CPs. Major players such as TTG, Sky and EE are now actively marketing superfast broadband services using VULA as an input and recent monthly order volumes have shown significant growth*" and that "*Openreach is already fully incentivised to increase CP take-up of GEA over the next period and to meet CP and end-user needs*" (pages 13 and 14, *BT Response to FAMR Call for Inputs,* http://stakeholders.ofcom.org.uk/binaries/consultations/fixed-access-markets/responses/BT.pdf).

[134] TalkTalk also argued that the reduced migration fee would not significantly reduce switching costs (as summarised in paragraph 3.48).

3.81 Therefore, we do not consider that the arguments put forward by BT for increased competition in the future remove BT's ability to impose a price squeeze or the significant and real risk that it has an incentive to do so. We also note that BT's latest internal forecasts [✂].

3.82 We note BT's argument that there are factors which undermine BT's incentives to impose a price squeeze (see paragraph 3.25). However, we do not consider that the factors identified by BT remove the risk that BT has such an incentive. We make the following observations in relation to those specific points raised.[135]

- **Current levels of differentiation between broadband providers mean there is no guarantee that BT would acquire any consumers lost by its competitors as a result of exclusion:** BT could reduce the VULA margin by raising the wholesale VULA price, meaning that other operators are likely to increase their retail superfast broadband prices while BT keeps its own retail prices unchanged. BT's claim appears to be that in this scenario other operators' consumers would choose not to purchase superfast broadband at all rather than switch to BT's retail superfast broadband propositions, meaning BT would forego the wholesale profits associated with those lost consumers. We accept there is no guarantee that BT would win all the relevant retail subscribers in this scenario. However, we do not consider that this significantly undermines BT's ability or incentive to price squeeze. In particular, we consider it highly likely that at least some consumers would switch to BT in such a scenario (even given current differentiation). For example, while we have not carried out a detailed analysis of diversion ratios, we note that [✂] of BT's new superfast broadband subscribers in Q3 2014 were "*new to BT*" (see paragraph 3.55) which suggests at least some consumers consider BT to be an alternative to their existing CP. Further, it is not clear that existing differentiation significantly undermines BT's ability to attract customers from its rivals. For example, BT would be likely to be able to target value-conscious consumers through its Plusnet offerings, and it may be able to attract consumers who value sport via the inclusion of sport content. Finally, such a price squeeze would still ultimately place BT's rivals at a relative competitive disadvantage in relation to superfast broadband (even if some consumers at least initially stayed with standard broadband rather than switch to BT), weakening retail competition going forward, which BT may trade-off against any forgone wholesale profits in the short term.

- **Openreach has an incentive to maximise utilisation of its network and so does not have an incentive to exclude rivals:** given the returns on its investment in fibre are likely to be sensitive to volumes, we recognise that if the marginal cost of serving an extra superfast broadband subscriber is low for Openreach then additional superfast broadband subscribers may be particularly profitable.[136] However, this is not the same as saying that Openreach has an incentive to maximise utilisation regardless of the wholesale VULA price. Like all firms, BT trades off higher volumes against lower prices. We discuss the impact of setting a low margin on volumes immediately above. Moreover, BT is vertically integrated and from a group perspective considers the impact on its retail business as well as just on Openreach (as also discussed above).

[135] We also note TalkTalk's arguments (as summarised in paragraph 3.43) in relation to these points put forward by BT.

[136] We note TalkTalk's argument (as summarised in paragraph 3.43) that BT has an incentive to margin squeeze in order to [✂], however, we do not reach a view on this issue here.

- Superfast broadband not based on VULA and standard broadband would both constrain BT's retail superfast broadband prices, even in the event that other competitors were not a constraint: we recognise that standard broadband and superfast broadband from other infrastructure owners (particularly Virgin, and to a lesser extent other CPs currently building their own infrastructure, as identified by BT – see paragraph 3.19) will likely provide some constraint on BT's retail prices in this review period, even in the event that other CPs reliant on VULA do not. However, we do not consider that these retail constraints would be sufficient to undermine BT's incentive or ability to price squeeze. In particular, in light of the SMP finding in the WLA market, we consider that standard broadband and alternative infrastructure operators are unlikely to be sufficient to ensure the margin available to rivals is sufficient for competition in superfast broadband (given BT's pricing freedom, discussed in paragraphs 3.61 to 3.62). Therefore we do not consider that either will prevent BT from gaining some longer term advantages from a strong retail position in superfast broadband resulting from imposing a price squeeze (we discuss further why retail competition for the superfast broadband segment matters in its own right in paragraph 3.85 onwards). Indeed, we have previously imposed regulation on the basis that two CPs are not sufficient for effective retail competition even where both Virgin and BT are present (as per the 2014 WBA Statement). Relatedly, while we acknowledge [✂].[137]

Risk of adverse consequences for end users

3.83 Having established that BT does have the ability to impose a price squeeze and that there a significant and real risk that it has an incentive to do so, we now consider whether such behaviour would have adverse consequences for end users of public electronic communications services.

3.84 In the 2014 WBA Statement[138] we found that there is likely to be a single retail market for all broadband speeds during this market review.[139] This means that standard broadband is currently likely to be a substitute for superfast broadband for many broadband consumers. As such, retail superfast broadband prices are likely to be constrained at least to an extent by competition from standard broadband in the short term, even if there is limited competition within the superfast broadband segment itself.

3.85 However, that is not to say that standard and superfast broadband are perfect substitutes. They are clearly differentiated in quality terms, as is reflected in suppliers' marketing and pricing. Accordingly, we consider that retail competition for

[137] In this regard, we note BT's argument that its share of superfast broadband subscribers is smaller than Virgin's. However, we also note that Virgin's share has been steadily declining over time [✂], while BT's has been steadily growing [✂]. See for example, Figure 5.10, *Ofcom, Communications Market Report 2014*, http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/2014_UK_CMR.pdf. This shows Virgin's share of superfast broadband subscribers decreasing from its peak of 65 per cent in Q3 2012 to 56 per cent in Q1 2014, while BT's share has increased from 31 per cent to 35 per cent in the same period.

[138] Ofcom, *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/.

[139] See Section 3 (Ibid.) on product market definition, where we set out our conclusion that it is appropriate to define a single market for all broadband speeds.

the superfast broadband segment matters, even though it is currently part of the wider broadband market.

3.86 Moreover, we consider that it is important to focus on the position in the supply of superfast broadband. This is because, as take-up of superfast broadband increases, the landscape of the retail broadband market is likely to shift. In particular, consumer perceptions may well change such that more consumers consider superfast broadband a more differentiated service from standard broadband. This would weaken the competitive constraint exerted by standard broadband. In such a scenario, it is important for consumers that effective competition exists between superfast broadband retailers. Moreover, retail competition occurs across more dimensions than price alone. Competition in respect of price structures, innovation, marketing, efficiency and other matters is also important. If BT is able to stifle the ability of rivals to compete in the superfast broadband market segment through imposing a price squeeze, competition of this type may also be diluted.

3.87 Therefore in this context we consider that if BT could establish a degree of retail market power in the provision of superfast broadband as a consequence of imposing a price squeeze, there is a significant risk that the price of these services will rise in the future, especially as the constraint from standard broadband diminishes.[140] [141] Further, if competition in the provision of superfast broadband is weak, we would expect to observe reduced consumer choice and lower levels of innovation in the longer term, since competition is a key driver of non-price improvements made by CPs. This would therefore have the effect of unwinding the benefits of competition that have been delivered in relation to standard broadband by LLU operators (as argued by Sky, see paragraph 3.40), leading to adverse consequences for end users.

3.88 We recognise that some of the likely adverse consequences for end users arising from the imposition of a price squeeze are likely to be felt after the current review period (when the constraint exerted by standard broadband may be significantly weaker). We note BT's argument that, to the extent this is the case, there would be an opportunity in the next market review to consider whether regulation is necessary (see paragraph 3.30). However, we are in a period of transition to superfast broadband (as discussed in paragraph 3.68 onwards). Given that the ability of other retailers to compete for and win superfast broadband subscribers during this review period will shape the effectiveness of competition in the future, it is important not to ignore the scope for adverse consequences beyond this review period in order to assess if regulation is appropriate now to prevent such an outcome. Moreover, by intervening now to support effective retail competition, it may be possible to avoid more intrusive regulation in future market reviews.

3.89 However, that is not to suggest that the imposition of a price squeeze would not lead to adverse consequences for end users in the current market review period. In particular, we consider that imposing a price squeeze could potentially give rise to adverse consequences during the period of transition. For example, we might be concerned were BT to impose a price squeeze by unduly raising its wholesale charges due to the additional downstream (retail) gains it could achieve (as

[140] As discussed above, we do not consider that Virgin alone would provide a sufficient retail constraint on BT.
[141] As set out in paragraph 3.55, BT's projected share of retail superfast broadband connections in 2016/17 is [✂]

discussed above), as this is likely to harm consumers who purchase superfast broadband services from other CPs (e.g. because BT's rivals may need to raise their retail prices in order to still recover their downstream costs whereas BT does not).[142] [143]

3.90 Therefore, on balance we consider that the imposition by BT of a price squeeze during the current market review period would have adverse consequences for end users of public electronic communications services in the longer term.[144]

3.91 We also note that such behaviour by BT could signal that it is willing to 'punish' rivals that compete too aggressively in the longer term by imposing a price squeeze (e.g. [✂]), weakening competitive pressures in the future. This would also lead to similar effects as discussed above.

3.92 Even if BT does not actually use any latitude to set a low VULA margin, the threat that it might do that in the future could undermine rivals' incentives to expand as strongly in superfast broadband. For example, even if BT's current VULA margin means it is profitable for rivals to serve superfast broadband customers at present, if in future BT were to raise the VULA price, those subscribers could become loss making or no longer generate sufficient revenues to recoup their original acquisition costs. Anticipating this, rivals to BT may decide to focus less on attracting new superfast broadband subscribers or on migrating existing standard broadband customers to superfast broadband. We consider that similar adverse consequences for end users (as to a scenario where BT did set a low margin) could arise were this to be the case.

Our regulatory aim

3.93 In light of the above, it appears to us from the market analysis carried out for the purposes of setting the VULA margin condition that there is a relevant risk of adverse effects arising from price distortion in that BT might so impose a price squeeze as to have adverse consequences for end users of public electronic communications services. Therefore our regulatory aim is to address this risk; that is, to promote competition by ensuring that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted by virtue of imposing a price squeeze which has adverse consequences for end users of public electronic

[142] We consider BT's argument about the regulatory means by which this concern could be prevented (see paragraph 3.29) in Section 4.

[143] In addition, while we consider that superfast broadband is likely to lie within the relevant market during this market review period, we cannot rule out the possibility that the market separates during the next two years. Were this to occur then significant consumer detriment could arise during this market review period as a result of BT's strong position in the supply of superfast broadband. We note BT's argument in relation to the 2014 WBA Statement (see paragraph 3.29). However, due to the forward-looking nature of a market review, we do not consider that we can categorically rule out the prospect that the markets will separate in this review period.

[144] We note BT's argument that we are required to assess the adverse effects on individual categories of end users and, in particular take account all of the effects on those users in order to judge whether they are worse off overall (paragraph 4.23, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf). We consider that the analysis we have carried out is sufficient to establish a relevant risk of adverse effects arising from price distortion.

communications services. This is due to BT’s ability to impose a price squeeze, the significant and real risk that it has an incentive to do so, the adverse consequences such conduct would cause and the fact that there do not appear to be any existing factors which remove this risk.

Options to achieve our regulatory aim

3.94 In the preceding analysis we set out our regulatory aim. We now need to consider the most appropriate means to achieve this aim during this review period. To do this, we consider the form of price squeeze which would have adverse consequences for end users of public electronic communications services; that is, what level of VULA margin would be insufficient to ensure sustainable competition.

3.95 In general, and all else equal, the greater the VULA margin the greater the ability of other retailers to match BT's retail superfast broadband offers. Increasing the VULA margin may promote retail competition by encouraging entry and allowing rival retailers to grow; it may also allow those rivals to achieve more substantial economies of scale and greater experience of offering fibre than at present. It would also allow BT’s rivals profitably to offer a full suite of retail products (i.e. superfast broadband services alongside their existing services). As such, the risk of adverse consequences for end users of public electronic communications services would be lower, delivering greater dynamic benefits for consumers through lower retail prices and more innovation and choice. However, requiring BT to set a larger VULA margin is not a costless exercise (we consider the costs of doing so further below) and so a balance between these effects will likely be necessary.

3.96 As a starting point, we first consider the VULA margin in relation to BT’s own costs. We consider that if BT sets a VULA margin such that an operator with the same costs as BT is unable to profitably match its retail superfast broadband offers, this would not support sustainable competition and would have adverse consequences for end users. This is because, in order to be profitable, an operator that is identical to BT (i.e. with the same costs and same product offering, but purchasing VULA at the wholesale price) would have to set higher retail prices than BT. This would clearly place that operator at a competitive disadvantage relative to BT. As a result, there is a risk that BT could in future acquire a degree of retail market power in superfast broadband.

3.97 In addition, we consider this to be a potential concern even if other operators are not identical to BT. For example, if other operators have legitimate advantages (e.g. through investment or alternative commercial strategies) whereby one aspect of their retail offer is more attractive than the corresponding aspect of BT’s, then in a competitive market we would expect them to be able to win customers from BT. However, BT might be able to set the VULA price at a higher level to compensate for, or to outweigh, its competitive disadvantage (thereby setting an insufficient VULA margin), which would distort competition and be liable to adversely influence rivals’ incentives to compete for superfast broadband customers. Similarly, such an insufficient VULA margin would diminish the ability of other operators to profitably compete against BT for particular customer segments. Given the market context set out earlier (see paragraph 3.53 onwards), wherein superfast broadband is expected to become increasingly important and BT has been performing strongly to date, we consider that weakening rivals' position in this way creates the risk that BT could in future acquire a degree of retail market power in superfast broadband, leading to adverse consequences for end users.

3.98 Therefore we consider that a VULA margin such that an operator with the same costs as BT is unable to profitably match BT's retail superfast broadband offers is likely lead to a price squeeze that has adverse consequences for end users of public electronic communications services. As a result, we consider that preventing BT from setting such a VULA margin is the minimum necessary to remove the risk of a price squeeze.

3.99 However, that is not to say that this would suffice to prevent the adverse consequences described above. We consider that it is also necessary to assess whether there is still a risk of adverse consequences for end users under this minimum approach such that our regulatory aim is in fact better achieved by an alternative VULA margin. We acknowledge that all CPs have their own advantages and disadvantages (reflecting their commercial strategies and operational choices), and that such differences are often a consequence of competition rather than something that regulation should neutralise.[145] However, we consider that there is also a potential risk that BT has some advantages (for example, which may be linked to its position as the legacy incumbent) which its rivals are unable to match. In these circumstances, a VULA margin which is only sufficient to enable an operator with the same costs as BT to profitably match BT's retail superfast broadband offers may not be sufficient to support sustainable competition, meaning there could still be a risk of adverse consequences for end users from the imposition of a price squeeze. As such, some further adjustments to the VULA margin may be necessary in order to achieve our regulatory aim.

3.100 In light of this, we have identified three ways we could achieve our regulatory aim:[146]

- Option 1 – ensure that BT does not set the VULA margin such that it prevents an operator with the same costs as BT being able to profitably match BT's retail superfast broadband offers.

- Option 2 – ensure that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably match BT's retail superfast broadband offers.

- Option 3 – ensure that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably undercut significantly BT's retail superfast broadband offers.

[145] For example, if an operator has gained an advantage through investment or shrewd business decisions, then it would harm incentives to invest and to manage effectively were we to regulate in order to offset those advantages.

[146] We abstract here from how these options could be achieved (e.g. via *ex ante* regulation, or through *ex post* competition law), which we discuss separately in Section 4. In addition, the reference in these options to "*BT's retail superfast broadband offers*" is in the abstract from any specific retail offerings. Instead, we consider the appropriate scope of the VULA margin control (including, for example, whether it is appropriate to take into account products which are bundled with superfast broadband) in Section 5. This is contrary to BT's argument that our decision to ensure that CPs can profitably match BT's superfast broadband offers influences the decision to include BT TV and BT Sport within the scope of the VULA margin control. (Paragraphs 5.61-5.62, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.)

3.101 We note that pursuing Option 2 is likely to require BT to set a larger VULA margin than would be necessary to achieve Option 1 and that pursuing Option 3 is likely to require a larger margin than would be necessary to achieve Option 2. This is because Options 2 and 3 both concern the ability of rival retailers that have slightly higher costs or some other slight commercial drawback relative to BT to compete in the retail provision of superfast broadband. As a result, such rival CPs would require a slightly higher VULA margin than required by BT in order to profitably match BT's offers (Option 2). In contrast, Option 3 involves rival CPs significantly undercutting those prices. Therefore Option 3 can be interpreted as encapsulating the concern that rival CPs would be unable to sustain their market position unless they maintain a systematically lower price than BT (or, alternatively, that rival CPs have significantly higher costs than BT and so need a greater margin in order to match BT's retail offerings).

3.102 In this regard, we note that we are not seeking to "*penalise*" BT for any first mover advantage as a result of BT making shrewder commercial decisions than its retail competitors (as BT seems to suggest – see paragraph 3.27). Instead, we are seeking to determine the option necessary in order to ensure that CPs are able to compete in the provision of superfast broadband going forward (during this period of transition) so as to ensure sustainable competition and prevent adverse consequences for end users of public electronic communications services.

3.103 We first consider the effectiveness of these options in achieving our regulatory aim. However, requiring BT to set a larger VULA margin is not a costless exercise, so we then also consider the costs of our options (see paragraph 3.114 onwards), before setting out our conclusions.

3.104 In practice, the difference between Option 1 and Option 2 is likely to be small.[147] However, they represent conceptually distinct aims, even if in practice the differences turn out to be small.

Assessment of effectiveness of Options 1 to 3 in achieving our aim

3.105 As set out above, we acknowledge that all CPs have their own advantages and disadvantages, and that such differences are often a consequence of competition (e.g. as a result of individual commercial strategies and operational choices) rather than something that regulation should neutralise. We also recognise that the leading retail competitors to BT such as Sky, TalkTalk and Virgin already operate significant retail broadband businesses and are currently offering their own fibre-based retail services. CPs like Sky and Virgin are also likely to enjoy their own advantages such as economies of scope as a result of their substantial pay TV and telephony businesses. In light of this, BT argues that that Option 1 would be sufficient to achieve our regulatory aim.

3.106 For us to consider Option 1 to be effective and to rule out even considering the need for any adjustments at this stage, we would want to be reasonably confident that BT did not have any material advantages that cannot be matched by other CPs in a reasonable timeframe. This is particularly so given the expectation that superfast broadband will become increasingly important in this review period and the role this

[147] As set out in Section 6, the current adjustments we make to BT's costs have [✂].

period will have in how competition develops (as discussed above). However, at this stage we are concerned there is a risk this may not be the case.

3.107 Contrary to BT's and Vodafone's suggestions (see paragraph 3.33 and 3.50 respectively), we do not consider it desirable, practical or proportionate to compare all costs and revenues of all CPs in order to inform this view. In particular, we consider that it is unlikely that we would get meaningful (or timely) results from such an analysis, given there are a complex range of factors relevant to such a comparison which would be difficult to identify and interpret (for example, lower costs may mean an operator has a lower quality service and thus lower revenue). Being mindful of not wanting to significantly neutralise the differences between CPs that result from competition, we have instead sought to take into account the underlying causes of cost/revenue differences, and so focussed on areas where there may be material differences which other CPs may not be able to match in a reasonable timeframe.[148] Indeed, we have identified some slight disadvantages for rival operators relative to BT which we consider would fall within this category.[149]

3.108 This therefore suggests that adopting Option 1 (without any consideration of the potential for slight cost or commercial disadvantages relative to BT) could hamper the ability of rival CPs to compete in the retail provision of superfast broadband in this review period. This is because rival CPs would not be able to profitably match BT's retail superfast broadband offers if they had slightly higher costs (or some other slight commercial drawback) relative to BT but the VULA margin was only sufficient for an operator with the same costs as BT.

3.109 As a result, we are concerned that there is a risk under Option 1 that BT is able to set the VULA margin to implement a price squeeze so as to have adverse consequences for end users of public electronic communications services.

3.110 While we consider there to be a risk that Option 1 would not be effective, we consider that both Options 2 and 3 are likely to be effective in achieving our aim. This is because both will allow us to consider, when designing the VULA margin regulation, the potential for unmatchable cost or commercial disadvantages that CPs may suffer relative to BT. Therefore, if material differences exist and other operators are unlikely to be able to match them, the VULA margin can be adjusted (if appropriate and proportionate) so that it still allows CPs with those slightly higher costs than BT (or some other slight commercial drawback relative to BT) to compete effectively (either by profitably matching or by undercutting BT's retail superfast broadband offers). Therefore both will reduce the risks of adverse consequences for end users occurring.

3.111 Since it is likely to result in a larger VULA margin, we might expect that Option 3 would be more effective in preventing a distortion to competition than Option 2. However, we consider that the incremental effectiveness of Option 3 in achieving our aim relative to Option 2 may be relatively low. This is because it is questionable whether CPs require this additional margin in order to compete effectively or indeed

[148] For example, BT has a unique position as the legacy incumbent national operator, which may provide it with advantages in relation to superfast broadband provision which other CPs are currently unable to replicate or offset.
[149] In particular, we discuss in Section 6 evidence that some CPs may experience shorter Average Customer Lifetimes ('ACLs'). We also consider the possibility that, in the future, BT's estimated unit bandwidth costs are lower than those of other operators.

whether CPs (particularly smaller retailers) will substantially benefit from the much larger margin likely to be required under Option 3 over and above Option 2.

3.112 Currently there are four large broadband suppliers, namely BT (with a share of subscribers of around 30 per cent) and Virgin, Sky and TalkTalk (with a share around 20 per cent, 20 per cent and 15 per cent respectively). While we consider there to be a risk that the three main competitors to BT have slightly higher costs or some other slight commercial drawback relative to BT, they already operate significant retail broadband businesses on which to build, meaning an even greater adjustment than required under Option 2 is unlikely to be necessary to ensure they remain effective retail competitors.[150] In reaching this view, we have been mindful that other CPs (most notably Sky and TalkTalk) also have large, well known multi-product operations with large customer bases.

3.113 The remaining suppliers are much smaller, with EE being the largest with a share of broadband subscribers of around 3 per cent.[151] We acknowledge that some of these smaller CPs may have even higher costs and/or commercial drawbacks relative to BT, which may limit the effectiveness of Option 2 for these types of CP. To the extent this is true, Option 3 may theoretically further improve their ability to compete effectively with BT in the retail provision of superfast broadband. However, we consider that the additional benefits to them of a larger margin are likely to be limited ([✂]). This is because the smaller CPs would still face competitive pressures from the other three large CPs under Option 3. This is consistent with historical experience in relation to broadband as a whole, where the largest four firms' share of subscribers has gradually increased over time, reflecting both organic growth and acquisitions of smaller firms. As such, it is not clear that Option 3 would be significantly more effective in achieving our aim than Option 2.

Assessment of the costs of Options 1-3

3.114 Increasing the VULA margin is not a costless exercise, and could raise the following issues:

- risk of inefficiency;
- potential increases in BT's retail prices to accommodate the larger margin; and
- negative impact on investment incentives.

3.115 We now discuss each of these potential costs, recognising that, all else equal, the higher the VULA margin the greater the potential costs.

Risk of inefficiency

3.116 Requiring BT to set a wider VULA margin may result in productive inefficiencies because a high margin could provide headroom for much less efficient firms to win business. This risk is likely to be higher with a larger VULA margin (and so higher for Option 3 than Option 2). However, as noted above, to the extent that continued competition from larger CPs makes it harder for smaller CPs to compete even if BT

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[150] See also the indicative assessment of our approach to the VULA margin in Section 6.
[151] Figure 5.39, Ofcom, *Communications Market Report 2014*, 7 August 2014, http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/2014_UK_CMR.pdf.

does set a wider VULA margin, the risk of productive inefficiencies arising even under Option 3 will also be reduced. While this risk may also be higher under Option 2 than Option 1, we note that Option 2 is only seeking to consider whether there are specific (material and likely unmatchable) disadvantages other CPs face relative to BT which justify an adjustment to the VULA margin so that other CPs can profitably *match* BT's offers; it is not clear that this would result in significant productive inefficiencies.

Potential increases in BT's retail prices

3.117 Increasing the VULA margin implies that BT may need to increase its retail prices[152] (which would harm consumers, at least in the short term), reduce its wholesale VULA price (which may affect BT's investment incentives, which we discuss in paragraph 3.119 onwards) or some combination of the two.[153]

3.118 There is a risk, therefore, that increasing the VULA margin will result in BT's retail prices being higher than is necessary, and we recognise BT's arguments that (depending on the adjustments made) this could lead to static and dynamic efficiency losses as well as a regulatory windfall for its rivals (see paragraph 3.31). While we recognise this risk is potentially higher for Option 2 than Option 1, we consider it is unlikely to be significant since, as discussed above, the increase in VULA margin that could result would be only to reflect specific (material and likely unmatchable) advantages of BT relative to other CPs so they can profitably *match* BT's offers (so as to avoid a distortion to competition). Therefore it would seem unlikely to result in the sort of windfall argued by BT. However, we do consider it would be of substantially greater concern were we to adopt Option 3, given the significantly larger margin this could require, since Option 3 seeks to ensure an operator with slightly higher costs can profitably significantly *undercut* BT's retail superfast broadband offers.[154]

Impact on investment incentives

3.119 BT has invested substantial amounts in its fibre network and will likely make further investments in the future (e.g. in vectoring, fibre to the remote note, G.FAST etc.). We have thus carefully considered the impact on investment incentives. As set out above, BT could respond to a higher VULA margin by reducing VULA charges as well as (or instead of) increasing retail prices. We note that the absolute charge level

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[152] We note that any obligation imposed to address BT's SMP in the WLA market would only impose requirements on BT in respect of its wholesale VULA charge. While in some circumstances it may be possible for BT to choose to comply with that requirement by adjusting its retail prices, there would be no regulatory requirement for it to do so.

[153] We do not comment here on whether a wholesale price reduction or retail price increase is more likely, instead considering the potential impact in the round (e.g. if either (or indeed both) occurred).

[154] For example, based on an illustrative calculation provided by confidential respondent [✂] ([✂]), a £6.27/month increase in fibre broadband margins could be required to equalise the margin available on standard broadband and fibre broadband. Given that current GEA-FTTC prices are between £6.90 and £9.95 per month, it would virtually eliminate the VULA charge were BT to absorb a margin increase of this level entirely through reductions in the VULA price. We consider that an increase in margins of this magnitude is likely to involve an increase in BT's retail prices as well as a fall in wholesale prices (see Openreach, *Generic Ethernet Access (FTTC) prices,* http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=yzq%2FQaGYa3hVgsB2ZYfjHxzfISuq3px%2FWFtgATP2kPRZ6rNZujnCs99NbIKJZPD9hXYmiijxH6wr%0ACQm97GZMyQ%3D%3D.)

of VULA is not regulated, and therefore (notwithstanding any constraints that result from regulation of the VULA margin) BT is able to set the level of the VULA charge itself. As a result, subject to the extent of increase in the VULA margin, it is largely in BT's control to set the VULA charge so that it recovers its costs of providing superfast broadband on a forward-looking basis. Therefore, given its freedom over its retail prices as well (as discussed above), we consider that any impact on investment incentives is likely to be limited. That said, we do note that the wider the VULA margin, the greater the risk that this may no longer be the case (particularly if there are sufficient constraints on retail prices), and so it could potentially have a negative effect on investment incentives (as argued by the CWU and KCOM, see paragraphs 3.36 and 3.38 respectively). For example, if it resulted in lower wholesale VULA prices such that BT could not recover its costs, then BT's incentives to invest in fibre in the future may be reduced.

3.120 Our approach in the 2010 WLA Statement explicitly went beyond *ex post* competition law and indicated that we would initially assess the impact of the VULA margin on a REO basis (as distinct from one that is equally efficient to BT).[155] Despite that approach, there was substantial investment in superfast broadband in the period to 2013/14, covered by our previous market review. As set out in paragraph 12.11 of the 2014 FAMR Statement, we note that BT is nearing the end of its main commercial NGA build, having achieved 66 per cent fibre coverage (around 19m premises). Similarly, other operators such as Virgin and KCOM have continued their investments during this period, with Virgin substantially increasing broadband speeds on its network.[156] In other words, a high level of investment and deployment has been achieved given the regime set out in the 2010 WLA Statement. We also note BT's arguments that it is planning additional investments (see paragraph 3.34) and requires a stable regulatory environment to continue with longer term investments. Therefore, we consider that adopting an option which maintains the approach set out in the 2010 WLA Statement is, subject to the extent of increase in the VULA margin, unlikely to have a material impact on investment incentives.

3.121 We consider that the underlying approach of Option 2 would be consistent with the existing regime implemented in the 2010 WLA Statement, given that Option 2 reflects an operator that has slightly higher costs than BT (rather than one that is equally efficient to BT). Further, given the small adjustments to the VULA margin likely to be required for Option 2 relative to Option 1, we consider that any reduction to the VULA charge required under Option 2 would be limited.[157] Therefore, for both these reasons, we consider that Option 2 is unlikely to have a significant negative impact

[155] Paragraph 8.128, Ofcom, *Review of the wholesale local access market: Statement on market definition, market power determinations and remedies*, 7 October 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf.

[156] See, for example, Virgin, *New Virgin Media broadband twice as fast as anyone else,* 11 November 2013, http://about.virginmedia.com/press-release/9409/new-virgin-media-broadband-twice-as-fast-as-anyone-else and Virgin, *Virgin Media launches broadband twice as fast as the rest,* 28 February 2014, http://about.virginmedia.com/press-release/9418/virgin-media-launches-broadband-twice-as-fast-as-the-rest.

[157] We also note that, given the small adjustments under Option 2, it is likely that BT could manage its response so as not to undermine the profitability of its own fibre investment (for example by increasing its retail prices instead). As such, we would not expect this option to undermine BT's fibre investment.

on investment incentives (of BT or other CPs) in this review period.[158] We note that KCOM argued that the proposed approach would directly affect its own investment incentives (see paragraph 3.38). However, in light of the above, we do not believe that its incentives should be significantly negatively affected.

3.122 However, we consider that Option 3 does have the potential to harm investment incentives. An increase in margins of the magnitude likely to be required to enable CPs to significantly undercut BT's retail superfast broadband offers is likely to involve a material fall in BT's wholesale VULA prices (as well as a potential rise in its retail prices). This is likely to reduce the profitability of BT's investments in fibre (due to the likely reduction in VULA charges required). In addition, it is important to note that this investment was made in the light of the regulatory position previously set out by Ofcom, and so adopting a consistent and predictable regulatory approach is important in order to support future investment, both in fibre and more generally.[159] Put another way, given BT has already invested large amounts in fibre deployment, making unanticipated regulatory changes that materially affect the profitability of that investment would introduce perceived regulatory uncertainty, harming future investment incentives. Therefore we remain concerned about the potential impact of seeking to achieve Option 3 on investment incentives.

Conclusion

3.123 As set out in paragraph 3.93, we consider that our regulatory aim should be to ensure that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted by virtue of BT imposing a price squeeze which has adverse consequences for end users of public electronic communications services. In considering the most appropriate way to achieve this aim, the forward-looking nature of our analysis means that there are inherent uncertainties about how the market will develop. Therefore this is a policy area in which we, as the specialist sectoral regulator, have to exercise judgement. Ultimately, this judgement involves assessing what is the minimum necessary to remove the risk of a price squeeze so as to have adverse consequences for end users of public electronic communications services; that is, what level of VULA margin would be insufficient to ensure sustainable competition and prevent adverse consequences for consumers. We note that, as a matter of proportionality, we would not want to provide competing CPs with a greater margin than we consider is necessary in order to prevent this.

3.124 We consider that a VULA margin that does not allow an operator with the same costs as BT to profitably match BT's retail superfast broadband offers does not remove the risk of a price squeeze so as to have adverse consequences for end users of public

[158] TalkTalk also argued that the incentives were unlikely to be affected as the current wholesale VULA charge is above the competitive level (see paragraph 3.49). To the extent this was the case (although we acknowledge BT's concerns about the underlying assumptions used, which are summarised in paragraph 3.35), we recognise TalkTalk's argument that BT may be able to reduce the VULA charge and still earn a sufficient return. However, we make no comment on whether TalkTalk's submission is correct on the absolute level of VULA charges here, as the focus is purely on the VULA margin.

[159] This is also discussed in Section 12, Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

electronic communications services. Therefore, we consider that Option 1 is the minimum necessary to remove this risk. However, we have then considered whether, from the market analysis carried out, this is sufficient or whether there is a need to go further.

3.125 We consider that there is a risk that other CPs have slightly higher costs and/or some other slight commercial disadvantages relative to BT, meaning there would be a material risk that Option 1 will be ineffective at removing the risk of a price squeeze. Therefore, while Option 1 would ensure that firms which were as efficient as BT could compete in the retail provision of superfast broadband and would not undermine BT's investments, we consider that there is a significant risk it could nonetheless still result in adverse consequences for end users of public electronic communications services. Given the increasing importance of superfast broadband and BT's strong performance to date (as described above), we consider it is therefore important to have the flexibility to consider further whether there are potential cost or commercial differences between CPs which may prevent BT's rivals from profitably matching its retail superfast broadband offers.

3.126 We consider that going beyond Option 1 is consistent with the approach in the 2010 WLA Statement. In particular, we stated that, "*When considering the differential between retail and wholesale prices, we are initially likely to consider whether the current price differential was above the current long-run incremental cost of the downstream activities of a reasonably efficient operator, including an allowance for subscriber acquisition costs*".[160] Given the importance of the period to March 2017 to the take-up of superfast broadband, we consider that we should at least maintain consistency at this time.

3.127 We consider that Option 2 would enable us to effectively prevent a price squeeze that would have adverse consequences for end users of public electronic communications services by requiring the VULA margin to reflect certain cost differences between CPs. While such an approach could have a short term negative impact on efficiency (by allowing CPs with slightly higher costs than BT to compete) and with some risk that retail prices could be slightly higher relative to the case under Option 1, we consider that these potential impacts, even if they did arise, would likely be outweighed by the long term dynamic benefits of future competition. In particular, Option 2 will only require an increase in the VULA margin (relative to Option 1) in order to reflect specifically identified areas where CPs have slightly higher costs than BT (or some other commercial drawback) which we consider would prevent them from matching BT's retail superfast broadband offers. Consequently, this will limit any resulting retail and/or wholesale price change relative to Option 1, meaning any consumer detriment of higher prices in the short term will be more limited and investment incentives are unlikely to be significantly adversely affected. Indeed, as noted above, while conceptually there is a difference between Option 1 and 2, in practice the difference is likely to be small. It also ensures that any negative impact on short term productive efficiency is limited. Therefore we consider that Option 2 provides a proportionate and effective way to achieve our aim.

3.128 We have been mindful of the balance of risks in reaching this view. In the event that future competition in superfast broadband is distorted, there could be significant

[160] Paragraph 8.132, Ofcom, *Review of the wholesale local access market: Statement on market definition, market power determinations and remedies*, 7 October 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf.

adverse consequences for end users given the future scale and importance of superfast broadband. In contrast, the risks associated with pursuing Option 2 appear small. While we recognise that it is not certain that competition problems will emerge, given the likely scale of the harm if they do, we consider that pursuing Option 2 is appropriate and proportionate.

3.129 While we consider that Option 3 would also effectively address the risk of a price squeeze, we consider that the additional benefits in this regard relative to Option 2 are likely to be limited, particularly as smaller competitors will still face competitive pressures from retailers such as Sky and TalkTalk. Moreover, we consider that the negative implications for efficiency and, subsequently, for consumers are likely to be relatively high – significantly higher than those under Option 2. This is particularly so given that all CPs are likely to have their own relative advantages and disadvantages which are the results of their own commercial decisions, so it is likely to be disproportionate to make even greater adjustments to allow CPs to undercut BT. There is also a greater risk of a negative impact on investment incentives under Option 3. Therefore, given Option 3 appears to go further than is necessary to achieve our aim, we consider that it does not provide a proportionate way to achieve our aim.

3.130 We note that this position on superfast broadband differs from the position in relation to standard broadband when we intervened in 2005. In particular, the context is different now, with several established CPs and brands with existing scale and customer bases in standard broadband. As such, it is not clear that other CPs currently need to be able to significantly undercut BT's retail superfast broadband offers in order to effectively compete. Instead, Option 2 can effectively achieve our aim. Further, the risk that regulatory intervention would result in higher retail prices or adverse effects on investment was lower in 2005 (highlighted by the fact that the high broadband prices of the time fell sharply as a result of our regulatory approach[161]).

Our regulatory aim for the VULA margin for this review period

3.131 In light of the above, our regulatory aim is to ensure that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted by virtue of imposing a price squeeze which has adverse consequences for end users of public electronic communications services. We consider that this aim is most appropriately achieved in this review period by ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers. Section 4 considers whether, in light of this aim, it is appropriate to impose some form of regulation to control the VULA margin and, if so, the form of control that should be imposed.

3.132 We consider that this aim is consistent with our statutory duties, in particular our principal duty. We note more generally that it is also in line with our priority for

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[161] Average monthly broadband prices fell from £50 (for speeds over 1Mbit/s), £35 (for speeds of 1Mbit/s) and £26 (for speeds of 512 Kbit/s) in 2003 to £41, £30 and £23 (respectively) in 2004 and £16, £15 and £10 (respectively) in 2005 (see figure 3.5, Ofcom, *The Communications Market 2006*, July 2006, http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cm06/).

2014/15, as set out in our annual plan, of "*Ensur[ing] effective competition and investment in both current and superfast broadband*".[162]

3.133 We note at this point that our position may change in future reviews. Our position in any future review will be informed by a range of considerations including developments in the supply of superfast broadband over the coming years, the risk that BT might use any position of SMP that it holds in the future to distort competition, and the need to maintain efficient investment incentives. For example, other CPs may in future have had an opportunity to build up a reasonable base of superfast broadband subscribers such that *ex ante* regulatory intervention may not be necessary.

[162] Figure 2, Ofcom, *Annual Plan 2014/15*, 31 March 2014, http://www.ofcom.org.uk/files/2014/03/Annual-Plan-1415.pdf.

Section 4

Form of the VULA margin control and compliance monitoring

Introduction

4.1 Having decided in Section 3 what our regulatory aim should be, we now set out our assessment of how we will regulate the VULA margin to achieve that aim.

4.2 We first consider whether competition law is sufficient to address our aim, our approach to *ex ante* margin regulation and the inclusion of an effects based assessment.

4.3 We then assess a series of options covering both the form of the specific requirement and the compliance/testing of that requirement that we consider capable of addressing the aim. In light of this analysis, we decide the form of the VULA margin control and the compliance regime based on an assessment of how effective these options are in achieving the aim; for those that are likely to be effective, we decide which will achieve our aim in the most proportionate way.

Position as at the last review

4.4 In the 2010 WLA Statement we relied on the requirement on BT to maintain fair and reasonable VULA terms, conditions and charges to prevent BT from setting an inappropriate pricing differential between retail superfast broadband prices and wholesale VULA prices and set out what we were likely to consider initially when reviewing that differential, including the cost standard.[163]

4.5 We also expected that BT would need to maintain financial models containing relevant information on VULA and downstream product costs and prices, and their development over time. However, we did not set out any formal compliance or monitoring process.

The 2014 FAMR Consultation

4.6 The proposals on which we consulted are set out below in the relevant sub-sections. We asked in the 2014 FAMR Consultation:

Q4.1	*Do you agree with the proposed form of the VULA margin requirement and associated compliance monitoring? Please provide reasons in support of your views.*

Does competition law address our aim?

4.7 We set out in the 2014 VULA Margin Consultation that we did not consider that the application of *ex post* competition law under Chapter II of the CA98 and/or Article 102

[163] Paragraphs 8.132-8.135, Ofcom, *Review of the wholesale local access market*, 7 October 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf.

of the Treaty on the Functioning of the European Union address our aim of ensuring that BT, over the forward-looking period of this review, does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers.

Stakeholder responses to the 2014 VULA Margin Consultation

BT[164]

4.8 BT argued that Ofcom's analysis was inadequate and that it was not clear why competition law would be ineffective in addressing concerns with "*margin squeeze strategies*". In particular, it suggested that Ofcom had not specified which features necessary to achieve its aim competition law would not capture, despite recognising adjustments could be made in certain circumstances.[165] Further, it noted that there was no suggestion that the provisional decision in relation to the Superfast Broadband Competition Act Investigation had exposed any deficiencies in competition law.

4.9 BT further argued that Ofcom's analysis of competition law did not take account of the fact that competition law would be applied in conjunction with the FRAND and EoI SMP conditions, such that BT would be subject to both *ex ante* and *ex post* regulation under the CA03 and the CA98. Therefore Ofcom had not given sufficient consideration to whether its existing package of regulation could achieve its aims.[166]

4.10 BT also suggested that, when assessing whether competition law is sufficient, the proper comparison should have been between competition law and an *ex ante* test which allows for an assessment of harm. We respond to this suggestion as part of our discussion of whether remedies imposed under *ex ante* margin regulation include an assessment of the effect on competition from paragraph 4.30.

KCOM[167]

4.11 KCOM argued that *ex post* competition law was sufficient to address any market failure. It noted that the Superfast Broadband Competition Act Investigation demonstrated that *ex post* competition law provided a remedy where behaviour was problematic. Further, KCOM noted that Ofcom had provisionally found no grounds for action, which raised the question of what issue Ofcom was attempting to resolve by imposing a specific SMP condition. This was particularly so given that other CPs were providing VULA-based services at a lower retail price than BT (this might

[164] Paragraph 6.11, *BT response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[165] BT noted that Ofcom had referred to the *Konkurrensverket v TeliaSonera Sverige AB* case, which set out that adjustments to how the dominant undertaking's costs are assessed can be made in certain circumstances (such as if CPs other than the vertically integrated supplier have costs disadvantages).
[166] Paragraphs 4.6-4.10, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[167] Pages 3-5, *KCOM response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/KCOM_Group.pdf.

suggest that BT's market share was "*organic*", which more detailed analysis of the retail market might confirm).

TalkTalk

4.12 TalkTalk argued that there is a significant difference in the purpose of *ex post* competition law and *ex ante* regulation, with the former unable to prevent competitive distortions due to it being after the event. Further, this difference also leads to a lower margin than under *ex ante* regulation, meaning that BT could pass a CA98 test even though its margin was not sufficient to avoid competitive distortions.[168]

4.13 TalkTalk noted that *ex post* competition law had proved insufficient in circumstances where firms have enduring market power (hence the European regulatory framework).[169] In particular, *ex post* competition policy may be a less effective where there is less certainty about how tests would be conducted, whereas an *ex ante* approach can specify any test in advance.[170] An *ex post* approach may also result in a significant lag between any abuse and its identification (it has in some cases taken several years for the European Commission to come to a decision and impose fines in cases involving margin squeeze).[171]

4.14 TalkTalk also noted that the EC Costing and Non-discrimination Recommendation recognises that the lack of wholesale price controls on VULA means that additional safeguards will be necessary (predicated on the presumption that SMP in the upstream market confers an incentive and ability to exclude rivals which must be constrained).[172]

Analysis

4.15 We agree with TalkTalk that there is a significant difference in the purpose of *ex* ante regulation and *ex post* competition law.

4.16 As set out in Section 3, our aim in this context is to ensure that BT does not use its SMP in WLA to set the VULA price to distort the emergence of retail competition in superfast broadband. We are concerned with competition over the review period and the risks of *future* weakening of competition at the retail level and that has lead us to conclude that the appropriate and proportionate regulatory aim is to ensure that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers. We do not consider that *ex post* competition law achieves our regulatory aim.

4.17 Further, any remedy to achieve our aim must provide sufficient certainty as to how we would assess the margin and as to its acceptable level. This certainty will ensure

[168] Paragraphs 3.25-3.26, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.
[169] Paragraph 2.10, *TalkTalk October 2014 Frontier Economics report*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Frontier_Economics_report_on_BTs_response.pdf .
[170] Paragraphs 1.5 and 2.5, Ibid.
[171] Paragraphs 1.5 and 2.10, Ibid.
[172] Paragraph 2.15, Ibid.

that BT understands how to comply with the obligation and in turn assist other CPs in respect of their decisions to invest in winning superfast broadband subscribers.

4.18 We do not consider that *ex post* competition law would be effective in achieving our aim given a lack of certainty in two respects.

4.19 First, we consider that *ex ante* regulation minimises uncertainty in the *ex post* position that would only become clear following *ex post* enforcement action, such as whether any adjustments to BT's costs would be made. Any such uncertainty means that it would be unclear to BT (and to other CPs) as to what level of VULA margin should be set to ensure compliance.

4.20 Second, we consider that *ex ante* regulation minimises uncertainty arising out of the requirement under *ex post* competition law to establish at least the potential for anti-competitive effects in the downstream market as a consequence of the failure to maintain a sufficient margin (see paragraphs 4.30 to 4.47).[173]

4.21 We also disagree with BT's argument that we have not given sufficient consideration to whether our existing package of regulation could achieve our aim (i.e. taking into account that *ex post* competition law will be applied in conjunction with existing *ex ante* regulation – see paragraph 4.9). Our assessment of the form of the VULA margin control (see paragraph 4.48 onwards) includes Option A, which essentially comprises the fair and reasonable terms, conditions and charges condition (Condition 1) currently imposed on BT in the WLA market in the UK excluding the Hull Area, supplemented by guidance.[174]

4.22 We consider that Condition 1 on its own will not be effective in achieving our aim. We also consider whether an obligation including an analysis of effects achieves our aim, and we conclude that it does not (see paragraphs 4.36 to 4.47). Having undertaken this analysis, we conclude in Section 7 that a combination of *ex post* competition law alongside the existing SMP remedies imposed on BT (including Condition 1 and the obligation to provide services on an EoI basis) also will not be effective in achieving our aim (see also paragraph 4.68).

Conclusion

4.23 Accordingly, we consider that *ex post* competition law is insufficient to achieve our aim and therefore it is appropriate to impose a form of *ex ante* margin regulation. We are seeking to impose appropriate regulation on an SMP provider, not address a breach of *ex post* competition law. As such, this is a regulatory exercise which inherently points to clarity and certainty, and which does not fall to be judged by the same standards or precedents as an *ex post* competition law case.

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[173] Case C-280/08 *Deutsche Telekom AG v Commission* [2010], paragraphs 252-255; Case C-52/09 *Konkurrensverket v TeliaSonera Sverige AB* [2011], paragraphs 60-66; Case T-398/07 *Spain v Commission* [2012], paragraphs 89-93.

[174] Option A comprises an SMP condition requiring BT to supply VULA on fair and reasonable terms, conditions and charges, supplemented by guidance on how we intend to undertake our assessment when testing whether the VULA margin complies with that SMP condition.

Conceptual approach to ex ante margin regulation

4.24 Where we find SMP in wholesale telecoms markets, we typically impose some form of *ex ante* regulation on wholesale prices. That wholesale regulation can take a number of different forms.

4.25 As set out in the 2014 FAMR Statement[175], we do not consider that cost-based regulation of the wholesale VULA price is appropriate. This is for a number of reasons, including the harm to investment incentives if we were to constrain prices in a way that prevents BT from capturing the upside of risky investments.

4.26 However, for the reasons set out in Section 3, our view is that some form of *ex ante* regulation is needed to ensure that BT maintains an adequate margin between its retail prices and the wholesale price of VULA, in order to achieve our regulatory aim.

4.27 Conceptually, margin regulation is equivalent to a 'retail minus' control on the wholesale price. Put simply, if BT is required to maintain a retail margin of at least £X/month then this is equivalent to setting a maximum wholesale price equal to the retail price minus £X/month. Controlling wholesale prices on a 'retail minus' basis in this way has a number of important differences compared to a 'cost plus' control. The regulated firm retains the flexibility to set whatever level of wholesale prices it wishes (provided that its retail price is suitably above the wholesale price). As a result, a 'retail minus' control can protect retail competition while still allowing the regulated firm to earn an appropriate return at the wholesale level (in particular where an apparently high return may be appropriate where it is the upside of a risky investment).

4.28 We do not consider that a cap[176] at the level of existing VULA charges would be sufficient to address our concerns and therefore would not be effective in achieving our aim. Such a cap would not be well targeted since our concern relates to the retail margin rather than the level of the wholesale price *per se*.[177] In particular, BT would still be able to reduce the margin available to its competitors by reducing its retail superfast broadband prices or by including costly additional features for no additional charge.[178] As such, given the market context (whereby we expect a period of transition to superfast broadband and BT's ability to price squeeze and the significant and real risk it has an incentive to do so), we consider that even with VULA charges

[175] http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/

[176] [✂]

[177] As explained in Section 3, our regulatory aim is to ensure that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted by virtue of imposing a price squeeze which has adverse consequences for end users of public electronic communications services. As such, a wholesale price cap would, for example, prevent a wholesale price rise that is accompanied by a commensurate increase in retail prices would not result in a price squeeze and thus would not result in the type of adverse consequences that this statement is seeking to prevent.

[178] A cap on the wholesale VULA charge could affect BT's incentives to price squeeze (relative to the position set out in Section 3 with no *ex ante* regulation) since the potential trade-off between possible short term (retail) losses and longer term gains (from reduced competition) could vary (e.g. depending on its absolute level). However, the effect on BT's incentive is far from clear in this scenario, particularly in light of the current market context and given that BT would maintain the ability to price squeeze under a wholesale charge cap.

capped at their current level there would remain a relevant risk of adverse effects arising from price distortion as discussed in Section 3. [✂].

4.29 In summary, we consider that *ex ante* regulation of the VULA margin is in line with our general regulatory approach of intervening to address SMP at the wholesale level. While a cost-based control on the wholesale VULA price is not appropriate at this point, we consider that requiring BT to maintain a minimum margin (referred to in this document as a 'VULA margin control') is an appropriate and direct approach to achieve our regulatory aim, given the discussion in Section 3.

Should remedies imposed under ex ante regulation include an assessment of the effect on competition?

4.30 We set out in the 2014 VULA Margin Consultation that our provisional conclusion was that it is not appropriate for the VULA margin assessment to incorporate a further assessment of the effects of BT's price on competition and/or consideration of whether BT's prices are objectively justified. Accordingly, we did not propose to incorporate either of these features into our proposed SMP condition. In the event that we considered BT's VULA margin to be insufficient, we said that we would consider this to be a breach of the proposed SMP condition.

Stakeholder responses to the 2014 VULA Margin Consultation

BT

4.31 BT argued that Ofcom was required by the BEREC Common Position and the EC Costing and Non-discrimination Recommendation to undertake an analysis of the effect on competition in any consideration of margin squeeze (that is, in each case to consider whether the level of the margin has had a detrimental effect on competition). It also noted that it is an established requirement under existing case law to conduct an effects analysis and that Ofcom cannot circumvent this requirement by imposing an *ex ante* remedy.[179] BT also stated that the Irish, Danish and Croatian NRAs treat it is a mitigating factor if an *ex ante* "*margin squeeze test*" is failed as a result of the incumbent operator meeting competitors' prices.[180]

4.32 Further, BT stated that Ofcom's emphasis on certainty was wrong and Ofcom had not analysed how the flexibility provided by current constraints is failing to prevent BT distorting superfast broadband competition. BT characterised Ofcom's approach as a brightline test that imposes constraints on BT which are not reflective of commercial realities and risks prohibiting behaviour that does not have the effect Ofcom is aiming to address.[181] In particular, BT considered that a brightline test looking at whether the VULA margin is sufficient to cover BT's retail costs risks 'Type 1' errors (false positives) since this is not a "*plain vanilla*" case of margin squeeze. Rather, superfast broadband services are characterised by product differentiation (particularly in terms

[179] Paragraph 6.11, *BT response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[180] Paragraphs 1.7-1.8, *BT Response to the 2014 VULA Margin Consultation – Annex D: Margin squeeze test implementation by other NRAs in the EU,* http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_D_-_Margin_squeeze_tests_by_other_NRAs.pdf.
[181] Paragraphs 6.16-6.23, *BT response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

of TV and sports content), heterogeneous consumer preferences and differences in operators' commercial strategies.[182]

TalkTalk

4.33 TalkTalk noted that an assessment under the existing fair and reasonable pricing obligation would be "*indistinguishable*" from the brightline test proposed by Ofcom.[183]

4.34 TalkTalk argued that both UK and EU regulations provided scope for a brightline test. TalkTalk said that it was clear that section 88 of the CA03 provides that Ofcom can impose a condition where Ofcom has shown that there is a risk of adverse effects.[184] Similarly, the EU regulatory framework refers to a presupposition that there is a material risk of a distortion of competition.[185] Further, an effects test would reduce the speed at which Ofcom could address any breach, given the extra stage of analysis that would be involved, reducing the effectiveness of any regulation and thus incentives to comply. [186]

Confidential respondent [✂]

4.35 Confidential respondent [✂] agreed with Ofcom that, having carried out an analysis of the market that has established the need for *ex ante* regulation of the margin, it should not be necessary to have to carry out further assessment of effects or consider whether BT's pricing is objectively justified. Doing so would detract from the certainty of an *ex ante* approach (therefore defeating its object) and would inevitably take a considerable amount of time, preventing Ofcom from intervening quickly.[187]

Analysis

4.36 We do not consider that there is a requirement to carry out an effects analysis as part of any remedy imposed under *ex ante* regulation as suggested by BT (see paragraph 4.31). Further, we do not consider that a VULA margin control which incorporated a further assessment of the effects of the VULA margin set by BT on competition would achieve our regulatory aim.

There is no requirement to carry out an effects analysis as part of any remedy imposed under *ex ante* regulation

4.37 We do not consider that there is a requirement to carry out an effects analysis as part of any remedy imposed under *ex ante* regulation. BT supports its position by

[182] Paragraphs 7.8-7.10, Ibid.
[183] Paragraph 2.5, *TalkTalk October 2014 Frontier Economics report*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Frontier_Economics_report_on_BTs_response.pdf.
[184] Paragraph 3.63, *TalkTalk's comments on BT's response*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.
[185] Paragraphs 2.17 and 2.19, *TalkTalk October 2014 Frontier Economics report,* http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Frontier_Economics_report_on_BTs_response.pdf.
[186] Paragraph 3.40, *TalkTalk's comments on BT's response*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.
[187] [✂]

reference to an *ex post* margin squeeze assessment under competition law (see paragraph 4.31). There is a requirement under *ex post* competition law to establish at least the potential for anti-competitive effects in the downstream market as a consequence of the failure to maintain a sufficient margin. However, this is not an appropriate parallel to draw with the decision we are concerned with here, as we are deciding in this Statement whether to impose an *ex ante* VULA margin control under the EU electronic communications framework. Although an effects analysis may be required under *ex post* regulation, this is not a requirement for *ex ante* margin regulation; the likelihood of economic harm is established by the prior finding of SMP and a relevant risk of adverse effects arising from that SMP.[188] We consider that BT's suggestion that this somehow circumvents competition law requirements is a mischaracterisation.[189]

4.38 We have found BT to have SMP in the WLA market in the UK excluding the Hull Area[190] and, for the reasons set out in Section 3, it appears to us from the market analysis carried out that there is a relevant risk of adverse effects from price distortion.

4.39 We note that BT has also suggested that the EC Costing and Non-discrimination Recommendation requires an analysis of effects in *ex ante* pricing remedies. However, this recommendation does not impose requirements but rather sets out recommendations of which we must take due account in reaching our decision. Therefore, the provisions referred to by BT do not impose a requirement to carry out an effects analysis as part of any remedy imposed under *ex ante* regulation. We set out in Section 7 how we have taken due account of the EC Costing and Non-discrimination Recommendation.

4.40 BT also referred to the approach taken by several other NRAs in the EU. However, we do not consider that this is relevant to the appropriate approach to adopt in the UK. Our decision in this statement is based on what is appropriate and proportionate

[188] See paragraph 326, British Telecommunications plc v Office of Communications [2011] CAT 5, http://www.catribunal.org.uk/237-5136/1146-3-3-09-British-Telecommunications-Plc-.html, and paragraph 80, British Telecommunications plc v Office of Communications [2012] EWCA Civ 1051, http://www.catribunal.org.uk/files/1146_BT_Judgment_of_the_Court_of_Appeal_270712.pdf.

[189] We note BT's discussion of the relationship between the exercise of sectoral regulation and competition law (paragraphs 10.12-10.19, *BT Response to the 2014 VULA Margin Consultation – Annex B*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf). In particular, we have considered BT's view that Parliament has chosen to emphasise the need for sectoral regulators to give greater priority to their competition law role and that, as a result of s.96A(5) to (7) of the CA03, it would be unlawful for Ofcom to impose a regulatory condition that would make it impossible to give effect to those statutory requirements. We do not consider that regulating the VULA margin is an exercise of discretion that frustrates the policy of s.96A(5) to (7). The policy underlying those sections is to require Ofcom to consider whether it would be more appropriate to proceed under the CA98 before giving a notification under section 96A. We consider that BT is wrong in its assertion that this policy is frustrated by the exercise by Ofcom of its discretion to impose SMP remedies under Chapter 1 of Part II of the CA03 where this is justified under those provisions. In the absence of clear statement of policy to this effect in cannot be right that Parliament intended to limit Ofcom's discretion as BT suggests.

[190] See Section 7, Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

to address BT's SMP and relevant risk of price distortion identified in the WLA market in the UK excluding the Hull Area. Moreover, as highlighted by TalkTalk, it is potentially misleading to focus on a single aspect of other NRAs' *ex ante* margin regulation since a more favourable (from the incumbent's perspective) approach to one issue may be a consequence of a stricter approach to another.[191]

A remedy that included an effects analysis would not meet our regulatory aim

4.41 We do not consider that a VULA margin control which incorporated a further assessment of the effects of the VULA margin set by BT on competition and/or consideration of whether BT's prices are objectively justified would achieve our regulatory aim of ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers. As set out above, a clear pricing rule will ensure that BT has the clarity and certainty for it to comply with our VULA margin control and this in turn will provide other CPs with certainty about the level of the VULA margin, such that they can make decisions about investing in winning superfast broadband subscribers.

4.42 As a matter of principle, our starting point for *ex ante* pricing rules, such as our VULA margin control, is a brightline test as this provides all stakeholders with greater certainty. In contrast, incorporating an assessment of effects within the proposed SMP condition may result in less clarity and certainty about the dominant provider's obligations under that condition. Similarly, since brightline tests are clearer, this aids swift and effective enforcement.

4.43 In the case of most *ex ante* pricing rules, incorporating an effects analysis significantly undermines the effectiveness of the pricing rule. For this reason, Ofcom regularly imposes pricing controls without incorporating an effects analysis within the control itself. For example, this was the case when specifying Ofcom's LLU charge controls (which relate to the CGA equivalents of VULA).[192] This was also the case when specifying BT's margin between IPStream and ATM interconnection prices.[193] [194]

[191] TalkTalk made this point in the context of the relevant cost standard to adopt (see paragraph 3.107, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf).

[192] See Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 2: LLU and WLR charge controls*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/. We adopted this approach notwithstanding the existence of product differentiation at the retail level. BT offers additional services such as BT Sport channels and TV with its standard broadband packages (as well as with its superfast broadband packages). Similarly, other operators include a variety of extra services in their standard broadband packages.

[193] See Ofcom, *Direction Setting the Margin between IPStream and ATM Interconnection Prices*, 26 August 2004, http://stakeholders.ofcom.org.uk/binaries/consultations/adsl_price/statement/statement.pdf.

4.44 In this Statement, we specify a 'retail minus' margin control on the wholesale VULA price.[195] On balance, we consider that a brightline pricing rule is appropriate since incorporating an effects analysis in this case would not achieve our regulatory aim. The level of uncertainty associated with such a pricing rule would likely undermine its effectiveness.

4.45 In light of this, we have decided that we should follow our normal practice in relation to *ex ante* pricing rules.

- BT argued that our approach imposes constraints on BT which are not reflective of commercial realities. However, a degree of simplification and abstraction is an inherent part of all the modelling we do for price controls. We discuss further whether the details of how we treat BT's costs and revenues allow BT sufficient flexibility in Section 7 (as part of our analysis of proportionality), which would mitigate against these risks.[196]

- BT argued that we had not analysed how the flexibility provided by current constraints is failing to prevent BT distorting superfast broadband competition. We disagree. Our response to this is set out in Section 3.

4.46 We accept that a brightline test represents a simplification. It is possible that a price that just fails a brightline test does not harm competition. Similarly, it is possible that a price that just passes a brightline test does in fact damage competition. However, this simplification is an inherent feature of *ex ante* regulation. We look to minimise these risks through the way in which we assess costs, revenues and volumes (and, in this case, through an assessment based on actual data instead of the forecasts that would be used in any pre-launch assessment – see paragraph 4.102), but cannot avoid them altogether.

Conclusion

4.47 In summary, we consider that it is not appropriate for the VULA margin assessment to incorporate a further effects assessment. Accordingly, in the event that we considered BT's VULA margin to be insufficient, we would consider this to be a breach of the proposed SMP condition.

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[194] Another example (albeit one not conducted under the EU electronic communications framework) was our approach to setting the terms on which Sky is required to offer access to Sky Sports 1 and Sky Sports 2. We calculated a suitable wholesale price on a 'retail minus' basis. Were Sky to have exceeded that price, we would not have also had to conduct an effects analysis before concluding it had breached the condition in question. (Ofcom, *Pay TV Statement*, March 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/third_paytv/statement/paytv_statement.pdf.)

[195] The VULA margin is the retail price minus the wholesale price of VULA. Requiring a minimum VULA margin is mathematically identical to requiring the wholesale VULA price to be no more than the retail price minus that minimum margin.

[196] While it does impose some constraint on how BT recovers its costs (and therefore potentially how it can respond to competition), we consider that the VULA margin condition still allows BT considerable flexibility over its cost recovery. In particular, we assess the VULA margin over BT's whole superfast broadband portfolio, rather than (for example) for individual offers (see discussion in Section 5).

Form of the VULA margin control

4.48 We now set out our conclusions on the form of the VULA margin control to achieve our regulatory aim of ensuring that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted by virtue of imposing a price squeeze which has adverse consequences for end users of public electronic communications services. We consider that this aim is most appropriately achieved in this review period by ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers.

Proposals as set out in the 2014 VULA Margin Consultation

4.49 In the 2014 VULA Margin Consultation, we set out four options:

- Option A – an SMP condition requiring BT to supply VULA on fair and reasonable terms, conditions and charges supplemented by guidance on how we intend to undertake our assessment when testing whether the VULA margin complies with that SMP condition;

- Option B – an SMP condition requiring BT to set the VULA charge so as to maintain a minimum differential between the wholesale VULA price and the price of the retail packages offered by BT that use VULA as an input ('minimum VULA margin'), supplemented by guidance on how we intend to undertake our assessment of compliance with the condition (our preferred option);

- Option C – an SMP condition on BT that requires it to maintain a minimum VULA margin which would be specified by means of a model set out in the SMP condition; and

- Option D – an SMP condition specifying a minimum VULA margin (expressed as a precise value) that BT must maintain during the review period.

4.50 We considered that Option B was the most appropriate and proportionate option.

Stakeholder responses to the 2014 VULA Margin Consultation

<u>BT</u>

4.51 BT stated that it was not clear why Ofcom had changed its view since the 2013 FAMR Consultation (which set out that the preferred option would be to rely on existing remedies and guidance in order to provide flexibility to account for changes in the superfast broadband market and to reflect the fact that BT's competitors were large and well resourced). BT further argued that Ofcom had not provided any analysis showing a material change since the 2013 FAMR Consultation (indeed, the only developments that had occurred since then supported a less intrusive remedy).[197]

[197] Paragraphs 6.27-6.29, *BT response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

4.52 Further, BT considered that Option B (along with Options C and D) leads to a brightline test that would be inappropriate in the context of superfast broadband services, and Ofcom has failed to demonstrate why the constraints arising on BT as a result of this are proportionate and/or are expected to deliver benefits to consumers.[198] Ofcom was wrong to place such emphasis on certainty as a reason for preferring Option B, and had not analysed how the flexibility provided by current constraints is failing to prevent BT distorting superfast broadband competition. BT argued that the flexibility provided by Option A is preferable in the face of the complex, dynamic and rapidly changing broadband market. Any assessment under Option A would be able to take account of the particular situation in which BT has set upstream and downstream prices, and of underlying market conditions, thereby preventing pricing activity that was likely to have an anti-competitive effect.[199]

The Bit Commons

4.53 The Bit Commons felt that there was a risk that Ofcom's proposals would not meet the intended objectives as there appeared to be too many ways to undermine and challenge it as standalone measure, such as through challenges to costings.[200]

The CWU

4.54 The CWU stated that Option A was the most appropriate option in terms of achieving effective retail competition while maintaining investment incentives. [201]

KCOM

4.55 KCOM supported the general approach to VULA pricing as set out in the 2014 FAMR Statement as flexible pricing reflected the risks of speculative investment and allowed the superfast broadband market to develop naturally. However, the proposals to impose a specific SMP condition regulating the VULA margin were effectively a "*price control in all but name*". KCOM argued that VULA was not at the right stage for formal price regulation, which could result in price increases for consumers and/or reduce wholesale revenues for those investing in networks, harming investment and uptake. Ofcom needed to consider the impact on incentives for the wider market and other CPs, with a particular focus on Hull. [202]

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[198] Paragraphs 2.4 and 6.1-6.9, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.

[199] Paragraph 6.16-23, *BT response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

[200] Pages 2 and 3, *The Bit Commons response to the 2014 VULA Margin consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/The_Bit_Commons.pdf.

[201] Page 5, *CWU response to the 2014 VULA Margin consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Communication_Workers_Union.pdf.

[202] Pages 3-5, *KCOM response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/KCOM_Group.pdf.

Sky

4.56 Sky stated that Option B was a proportionate way of protecting against the risk of BT acting in a way that reduces the competition that it faces at the retail level.[203]

TalkTalk

4.57 TalkTalk felt that it did not matter whether Ofcom's method and assumptions were provided via guidance or set out in the SMP condition (although Option D would be inappropriate as BT would simply redesign its products to include more features and costs, which would be liable to lead to false positives and negatives), as either would provide broadly the same degree of certainty. TalkTalk noted however that an SMP Condition would be harder to modify (resulting in an out of date test) and so was not convinced of the need to include any, or many, of the details within an SMP condition.[204]

Confidential respondent [✂]

4.58 Confidential respondent [✂] would prefer Option C, but nonetheless welcomed the proposal to oblige BT to maintain a "*minimum margin*" and to publish detailed guidance. Confidential respondent [✂] acknowledged the need to balance certainty and flexibility in order to adapt to market changes.[205]

Analysis

4.59 In light of our conclusion in paragraph 4.47 that a VULA margin control which incorporated a further assessment of the effects of the VULA margin set by BT on competition and/or consideration of whether BT's prices are objectively justified would not achieve our regulatory aim, each of Options A-D would involve a brightline assessment.

4.60 As with our assessment in the 2014 VULA Margin Consultation, our consideration of which option is the most appropriate is focused on which provides the appropriate balance between certainty and flexibility. In light of this assessment, we identified which options are effective in achieving our aim; for those that are, we considered which of these is the least onerous (i.e. most proportionate) option.

4.61 The differences between each option relate to the amount of detail that is specified in the SMP condition – and therefore the level of certainty afforded to BT and other CPs – and the appropriate degree of flexibility afforded to Ofcom to adjust its approach in light of any significant changes in the market.

Option B is the most appropriate and proportionate option

4.62 Our decision is that Option B is the most appropriate and proportionate option. While offering sufficient certainty to achieve our regulatory aim, Option B is the least

[203] Paragraph 2.5, *Sky response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
[204] Paragraph 7.7, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[205] [✂]

onerous of the relevant options in that it retains appropriate flexibility to adjust to significant changes that might occur in a developing market.[206]

4.63 This option imposes an explicit requirement on BT to maintain a minimum VULA margin. The condition sets out the approach that BT needs to apply, including the definition of a price squeeze and the treatment of certain key parameters. Alongside this, we will publish detailed guidance on our intended treatment of specific costs and revenues and the mechanics of how we would assess the VULA margin.

4.64 Specifying the overall requirement and certain key parameters in the SMP condition provides the requisite certainty to BT and other CPs which we consider necessary to achieve our aim. In particular, inclusion of certain parameters in the SMP condition (which specify the adjustments made to BT's costs in our assessment) that BT must follow limits the scope for ambiguity around what BT is required to do and provides a reasonable degree of certainty over the margin it needs to maintain. This addresses the drawback of a purely guidance-based approach under which BT would not have information on the required cost adjustments, meaning it would be difficult for BT to comply with the regulation.

4.65 However, limiting the scope of what is specified in the SMP condition and instead setting out more detail on our approach and treatment of costs and revenues and on the detail of our approach to the assessment in guidance also ensures appropriate flexibility to accommodate significant future changes (for example, the launch of a major new type of product by BT[207], or for a more appropriate approach to calculating a particular cost in light of developments in how services or products are supplied[208]). This limits the risk that this option may cease to be appropriate or optimal over the market review period as a result of changing circumstances. The circumstances in which it would be necessary to amend the SMP condition to reflect changing circumstances ought to be relatively limited, particularly as those aspects of the VULA margin assessment most likely to be subject to significant changes in the market will be set out in the guidance, which will allow for modifications in approach.

4.66 We also note that BT, the CWU and KCOM state that going beyond Option A would be inappropriate given the current phase of the market and the need to ensure incentives to invest (see paragraphs 4.51, 4.54 and 4.55). We note that we have ruled out a cost-based approach for a number of reasons, including the harm to investment, and that Option B still allows BT to set the wholesale price for VULA thereby enabling it to reflect investment risks. In addition, given our aim is to ensure that other CPs are able to compete, we consider that the certainty afforded by this option also protects incentives for other CPs to invest in winning superfast broadband subscribers.

4.67 While BT considers that we have not indicated any reason to change from our proposal set out in the 2013 FAMR Consultation (essentially Option A) (see

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[206] We note the concern of the Bit Commons in relation to potential ways to undermine this (and any) option. However, we consider that our approach will provide the most appropriate way to address our aim, with sufficient certainty over the costs we use along with the requisite flexibility to adjust to possible changes in the market.

[207] A historical example of such a change is BT's decision in May 2013 to include its BT Sport channels with its broadband packages for no additional charge.

[208] We set out in Section 6 specific examples of significant changes that might lead us to depart from our guidance.

paragraph 4.51), we note that the additional certainty provided by Option B would address concerns raised by stakeholders following the proposals set out in the 2013 FAMR Consultation. Further, BT's argument (see paragraph 4.52) that our adoption of Option B is driven by a focus on certainty requiring us to exclude an effects analysis is incorrect (see paragraphs 4.30 to 4.47).

Reasons for rejecting other options

4.68 We consider that Option A (which relies on the existing requirement on BT to provide VULA on fair and reasonable terms, conditions and charges, supplemented with guidance on how we intend to undertake our assessment) would not achieve our aim. In particular, we are of the view that it would result in too much uncertainty for BT and other CPs. While this option was preferred by BT, KCOM and the CWU, by not specifying the underlying obligation in a separate SMP condition, this would lead to the uncertainty that we would wish to avoid.[209] We also note that these circumstances could equally create uncertainty for other CPs in judging BT's compliance and the level of the VULA margin and, therefore, whether they can provide an offering that can profitably match BT. This would in turn affect their decision to invest in winning superfast broadband subscribers. As such, we consider that Option A does not address our regulatory aim.

4.69 Conversely, we consider that while Options C and D would address our regulatory aim and provide a high degree of certainty regarding the margin required, we are concerned that the effectiveness and proportionality of these options could be eroded where the margin set under these options was not able to adapt to possible changes in the market or it took significant time to reflect changes.

4.70 Options C and D would provide a high degree of certainty to BT as to how it could comply with the condition. In the case of Option D, it would simply be a case of ensuring that the difference between its wholesale and retail charges was no less than the specified minimum margin. Option C, on the other hand, would specify all the parameters of our assessment, allowing BT to calculate the precise minimum margin and assess whether it was in compliance.[210] Both options would also provide more certainty and transparency for other CPs.[211]

4.71 However, there is a high risk that our approach under either of these options may no longer be appropriate or optimal over the market review period as a result of changing circumstances, particularly given the developing nature of the market as discussed in Section 3. Both options would require assumptions about costs and revenues over the course of the review period and there is a significant risk these could prove incorrect. In such a case it would be necessary to amend the obligation during which time there could be an inappropriate or sub-optimal margin. Changing circumstances may mean that either option might have the following effects.

[209] Under a guidance-based approach, Ofcom would need to consider the need for and level of any adjustment, based on the latest available information. However, this complicates compliance for BT. Since it may be poorly informed about its competitors' costs, it may find it difficult to judge what adjustments we would consider appropriate.

[210] Noting it may need to do this on an ongoing basis to ensure the compliance was maintained.

[211] In both cases, CPs would nonetheless be required to make certain assumptions. In the case of Option D, in the case of the minimum margin being based on a portfolio of products (e.g. a basket), CPs would need to make assumptions about volumes. With respect to Option C, they may need to make assumptions about BT data that is deemed to be confidential.

- It might no longer achieve our regulatory aim in that BT would be able to launch products that would be compliant with the stated minimum margin but which would not be permitted had the margin been revised to take account the revised set of circumstances. In practice, this would mean that a competitor with slightly higher costs would be unable to match BT's offers.

- It might impose disproportionate restrictions in that BT would be prevented from being able to launch products that would otherwise be compliant with the stated minimum requirement had the margin been revised to take account of the revised set of circumstances. In practice, this would mean that BT is required to maintain a minimum margin higher than that necessary to allow a competitor with slightly higher costs to match BT's offers or prevent BT from launching new or innovative offers. This could prevent BT from competing effectively in the market until changes to the model could be consulted on and implemented.

Conclusion

4.72 In light of the considerations set out above, we consider that Option B is the most appropriate and proportionate option.

Form of compliance monitoring

4.73 Having decided on the form of the VULA margin control, we now set out our decision on the appropriate approach for monitoring BT's compliance with this requirement.

Assessment of the need for additional compliance monitoring and testing obligations

4.74 BT is subject to a number of SMP conditions across a range of markets in which it holds SMP. We may investigate potential non-compliance as a result of a dispute or complaint by a third party. We may also commence an own-initiative investigation if we have reason to believe BT may not be compliant (e.g. as a result of our general monitoring of the market). Where any such investigation was appropriate, we would use our statutory information-gathering powers to collect evidence for the purposes of our assessment.

4.75 In some cases, we also require BT, under the SMP condition, to provide certain information necessary for us to assess BT's compliance with that obligation on a periodic basis. One such example is charge controls, where we impose a specific obligation on BT to record, maintain and supply data necessary for Ofcom to monitor compliance with the price control. This requirement is imposed in recognition of the importance of BT complying with its charge control obligations and the fact that, without certain information (particularly volume information), it is difficult to proactively monitor compliance. We consider this is a necessary part of the overall charge control obligation to allow us to monitor and, if required, enforce compliance with the condition.

4.76 We also note more generally that other European NRAs actively ensure compliance through regular testing of the margin, in some cases prior to product launch.[212] As explained in paragraph 4.40, we do not consider that practice elsewhere is relevant

[212] For example, in Ireland and Austria.

to the appropriate approach to adopt in the UK. While NRAs will have varying reasons for applying such a mechanism, such mechanisms may be considered necessary where they judge there is a very high potential for, and/or significant direct consequences of, non-compliance. In the case of requiring prior approval, this could be to avoid significant detriment caused by a non-compliant product being offered in the market which may not be able to be reversed (for example, if a non-compliant product caused a competitor to exit the market).

4.77 In Section 3, we noted that the period covered by this market review is likely to be important for whether effective competition in superfast broadband emerges. We observe that, were BT to use its SMP in the WLA market over the period of the market review to achieve a large share of VULA-based retail superfast broadband subscribers, this would likely distort competition to the detriment of competition and consumers. A breach of our VULA margin control which persists for a period without detection could thus result in a distortion of competition. Therefore, we consider it important that we are able to identify any breaches of the VULA margin control in a sufficiently timely manner to prevent this. Accordingly, we consider it appropriate to put in place specific compliance monitoring and testing processes.

Options for monitoring compliance

4.78 We set out three options for compliance monitoring and testing in the 2014 VULA Margin Consultation:

- Option (i) – BT to provide the data necessary to monitor compliance with the proposed VULA margin condition to Ofcom every six months, with Ofcom conducting a high-level assessment of the margin at six monthly intervals.

- Option (ii) – BT to provide the data necessary to monitor compliance with the proposed VULA margin condition to Ofcom before it launches a new or revised product, as well as every six months, with Ofcom conducting a high-level assessment of the margin before and after product launch.

- Option (iii) – Ofcom to approve new or revised products prior to launch, having assessed whether or not they comply with the proposed VULA margin condition.

4.79 We proposed that Option (i) was the most appropriate and proportionate method of ensuring compliance.

Stakeholder responses to the 2014 VULA Margin Consultation

BT

4.80 BT stated that, notwithstanding its views on the form of the requirement, it agreed with Ofcom's assessment of the compliance options, in particular its dismissal of pre-launch testing. It added that Ofcom should revisit the detail of compliance issues to fit with the remedies adopted.[213]

[213] Paragraph 6.34, *BT response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

The CWU

4.81 The CWU agreed that Option (i) was a sufficient and effective way to meet Ofcom's aim of monitoring and enforcing BT's compliance. [214]

TalkTalk

4.82 TalkTalk argued that Ofcom should provide clearer information on the nature of the revenues and costs used[215] (including sufficient detail such that a spreadsheet to derive the margin could be developed) to better ensure compliance and reduce the opportunity for BT to game the system [✂].[216] TalkTalk also said that Ofcom should provide as much guidance as it could with respect to new services that BT might launch, such as mobile.[217]

4.83 TalkTalk requested that Ofcom outline in the statement the process and steps it would follow on receiving data from BT. It considered that any process should ensure that Ofcom can quickly determine whether there is sufficient evidence to suspect a breach of the SMP condition and to open a formal investigation on an expedited basis. TalkTalk further argued that, as any formal investigation might take a long time to conclude, the information supplied by BT every six months must be [✂]. Ofcom should also consider whether it would be possible to use its powers under Section 98 of the CA03[218] given that "*margin squeeze*" would result in "*serious economic problems*" for other CPs.[219] Further, TalkTalk stated that Ofcom must publicise whether or not it decides to proceed with a formal investigation – doing so would be consistent with Ofcom's regulatory principles and avoid uncertainty for other CPs that might lead to unnecessary complaints.[220]

4.84 TalkTalk reiterated its argument that Ofcom should require BT to file a margin test for material new product launches and/or material price changes in addition to testing every six months. It considered that this would reduce the possibility of non-compliant products being offered (and thus harm to the market) and [✂].[221] TalkTalk noted that the absence of pre-launch testing placed the UK behind European best practice, with

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[214] Page 5, *CWU response to the 2014 VULA Margin consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Communication_Workers_Union.pdf.
[215] Paragraph 7.6, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[216] Paragraph 7.3, Ibid.
[217] Paragraph 7.7, Ibid.
[218] Section 98 of the CA03 gives Ofcom additional powers where it determines that there are reasonable grounds for suspecting that a contravention of a condition of entitlement (other than an SMP apparatus condition) has caused, or creates a risk of, either a serious threat to public safety, public health or national security; or serious economic or operational problems or any communications provider or provider of associated facilities or any person who uses them. In such exceptional circumstances, Ofcom may, in a notification of the contravention under section 94 of the CA03, reduce the one-month period allowed to the person who is alleged to be in breach of a condition to make representations and to take steps towards compliance. In addition, Ofcom may suspend the person's entitlement to provide networks, services and/or associated facilities or may restrict that entitlement in some way.
[219] Paragraph 7.8, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[220] Paragraph 7.8, Ibid.
[221] Paragraph 7.9, Ibid.

the EC Costing and Non-discrimination Recommendation referring to products being tested before or soon after launch.[222]

4.85 TalkTalk did not agree that Ofcom would be obliged to scrutinise any such submission as there was no statutory duty or regulatory obligation for Ofcom to review submissions it received. The burden on BT would be minimal since it would simply be submitting data generated for its own internal compliance. This burden could be further reduced by requiring it to file only for material new product launches and price changes (those that could result, for example, in a £1 increase in costs or reduction in revenues). TalkTalk accepted that any pre-launch test would rely on forecast data which BT could game, but this would be limited given the range of plausible forecasts was narrow (historical trends could be used). Further, it was better to have some form of pre-launch testing than none at all.[223]

4.86 Finally, TalkTalk asked for clearer and more specific guidance on sanctions in order to provide BT with the necessary incentive to comply. TalkTalk argued that Ofcom's existing guidelines are too generic and do not provide the required certainty, such as whether Ofcom would consider a fine for a first offence.[224]

4.87 In addition, Ofcom should also be clear about what remedial steps might be taken in case of a breach and whether Ofcom would grant permission for CPs to pursue damages.[225]

Vodafone

4.88 Vodafone argued that the fast-moving nature of the superfast broadband market meant that to effectively protect competition and protect against gaming, BT should be required to provide data to ensure compliance before launching new superfast broadband products and major price changes. Vodafone considered that this would be proportionate given that BT would as a matter of course be carrying out compliance checks. It would also relieve competing CPs of the responsibility for submitting disputes to Ofcom. In addition, information should be provided every three months to ensure that Ofcom has the information on a systematic and timely basis in case of complaints (reflecting the speed of market development).[226]

Confidential respondent [✂][227]

4.89 Confidential respondent [✂] suggested that the model should be published alongside the guidance and Ofcom should also consult on any significant changes resulting from market changes (publishing any updated model and guidance). Confidential respondent [✂] also suggested that Ofcom should provide specific guidance on how the rules will be applied to any materially revised BT propositions after Ofcom is notified and publish a non-confidential version of its assessment following each reporting period.

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[222] TalkTalk noted that Austria, Denmark, Germany, Greece, Ireland, Italy, the Netherlands and Spain all required pre-launch testing (Belgium did not, but imposed a charge control). (Paragraphs 7.13-7.15, Ibid.)
[223] Paragraphs 7.10-7.11, Ibid.
[224] Paragraphs 7.16-7.20, Ibid.
[225] Paragraph 7.21, Ibid.
[226] Pages 6 and 8, *Vodafone response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.
[227] [✂]

4.90 Confidential respondent [✂] believed that some form of pre-launch testing was required to mitigate the risk of BT introducing new offers which could cause serious and irreparable harm.[228] Further, the reporting period of six months would only be sufficient if combined with pre-launch testing (otherwise three months would be required). Confidential respondent [✂] considered that Option (ii) would be the most proportionate option (although it requested clarification that the high-level assessment ensured sufficient scrutiny to detect non-compliance). To ensure proportionality, pre-launch assessment could be limited to new superfast broadband products and bundles and to changes to flagship products.[229]

4.91 Confidential respondent [✂] suggested that it would be useful for Ofcom to assess whether BT would have been in compliance prior to the VULA margin condition coming into force in order to assess the impact on BT's pricing.

4.92 Finally, confidential respondent [✂] stated that it was critical for Ofcom to ensure that any breach of the obligation was brought to an end as soon as possible. BT should be directed to take specific actions rather than being given a general requirement to end any infringement.

Analysis

4.93 As with our analysis in the 2014 VULA Margin Consultation, we have considered the extent to which each option is able to assist with identifying any breaches of the VULA margin control in a reasonable timeframe, whether the compliance monitoring and/or testing is likely to enable an accurate assessment, the level of transparency and assurance it provides and the regulatory burden. In light of this assessment, we have reached a view on which options are effective in achieving our aim and, for those that are, which does so in the most proportionate way.

<u>Option (i) is the most appropriate and proportionate option</u>

4.94 We consider that Option (i) is the most appropriate and proportionate approach to assist us in monitoring and if necessary enforcing BT's compliance with the VULA margin control. It is likely to be effective in allowing us to monitor and, if necessary, enforce BT's compliance. Option (i) is also the least onerous of the relevant options. Option (i) provides Ofcom with the information required to assess BT's compliance on a frequent basis such that Ofcom would be able to intervene in a reasonable timeframe to prevent any breach, should one be identified, without impeding BT's ability to launch new offers and respond to competition.

4.95 Under Option (i), BT is required to provide details of the costs and revenues necessary to demonstrate its compliance with the VULA margin condition every six

[228] Confidential respondent [✂] noted that pre-launch testing is supported by the EC Costing and Non-discrimination Recommendation, and a number of member states required pre-launch testing.
[229] Confidential respondent [✂] noted that the EC Costing and Non-discrimination recommendation gives guidance on identifying such flagship products by taking account of their relevance for current and future competition. Ofcom could and should identify relevant flagship products either on the basis of the products which attract a specified percentage of new fibre subscribers, and/or revenues from such subscribers. For example, Luxembourg has decided it is appropriate to carry out a margin squeeze test on flagship products, defined as those products which in sum represent a revenue share of 70 per cent of the SMP operator's relevant retail products, plus all products which represent a revenue share of at least 10 per cent.

months. As set out in the consultation, the first compliance report will be required two months after the condition comes into force[230], covering BT's first month of compliance. Subsequent to that, BT is required to report within one month of the end of the period 1 April to 30 September and within one month of the end of the period 1 October to 31 March.[231]

4.96 Upon receiving the report we would undertake a high-level assessment and raise any necessary queries with BT regarding the data. Such an assessment would involve a sense check on the data provided by BT to see whether the figures provided were reasonable and, therefore, whether it was sufficiently clear that the margin level indicated was compliant. This analysis will be supplemented by publicly available information, as well as our experience analysing BT's data obtained during this review (to the extent that this experience remains relevant). [✂] we will ensure that BT provides the right data in the right format for us to carry out such an assessment properly (see paragraph 4.107).

4.97 While we would not conduct a full investigation each time we received a report, we consider that the cost and revenue data provided is likely to assist our ability to detect non-compliance and, if warranted, commence a full investigation in a reasonable timeframe.[232] The provision of this information would also mean that such a full investigation would have a good starting position. TalkTalk and confidential respondent [✂] expressed concerns that a high-level assessment would not ensure sufficient scrutiny to detect non-compliance and asked for further clarification as to Ofcom's intentions (see paragraphs 4.83 and 4.90 respectively). While falling short of the degree of assessment carried out in a formal investigation, our high-level assessment will nonetheless involve sufficient analysis to allow us to judge whether there are reasonable grounds to suspect non-compliance.

4.98 Following BT submitting its first compliance report, we will issue a statement that informs stakeholders whether or not we have reasonable grounds to suspect non-compliance over the first month assessment period. This will provide a clear reference point for future assessments and therefore we do not consider it necessary to do this each time we conduct a high-level assessment (as suggested by TalkTalk, see paragraph 4.83).

4.99 We note that BT generally makes significant changes to its prices once or twice per year and Option (i) therefore allows Ofcom to monitor compliance within a reasonable timeframe of such price changes occurring. We consider that less frequent reporting, such as once per year, would be insufficient given the frequency

[230] We consider that it is appropriate to provide BT with a short period from publication of the final statement before the condition comes into force. As such, the draft SMP condition at Annex 2 specifies a provisional date of 1 March 2015 from which the condition will take effect.
[231] The first report of the regular cycle will be due by the end of October 2015 (covering the period 1 April to 30 September 2015), with the following report due at the end of April 2016 (covering the period 1 October 2015 to 31 March 2016) and so on. We note that we can require BT to provide the relevant data at any time should we consider it necessary. Confidential respondent [✂] suggested that it would be useful to assess whether the VULA margin was in compliance prior to the condition coming into force in order to assess the impact on BT's pricing ([✂]). While we can see that this might be useful information for other CPs, our purpose here is to check that BT has complied with the new condition in a reasonable period. Further, we do not consider it appropriate to assess whether BT was in compliance with an obligation before that obligation was in force.
[232] We do not consider it appropriate to introduce a new *expedited* process as suggested by TalkTalk, but will as a matter of course ensure that any investigation is carried out in good time.

of BT's price changes and the general fast-moving market nature of the market. Further, reporting under the SMP condition may be supplemented at any time by our statutory powers to require information which would enable us to seek updated information from BT at any time (e.g. if it changed its prices significantly, shortly after providing the six monthly report). Given this power and the frequency of BT's price changes, we do not therefore consider more frequent regular reports, as requested by Vodafone (see paragraph 4.88) (and confidential respondent [✂] given we are not using pre-launch testing – see paragraph 4.90) to be necessary. While Vodafone referred to the fast-moving nature of the market as a reason for more frequent tests, we consider that the driver should be the frequency of changes by BT.

4.100 We consider the regulatory burden of providing five or six regular reports to Ofcom during the market review period to be relatively low. We note BT already maintains a model for internal compliance purposes, although this may require adaption and checking in order to meet the requirements of this option.

Reasons for rejecting Options (ii) and (iii)

4.101 We consider that Options (ii) and (iii) would not be as proportionate or effective as Option (i) and are therefore not appropriate.

4.102 In particular, we consider that the main apparent advantage over Option (i), i.e. being able to conduct a high-level assessment of BT's information (in the case of Option (ii)) or a full assessment (in the case of Option (iii)) before the launch of a product or offering (or change in prices), is in practice likely to be limited. This is because we consider that the likelihood of detecting non-compliance in advance or soon after new products are launched may be low as the information provided pre-launch would be based on forecasts rather than actuals.[233] In particular, it is likely to be difficult to identify whether the forecasts provided by BT are reasonable, which means that even if BT is forecast to be compliant at the time a new product is launched, on the basis of inaccurate forecasts, it could later turn out to be non-compliant.[234]

4.103 Vodafone and Confidential respondent [✂] argued that some form of pre-launch testing is necessary to ensure that Ofcom can quickly identify non-compliant offerings (crucial given the fast-moving nature of the market) and provide the right incentives on BT to comply (see paragraphs 4.90 and 4.88 respectively). TalkTalk and confidential respondent [✂] both noted that some form of pre-launch testing regime is present in a number of EU countries and that the EC Costing and Non-Discrimination Recommendation recommends products to be tested before or soon after launch (see paragraphs 4.85 and 4.90 respectively).

[233] For the reasons set out in Section 5, it is appropriate to conduct the VULA margin assessment in relation to BT's fibre portfolio, rather than individual products within that portfolio. Under Options (ii) and (iii) it would be necessary to forecast BT's costs and revenues for that entire portfolio. This would involve forecasting what proportion of BT's fibre portfolio would likely be accounted for by any new product or offer that is being launched.

[234] TalkTalk asserted that the range of plausible forecasts was narrow and historical trends could be used. However, we consider that forecasts are likely to be subject to significant uncertainties and that these are not resolved by TalkTalk's suggestion that we use historic data. For example, if a new product were truly offered for a very low margin, it is likely that take-up of that product would be particularly high. By using historical data (as suggested by TalkTalk) on the proportion of BT's fibre portfolio accounted for by past (higher margin) products when they were launched, we would underestimate the impact of the new product on BT's overall VULA margin.

4.104 For the reasons set out in Section 5, our VULA margin assessment applies to BT's fibre portfolio rather than individual flagship products (assessing the margin on individual products has a number of drawbacks). In any event, for the reasons set out above we do not consider that there is any material benefit which outweighs the additional burden on BT (and, in particular, the burden arising from the BT being prevented from launching a product until we have conducted a test in the case of Option (iii)). We do not consider that it would enable Ofcom to identify non-compliance more quickly; we believe that we will only be able to effectively assess this on the basis of actual data rather than forecasts.

4.105 We also do not consider that a pre-launch assessment is likely to have a material impact on BT's compliance. In complying with the VULA margin control, we would expect BT to carry out internally the analysis it needs – and to generate the relevant data – to ensure that the VULA margin is at an appropriate level. We do not consider that having to send in the results of that analysis for filing pre-launch will add to BT's incentives for compliance in a material way over and above having to provide us with actual data every six months. [✂]. While TalkTalk suggests that any form of pre-launch filing is better than none at all, we are required to ensure that the regulation we impose is proportionate; given we consider that there is no material benefit from BT undertaking pre-launch filing, we do not consider it to be proportionate.

4.106 While confidential respondent [✂] and TalkTalk point to pre-launch regimes in other EU countries, we consider that our approach is appropriate and effective for the situation in the UK. In particular, we note that our preferred approach will regularly test BT's compliance using actual data, rather than doing so once prior to or soon after launch using forecasts. We consider that 6-monthly reporting will be sufficiently frequent to identify any non-compliant offerings within a reasonable timeframe (particularly as BT in general only makes changes twice a year). Further, contrary to Vodafone's concern, this will ensure that Ofcom regularly assesses BT's compliance on an effective and appropriate basis, although other CPs are able to raise concerns at any time.

Further details of the monitoring and testing obligations

4.107 The condition requires information to be provided using the same categories (i.e. upfront and ongoing revenues and costs) which we would use to conduct a full assessment, as well as such other data as Ofcom may direct from time to time. For each of these parameters, it will be necessary for BT to provide this information in a sufficiently disaggregated form to enable Ofcom to monitor and undertake a high-level assessment of compliance. We will undertake discussions with BT about the exact format we would expect the information to be provided in shortly. This would include the level of aggregation and presentation of the information (e.g. it may be similar to the internal model it currently maintains).

4.108 TalkTalk and confidential respondent [✂] suggested that we should provide more information on the revenues and costs used, including the model (see paragraphs 4.82 and 4.89 respectively). We have published the model alongside this statement. However, we do not intend to publish the data BT provides pursuant to this obligation as we consider the value of doing so would be limited. Much of BT's information would be confidential and would therefore need to be redacted. This is consistent with our approach to charge controls.

4.109 Confidential respondent [✂] also suggested that we should consult on any significant changes to the model and guidance (see paragraph 4.89). We will as matter of course consult on any significant changes as appropriate. We also set out in the guidance (see Section 6 and Annex 3) how we intend to address major new offerings (as requested by TalkTalk and confidential respondent [✂] – see paragraphs 4.82 and 4.89 respectively).

4.110 Both TalkTalk and confidential respondent [✂] requested further detail on the sanctions that Ofcom might impose on BT where it was found to have breached the obligation, and on what remedial steps Ofcom would take in such circumstances. Both argue that this would improve incentives on BT to comply (see paragraphs 4.86 to 4.87 and 4.92 respectively).

4.111 The remedial steps that Ofcom might take against BT if it were found to be in breach would need to be assessed on a case by case basis. Therefore we do not consider it appropriate or indeed helpful to set out the remedial steps we would be likely to take, although, as a minimum, we would look to bring any infringement to an end as soon as possible.

4.112 With respect to the sanctions that we would impose, again this would need to be considered in each case.

4.113 We note that sanctions for a breach of an SMP condition include penalties, which can be substantial (and which can, if we consider it appropriate, be levied in the case of a first offence). Therefore, we consider that this alone ought to act as a substantial deterrent to breaching an obligation set out in the proposed SMP condition. We have published guidelines on determining the amount of penalties imposed by us under the CA03[235] and do not consider that it is necessary to supplement these guidelines in this case.

Conclusion

4.114 For the reasons set out above, we consider that Option (i) is the most appropriate and proportionate option for monitoring compliance.

Final conclusion on our approach to regulating the VULA margin

4.115 In light of our assessment above, our view is that Option B combined with Option (i) are the most appropriate and proportionate measures to impose on BT in order to achieve our aim, that is:

- an SMP condition requiring BT to set the VULA charge so as to maintain a minimum differential between the wholesale VULA price and the price of the retail packages offered by BT that use VULA as an input, supplemented by guidance on how we intend to undertake our assessment of compliance with the condition; and

- BT to provide the data necessary to monitor compliance with the proposed VULA margin condition to Ofcom every six months, with Ofcom conducting a high-level assessment of the margin at six-monthly intervals.

[235] Ofcom, *Penalty guidelines*, June 2011, http://www.ofcom.org.uk/about/policies-and-guidelines/penalty-guidelines/.

4.116 We note that, as a consequence of implementing the VULA margin control in a new SMP condition, we are removing the fair and reasonable charges obligation in the WLA market insofar as it relates to the VULA margin with respect to the packages offered by BT Consumer.[236]

[236] It would still apply to BT Business packages, as well as other VULA terms, conditions and charges.

Section 5

Approach to VULA margin assessment

Introduction

5.1 This section sets out the approach to assessing the VULA margin that is codified in the SMP condition. In Section 6, we go on to provide more detail on how we intend to calculate specific costs and revenues when carrying out that assessment.

5.2 This section is structured as follows:

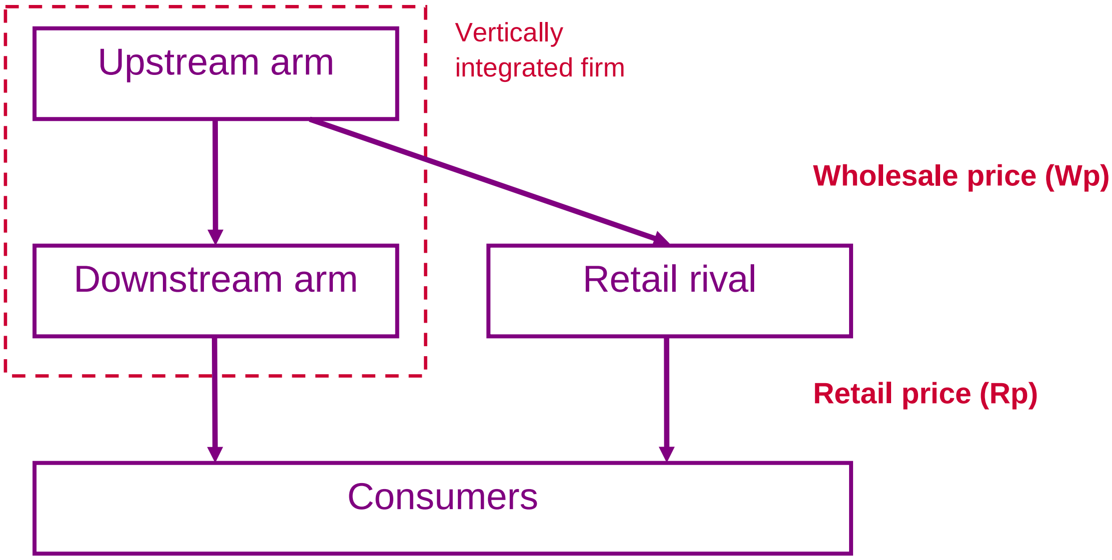
- explanation of a minimum VULA margin;
- appropriate conceptual approach for assessing costs and revenues – we conclude on whether to apply an EEO, adjusted EEO or REO standard;
- appropriate cost standard – we conclude on whether to assess costs on a LRIC or LRIC+ basis;
- scope of the VULA margin assessment – we conclude on what products should be included or excluded and the level of aggregation across different products;
- copper access technology – we conclude on whether to assess the costs of a WLR or MPF (a form of LLU) operator; and
- conclusions.

Explanation of a minimum VULA margin

5.3 As set out in Section 3, our regulatory aim is to ensure that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted. We consider that this regulatory aim is most appropriately achieved in this review period by ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers.

5.4 Figure 5.1 provides a stylised illustration of the issue, setting out the relationship between a vertically integrated firm (with both upstream and downstream arms) and a downstream rival.

Figure 5.1 – Illustration of a minimum VULA margin



Source: Ofcom

5.5 The vertically integrated firm's upstream arm sells the wholesale input at a price of Wp per unit. Its downstream arm retails the final product to consumers for a price of Rp per unit. The vertically integrated firm thus sets a margin of (Rp – Wp) between its wholesale and retail prices. A downstream rival that incurs costs of DC (downstream costs) per unit will be able to profitably match the vertically integrated firm's price if (Wp + DC) is less than or equal to Rp. Put another way, that rival can match the vertically integrated firm's price if the margin (Rp – Wp) is sufficient to cover its other downstream costs (DC).

5.6 In establishing the minimum VULA margin we need to consider the appropriate methodology for calculating both downstream costs (DC in the example in paragraph 5.5) and the margin between the wholesale price (Wp) and the retail price (Rp).

5.7 We set out in paragraphs 5.8 to 5.9 how we would assess the VULA margin. In terms of the example in Figure 5.1, the wholesale price of VULA forms part of the wholesale costs incurred by the downstream arm of the vertically integrated operator (W). In practice there are a number of complications that are omitted from the simple example in Figure 5.1, for example, which analytical approach to use to calculate downstream costs (DC) and which revenues (P) to take into account given that superfast broadband is typically sold in bundles.

5.8 Acquiring a new superfast broadband subscriber results in upfront costs and upfront revenues (e.g. subscriber acquisition costs, revenues from activation charges) as well as a stream of ongoing costs and ongoing revenues over that customer's lifetime. It is thus appropriate to consider the following factors:

- P = ongoing monthly revenue;

- W = ongoing monthly wholesale costs;[237]
- DC = ongoing monthly retail costs;
- UR = upfront customer acquisition revenues; and
- UC = upfront customer acquisition costs.

5.9 The ongoing monthly margin is (P – (W + DC)) and the net upfront costs are (UC – UR). An appropriate way to conduct the VULA margin assessment is to consider whether the ongoing monthly margin is sufficient to cover the upfront net costs by estimating the net present value ('NPV') of a customer over its expected average lifetime. This involves comparing the NPV of net upfront costs (UC – UR) and the discounted value of the ongoing margin.[238]

5.10 Assessing whether or not the ongoing monthly margin is sufficient to cover the upfront net costs provides a brightline test that determines whether BT is passing (i.e. setting a sufficient VULA margin) or failing (i.e. setting an insufficient VULA margin). BT argued that failing such a test does not necessarily show that downstream competitors are foreclosed.

- We consider that such a test is appropriate since, for the reasons set out in Section 4, we do not consider that it is appropriate for the VULA margin assessment to incorporate a further effects assessment.
- In addition, we have designed our approach to assessing the VULA margin to best meet our objective of preventing a distortion to competition in retail superfast broadband. We have therefore taken into consideration current market circumstances and the likely effects of an insufficient VULA margin when setting the parameters of the test, e.g. see the discussions on treatment of bundles in paragraphs 5.71 to 5.110 and adjustments to BT's costs and revenues in Section 6.

5.11 We also discuss BT's points on consideration of effects in the next sub-section, in the context of identifying the conceptual approach for assessing costs and revenues.

Appropriate conceptual approach for assessing costs and revenues

5.12 In the 2014 VULA Margin Consultation we identified three possible conceptual approaches for assessing whether a vertically integrated operator is allowing a sufficient margin between its wholesale price and its downstream price.

- EEO approach – this involves assessing whether the vertically integrated firm's downstream arm could operate profitably if it had to pay an equivalent wholesale price as charged to downstream competitors. This approach assesses whether firms that are as efficient as BT would be able to match its retail prices.

[237] The ongoing monthly wholesale costs reflect the wholesale price that BT charges for VULA as well as BT's charges for WLR. See the discussion on copper access technology from paragraph 5.141.
[238] Stakeholders made a number of submissions on whether this particular formulation is appropriate for assessing the VULA margin. We address these comments in Section 6.

- Adjusted EEO approach – this is based on the vertically integrated firm's own costs, but some adjustments are made to reflect advantages that the firm may have. This approach will result in a larger minimum margin than the EEO approach.

- REO approach – this involves examining whether the difference between the vertically integrated firm's retail and wholesale prices is sufficient for a 'reasonably efficient' downstream competitor to make a normal rate of return. Under this approach, the costs and revenues of the entrant are the relevant parameters, not those of BT. This approach assesses whether firms that are reasonably efficient would be able to match BT's superfast broadband retail offers.

5.13 In the 2014 VULA Margin Consultation, we proposed that an adjusted EEO approach would be used to assess the VULA margin. We considered this to be the most appropriate way of achieving the regulatory aim. We stated that an adjusted EEO approach based on BT's costs but with adjustments to reflect cost advantages that BT might possess would be consistent with our objective.

Responses to 2014 VULA Margin Consultation

5.14 TalkTalk, confidential respondent [✂] and Vodafone supported the use of an adjusted EEO approach.

- TalkTalk said that, provided the EEO is correctly defined and the appropriate adjustments made (as discussed in Section 6), it has no objections in principle to Ofcom using an adjusted EEO approach. It said that such an outcome would be consistent with Ofcom's duties and intent to promote competition. In addition, TalkTalk agreed with Ofcom that it is preferable to use an adjusted EEO approach as it relies predominantly on BT's own costs/revenues. However, if Ofcom does not make all the appropriate adjustments (as set out in Section 6), then TalkTalk said that Ofcom should adopt an REO approach. Finally, TalkTalk considered that an adjusted EEO approach is consistent with the European Commission's objectives in the Costing and Non-discrimination Recommendation. It also argued that it is legitimate to diverge from the Costing and Non-discrimination Recommendation if Ofcom's approach differs from the European Commission's concept.[239]

- Confidential respondent [✂] supported Ofcom's proposal to use an adjusted EEO approach, provided that it appropriately reflects the costs and other commercial disadvantages that non-BT operators suffer in becoming established and effective competitors in the market. It added that an adjusted EEO approach must provide sufficient margin for other operators to win subscribers during the crucial growth phase of superfast broadband. Once sufficient operators have reached minimum efficient scale, competition can be expected to become self-sustaining and bring significant benefits to consumers.[240]

[239] Paragraphs 3.5-3.13, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[240] [✂]

- Vodafone supported the use of an adjusted EEO approach, noting that it aligns with the Costing and Non-discrimination Recommendation.[241]

5.15 BT disagreed with the use of an adjusted EEO approach.

- BT said that Ofcom's use of an adjusted EEO approach was procedurally flawed in that it failed to take utmost account of the Costing and Non-Discrimination Recommendation. We consider this argument in Section 7.[242]

- BT noted that Ofcom's approach differs from that adopted in other EU Member States, citing the Netherlands and Austria as examples. BT argued that the EEO standard is seen as an appropriate measure of costs in countries with less competition than the UK and without an existing EoI framework. BT thus did not believe that an adjusted EEO approach has been shown to be justified or proportionate, because it is not necessary to support effective downstream competition.[243]

5.16 BT also noted that failing an EEO test does not necessarily mean that downstream competitors are foreclosed. In particular, it argued that the provision of superfast broadband services differs from a "*plain vanilla*" case where profit sacrifice (i.e. BT failing to recover its downstream costs) is likely to indicate foreclosure at the retail level. Rather, superfast broadband lies in a wider broadband market at the retail level, as it is often supplied in differentiated bundles to consumers with different preferences by operators that have adopted different commercial strategies.[244]

5.17 TalkTalk disagreed with BT's submissions in relation to the Costing and Non-discrimination Recommendation.

5.18 In relation to the approach in other Member States, TalkTalk further noted the following points.

- In the Netherlands and Austria there are cost orientation obligations (equivalent to charge controls in UK) on VULA which provide the "*heavy lifting*" of preventing exclusion, and therefore the VULA margin regulation has less need to be stringent. Moreover other aspects of the margin test are more stringent than in the UK e.g. product by product testing and 3-year average customer lifetime ('ACL').

- There are many other countries that use "*more stringent*" costs standards are used (e.g. adjusted EEO, REO and SEO[245]).[246]

[241] Pages 4 and 9, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.
[242] Paragraphs 5.44-5.54, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[243] Paragraphs 8.85-8.88, Ibid.
[244] Paragraphs 2.6-2.13, Ibid.
[245] 'Similarly efficient operator'.
[246] Paragraph 3.107, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.

5.19 The CWU and KCOM raised additional arguments in the context of whether an EEO test is appropriate. We discuss these in Section 3.

Ofcom's considerations

5.20 Our assessment of the conceptual approach for assessing costs and revenues is structured as follows. First, we summarise our previous approaches to *ex ante* margin regulation. Second, we explain why an EEO approach is not appropriate. Finally, we consider whether an REO approach or an adjusted EEO approach is more appropriate.

Previous Ofcom positions in *ex ante* margin regulation

5.21 We have previously considered the *ex ante* regulation of margins in a number of different contexts. In the 2010 WLA Statement we indicated that an assessment of BT's VULA margin would initially be based on an REO standard.[247] We previously considered BT's margin between IPStream and ATM interconnection prices ('the WBA Margin')[248] and also the margin between Sky's wholesale and retail prices for Sky Sports 1 and Sky Sports 2.[249] In regulating the WBA Margin we used the concept of an SEO. This used the cost functions of the dominant firm but adjusted for scale and scope. We also took the approach of using the incumbent's costs and adjusting for scale in setting Sky's wholesale charges for Sky Sports 1 and Sky Sports 2.

5.22 We have also placed an *ex ante* obligation on Royal Mail in relation to the margin between its retail prices and the price it charges for access to its network. However, that obligation represented a 'glide path' between the existing regime and our preferred long-term approach for preventing price squeezes based on *ex post* competition law powers.[250]

5.23 The appropriate imputation test depends on the purpose of the regulation, but it is noteworthy that we have previously applied either an adjusted EEO or REO test when we are seeking to support effective retail competition in the future.

An EEO approach is not effective in achieving our aim

5.24 We do not consider that an EEO approach would be effective in achieving our aim. Setting a minimum VULA margin based on BT's costs would prevent an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably match BT's retail superfast broadband offers.

5.25 BT and TalkTalk commented on the approach adopted by NRAs in some other Member States. As explained in Section 4, we do not consider the approaches

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[247] Paragraphs 8.132-8.136, Ofcom, *Review of the wholesale local access market: Statement on market definition, market power determinations and remedies*, 7 October 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf.

[248] Paragraph 2.5, Ofcom, *Direction Setting the Margin between IPStream and ATM interconnection Prices*, 26 August 2004, http://stakeholders.ofcom.org.uk/binaries/consultations/adsl_price/statement/statement.pdf.

[249] Paragraph 10.60, Ofcom, *Pay TV Statement*, 31 March 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/third_paytv/statement/paytv_statement.pdf.

[250] Paragraph 10.119, Ofcom, *Securing the Universal Postal Service*, 27 March 2012, http://stakeholders.ofcom.org.uk/binaries/consultations/review-of-regulatory-conditions/statement/statement.pdf.

adopted by other NRAs to be relevant to the appropriate approach to adopt in the UK.

An adjusted EEO approach is more effective in achieving our aim and less onerous than an REO approach

5.26 As explained in Section 4, we do not consider that it is appropriate for the VULA margin assessment to incorporate a further effects assessment. Given that we are adopting a brightline test, we have considered whether that test should reflect an REO approach or an adjusted EEO approach.

5.27 We consider that an adjusted EEO approach is more effective in achieving our aim and less onerous than an REO approach.

5.28 In principle, an REO approach would be effective in achieving our aim. This is because setting the minimum VULA margin by reference to the costs and revenues of an entrant should allow for an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably match BT's retail superfast broadband offers.

5.29 However, because of the difficulties in determining which costs and revenues of an entrant to use to set the REO cost standard, there is a risk that an REO standard will not be effective in achieving our aim (by setting too low a VULA margin) or go beyond the minimum necessary to achieve our aim (by setting too great a minimum VULA margin).

- **Ofcom would need to define the scope of the REO's activities, business model and cost base in order to populate the model used to assess the VULA margin**: this would be a complex and uncertain exercise with clear scope for error. Alternatively, Ofcom might select an existing rival to BT and use that rival's costs to populate the model. That would also be a complex exercise and could potentially risk regulatory gaming; given that BT's rivals are differentiated, it would also not be clear which rival to select.

- **Adjusting the REO estimates over time would be problematic:** one way of adopting an REO approach is to specify what an REO's costs currently are and how they will change over the period covered by this market review. This would need to be done in advance so BT can understand what it needs to do to ensure compliance throughout the review period. This raises a significant risk of regulatory error (if Ofcom had to forecast costs over the period to March 2017) or compliance difficulties for BT (if the REO's costs were based on industry averages or other third party data which is not available to BT). Given the amount of forecasting that would be required, we consider that an REO approach risks adding considerable extra complexity as well as uncertainty and risk.

- **Alternatively, an REO approach could largely use BT's costs:** such an approach is better described as an adjusted EEO approach.

5.30 An adjusted EEO approach is also likely to be effective in achieving our aim since it will allow an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) to be able to profitably match BT's retail superfast broadband offers. This is achieved by making adjustments to the dominant firm's costs to reflect advantages that the dominant firm may have.

5.31 An adjusted EEO approach is also likely to be less onerous than an REO approach as it sets the minimum VULA margin by reference to data largely based on BT's costs and revenues (except where specific adjustments are made). This means that an adjusted EEO approach ought to go no further than is necessary to achieve our aim. It also has the benefit of being simpler for BT and Ofcom to implement and less prone to regulatory error than an REO approach.

5.32 TalkTalk, Vodafone and confidential respondent [✂] broadly agreed with our adopting an adjusted EEO approach. However, TalkTalk and confidential respondent [✂] also stated that if we do not make (in their view) sufficient adjustments to BT's costs and revenues then we should instead adopt an REO approach. We agree that it is important that the adjustments to BT's costs and revenues are suitably specified. Section 6 deals with our criteria for selecting adjustments and provides details on how we apply this to individual cost and revenue items. We consider that TalkTalk and confidential respondent [✂]'s views on whether our adjustments are appropriate are better characterised as either relating to our overall approach (as set out in Section 3, in particular whether we should adopt Option 2 or Option 3) or the specifics of our assessment of what adjustments to make (as set out in Section 6). In either case, we do not consider it appropriate to adopt an REO approach, given the drawbacks set out in paragraph 5.29.

Conclusion

5.33 Thus, in summary, our view is that an adjusted EEO approach is appropriate when assessing the VULA margin on an *ex ante* basis. In Section 6, we set out our approach for deciding which of BT's costs and/or revenues to adjust.

Appropriate cost standard

5.34 In assessing whether the margin between the wholesale VULA price and downstream retail prices is appropriate we need to consider the appropriate cost standard to use.

5.35 In the 2014 VULA Margin consultation, we proposed that the appropriate cost standard was likely to be long-run incremental cost plus a contribution to fixed and common costs (i.e. a LRIC+ standard).

Responses to 2014 VULA Margin consultation

5.36 Confidential respondent [✂], TalkTalk and Vodafone supported the use of the LRIC+ cost standard. They made the following additional points.

- Confidential respondent [✂] said that the use of a pure LRIC standard would provide little incentive for competitors to promote their fibre broadband services, while incentives for the efficient migration to fibre could be distorted as non-BT operators would necessarily have to recover common costs disproportionally from copper. It said that the adoption of a LRIC+ standard would ensure that fibre supports the recovery of fixed and common costs in a way that will be sustainable as fibre grows to account for a larger share of the overall broadband market.[251]

[251] [✂]

- TalkTalk said that LRIC+ is the correct cost standard because it better replicates the competitive conditions facing efficient downstream rivals to BT as they have no choice but to recover some common costs from superfast broadband products. In addition, TalkTalk argued that the principal benefits of migration from copper to fibre come at the network level and that if BT wishes to encourage such migration it can alter wholesale VULA prices.[252]

5.37 The CWU said that it favours the use of a LRIC standard in order to allow BT the flexibility to recover its common costs from its copper network, which is important for helping to incentivise BT's continued investment in fibre-based services. It also said that BT's NGA network is still heavily dependent on copper due to the use of FTTC technology and that much of BT's common costs, such as labour costs, derive from its copper network.[253]

5.38 BT said that it does not challenge in principle the use of a LRIC+ approach within an *ex ante* margin assessment framework applying to dual-play offers. However, BT argued that specifying the amount of fixed and common costs that it is required to recover from superfast broadband services in a brightline test would provide significant advantages to BT's competitors and distort efficient and effective competition. It argued that BT's competitors, who are all active across standard broadband and superfast broadband, will have considerable flexibility (that BT will not have) in how they choose to recover fixed and common costs across these services. BT thus expects some flexibility in Ofcom's approach when actually considering BT's pricing. Ofcom should thus amend its guidance to acknowledge that some degree of flexibility in how BT recovers these fixed and common costs across standard broadband and superfast broadband services may be warranted. BT argued that, in a scenario where BT 'failed' the test within the margins of these fixed and common costs, some further consideration should be given to how those costs are being recovered over standard broadband and superfast broadband services, as well as from new customers and existing customers.[254]

5.39 In addition, BT disagreed with Ofcom's reasoning in paragraphs 5.55 to 5.56 of the 2014 VULA Margin Consultation for choosing the LRIC+ standard rather than the LRIC standard. BT noted the following points in particular.

- The level of mark-up should not be set to meet an objective of promoting competition in superfast broadband services when Ofcom's stated aim was to prevent BT distorting competition in superfast broadband services.

- The need to ensure fixed and common costs are recovered over the longer term should not place rigid restrictions on the way in which such costs are recovered across services in the short term. Ofcom's concern about sharp shifts in common cost recovery as a result of short term prices not reflecting long term cost recovery requirements could be avoided by adopting some flexibility of approach

[252] Paragraphs 3.53-3.57, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[253] Page 6, *CWU Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Communication_Workers_Union.pdf.
[254] Paragraphs 8.93-8.95, *BT Response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

over time – e.g. with lower levels of cost recovery on superfast broadband acquisition prices compared to other broadband prices.

- Ofcom should assess common cost recovery across standard broadband and superfast broadband services by reference to static and dynamic efficiency.
- The consequences of errors in adopting a LRIC standard should not imply a more general need to establish a higher mark-up above LRIC. Further, since BT considered that Ofcom's overall approach to designing the test is conservative – most notably because of its static nature – any concerns about errors are likely to be overstated.
- Considering common cost recovery across standard broadband and superfast broadband should be fairly easy.[255]

5.40 Finally, BT noted that Ofcom's approach differs from that adopted in some other European countries where *ex ante* margin squeeze tests are carried out. Citing examples such as Ireland, Spain and the Netherlands, BT argued that flexibility has been built into the margin squeeze tests to reflect the varying levels of competition in different markets. For example, the cost benchmark and/or cost standard used will reflect the presence of competitive pressure imposed by cable operators (nationally or in some exchange areas) and/or higher levels of competition in the provision of unregulated services such as TV.[256]

5.41 In TalkTalk's comments on BT's response to the 2014 VULA Margin Consultation, TalkTalk stated that Ofcom must make it clear that BT should follow Ofcom's guidance, and should be penalised if it chooses not to do so. Allowing BT "*some flexibility*" would allow it to understate its downstream costs (and potentially at the same time overstate Openreach's costs). Thus, any flexibility will simply allow BT to circumvent the intent of the regulation and consequently imperil its aim of preventing competitive distortions.[257]

Ofcom's considerations

5.42 For the VULA margin, the choice of the relevant cost standard is essentially between whether it is appropriate to use a LRIC or a LRIC+ cost standard, i.e. whether it is appropriate to require superfast broadband subscribers to make a contribution to common costs. We assess below which of these cost standards will be effective in achieving our aim. This assessment is grouped into the following broad categories:

- relationship with our overall objective;
- consistency with our general regulatory practice;
- consequences of errors in estimating costs; and

[255] Paragraph 8.13, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[256] Paragraphs 8.15-8.16, Ibid.
[257] Paragraph 3.102, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.

- other points raised by stakeholders.

Relationship with our overall objective

5.43 We recognise that the use of a LRIC+ standard and guidance on how Ofcom intends to calculate the LRIC+ cost stack in effect specifies a minimum proportion of fixed and common costs to be recovered from superfast broadband services. While requiring the VULA margin to include a specified level of common costs can result in reductions in productive/static efficiency (at least in the short term), as discussed in Section 3 this risk needs to be balanced with the potential dynamic efficiency benefits of enhanced competition in fibre broadband. We thus consider that adopting a LRIC+ approach will be effective in achieving our regulatory aim.[258]

5.44 In particular, as explained in Section 3, in general and all else equal, the greater the VULA margin the greater the ability of other retailers to match BT's retail superfast broadband offers. This is because increasing the VULA margin may promote retail competition by encouraging entry and allowing rival retailers to grow; it may also allow those rivals to achieve more substantial economies of scale and greater experience of offering fibre than currently.[259] As such, using LRIC+ would reduce the risk of adverse consequences for end users of public electronic communications services relative to a lower cost standard (for example, LRIC). Further, in adopting LRIC+ we have sought to allocate a reasonable/proportionate proportion of fixed and common costs to be recovered from superfast broadband services. Therefore, while this will increase the VULA margin relative to a cost standard with no common cost recovery (and therefore promote retail competition as described above), in adopting LRIC+ we are not seeking to go further than necessary to achieve our regulatory aim.

5.45 More generally, in the long term we think it likely that fibre broadband would need to make some contribution to the recovery of common costs.[260] As a matter of policy, we consider that it is reasonable for the VULA margin assessment to reflect this long run position, i.e. for fibre broadband subscribers to make a contribution to common costs. Doing so is likely to support more stable prices over time by avoiding a situation where common cost recovery shifts sharply from one product to another. Such price shifts are likely to be disruptive for consumers, particularly as they are likely to find them hard to predict.

5.46 We consider that BT’s suggestion of adopting “*flexibility*” in the approach to including common costs over time would not provide a sufficient level of certainty to it or other CPs. We are concerned that if we do not provide clear guidance on the minimum amount of common costs that it is appropriate to recover from the VULA margin, in some cases it would be unclear whether BT has complied with the condition or not. Accordingly, we consider that the effect of BT’s proposal would be to undermine the relevance and effectiveness of our guidance. For the reasons set out in this section,

[258] BT stated that our aim was to prevent it from distorting competition in superfast broadband services, rather than promoting competition in those services. However, as explained in Section 3, our approach seeks to promote competition in electronic communications services by preventing a distortion or restriction of competition.

[259] Indeed, if the available margin precisely equals LRIC, firms are indifferent as to whether they participate in the market or not.

[260] Put simply, there is likely to come a point where there are so few copper broadband subscribers that it is necessary for fibre broadband subscribers to make a contribution in order to ensure that common costs are recovered.

we consider that the LRIC+ standard is appropriate. As a consequence, we consider that it is necessary to provide guidance on the common cost mark-up that needs to be recovered from superfast broadband services in order to implement an effective VULA margin control.

Consistency with our general regulatory practice

5.47 We typically take common costs into account when setting charge controls. We adopt such an approach where we consider that a LRIC+ cost standard is necessary for those charge controls to be effective. For example, we have used Fully Allocated Costs ('FAC') as the cost measure in our WLR/LLU charge controls[261], the WBA charge controls[262], and leased lines charge controls.[263] LRIC+ and FAC are similar in that both take into account an allowance for common costs.[264]

5.48 In certain circumstances, adopting a LRIC+ standard when identifying a suitable retail margin can produce the same outcome as adopting a LRIC+ approach when controlling wholesale charges.[265] This highlights that adopting a LRIC+ approach when assessing the VULA margin is consistent with our general approach of setting wholesale charge controls on a LRIC+ (or FAC) basis.

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[261] Paragraphs 3.14-3.20, Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN 30 Volume 2: LLU and WLR charge controls,* 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

[262] Paragraphs 7.117-7.121, Ofcom, *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/.

[263] Paragraphs 18.32-18.39, Ofcom, *Review of retail leased lines, wholesale symmetric broadband origination and wholesale trunk segments – Statement*, 28 March 2013, http://stakeholders.ofcom.org.uk/consultations/business-connectivity-mr/final-statement/.

[264] At paragraph 8.16 of Ofcom, *Review of the fixed narrowband services markets – Statement on the proposed markets, market power determinations and remedies*, 26 September 2013, http://stakeholders.ofcom.org.uk/binaries/consultations/nmr-2013/statement/Final_Statement.pdf, we referred to FACs as "*a form of LRIC+"* and at paragraph 1.18 of Ofcom, *Review of BT network charge controls*, 19 March 2009, http://stakeholders.ofcom.org.uk/binaries/consultations/review_bt_ncc/summary/reviewbtncc.pdf, we stated that CCA FAC is the *"best available proxy for long run incremental costs plus an appropriate contribution to common costs (LRIC+)*".

[265] To illustrate, suppose that the retail price is equal to the sum of: (i) the retail LRIC; (ii) retail common costs; (iii) wholesale common costs; and (iv) the wholesale LRIC. This formulation assumes that there are no supernormal profits. Adopting a LRIC+ standard for the purposes of a cost-based control on wholesale prices means that the maximum wholesale price would be (iii)+(iv). Adopting a LRIC+ standard when identifying a suitable retail margin means that the maximum wholesale price would be the retail price less (i)+(ii). This is also equal to (iii)+(iv) since the retail price is assumed to equal (i)+(ii)+(iii)+(iv).

5.49 A LRIC+ approach would also be consistent with our approach in other *ex ante* cases where we have been considering the promotion of competition.[266]

- In the *ex ante* regulation of BT's margin between ATM interconnection and IP stream, we used a FAC current cost accounting ('CCA') approach.[267]

- In our Pay TV investigation, we determined wholesale prices for Sky's premium sports channels on the basis of a margin that would allow recovery of incremental costs and a proportion of common costs. We developed a retail-minus methodology on a FAC basis, with fixed and common costs allocated across Sky's whole business. We noted that even though our definition of a hypothetical entrant assumed that it provided other products and services in addition to Sky's premium sport channels, we considered that it may not be viable for it to recover all of its common costs from those other services.[268]

5.50 While we typically take common costs into account when setting charge controls, we accept that there are some exceptions. For example, we set charge controls for mobile and fixed termination rates equal to LRIC as we considered that this was more likely to promote efficiency, sustainable competition and consumer benefits in those contexts.[269] Similarly, for our charge control on GEA-to-GEA migration we use a LRIC standard since this is more likely to promote competition in that context, for example by reducing switching costs.[270] We regard these cases as exceptions that reflect the particular features of the products in question and our specific policy objectives.

Consequences of errors in estimating costs

5.51 In the light of our regulatory aim, the consequences of errors in estimating costs are likely to be more serious under a LRIC cost standard and more likely to lead to a LRIC cost standard being ineffective in achieving our aim. In assessing the appropriate VULA margin, costs could be underestimated. If the adjusted EEO's LRIC was underestimated and if BT set a VULA margin only just equal to the

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[266] As explained in paragraph 5.22, the objective of our SMP condition differs from our objective when regulating the margin between Royal Mail's access and retail prices. In relation to Royal Mail, our long term preference was setting prices by reference to LRIC since this would provide the correct signals for entry and investment. However, due in part to the absent of suitable data on LRIC, to establish a 'glide path' from the existing regulatory regime, we considered that information based on FAC should be used. Paragraphs 10.117 and 10.121, Ofcom, *Securing the Universal Postal Service. Decision on the new regulatory framework – Statement*, 27 March 2012, http://stakeholders.ofcom.org.uk/binaries/consultations/review-of-regulatory-conditions/statement/statement.pdf.

[267] Paragraph 2.26-2.40, Ofcom, *Direction Setting the Margin between IPStream and ATM interconnection Prices*, 26 August 2004, http://stakeholders.ofcom.org.uk/binaries/consultations/adsl_price/statement/statement.pdf.

[268] Paragraphs 10.116-10.129, 2010 Pay TV Statement.

[269] Ofcom, *Wholesale mobile voice call termination statement,* 15 March 2011, http://stakeholders.ofcom.org.uk/consultations/mtr/statement; and Ofcom, *Review of BT network charge controls*, 19 March 2009, http://stakeholders.ofcom.org.uk/binaries/consultations/review_bt_ncc/summary/reviewbtncc.pdf

[270] Paragraph 12.181, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

(incorrectly estimated) LRIC, then that margin would not be effective in achieving our aim. Such an outcome could harm competition in the fibre segment since an adjusted EEO may be worse off if it wins fibre customers (since if it matches BT's prices it fails to cover its incremental costs).[271]

5.52 BT considered that we should place limited weight on the risk of underestimating the LRIC since our approach to assessing the VULA margin is conservative. We disagree. As set out in Section 6, we recognise that the static nature of our approach does not take into account increases in the margin over the customer lifetime. However, this works both ways in that it will also not reflect potential increases in costs (e.g. network costs) or decreases in revenues (e.g. call revenues). Therefore, contrary to BT's view, we consider that the risk of errors in estimating costs is a valid reason for choosing LRIC+ as the cost standard.

Other points raised by stakeholders

5.53 Stakeholder responses touched on a number of other issues.

- We recognise that, in the absence of a minimum contribution, BT could choose to recover proportionally more common costs from copper services, allowing it to set comparatively low fibre broadband prices in the short term. We acknowledge that such a pricing structure could be used to influence the rate of migration of customers from copper to fibre. We therefore acknowledge that using a LRIC+ approach, whereby a minimum contribution to common cost recovery for superfast broadband is specified, could affect BT's ability to shift common cost recovery from fibre to copper. However, as pointed out by TalkTalk, if BT wishes to follow a strategy of migrating customers from copper to fibre, BT could lower the wholesale VULA price.

- Departing from a LRIC approach and instead specifying a minimum contribution to common cost recovery that should be made by fibre subscribers reduces BT's flexibility in where it recovers its common costs. However, as discussed in paragraphs 5.121 to 5.140, this is partially offset by our proposal to assess BT's entire fibre portfolio (in aggregate). This provides BT with flexibility as to how it recovers common costs between different fibre bundles within that portfolio.[272]

- We acknowledge that our approach may differ from the approach adopted by the NRAs in some other European countries. However, as set out in Section 4, we consider that this is of limited relevance to the appropriate approach to adopt in the UK.

- We do not consider that a LRIC+ approach risks having a material negative impact on BT's incentives to invest in its fibre network. Under our proposals, BT is free to set the level of the wholesale VULA price in order to make a suitable

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[271] We also recognise that there is a risk that the LRIC of an adjusted EEO could be overestimated, resulting in a larger VULA margin than necessary. However, we consider that under a LRIC cost standard, the consequences of over- and under-estimating the LRIC for achieving our aim are asymmetric. This parallels our discussion of the balance of risks in achieving our aim between Options 1, 2 and 3 in Section 3.

[272] We have also, in the case of BT Sport costs, chosen our proposed method of allocation between copper and fibre in part because it gives BT greater flexibility on where it recovers those costs. See Section 6 for further details.

return on its upstream investments, provided that it maintains an appropriate retail margin.

- The CWU argued that many of BT's common costs derive from its copper network, in part because most VULA customers are served by FTTC. In light of the problems associated with a LRIC approach that we have discussed in paragraphs 5.44 to 5.52, we do not consider that it follows from this observation that we should adopt a LRIC approach when assessing the VULA margin.

Conclusion

5.54 For the reasons set out above, we consider that, on balance, only a LRIC+ standard would be effective in achieving our aim when carrying out an *ex ante* assessment of the VULA margin.

5.55 We recognise that this means that BT has less flexibility to reallocate common cost recovery between standard and superfast broadband than its competitors. However, this loss of flexibility for BT is outweighed by the other advantages of a LRIC+ approach and the drawbacks of a LRIC approach discussed above. Moreover, our indicative assessment suggests that BT's current margin may [exceed] the minimum margin calculated on a LRIC+ basis. In other words, BT's current VULA margin already includes a contribution to common costs. This provides us with further confidence that adopting a LRIC+ approach to assessing the VULA margin is appropriate going forward.

5.56 We provide further guidance on our approach to including common costs in Section 6. We consider it important that the method for calculating the common cost mark-up is followed closely as this will provide certainty to stakeholders and aid the monitoring of compliance.

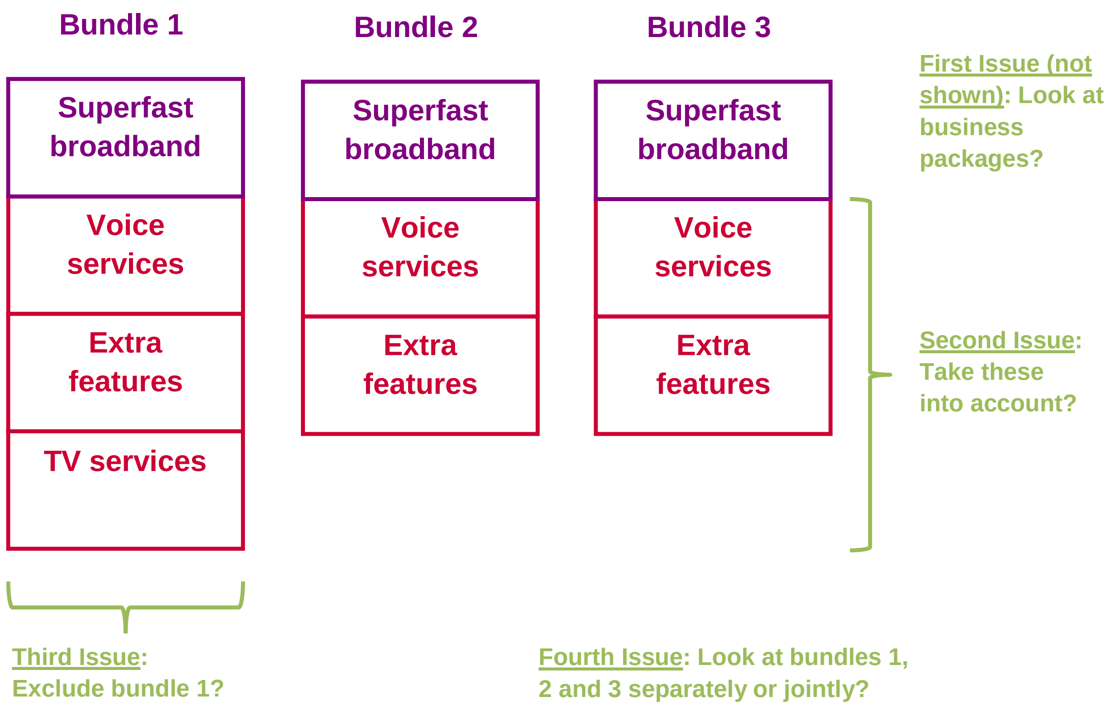
Scope of the VULA margin assessment

5.57 We now consider the appropriate scope of the VULA margin assessment:

- business services – we consider whether retail products marketed at business (as opposed to residential) customers should be excluded from the VULA margin assessment;
- treatment of bundled products – we consider whether it is appropriate to take products that are bundled with broadband (e.g. voice calls, additional non-broadband services, BT Sport, etc.) into account when assessing the VULA margin;
- triple-play bundles – we consider whether it is appropriate to exclude or include triple-play bundles (i.e. bundles including BT TV, broadband and voice telephony); and
- the output increment – we consider whether the appropriate output increment for the VULA margin assessment is at the level of individual offers, individual products, the fibre portfolio or the broadband portfolio.

5.58 Figure 5.2 explains the distinction between the latter three points. This shows different bundles each made of superfast broadband, voice services, extra features and (in the case of bundle 1) TV services. In paragraphs 5.95 to 5.96 we conclude that those extra components should be taken into account. The next issue we consider is whether bundle 1 (the triple-play bundle) should be assessed and we conclude that it should. The final issue we consider is whether we should look at bundles 1-3 individually or jointly and we conclude they should be assessed jointly.

Figure 5.2 – Scope of VULA margin assessment – illustration



5.59 It is helpful to distinguish between the Second Issue and the Third Issue since they have different implications for the VULA margin assessment. Taking TV services as an example, if these were excluded (following consideration of the Second Issue) the remaining components of triple-play bundles would still be taken into account (superfast broadband, voice services etc.). In contrast excluding triple-play bundles (following consideration of the Third Issue) involves excluding all elements of these bundles.[273]

Treatment of business services

5.60 VULA can be used to support a number of downstream services including residential and business services, with BT Consumer supplying broadband services to residential customers and BT Business supplying broadband services to business customers. At the wholesale level, the basic connectivity (VULA) used to support residential and business services is the same. However, at the retail level services

[273] To illustrate further, suppose we wish to calculate the average revenue from voice calls. If TV were excluded (the Second Issue) then it would be appropriate to use the average for all BT superfast broadband subscribers. If triple-play were excluded (the Third Issue) then it would instead be appropriate to just reflect the average for dual-play subscribers.

can be quite different. Residential services are often sold as a number of pre-specified bundles that include various products and features. For example, BT currently offers a limited number of Infinity packages with each having a different mix of products and features at a different price point. In contrast, business services often tend to be more bespoke and can be provided alongside other information technology communication services ('ITC') (for example, software packages, other connectivity services, storage, security, networking solutions, support services, etc.).

5.61 In the 2014 VULA Margin Consultation we took the provisional view that it is not appropriate or proportionate to extend the VULA margin assessment to include superfast broadband services supplied by BT Business. Rather, we proposed that such services should be subject to the fair and reasonable terms, conditions and charges requirement imposed by the 2014 FAMR Statement.

Responses to 2014 VULA Margin Consultation

5.62 Confidential respondent [✂] and BT agreed with the proposal to not include business services in the VULA margin assessment and instead to rely upon the fair and reasonable terms, conditions and charges obligation to ensure effective competition in this area. In addition:

- confidential respondent [✂] advised that the business broadband segment should be kept under review and that Ofcom should be ready to intervene, if necessary, should it receive complaints or observe behaviours which raise concerns[274]; and

- BT noted that Ofcom has the ability to consider any specific issues on a case by case basis under these existing requirements, taking full account of all relevant information.[275]

5.63 Vodafone argued in favour of extending the VULA margin assessment to business services. Vodafone said that the structure of competition in the business broadband market currently warrants inclusion in the scope of the test to address BT's SMP.[276]

5.64 In BT's comments on responses to the 2014 VULA Margin Consultation, it argued that Vodafone provided no analysis of competition to support the inclusion of business services and that no reference is made to the efficacy of existing measures to constrain any ability to engage in margin squeeze behaviour.[277]

Ofcom's considerations

5.65 Assessing services marketed at business consumers would likely require differences in approach relative to services marketed at residential consumers. For example, while business and residential broadband services are considered to be in the same

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[274] [✂]

[275] Paragraph 8.18, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

[276] Pages 5 and 9, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.

[277] Paragraph 4.1, *BT Comments on responses to the 2014 VULA Margin Consultation*, 23 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf.

retail market[278], the competitive conditions are likely to differ between business superfast broadband retail services and residential superfast broadband retail services. In particular, there are different providers supplying services in this segment of the market and BT's relative position in the business segment is likely to differ from the residential segment. Additionally, the two divisions (BT Consumer and BT Business) are distinct businesses within BT's reporting structure[279] and the services offered by BT Business differ from the ones offered by BT Consumer.

5.66 As discussed above, business services tend to be more bespoke. This diversity makes providing margin guidance more complex because it would be necessary to identify which product or product bundles should be included in any guidance. It would then be necessary to assess the costs and revenues of any ITC services sold alongside the basic VULA connection.

5.67 Further, with the exception of Vodafone's response, we have not received representations from stakeholders setting out concerns in relation to the supply of VULA based business services.

Conclusion

5.68 Therefore, given these features, we do not believe that it would be appropriate or proportionate to consider an extension of the VULA margin assessment to include superfast broadband services supplied by BT Business at this time.

5.69 The fair and reasonable terms, conditions and charges VULA obligation will continue to apply to BT Business services (as set out in Section 4). As such, if we were to observe behaviour in relation to the margin on VULA-based business services which raised concerns (or indeed any other pricing concerns), we could consider intervention on the basis of this condition to address such behaviour.

5.70 We note that, in the interests of proportionality, we have previously adopted a gradual approach to NGA-specific regulation, starting with a relatively light touch regime but increasing specific regulation where market developments warrant it. We will consider business services in future market reviews in the light of any further policy analysis[280], including whether any business-specific regulation is necessary in relation to VULA.

Treatment of bundled products

5.71 The VULA margin assessment will set the minimum margin between the wholesale VULA price and retail prices for services that use VULA as an input. Broadband may be sold as a standalone product but is typically sold bundled with other services such

[278] Paragraph 3.114, Ofcom, *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/.

[279] BT, *BT to create new businesses to replace BT Retail*, 30 July 2013, http://www.btPlc.com/news/articles/showarticle.cfm?articleid=%7B68268030-3b15-4603-a6c8-7f2437114344%7D.

[280] We have published a call for inputs on the provision of communications services to Small and Medium-sized Enterprises ('SMEs') to identify particular issues in terms of the availability, quality and reliability of communications services available to SMEs in order to develop policies to address them where appropriate (see Ofcom, *Communication services and SMEs: Call for inputs*, 6 November 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/smes-cfi/summary/SMEs_CFI.pdf.)

as line access services and TV services. Broadband packages can also include services not directly related to the provision of the core telecommunication services (e.g. Sainsbury's vouchers, 'free' virus-protection).

5.72 In the 2014 VULA Margin Consultation, we proposed including the costs and revenues of bundled elements when assessing the VULA margin.

Responses to 2014 VULA Margin Consultation

5.73 Below, we separately summarise the responses we received in relation to the treatment of bundles generally and the responses that specifically referred to BT Sport.[281]

General approach to bundled services

5.74 Most stakeholders were in favour of including all bundled elements when assessing the VULA margin.

5.75 Sky and confidential respondent [✂] considered that not including all bundled elements runs the risk of undermining the effectiveness of the proposed regulation, for example by bundling valuable products with superfast broadband at no additional charge to consumers.[282]

5.76 Confidential respondent [✂], TalkTalk and Vodafone said that BT could well include mobile services for residential customers as part of a bundle including fibre-based superfast broadband services. They considered that the same reasoning applies to quad-play bundles. Accordingly, they considered that these quad-play bundles (and BT's costs of providing mobile services), once launched by BT, should be included in the VULA margin assessment.[283] TalkTalk also set out the details of how it considered an assessment of the costs and revenues of mobile services should be taken into account.[284] This is covered in Section 6.

5.77 BT agreed that Ofcom should consider the costs and revenues of the full range of services provided within BT's dual-play offers, i.e. among other things, line rental, call package fees, out of package call revenues, additional bandwidth usage charges, hardware (e.g. wireless routers), software (e.g. parental protection), enhanced functionality (e.g. cloud storage, access to WiFi networks) in addition to any vouchers or gifts supplied at the point of acquisition. BT argued that all operators provide a similar, albeit not identical, range of ancillary and add-on services to support the delivery of their basic dual-play offers. However, BT said that this range of add-ons to

[281] Although KCOM explicitly did not comment on the inclusion of BT Sport costs in the VULA margin, it did highlight the impact on BT's decisions in relation to BT Sport as part of its concerns about imposing regulation in the WLA market (see page 5, *KCOM response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/KCOM_Group.pdf). We consider the proportionality of our proposals, given the impact on supply of TV and content, in Section 7.
[282] Paragraph 4.2, *Sky Response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf; [✂].
[283] [✂]; Pages 5-6, *Vodafone Response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.
[284] Paragraphs 5.7-5.36, *TalkTalk Response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

dual-play offers are different in nature to the provision of BT Sport, which raise a more complex set of competition issues. We set out in more detail BT's views on the inclusion of BT Sport in paragraphs 5.82 to 5.84 below.[285]

5.78 In BT's comments on responses to the 2014 VULA Margin Consultation, it said that as BT has not launched any superfast broadband bundles which include mobile services, TalkTalk's suggestion of defining how Ofcom would assess any impact these bundles would have on competition is premature. BT also said that it will be an entrant in mobile services facing high start-up costs as it grows a subscriber base. Further, other operators in the broadband market are able to offer mobile services within bundles. It argued that Ofcom should not focus on cost recovery in these circumstances, particularly if assessed over the short term. Instead, Ofcom should consider the effect that the provision of any bundles including mobile services are expected to have on competition for superfast broadband services.[286]

Inclusion of BT Sport in the VULA margin assessment

5.79 Sky argued that BT Sport is not a special case and that all products and services that are bundled with the provision of superfast broadband services should be included in the test.[287]

5.80 Confidential respondent [✂] also said that BT Sport should be included in the margin squeeze assessment. It set out a number of quotes from BT press releases and investor presentations which it considered show the importance of BT Sport in BT's strategy to compete for broadband subscribers.[288]

5.81 TalkTalk considered that the cost of BT Sport should be included in the VULA margin assessment in the same way as other features or marketing tools. TalkTalk considered that if BT Sport were excluded from the VULA margin assessment, BT would have the ability and incentive to subvert the VULA margin regulation through gaming. TalkTalk also argued that the strategy behind BT Sport is to increase broadband uptake and retention, rather than build a profitable standalone pay TV channel. In support of this latter argument, TalkTalk cited various public statements by BT, [✂] and the large amounts BT has paid for sports rights.[289]

5.82 BT objected to the inclusion of BT Sport in a brightline test.[290] It argued that a brightline test should exclude BT Sport because BT has made long term strategic investments in sports content and Ofcom's approach is inappropriately short term

[285] Paragraphs 8.18-8.20, *BT Response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[286] Paragraphs 2.74-2.75, *BT Comments on responses to the 2014 VULA Margin Consultation*, 23 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf.
[287] Paragraph 4.3, *Sky Response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
[288] [✂]
[289] Paragraphs 4.3-4.15, *TalkTalk response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[290] Notwithstanding its overarching opposition to an SMP remedy imposing a brightline test, BT did propose that such an assessment could be conducted in relation to dual-play superfast broadband offers if BT Sport were excluded (see paragraphs 7.43-7.44, *BT Response to the 2014 VULA Margin consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf).

and static for assessing such investments. A brightline test that includes BT Sport would undermine BT's commercial objectives in investing in this content. BT argued that fibre broadband packages bundled with BT Sport would be more properly assessed under a more flexible FRAND condition and/or competition law.[291]

5.83 BT argued that BT Sport should not be included in the VULA margin assessment for the following reasons.

- **BT Sport is a long term investment to break into a market in competition with a dominant player (Sky):** BT said that it is a new entrant in the provision of sports content. It argued that, to the extent that BT Sport may make losses in the current market review period, they would be driven by BT's entry into a new market rather than by BT's activities in the provision of fibre broadband bundles. It argued that BT Sport is included in copper and fibre broadband bundles simply because this is the approach that minimises BT's losses and that this should not be viewed as an ongoing cost in providing fibre broadband bundles. BT considered that treating the costs of BT Sport on a static and short term basis will affect "*BT in its (already limited) attempts to compete against Sky and other CPs … creating a further distortion in related markets*".[292]

- **Ofcom's proposed approach to including BT Sport is particularly susceptible to Type 1 errors (false positives):** BT argued that BT's costs of supplying BT Sport will be less predictable given uncertainties over the range of content that will be provided over time and the terms of access to that content (in particular, rights costs for premium sport). BT's unit costs will also be driven by growth of the subscriber base taking BT Sport.[293] BT considered that it is unrealistic to assume that the costs and revenues associated with BT Sport will stay constant over the average expected customer lifetime of five years. BT argued that it may change the terms on which BT Sport is supplied which would affect its revenues, and also that it has no guarantee that it will continue to have the same content after current contracts expire.[294]

- **A brightline test of profit sacrifice applied to BT Sport would prevent BT from pricing in ways that would not distort competition in the provision of superfast broadband services:** BT referred to the Compass Lexecon report provided at Annex C in its response to the 2014 FAMR Consultation. We discuss this in further detail in Section 6 but, in summary, this report argues that, even if BT does not recover any of the costs associated with BT Sport, other broadband

[291] Pages 68-75, Ibid.
[292] Paragraphs 7.25-7.26, Ibid.
[293] Paragraphs 7.10-7.11, Ibid.
[294] Paragraph 7.29(b), Ibid.

providers may still be able to attain minimum efficient scale by competing for subscribers that have no interest in BT Sport.[295]

5.84 BT did not consider that applying a brightline test to only a subset of BT's superfast broadband services could result in BT being able to circumvent Ofcom's regulatory aims. It said that limiting the brightline test by excluding BT Sport would provide comfort that BT was not distorting competition by (i) explicitly demonstrating that other operators would be able to compete effectively for a significant share of customers (i.e. those that attached little value to BT Sport); and (ii) providing a clear starting point for assessing the more complex set of competition issues in relation to the effects of BT's provision of superfast broadband bundles with BT Sport. The effect of BT Sport could thus be considered "*in a more flexible legal and regulatory framework*" rather than within a brightline test.[296]

Ofcom's considerations

Ofcom's general approach

5.85 We consider that it is appropriate to include the costs and revenues of bundled elements when assessing the VULA margin. We consider that such an approach is necessary to achieve our regulatory aim. There are three reasons for this.

- First, our regulatory aim is to prevent BT using its SMP in the WLA market to set the VULA margin such that it causes retail competition in superfast broadband to be distorted. We consider that retail competition in superfast broadband occurs between different bundles; both BT and other operators supply bundles of services. We thus consider that, in order to achieve our aim, any assessment must consider whether an adjusted EEO is capable of matching the price BT charges for its bundles. Such an assessment tests whether rival operators can effectively compete for relevant retail fibre broadband subscribers, who will typically be buying those services as part of a bundle. Accordingly, we consider that including bundled elements will achieve our regulatory aim.

- Second, if the costs and revenues of bundled elements are not included, the effectiveness of the SMP condition is likely to be undermined. In particular, by offering bundled elements at less than their cost, BT could effectively offer a 'discount' on its superfast broadband services. As a result, an adjusted EEO may be unable to match the price of BT's overall bundle even if BT's margin on the

[295] Paragraph 12, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf. Paragraph 55(a) also states that around [✂] per cent of BT broadband subscribers attach negligible value to BT Sport since they have not taken it up (despite it being free). See also paragraphs 7.46-7.47, *BT Response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

[296] Paragraphs 7.45-7.48, Ibid.

superfast element is notionally positive. Therefore the VULA margin condition would not be effective in achieving our regulatory aim.[297]

- Third, the non-broadband elements (e.g. BT Cloud, virus-protection) are included as 'add-ons' and do not always have a readily identifiable price. As such, trying to determine the 'price' of the superfast broadband component alone is difficult.[298] This variable means that there is a risk that our VULA margin condition would be ineffective if we wrongly estimate the price of the superfast broadband component.

5.86 A number of stakeholders supported the inclusion of all bundled elements for broadly similar reasons. We note that BT agreed with including bundled elements of dual-play offers but argued that there were reasons for taking a different approach to BT Sport and, potentially, to mobile services. We consider the treatment of mobile services and BT Sport below.

Inclusion of mobile services

5.87 A number of stakeholders submitted that the VULA margin assessment should take into account mobile telephony services should BT begin to bundle this with superfast broadband. We consider that mobile services would be no different to any other bundled element and hence bundles that include mobile services would be taken into account in the VULA margin assessment. We would include the revenues and costs of these services, and in Section 6 we set out our preliminary view on how the revenues and costs of mobile services would be taken into account should BT begin offering superfast broadband bundles that include mobile services during this review period.

5.88 We do not agree with BT that it is premature to set out our approach to the inclusion of mobile services in this way. BT is the process of acquiring an existing mobile operator.[299] It is thus appropriate to provide a degree of clarity for BT and other operators on how we would likely treat mobile services. We do not agree with BT's argument that we should focus on the impact of bundles including mobile services on competition rather than whether the VULA margin on those bundles is sufficient to recover retail costs. For the reasons set out in Section 4, we do not consider it appropriate for the VULA margin assessment to incorporate a further effects assessment. We consider that any relevant start-up costs associated with new mobile operations are best addressed through the methodology for calculating the costs that need to be recovered from the VULA margin (as discussed in Section 6).

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[297] To illustrate, suppose BT charges a retail price of £30 for a bundle of superfast broadband and other services. Suppose it is possible to attribute £10 of this price to superfast broadband and £20 to other services. If the cost of supplying superfast broadband (including the wholesale VULA price) is £8 but the cost of supplying the other components is £24, a rival would be unable to profitably match BT's bundle price of £30 since the cost of the bundle is £32. This is despite the superfast element apparently being profitable (with a notional price of £10 and compared to a cost of £8).

[298] Even if some bundled components did have a separately identifiable price, if that price is only available if the component is purchased as part of the bundle it is still appropriate to consider the costs and revenues of the component when assessing the bundle as a whole. For example, some of the costs of that component may be recovered from the revenues associated with the other products it is bundled with.

[299] See, in particular, BT, *BT enters into exclusive negotiations to acquire EE*, 15 December 2015, https://www.btplc.com/News/Articles/ShowArticle.cfm?ArticleID=C166A667-9C87-4128-8A2C-03E2DD8E017C).

We do not consider that it follows that because start-up costs may exist, mobile services should be excluded when carrying out the VULA margin assessment.

Inclusion of BT Sport

5.89 We do not agree with BT's argument that BT Sport should be entirely excluded from the VULA margin assessment.[300] We consider that the same arguments set out in paragraph 5.85 in relation to other elements of BT's broadband bundles apply equally to BT Sport. In particular, we consider that excluding BT Sport would leave a 'gap' in the VULA margin test, as this would allow BT to set a margin that is insufficient for an adjusted EEO to profitably compete against its superfast broadband packages where these are bundled with access to BT Sport.

5.90 Indeed there is evidence that we consider shows that BT's investment in BT Sport is closely linked to its strategy in retail broadband including maintaining and growing its superfast broadband customer base. This evidence is set out in Annex 1. In summary, we consider that this evidence shows that BT's investment in sports content was to support its broadband business including increasing customer acquisition and retention on superfast broadband packages. This evidence highlights the risks associated with excluding BT Sport given that sports content strengthens BT's competitive position relative to other superfast broadband suppliers, and excluding it risks undermining our objective of ensuring that BT does not use its SMP in the WLA market so as to set an insufficient VULA margin, thereby distorting retail competition in the provision of superfast broadband.

5.91 BT was concerned that the inclusion of BT Sport in the VULA margin assessment would undermine its commercial objectives in investing in sports content. As set out in Section 3, our concern in this market review is that BT, as the vertically integrated operator in superfast broadband that holds SMP in the upstream WLA market, possesses the ability to distort competition in the retail superfast broadband market via the prices it sets for the WLA inputs and its retail bundles and that there a significant and real risk that it has an incentive to do so. BT has chosen to recover its investment in sports rights by including BT Sport in its retail broadband bundles, forgoing the direct revenues it could have earned from reaching wholesale agreements with other TV providers. While BT is clearly free to decide how it can most profitably commercialise its investments, we consider that in order to prevent a distortion to retail superfast broadband, and for our VULA margin control to be effective in meeting our regulatory aim, BT must ensure that the VULA margin is sufficient to cover the costs of all elements of its retail superfast broadband bundles (i.e. including BT Sport).

5.92 While BT argues that the costs associated with BT Sport should be excluded from the VULA margin assessment, it does not appear to consider that the additional broadband revenues it earns as a result of BT Sport should be excluded. For

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[300] In this Section we are addressing the argument that BT Sport should be excluded. If this were the case then it would not be necessary to consider what methodology should be used to calculate an appropriate contribution from the VULA margin to BT Sport – it would simply be disregarded. If BT Sport is taken into account then it is necessary to identify an appropriate methodology to use when calculating that contribution (as discussed in Section 6). Some of the methodologies suggested by BT may, in some circumstances, result in a low or zero contribution to BT Sport from the VULA margin. However conceptually this is not because BT Sport is being excluded *per se*; rather it is because applying those methodologies to a given set of data produces a low contribution (but applying them to a different set of data would obviously produce a different number).

example, by including BT Sport, BT may be able to charge a higher price for its broadband packages (even though there is no additional charge for BT Sport itself).[301] We consider that including these additional revenues but not the additional costs associated with them would be inconsistent and prevent our VULA margin control from being effective in meeting our regulatory aim.

5.93 Turning now to BT's arguments for excluding BT Sport, as set out in paragraph 5.83.

- **BT argued that, to the extent that BT Sport may make losses in the current market review period, they would be driven by BT's entry into a new market:** we do not consider that this implies that the cost of BT Sport should be entirely excluded. Rather, we consider that this relates to how those costs should be treated (having made the decision to include them in our assessment). Specifically, this relates to the timing of cost recovery and whether an adjustment should be made to reflect overall losses. We discuss both these issues in Section 6.

- **BT argued that the future costs and revenues associated with BT Sport are uncertain and, therefore, a static approach (based on current costs and revenues) may result in errors:** we consider that it is a non sequitur to therefore argue that the costs BT Sport should be excluded entirely. Put simply, assuming a BT Sport cost figure of zero is likely to be a far less reliable estimate than adopting a static approach to assessing the VULA margin.

- **We do not agree that BT Sport should be excluded since other broadband providers may still be able to attain minimum efficient scale by competing for subscribers that have no interest in BT Sport:** this argument was set out in the Compass Lexecon report at Annex C to BT's response to the 2014 VULA Margin Consultation, and we address it in Section 6. In particular, BT's approach essentially marginalises competition to a subset of consumers. This is because excluding the cost of BT Sport would give BT an advantage in competing for customers that value sports content by virtue of its SMP in WLA. We do not consider that other operators should be prevented from competing for these customers, particularly as they comprise approximately [✂] of BT's broadband subscribers.[302] Moreover even customers that appear to have no interest in BT Sport may prefer to purchase a superfast broadband bundle that includes BT Sport rather than an identically priced bundle that does not. This is because the former includes BT Sport as a free option.

5.94 More generally, BT's view that BT Sport should be excluded is closely related to its view that the VULA margin assessment should incorporate a further effects

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[301] BT's broadband prices are currently higher than those of Sky and TalkTalk. For example, for BT's unlimited 38Mbit/s superfast broadband dual-play bundle, the cost over 18 months was £710.82, compared to £655.20 for Sky and £491.60 for TalkTalk for comparable bundles (operators' websites accessed 3 December 2014).

[302] Compass Lexecon stated that around [✂] of BT's broadband subscribers attach no or negligible value to BT Sport (page 12, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf).

assessment. For the reasons set out in Section 4, we do not consider that this should be the case.

Conclusion

5.95 We have therefore decided that our approach in regulating the VULA margin should be to include the costs and revenues of all bundled elements when assessing the VULA margin. It is clear that BT has bundled BT Sport to increase the attractiveness of its superfast broadband packages as a means of driving customer acquisition and retention. We consider that the exclusion of BT Sport would leave a 'gap' in the VULA margin regulation, as this would allow BT to set a margin that is insufficient for rivals to profitably match the price of BT's superfast broadband offers. If this were to occur, we consider that this would render achieving our regulatory aim ineffective.

5.96 As a result of this decision, looking forward over the market review period, we consider that BT will need to pay careful consideration to whether it can recover the costs of future investments in services that it intends to bundle with retail superfast broadband to avoid breaching the VULA margin control.

Bundles including BT TV (triple-play)

5.97 In the 2014 VULA Margin Consultation, we proposed that when assessing the VULA margin it is appropriate to take BT's triple-play bundles (bundles that include voice, broadband and TV services sold together) into account.

Responses to 2014 VULA Margin consultation

5.98 Confidential respondent [✂] argued that triple-play is likely to be particularly significant in relation to superfast broadband, as receiving TV over broadband can be expected to be a key driver of many residential customers upgrading from standard broadband products. The exclusion of triple-play would therefore allow BT greater scope to foreclose this important and growing market segment.[303]

5.99 TalkTalk agreed that triple-play bundles should be included in the VULA margin assessment in order to avoid BT subverting the objective of our VULA margin regulation.[304]

5.100 BT argued that a brightline test should be limited to dual-play offerings because BT has made long term strategic investments in TV and Ofcom's approach is inappropriately short term and static for assessing such investments. BT argued that a brightline test covering bundles with BT TV would undermine BT's commercial objectives in investing in this feature. BT argued that bundles that include BT TV would be more properly assessed under a more flexible FRAND condition and/or competition law.[305]

5.101 BT argued that triple-play bundles should not be included in the VULA margin assessment for the following reasons.

[303] [✂]
[304] Paragraph 4.3, *TalkTalk Response to 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[305] Paragraphs 7.65-7.67, Ibid.

- **BT's triple-play offerings are competing against rivals with heterogeneous offerings:** BT argued that, because superfast broadband services are supplied in a diverse range of offers into the competitive retail broadband market, with different suppliers pursuing different strategies to target different segments of customers, a brightline test will not provide a strong indicator of exclusionary effects.[306]

- **Rivals such as Sky, Virgin and TalkTalk all have advantages over BT in providing pay TV services:** BT stated that provision of pay TV services requires access to content rights and/or wholesale access to channels. BT said that Sky is dominant and controls access to critical basic and premium content (particularly Sky Sports). While other broadband providers have access to this content, BT does not. As a result, other broadband providers have differentiated their offers from those supplied by BT and enjoy an advantage over BT in the provision of triple-play bundles.[307]

- **Ofcom's proposed treatment of the costs of supplying BT TV is excessively static and short term:** BT argued that it continues to invest in its TV platform and that a static assessment will not indicate the profitability of BT TV across the expected lifetime of a customer. BT argued that it expects that revenues may increase over the lifetime of a customer when Ofcom has addressed the "*existing structural concerns*" in relation to access to TV content. It also considered that growth in its TV business would lead to lower unit costs and that BT expects triple-play customers to have an extended customer lifetime.[308]

5.102 BT stated that, while the provision of triple-play bundles is growing, around [✂] per cent of its broadband customers do not purchase a triple-play bundle. Further, provided the margin on dual-play bundles was sufficient to recover the costs associated with those bundles, it would be incrementally profitable for pay TV providers such as Sky to upsell triple-play to those customers that currently do not take broadband. In addition, the ability of dual-play providers to offer triple-play services is more dependent on the terms on which they purchase TV and content inputs than on the retail price of BT's triple-play bundles.[309]

5.103 BT did not consider that applying a brightline test to only dual-play offers could result in BT being able to circumvent Ofcom's regulatory aims. It said that limiting the brightline test by excluding triple-play bundles would provide comfort that BT was not distorting competition by (i) explicitly demonstrating that other operators would be able to compete effectively for a significant share of customers (i.e. those that are interested in dual-play bundles); and (ii) providing a clear starting point for assessing the more complex set of competition issues in relation to the effects of the provision triple-play. The effects of triple-play bundles could thus be considered "*in a more flexible legal and regulatory framework*", rather than within a brightline test.[310]

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[306] Paragraph 7.9, Ibid.
[307] Paragraph 7.11, Ibid.
[308] Paragraph 7.34, Ibid.
[309] Paragraphs 7.46 and 7.48, Ibid.
[310] Paragraphs 7.45-7.48, Ibid.

Ofcom's considerations

5.104 We consider that not including triple-play bundles in the VULA margin assessment would risk our VULA margin control not being effective in meeting our aim.

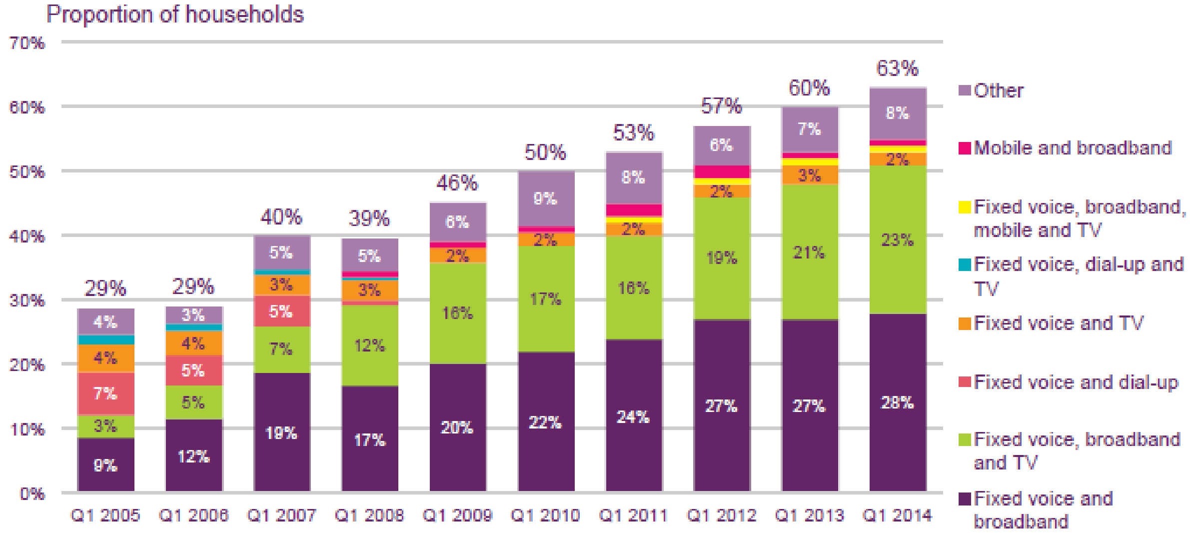
5.105 As set out in Section 3, our concern stems from BT's SMP in the provision of WLA. The obligations we have imposed in relation to VULA are intended to address that market power. While triple-play provision also requires wholesale inputs in addition to VULA, in providing triple-play bundles operators such as TalkTalk and Sky are wholly reliant on the supply of VULA by BT. Therefore, the same concerns still apply. We consider that BT's WLA inputs (GEA and WLR) represent a material, fixed proportion of the costs of supplying triple-play bundles.[311] Therefore, the fact that other inputs are also necessary to supply triple-play bundles does not change the analysis.

5.106 We consider that the exclusion of triple-play bundles would result in a 'gap' in the VULA margin assessment, as this would allow BT to set a margin that is insufficient for an (adjusted) EEO to profitably compete on these bundles. In other words, the exclusion of triple-play bundles would effectively allow BT to reduce the margin available in this segment of the market, providing no safeguards against BT using its SMP in the provision of WLA to foreclose competition for triple-play broadband bundles. Therefore, were we to exclude triple-play bundles, it is unlikely that our VULA margin control would be effective in achieving our regulatory aim.

5.107 We consider that such a 'gap' in the test would risk allowing competition to be distorted for an important and material part of the downstream market. BT argued that even if triple-play bundles were excluded, other operators would still be able to compete in the provision of dual-play bundles. However, triple-play is becoming increasingly important in the fixed broadband sector. As shown in Figure 5.3, 23 per cent of households reported having a triple-play bundle of fixed voice, broadband and multichannel TV in Q1 2014. Further, the trend is upwards as the proportion of households taking triple-play bundles has increased steadily over the last three years. We note that fibre technology has advantages in supplying IPTV and BT only supplies a limited range of content with its copper TV offering. Indeed, BT stated in 2014 that "*Fibre ... underpins our TV plans*".[312]

[311] Our indicative assessment of the VULA margin indicates that GEA and VULA make up about 25-50 per cent [✂] of BT's downstream costs for dual-play superfast broadband bundles and about 25-50 per cent [✂] for triple-play superfast broadband bundles (both including the cost of BT Sport).
[312] Page 1, BT, *Results for the Third Quarter and Nine Months to 31 December 2013,* 31 January 2014, http://www.btPlc.com/News/ResultsPDF/q314-release.pdf.

Figure 5.3 – Take-up of bundled services[313]



Source: Ofcom Technology Tracker
Base: All adults aged 16+ (2014 n=3740)
QG1. Do you receive more than one of these services as part of an overall deal or package from the same supplier?

5.108 BT argued that, even if triple-play bundles were excluded, it would still be incrementally profitable for a pay TV operator to upgrade a customer that does not take broadband to a triple-play bundle. We do not consider that this alleviates our concerns about a 'gap' in our VULA margin regulation if triple-play bundles were excluded. To explain, consider the following illustrative example.

- Suppose that the retail price of pay TV content is £5 and that the cost of providing it is £4. Suppose that the retail price of a dual-play superfast broadband bundle is £10 and the cost of providing that bundle is £8.

- BT argued that it is incrementally profitable for a pay TV provider to upsell to a pay TV consumer. If the price of a triple-play bundle is £15, this increases the profits earned from £1 (on pay TV only) to £3.

- However, this rests upon the assumption that the price of a triple-play bundle is £15. If triple-play bundles were excluded from the VULA margin assessment, BT might charge £11 for a triple-play bundle (less than the cost of provision, namely £4+£8). Other operators could not profitably match the price of such a bundle.

5.109 We do not consider that BT's arguments justify the entire exclusion of triple-play (i.e. disregarding all the costs and revenues). Although they are relevant to issues considered elsewhere in this Statement, we note the following in relation to BT's arguments set out in paragraph 5.101.

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[313] Figure 1.10, *Communications Market Report 2014*, 7 August 2014, http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/2014_UK_CMR.pdf.

- **BT argued that retail superfast broadband offers available on the market are heterogeneous and that a brightline imputation test will not be a strong indication of exclusionary effects and distortions:** we set out in Section 3 our analysis on the risks of adverse effects arising from BT setting an insufficient VULA margin; Section 4 sets out why we consider it inappropriate to incorporate a further effects assessment.

- **BT argued that other broadband operators enjoy an advantage as a result of their access to channels wholesaled by Sky:** other CPs such as TalkTalk and Virgin incur costs in supplying those channels (namely the wholesale fees they pay to Sky), which are reflected in the retail prices that they charge triple-play consumers. Excluding triple-play bundles from the VULA margin assessment risks BT setting retail triple-play prices that these CPs (and indeed an adjusted EEO) are unable to match. We thus consider that it is not appropriate to counter-balance the disadvantages that BT claims to suffer in the supply of triple-play bundles by allowing BT to set a VULA margin on these bundles that is insufficient to recover its costs.

- **BT argued that the future profitability of its TV operations may increase and therefore a static approach (based on current costs and revenues) may result in errors:** we do not consider that this implies that triple-play bundles should be excluded entirely. Rather, we consider that this relates to how BT TV costs and revenues should be treated (having made the decision to include triple-play bundles and thus make some allowance for them). We discuss these issues further in Section 6, where we conclude it is not appropriate to depart from our static approach in relation to the costs and revenues of BT TV. This is because, for example, BT TV is already a long-established business (it was launched in December 2006).

Conclusion

5.110 In summary, we conclude that the VULA margin assessment should include triple-play bundles because not to include these would risk our VULA margin control not being effective in meeting our aim. We consider that the exclusion of triple-play bundles would leave a ‘gap’ in the VULA margin regulation, as this would allow BT to set a margin that is insufficient for rivals to profitably match BT’s superfast triple-play bundles. In reaching this position, we have taken into consideration the fact that triple-play bundles are an important and growing proportion of superfast broadband sales.[314]

Output increment

5.111 When assessing the VULA margin, the scope of the set of products being assessed is an important consideration. The output increment is the set of products that are looked at as an aggregate whole when assessing the VULA margin. For example, whether each superfast broadband bundle should be assessed individually or whether BT’s entire superfast portfolio should be assessed as a whole. Under our proposed LRIC+ standard, the size of the output increment need not materially affect which costs are taken into account because common costs are included as a matter

[314] [✂]

of course.[315] However, the output increment size does affect the degree of flexibility that BT has in recovering its common costs.[316]

5.112 In the 2014 VULA Margin Consultation, we considered the use of a number of possible output increments.

- Total broadband approach – assessing the aggregate position of bundles including either standard or superfast broadband.
- Total fibre portfolio approach – assessing the entire portfolio of bundles that use VULA as an input.
- Individual product/product group approach – assessing the individual BT bundles that are provided to customers. These are differentiated by download speeds, usage limits and the other (non-broadband) services that are included. We have considered whether such an assessment should be carried out, in addition to the fibre portfolio approach.

5.113 We rejected the total broadband approach on the basis that our competition concerns relate to the ability of BT's rivals to compete for superfast broadband subscribers, rather than broadband subscribers as a whole. We rejected the individual product/product group approach on the basis that it would restrict BT's flexibility in how it allocates its common costs between its fibre services, and that focusing on a narrower set of products than BT's fibre portfolio would not be particularly beneficial to competition.

5.114 We provisionally concluded that the most appropriate output increment is BT's total fibre portfolio. We said that allowing such flexibility is desirable, particularly when using a LRIC+ cost standard, although we recognised that in certain circumstances such flexibility could be used to harm competition (for example by offsetting low margins on one category of fibre products against high margins on another). However, we considered that the benefits of allowing additional flexibility outweighs this risk given that BT's main competitors supply a comparable range of superfast bundles.

Responses to 2014 VULA Margin Consultation

5.115 BT agreed that any assessment of the VULA margin should be conducted at the overall level of the fibre portfolio, rather than a more disaggregated approach that considered individual services or groups of services. BT pointed out that it offers a range of fibre dual-play propositions and these are broadly replicated by the offers seen in the market from BT's competitors. It added that different CPs may adopt

[315] In contrast, the LRIC will vary with the size of that increment because the larger the increment, the more common costs are included in the LRIC. For example, if the increment was only some of BT's fibre products (say 38Mbit/s and below), then the common costs of fibre provision would not be included in the LRIC estimate because BT would still be supplying 76Mbit/s and above services.

[316] To illustrate, consider the case of two products (X and Y), each with an incremental cost of £5. One unit of each product is sold and there are common costs of £4. If each individual product is taken as the output increment, it is necessary to determine how to split the £4 of common costs. If this were done evenly (say), the minimum retail price of both X and Y would be £7. In contrast, taking the portfolio of both products as the output increment allows for greater price flexibility. For example, the operator would be free to set a retail price of £6 for X and £8 for Y if it wished.

different strategies to target particular customer segments, but all CPs will face the challenge of driving volumes and recovering overall costs.[317]

5.116 TalkTalk[318], confidential respondent [✄][319] and Vodafone[320] considered that a portfolio approach on its own (i.e. without carrying out additional tests at a more disaggregated level) would fail to prevent the distortion of competition through BT's pricing on individual products. For example, [✄] were concerned that assessing the fibre portfolio as a whole would allow BT to price value/entry-level products below cost by offsetting losses with the high margins earned on other products. They considered that the fibre portfolio approach would allow BT to engage in a targeted strategy aimed at "*unfairly squeezing its main competitors*" who primarily serve the value/entry-level segment of the market. These respondents argued that BT has a greater ability than its competitors to carry out such a strategy, as BT's position as the legacy monopolist gives it scale and scope advantages in relation to the products it supplies and, in particular, provides it with a larger base of customers to which it can supply higher margin products. In this regard, TalkTalk made the following additional points.

- A portfolio approach allows BT to retail some products below wholesale charges plus LRIC. Such retail prices are anti-competitive and can never be justified.[321]

- If BT's superfast broadband customer mix includes inert customers who tend to use high-margin products such as Infinity 2 then, since competitors cannot access these non-contestable customers, even operators that offer the full range of superfast broadband products will be subject to a "*margin squeeze*".[322]

- TalkTalk contended that, as each of BT's main rivals has a distinct customer focus (value customers at TalkTalk, sport lovers at Sky) and cannot quickly switch to serving other segments, BT is able to target each operators' customers. TalkTalk's analysis suggests that the margin on Infinity 2 Unlimited is about £2-£3 more than on Infinity 1.[323] A report by Frontier Economics included as an annex to TalkTalk's response to the 2014 VULA Margin Consultation commented on BT's ability and incentive to target TalkTalk. This report set out the following in particular.

  - TalkTalk would be the most likely operator for BT to target as the available evidence (for example, ARPUs[324] and customer switching patterns) is consistent with BT being TalkTalk's closest competitor.[325]

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[317] Paragraph 8.21, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[318] Paragraphs 3.58-3.75, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[319] [✄]
[320] Pages 3-5, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.
[321] Paragraphs 3.60-3.61, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[322] Paragraph 3.62, Ibid.
[323] Pages 26-27, Ibid.
[324] 'Average Revenue Per User'.

- o TalkTalk has fewer financial resources than Sky and Virgin, so would find it harder to sustain losses. In addition, Sky has a strong position in pay TV and triple-play bundles (voice, broadband and pay-TV) are expected to be of growing importance. Virgin does not rely on BT's wholesale inputs at all.[326]

5.117 Given their concerns, TalkTalk[327], confidential respondent [✂][328] and Vodafone[329] argued that it would be appropriate to complement an assessment of the fibre portfolio with tests on individual products/product groups. TalkTalk and confidential respondent [✂] proposed the use of product testing on the basis of a LRIC standard in addition to testing the fibre portfolio on the basis of LRIC+. This would address their concerns about the margin on value/entry-level superfast broadband products being insufficient to recover even LRIC while allowing BT flexibility as to how it recovers common costs from different superfast broadband products. Both respondents also contended that this approach would entail a limited regulatory burden.

5.118 TalkTalk made the following additional points.

- Testing individual products/product groups would remove any non-replicable advantage BT enjoys from its inert customers who consume proportionally more high-end (and high-margin) products.

- The more disaggregated tests, carried out on a LRIC basis, should assess each of BT's core superfast broadband product groups (e.g. Infinity 1, Infinity 2 etc.) with and without TV.

- Too much of BT's overall costs had been allocated as fixed and common and as a result the true level of LRIC will be underestimated. If Ofcom is unable to determine which costs are incremental then the product-by-product test should be carried out on a LRIC+ basis. TalkTalk considered that common costs represent a small proportion of overall superfast broadband revenues and hence that the loss of flexibility as to how common costs are recovered between product groups is not a significant disadvantage.

5.119 TalkTalk, confidential respondent [✂] and Vodafone also argued that the use of individual product tests is consistent with the Costing and Non-discrimination Recommendation, in which the European Commission advocates carrying out tests on "*flagship products*". In addition, confidential respondent [✂] contended that the need to focus on individual products has been recognised by several European regulators, including Ofcom (in the 2004 WBA Direction) and the Dutch regulator, and has been noted by the European Commission in competition law cases.

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[325] Paragraphs 3.6-3.22, *TalkTalk Response to the 2014 VULA Margin Consultation – Frontier Economics Report on Ofcom's VULA margin test*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Frontier_Economics_-_Report_on_Ofcom's_VULA_margin_test.pdf.

[326] Paragraphs 3.22-3.30, Ibid.

[327] Paragraphs 3.76-3.94, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

[328] [✂]

[329] Pages 4-5, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.

5.120 Finally, TalkTalk considered that there should be two portfolio tests carried out on a LRIC+ basis: one for BT Consumer and one for Plusnet. It is important to recognise that Plusnet operates separately from BT and as a consequence there are few costs that are truly common as between Plusnet and BT Consumer.[330]

Ofcom's considerations

5.121 In the light of consultation responses, we have considered two main possible output increments that could be used when assessing the VULA margin.

- Total fibre portfolio approach – assessing the entire portfolio of BT bundles that use VULA as an input.
- Individual product/product group approach – assessing the individual BT bundles that are provided to customers. These are differentiated by download speeds, usage limits and the other (non-broadband) services that are included. We have considered whether such an assessment should be carried out, in addition to the fibre portfolio approach.

5.122 We note that we received no responses on the use of the total broadband approach.

<u>Previous Ofcom *ex ante* cases</u>

5.123 In the 2004 WBA Direction we considered carrying out the analysis at the business level. However, we concluded that a product group approach was appropriate since it would prevent BT targeting particular competitors and avoid new ISPs having to replicate BT's product mix. We recognised that:

> "*It is likely that a number of entrants could well be multi-product suppliers in their own right and will choose to compete with BT across a similar product portfolio. However, as the market is still developing, Ofcom does not want to pre-judge this issue*".[331]

5.124 In setting the terms of the wholesale must-offer in relation to some of Sky's sports channels, we stated that:

> "*The aim is to ensure that the retailer can compete in the provision of pay TV bundles that include Core Premium Sports products, but is not forced to replicate the additional separate elements in Sky's wider packages*."

We effectively looked at each of Sky Sports 1, Sky Sports 2, and Dual Sports (where Sky Sports 1 and Sky Sports 2 are sold together) separately. However, the different configurations of so-called basic channels that are purchased with each of these Sky Sports packages were considered in aggregate. In essence, we carried out a 'product group' approach, where the product groups were: (i) retail bundles including

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[330] Paragraphs 3.88-3.91, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

[331] Paragraphs 2.41-2.45, Ofcom, *Direction Setting the Margin between IPStream and ATM interconnection Prices*, 26 August 2004, http://stakeholders.ofcom.org.uk/binaries/consultations/adsl_price/statement/statement.pdf.

Sky Sports 1; (ii) retail bundles including Sky Sports 2; and (iii) retail bundles including Dual Sports.[332]

5.125 In both the 2004 WBA Direction and Pay TV examples, part of our reasoning was the mix of products rivals should be expected to supply. In the case of superfast broadband, in practice other operators offer a portfolio of products similar to BT's. Sky, TalkTalk, and EE all offer both 38Mbit/s and 76Mbit/s broadband. They also offer a range of tied and optional voice services (i.e. calls, access) and TV services (i.e. a DVR set-top box providing Freeview and pay TV content). If BT applies different margins to different offers, this may not matter as BT's rivals could also supply those offers and still be able to compete in the superfast segment. That is, as long as the VULA margin for the fibre portfolio is positive, then an operator which is at least as efficient as BT could compete for the entire fibre portfolio.

Appropriateness of a fibre portfolio test

5.126 Stakeholders agreed with our proposal to carry out a VULA margin assessment at the level of the total fibre portfolio. Therefore, we have decided to maintain our provisional position and impose a test based at the level of the total fibre portfolio. In reaching this decision, we rejected the total broadband approach on the basis that overall such an approach would not be effective in achieving our regulatory aim.

5.127 As we have previously set out[333], the total fibre portfolio approach provides BT with the flexibility to determine the margins on individual products within the portfolio. We consider that flexibility is particularly desirable given two aspects of the VULA margin assessment. First, fibre services are still developing, with various technologies such as G.FAST likely to increase speeds. Second, since we consider that a LRIC+ standard should be applied (see paragraphs 5.54 to 5.56) flexibility would allow BT to determine what contribution to common costs (i.e. the 'plus' in the LRIC+ calculation) is made by different products. Such flexibility would allow BT to experiment when setting the relative prices of different superfast broadband products and to respond to differences in consumer demand for different superfast broadband packages. By contrast, we considered that the limits on BT's flexibility under the both the fibre product group approach and the individual product approach would on their own mean that each of these are disproportionate when compared to the total fibre portfolio approach.

5.128 Using a broader set of products gives BT greater flexibility. However, this greater flexibility may also give BT a greater ability to set a lower margin on certain offers which may particularly affect certain competitors (as argued by some stakeholders). We consider below whether additional tests, over and above the fibre portfolio assessment, are needed to address this concern and ensure our approach to regulating the VULA margin is effective in achieving our aim.

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[332] Paragraphs 10.77 and 10.92-10.102, Ofcom, *Pay TV statement*, 31 March 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/third_paytv/statement/paytv_statement.pdf. We also excluded the costs and revenues associated with other elements of the bundle e.g. Sky Movies content, broadband and telephony costs and revenues (see paragraphs 10.82 and 10.108-10.111, Ibid.).

[333] Paragraph 5.103, *Fixed access market reviews: Approach to the VULA margin – Consultation*, 19 June 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/summary/VULA_Margin_Consultation.pdf.

Appropriateness of a further test of individual products/product groups

5.129 We acknowledge the concerns of TalkTalk, confidential respondent [✂] and Vodafone regarding the possibility that a fibre portfolio approach would permit below-cost pricing (i.e. pricing below LRIC) on individual products. It is correct that, in theory, a test carried out at this level would not in itself prevent BT from offsetting loss-making products with high-margin products so long as the fibre portfolio as a whole earned a positive margin.

5.130 We have thus considered whether it is necessary to complement the fibre portfolio test with individual product tests carried out on the basis of LRIC to ensure that we achieve our regulatory aim.[334] The use of LRIC for the product tests would allow BT to retain flexibility as to how it recovers common costs from different superfast broadband products, while the fibre portfolio LRIC+ test would ensure that in aggregate common costs are recovered from superfast broadband.

5.131 In order to understand whether the concerns raised by stakeholders are likely to arise in practice, we have carried out an indicative assessment of BT's current VULA margin on different product groups. We have calculated the LRIC margins on each superfast product taking into account their different prices, their respective bandwidth costs and the share of sales, general and administration ('SG&A') costs that we consider are incremental to individual products. We present the results of our analysis below.

Table 5.1 – Indicative assessment of monthly headroom (including BT Sport) per customer

Infinity 1 (LRIC)	Unlimited Infinity 1 (LRIC)	Infinity 2 (LRIC)	Infinity 3 (LRIC)	Plusnet (LRIC)	Fibre portfolio (LRIC+)
[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: Ofcom indicative assessment of BT superfast broadband offers in January 2014.

5.132 Table 5.1 provides an indication of the extent to which the VULA margin on each individual product group exceeds our estimate of the LRIC, i.e. the amount of 'headroom' that BT's retail prices allow above LRIC. We emphasise that this is not intended to be a precise calculation; rather, it is intended to shed light on the relativities of the various figures, as well as their broad magnitude.[335]

5.133 First, we observe that, contrary to TalkTalk and confidential respondent's [✂] contention that BT is loss making on its value/entry-level product, BT's primary value proposition, Infinity 1, has a positive monthly LRIC headroom of [✂]. In addition, Unlimited Infinity 1 and Infinity 2, which have higher speeds and/or usage caps, earn positive monthly LRIC headrooms ([✂]).[336]

[334] We consider that individual product tests carried out on the basis of LRIC+ would provide insufficient flexibility for BT to decide how it recovers common costs.
[335] The caveats around the indicative assessment of the VULA margin on BT's fibre portfolio as a whole in Section 6 equally apply here.
[336] Our analysis indicates that it is differences in the bandwidth usage of customers on different products that has primarily driven the differences in margin across products.

5.134 Second, we consider that the results indicate that an assessment carried out on individual products on the basis of LRIC is likely to be redundant as the fibre portfolio test carried out on the basis of LRIC+ is considerably more stringent.

- The fibre portfolio LRIC+ headroom is [✂].

- However, the individual product LRIC headrooms are [✂].

5.135 The reason why the headroom calculated for individual products is considerably higher than the fibre portfolio headroom is that fewer costs are included in the individual product tests.

- Clearly, by using a LRIC standard, the cost stack does not include the apportionment of fixed and common costs included when using a LRIC+ standard. In our indicative assessment, we estimate that the removal of fixed and common costs increases the monthly headroom by an average of [✂] for each product.

- In addition, the use of a narrower output increment requires the removal of costs that are incremental to the fibre portfolio but are common across individual products, i.e. individual product LRICs include fewer costs than the fibre portfolio LRIC. Having removed these costs, the monthly headroom increases by a further [✂] on average for each product.[337] Given the materiality of fixed and common costs (with respect to both the fibre portfolio and individual products), it appears unlikely that BT could price below LRIC on any individual product while maintaining a positive margin for the fibre portfolio assessed using LRIC+.

5.136 We have considered TalkTalk's claim that too much of BT's overall costs have been categorised as fixed and common. The indicative assessment we refer to in this section has been informed by a detailed analysis of costs that was carried out as part of the Superfast Broadband Competition Act Investigation in order to calculate the BT superfast broadband portfolio LRIC. As set out in paragraphs A2.13 to A2.18 of the Superfast Broadband Competition Act Investigation decision, we categorised retail SG&A costs into one of three categories[338] using information gathered from BT about the nature of the costs. On the basis of our analysis, we consider that most of the shared costs which BT identifies as directly or indirectly attributable to BT Consumer will be, in part, incremental to superfast broadband in the long run.[339] The main category of costs we treat as 'fixed and common' (to the superfast broadband portfolio) are those which would be expected to remain invariant if BT were no longer

[337] This figure was calculated assuming that a cost of [✂]/month per subscriber for BT Sport is incremental to individual superfast product groups such as Infinity 1 (i.e. the same monthly BT Sport cost used in the indicative assessment set out in Section 6). If the entirety of this amount were not part of the individual product group LRIC (a matter that we have not considered further) then the amount of headroom available would be even larger.

[338] (i) shared costs related to customer acquisition; (ii) ongoing shared costs that are variable in the short-run; and (iii) ongoing shared costs that are variable in the long run.

[339] In the Superfast Broadband Competition Act Investigation decision, we noted that BT did not include the third category of costs (long run variable) in its Model as it has argued that these costs are not incremental to BT's superfast broadband portfolio (see paragraph A2.16, *CW/01103/03/13: Complaint from TalkTalk Telecom Group plc against BT Group plc about alleged margin squeeze in superfast broadband pricing – Decision*, 21 October 2014, http://stakeholders.ofcom.org.uk/binaries/enforcement/competition-bulletins/closed-cases/all-closed-cases/cw_01103/CW-01103-03-13.pdf).

to have the BT Consumer business.[340] TalkTalk has not explained why it disagrees with this analysis.

5.137 We therefore consider that these concerns are unlikely to arise in practice and that on this basis it is therefore unnecessary to add an additional layer testing individual products on the basis of LRIC. In practice, stakeholders' concerns about BT setting low margins on value/entry-level products are not borne out by the data we have analysed (indeed the opposite may be the case). Moreover, such additional tests are less likely to constrain BT's behaviour in any case given the LRIC cost standard adopted. In these circumstances, and given the risk identified, we do not consider that it is proportionate to place additional restrictions upon BT. We also note that, to the extent that there is any residual risk of BT pricing individual products in the fibre portfolio below cost, *ex post* competition law may act as a constraint on such behaviour.

5.138 In addition, even if it were the case that BT were to offset a low margin on entry-level superfast broadband offers against a high margin on other superfast broadband offers, we would need to consider why such a pattern of pricing is sustainable in the face of competition from other CPs.

Other points raised by stakeholders

5.139 Stakeholder responses touched on a number of other issues, which we address as follows.

- We consider that there would be little added benefit to carrying out two portfolio tests at LRIC+ (one for BT Consumer and one for Plusnet). A large proportion of fixed and common costs that we include in the LRIC+ test are associated with BT's TSO division, which provides support and services to all of the 'market facing units' within BT Group (including both BT Consumer and Plusnet).[341] Thus, we do not agree with TalkTalk's claim that few costs are common between BT Consumer and Plusnet. As a result, conducting two separate portfolio tests on a LRIC+ basis would require us to specify what proportion of those common costs should be recovered from BT Consumer and what proportion should be recovered from Plusnet. We consider that doing so would overly restrict BT's flexibility over how it recovers its common costs and how it is able to set prices and respond to consumer demand.

- We acknowledge that individual product tests have previously been used by several European regulators. In paragraph 5.125 we explain why we consider it appropriate to take a different approach to those previously adopted by Ofcom in the 2004 WBA Direction and Pay TV Statement. We acknowledge that our approach may differ from the approach adopted by the NRAs in some other European countries. However, as set out in Section 4, we have not investigated the approaches adopted by other NRAs because we consider it is of limited relevance to the appropriate approach to adopt in the UK.

- We discuss consistency with the Costing and Non-discrimination Recommendation in Section 7.

[340] Ibid.

[341] As set out in Section 6, we recognise that Plusnet operates separately from BT Consumer but we intend to assess Plusnet products in a simplified way due to their low weight in the fibre portfolio.

Conclusion

5.140 We conclude that the most appropriate output increment is the fibre portfolio. We consider that this approach affords BT an appropriate level of flexibility to decide how it recovers common costs across products. We consider that additional tests carried out on individual products using LRIC are likely to be unnecessary and disproportionate.

Copper access technology

5.141 Broadband and voice services can be supplied over BT's network in a variety of ways and CPs use different technologies. The technology CPs use can affect the cost of serving fibre broadband customers. We have considered which copper access technology it is appropriate to assume that the adjusted EEO uses when assessing the VULA margin.[342]

5.142 Superfast broadband services can be supplied over BT's network in two main ways:

- WLR and Generic Ethernet Access (GEA) – WLR is used to provide the voice service, while GEA (the name for Openreach's VULA product) is used to provide the broadband service; and

- MPF and GEA – MPF is used to provide the voice service while GEA is used to provide the broadband service.

5.143 The technology an operator uses may be influenced by the technology that it uses to provide access to standard broadband services. Sky and TalkTalk primarily use MPF to provide both voice and standard broadband at BT exchanges covering around 90-95 per cent of the UK population (excluding the Hull Area).[343] Both use WLR and WBA purchased from BT outside of these areas. BT uses WLR and SMPF to provide voice and standard broadband. EE primarily uses WLR and WBA purchased from BT. Other CPs use a range of technologies.

5.144 In the 2014 VULA Margin Consultation, we considered that it is appropriate to assume that the adjusted EEO uses WLR+GEA when assessing the VULA margin on two grounds.

- It is not clear that operators using MPF technology have materially higher costs than those, like BT, which use WLR. Rather, it is possible that operators using MPF technology may have lower costs than BT, although this may change over the review period.

- BT does not use MPF to supply its customers. Using an MPF+GEA benchmark is thus likely to complicate BT's assessment of whether it is complying with our

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[342] Our choice of copper access technology affects our decision whether to take certain costs (e.g. co-location) into account – see Section 6.

[343] Table 4.1, *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies, 26 June 2014*, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/. Sky and TalkTalk serve a minority of consumers in these exchanges using WLR to supply voice services and SMPF to supply broadband services.

proposed SMP condition since BT is likely to be less well informed about the costs incurred by such an operator.

Responses to 2014 Consultation

5.145 Only one stakeholder commented on the proposed methodological approach to taking into account copper access technology. Confidential respondent [✂] said that it supports the calculation of BT's costs assuming WLR copper access, consistent with BT's actual business. [✂].[344]

Ofcom's considerations

5.146 We have considered which copper access technology it is appropriate to assume that the adjusted EEO uses when assessing the VULA margin.[345] We have considered whether to carry out the VULA margin assessment by reference to a WLR+GEA operator (such as BT) or a MPF+GEA operator (such as TalkTalk or Sky). As discussed in paragraph 5.33, we consider it is appropriate to use an adjusted EEO standard. As a result, the natural starting point is BT's costs (i.e. those of a WLR+GEA operator, rather than a MPF+GEA operator). However, in order to assess whether this is appropriate, we have considered whether using a WLR+GEA operator would result in materially different costs to a MPF+GEA operator.

5.147 We have considered the case where a CP wins a new customer as an example. That CP will incur a cost in migrating that customer from their existing supplier. BT would supply that new customer using WLR+GEA. In contrast, other operators can choose to supply that new customer using either WLR+GEA or MPF+GEA, depending on which option is incrementally more profitable. This suggests that, for these customers, other operators are unlikely to incur materially higher costs than BT (indeed other operators potentially may have lower costs relative to BT).

5.148 Where a CP upgrades an existing customer from standard to superfast broadband, then it can continue to supply voice services using the same technology and thus need not incur any additional costs. As a result, an MPF operator could in principle supply upgrading customers using MPF+GEA rather than WLR+GEA, even if the latter had slightly lower ongoing costs, since converting that customer to WLR+GEA results in a migration charge of £30.83.[346]

5.149 Rental charges make up a much larger proportion of the downstream cost stack than the migration charge, as they are incurred on an ongoing basis in every month during

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[344] [✂].
[345] Our choice of copper access technology affects our decision whether to take certain costs (e.g. co-location) into account – see Section 6.
[346] As of December 2014. See "*MPF Connection charge*" at http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=totid5BwFmkf9vLcBITRyZF9loRxWIbIKK6V7YWmlYAlMnGHsqdC0vzO163bJmh34D91D7M0q8u%2F%0AIlSgtIFAKw%3D%3D. MPF Connection is in a charge control basket called "*MPF New Provides*" and this basket will be provisionally charge controlled at CPI-2.8%. See Table 1.1, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN 30 Volume 2: LLU and WLR charge controls,* 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

a customer's lifetime (as opposed to connection costs which are incurred once).[347] As a result, the differential in rental costs is the more relevant indicator of whether WLR or MPF is more expensive.

5.150 WLR Rental charges have historically been higher than those for MPF Rental. In 2014/15 the annual charge is charge controlled at £91.05 for WLR and £86.11 for MPF as set out in Volume 2 of the 2014 FAMR Statement.[348] However, by 2016/17, the charge for MPF is expected to be above that of WLR because WLR is subject to a charge control of CPI-3% and MPF is subject to a charge control of CPI+0.3%.[349]

5.151 In terms of other costs associated with the technology used to provide copper access, we consider that the available evidence does not clearly indicate that the costs of using MPF are higher.

- In addition to these rental charges, MPF operators incur the cost of installing and maintaining LLU equipment in BT exchanges. These costs are shared between voice and standard broadband services, and depend on factors such as the overall number of customers (both standard and superfast) served using that equipment. Our analysis indicates that such costs make up a relatively small amount of downstream costs (approximately [✂] per cent of the downstream costs of an MPF operator).[350]

- MPF operators typically operate a 'flatter' network architecture with fewer points of interconnection than BT. They are also likely to be using more modern equipment than BT. MPF operators may therefore face lower network costs, although this could be offset by lower volumes.

- If a CP uses MPF then they incur the costs of self-supplying call termination and origination. However an MPF operator retains the termination revenues they receive for terminating calls from other operators. In contrast, when an operator uses WLR they must pay BT for call origination and termination (at regulated prices).

5.152 This suggests that the current total costs of using WLR copper access are likely to be higher than those for MPF copper access, although this may change by 2016/17. By 2016/17 the relative total costs of MPF and WLR may be broadly similar as the difference in rental costs will have significantly reduced.

5.153 Further, as BT does not use MPF to supply its customers. Using an MPF+GEA benchmark is thus likely to complicate BT's VULA margin assessment since BT is likely to be less well informed about the costs incurred by such an operator.

5.154 In conclusion, we consider that it is appropriate to assess the VULA margin on the basis that the adjusted EEO uses WLR+GEA. For the reasons set out above, we consider that such an approach would be effective in achieving our aim and

[347] Analysis for our indicative assessment of the VULA margin in Section 6 indicates that copper access rental costs make up about [✂] per cent of total monthly retail costs (including amortised upfront costs) whereas copper access connection costs account for about [✂] per cent.
[348] Table 1.1, Table 1.2 and Figure 1.1, Ibid.
[349] Table 1.1, Table 1.2 and Figure 1.1, Ibid.Table 1.1, Ibid.
[350] [✂]

therefore, it would be disproportionate to assess the VULA the margin on the basis of an MPF+GEA operator.

Conclusions on approach to VULA margin assessment

5.155 For the reasons set out in this section, we have decided that, in order to set our VULA margin control, it is appropriate to:

- use an adjusted EEO approach;
- assess costs on a LRIC+ basis;
- consider superfast broadband packages marketed at residential (rather than business) customers;
- include the costs and revenues of all elements bundled with superfast packages (including BT Sport);
- include triple-play bundles;
- use the total fibre portfolio as an output increment; and
- consider the costs of an operator that uses WLR technology.

5.156 The SMP condition in set out in Annex 2 codifies the approach set out in the above paragraph.

Section 6

Detailed discussion of treatment of costs and revenues

Introduction

6.1 In Section 5 we considered the approach to assessing the VULA margin that will be codified in the SMP condition. We now consider in detail the treatment of BT's costs and revenues when assessing the VULA margin.

6.2 In particular, this section provides guidance on the approach that we intend to adopt when assessing the VULA margin by reference to the requirement in the SMP condition, including details of how we intend to analyse data on BT's costs and revenues. This guidance is intended to provide further clarity on what is required under the SMP condition. This guidance will also provide transparency to other CPs about our approach.

6.3 We recognise that in order to assess the VULA margin it is necessary to make assumptions about the treatment of costs and revenues. In developing our approach, we are conscious that this regulation is forward-looking in nature and that the market for superfast broadband is expected to grow significantly over this forward-looking period. Given this, we have had to be pragmatic when exercising our judgement on the detailed approach to individual parameters and implementation. In doing this, our overarching aim is to establish clear and understandable guidance that provides clarity and certainty to BT and its competitors about what we believe is an acceptable approach, in light of the broad range of possible positions that could be taken.

6.4 Given our desire to provide certainty and clarity, we have also sought to identify which specific approach we would adopt to the treatment of costs and revenues. If our guidance were to set out a number of possible approaches without picking between them, this would provide limited certainty to stakeholders.

6.5 As set out in Section 4, by setting out these details in guidance (rather than including them in the condition or in a model), we retain appropriate flexibility to adapt to significant changes in circumstances while still providing stakeholders with a significant insight into our approach. Therefore, while the guidance is intended to reflect our current view of the approach we intend to adopt when assessing the VULA margin, we recognise that it may be appropriate to depart from it if there is a material change in circumstances. For example, if there was a sufficiently material change to the way BT sells or bundles its broadband packages, we may need to take this into account in any future assessment.

6.6 While we do not consider that it is appropriate for the details of the guidance to form part of the SMP condition, there are two exceptions to this:

- we will specify in the SMP condition the appropriate ACL that should be used in assessing the VULA margin; and
- we will specify in the SMP condition a floor for each year of the market review for the unit bandwidth costs to be used in assessing the VULA margin.

6.7 We consider that it is important to set out these two parameters in the SMP condition in order to provide BT with certainty, particularly as they are set with reference to other operators' data. We also consider that the values we have specified in the SMP condition are sufficiently reliable and fit for purpose for the period that the regulation will apply.

6.8 In summary, this section:

- sets out guidance on the approach to calculating costs and revenues that we intend to adopt when assessing the VULA margin; and
- explains how we will adjust BT's costs and revenues in order to reflect the position of an adjusted EEO.[351]

6.9 For clarity, our guidance (as distinct from the accompanying reasoning) is set out in text boxes highlighted in grey. A full version of our guidance is set out in Annex 3.

Overview of approach

6.10 In the 2014 VULA Margin Consultation, we said that we would consider the following factors when assessing the VULA margin:

- P = ongoing monthly revenue;
- W = ongoing monthly wholesale costs;[352]
- DC = ongoing monthly retail costs;
- UR = upfront customer acquisition revenues; and
- UC = upfront customer acquisition costs.

6.11 We stated that an appropriate way to conduct the VULA margin assessment is to consider whether the ongoing monthly margin is sufficient to cover the upfront net costs by estimating the NPV of a customer over their expected ACL. In other words, whether the discounted value of the ongoing margin (P – (W + DC)) is sufficient to cover the net upfront costs (UC – UR). If the ongoing margin is not sufficient to cover the net upfront costs then BT has failed to set the VULA charge and retail prices so as to maintain a minimum VULA margin, contrary to the SMP condition.

Responses to 2014 VULA Margin Consultation

6.12 BT said that a static brightline assessment of the VULA margin would constrain BT in an overly rigid way. It argued in favour of an approach that takes into account revenue/cost changes over time.

6.13 In particular, BT said that Ofcom's proposal of defining the minimum margin requirement and the algebraic terms within the SMP remedy appears to allow no account to be taken of how costs and revenues might reasonably be expected to

[351] We have incorporated these adjustments into the SMP condition.
[352] The ongoing monthly wholesale costs includes the wholesale price that BT charges for VULA and the wholesale price that BT charges for WLR.

change over the customer life.[353] In BT's view, our test is therefore simply whether the monthly margin earned at the point of acquisition would be sufficient to recover the acquisition cost if that monthly margin remained flat throughout the customer life. BT said that the VULA margin assessment will essentially be backward looking and that no account would even be taken of known changes to Openreach EoI charges, call termination charges or significant downward trends in the network costs of bandwidth. BT argued that in a competitive and dynamic retail market, BT's competitors will be setting prices on a forward-looking basis.[354] BT also identified other NRAs that either use a discounted cash flow ('DCF') approach or take into account known or expected changes in the margin.[355]

6.14 Finally, in relation to BT Sport costs, BT argued that when it begins broadcasting Champions League matches it will face a "*spike*" in the net costs of sport as the full rights costs for the Champions league would be included in the test from day one, whereas associated revenues will grow over time. BT stated that we should retain the flexibility to consider changing our approach when this occurs.[356]

6.15 TalkTalk disagreed with BT that the VULA margin assessment should assume that margins will rise since revenues will rise and/or costs will fall. TalkTalk said that Ofcom's assumption of constant revenues/costs is sound and, if anything, the likelihood is that margins will fall rather than rise for the following reasons[357]:

- as superfast broadband becomes more competitive (as a result of margin squeeze regulation being introduced), then it should be expected that there will be downward pressure on retail prices (for any given VULA price);
- the rights costs for BT Sport are most likely to rise in the future[358];
- future reductions in wholesale charges (e.g. MPF, GEA, termination rates) are likely to result in reductions in prices/revenues as the additional margin caused

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[353] BT also argued that, by including triple play offers, Ofcom made no allowance for the complexities of costs increases arising from unrelated factors (paragraphs 6.34-6.35, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf).
[354] Paragraphs 8.26-8.29, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[355] Paragraphs 1.14-1.15, *BT Response to the 2014 VULA Margin Consultation – Annex D: Margin squeeze test implementation by other NRAs in the EU,* http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_D_-_Margin_squeeze_tests_by_other_NRAs.pdf.
[356] BT, *Ofcom's approach to VULA margin,* presented at meeting between BT and Ofcom on 9 December 2014. BT considered that this supports separately considering the effect on competition or excluding BT Sport from the VULA margin assessment. We consider these arguments in Sections 4 and 5 respectively.
[357] Paragraph 3.104, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.
[358] TalkTalk referred to Enders Analysis, *Virgin Media calls for PL auction investigation*, 6 October 2014. This report stated that "*if current city expectations are anything to go by, we could see another whopping increase in Round 2 [of the battle between Sky and BT for FAPL rights], this time a 60% increase of £600m*." (Ibid.)

by the lower cost will be competed away (since the cost reduction is enjoyed by most ISPs);

- [✂], implying that the margin in Ofcom's test should be assumed to reduce over time;
- BT has provided no evidence that margins will rise;
- [✂]; and
- an assumption for the growth rate in margins over time would present tractability challenges since it is not clear how this would be sourced.

Ofcom's considerations

Our approach

6.16 The design of our VULA margin assessment will assess whether the ongoing margin for a particular cohort of customers at a particular point in time (i.e. customers acquired over the relevant assessment period) is sufficient to recover net upfront costs over the average lifetime of those customers, assuming that the ongoing margin remains constant over that customer lifetime.

6.17 We consider that this approach is appropriate because we have decided to use BT's historical financial data in order to estimate costs and revenues, and to not rely on forecasts. In particular, in order to monitor compliance with the VULA margin regulation, every six months we will use the most recent annual versions of BT Consumer's management accounts and its financial and management information systems (along with product volume data) to estimate relevant revenues and costs on a per subscriber basis.[359] If we were to use a more forward-looking test such as a DCF approach, a number of assumptions and forecasts would be required, e.g. volumes, cost-volume relationships and asset terminal values.[360]

6.18 Reliance on forecast data in a DCF approach has the following drawbacks:

- the primary source of the forecasts would be BT itself, leading to the risk that unreasonable forecasts would be used in order to skew the test in BT's favour; and
- even if the forecasts relied upon were accurate, a positive NPV result would not tell us whether positive margins are due to legitimate pricing or the exclusion of competitors (e.g. in the absence of competition in the future, BT could increase profitability by raising retail prices).

6.19 However, while our approach to assessing the VULA margin will not rely on forecasts of revenues and costs, it will take into account some known and expected changes to

[359] We estimate the cost of providing superfast broadband to customers acquired in the period under assessment (e.g. the preceding six months), i.e. 'new' customers, based on the average LRIC+ for the total base of BT's superfast broadband customers.
[360] BT also referred to the approach adopted by a number of other NRAs. As explained in Section 4, we do not consider the approaches adopted by other NRAs to be relevant to the appropriate approach to adopt in the UK.

revenues and costs over the ACL. An example of a known change that is taken into account is the monthly subscription prices used, which will be a weighted average price over the ACL that includes the impact of loyalty/retention discounts (see paragraph 6.80). A further example is in relation to the take-up of BT TV. In modelling the revenues and costs of triple-play customers, we account for the fact that a proportion of customers are likely to cease taking BT TV during the ACL (see paragraph 6.103). We consider that it is not appropriate to include changes that are subject to uncertainty (e.g. unit costs) due to the drawbacks of relying on forecast data.

6.20 BT referred to controls on Openreach EoI input charges e.g. WLR charge, Ethernet Backhaul Direct ('EBD') links, which are typically subject to price controls with downward sloping glide-paths. It is generally accepted that, in a competitive market, changes in costs are matched by changes in price as excess profits are competed away. Given that we have introduced the VULA margin control to ensure sustainable competition in superfast broadband, we consider that it is appropriate to assume that the margin would be unaffected by such changes in input costs.[361]

6.21 In relation to the other individual items that BT considers will exhibit downward cost trends, we consider that the overall impact on the VULA margin is unclear once other changes in costs and revenues are taken into account. For example, while unit bandwidth costs may decline, this may be offset by increases in bandwidth usage. As a result the impact on overall bandwidth costs is unclear. Similarly while BT has highlighted examples of changes that (at least in isolation) might tend to reduce the minimum VULA margin (e.g. falling costs), other parameters may change in a way that (in isolation) might tend to increase the minimum VULA margin (e.g. call revenues may fall). This highlights the forecasting challenges discussed in paragraph 6.18, especially given the interrelated nature of some cost/revenue items.

Our treatment of 'day one' issues

6.22 We recognise that there are limitations to our approach of assuming the margin remains constant over time. In particular, BT's submission on the approach to the treatment of BT Sport costs highlights the general issue of how to treat a significant transition in its business model for superfast broadband. We recognise that our approach can lead to 'day one problems'.

6.23 To illustrate, assume that BT adds an extra feature or product to its superfast broadband bundles and that it charges consumers taking this product/feature. On the first day that the feature/product is added, it will result in a number of extra costs for BT. However, on that first day the revenues associated with that extra feature/product may be zero. As a result, were the VULA margin assessment conducted in relation to the first day only, then BT's existing margin may be too low. In contrast, the same margin may be sufficient when a slightly longer assessment period is used, once the revenues associated with that extra feature/product have increased.

6.24 We recognise that, where there is a significant transition in BT's business model for superfast broadband, rigidly applying the approach set out in the rest of our guidance

[361] The argument that it is reasonable to assume that the VULA margin remains stable over the ACL also applies to changes in the cost attributed to BT Sport, e.g. due to changes in the amount BT pays for sports rights.

over a short assessment period can lead to these ‘day one problems’. However, we are also mindful that future price rises may reflect the exclusion of competitors (e.g. in the absence of competition in the future, BT could increase profitability by raising retail prices).

6.25 Accordingly, when conducting an assessment covering a period of less than six months, we would consider whether a significant transition in BT’s business model occurred during that assessment period. If there was evidence that this was the case then we may depart from the guidance set out below in order to avoid ‘day one problems’.

6.26 We think that this approach strikes a balance between the benefits of a static approach and the limitations that can arise in some circumstances.

Guidance
We would use a static approach to assess the VULA margin that would take into account known and expected changes in revenues and costs over the ACL.

When conducting an assessment covering a period of less than six months, we would consider whether a significant transition in BT’s business model occurred during that assessment period. If there was evidence that this was the case then we may depart from the guidance set out below.

Structure of this section

6.27 We first set out our approach in relation to the following overarching issues:

- data sources and approach to weighting the superfast broadband portfolio;
- adjustments to BT’s costs and revenues;
- simplification of the analysis and our approach to FTTP and Plusnet services;
- focus on new consumers;
- bundled services not currently offered by BT (e.g. mobile services); and
- cost of capital.

6.28 We then go on to provide a detailed discussion of revenues, costs and expected ACL:

- ongoing monthly revenues;
- ongoing monthly wholesale costs;
- ongoing monthly retail costs;
- upfront costs;
- upfront revenues; and
- ACL.

6.29 Finally we set out an indicative estimate of the cumulative effects of our proposals.

Data sources and approach to weighting the superfast broadband portfolio

6.30 When assessing BT's compliance with SMP condition 14 during a particular time period, we would seek to use the best available data. Where possible, we would use historical, audited data covering the assessment period. If data for the period in question is not yet available, we would use the most recent data that is available unless that data is not appropriate. Three of the main sources we intend to rely on are as follows.

- **Publicly available data:** this includes Openreach price lists, pricing reports and published Ofcom documents.

- **Annual BT management accounts:** [✂].[362] We would make the assumption that, on average, a superfast broadband customer generates the same amount of costs and revenues as a standard broadband customer. As a result, when we calculate a particular cost or revenue item using the management accounts, we would divide total costs/revenues by the total broadband customer base.

- **Internal BT data:** for some revenue/cost items, we would use more granular data from BT's internal management information systems ([✂][363]).

Responses to 2014 VULA Margin Consultation

6.31 TalkTalk raised the concern that Ofcom's proposed use of a variety of data sources from BT, including its management accounts and the RFS, may lead to inconsistencies – and particularly those in BT's favour – since BT is likely to select (or "*cherry pick*") the sources that best suit its case. TalkTalk argued therefore that Ofcom should use a single consistent source and where this is not possible we should be aware that BT is likely to exploit this situation.[364]

Ofcom's considerations

<u>Data sources</u>

6.32 We have proposed to use a variety of data sources when testing compliance with the VULA margin condition. The purpose of collecting data from such a wide range of sources is to give us a clear understanding of the revenues and costs of providing superfast broadband services. The VULA margin assessment is concerned with profitability at the retail level where there are no regulatory reporting obligations on BT. Therefore, unlike for charge controls on BT's wholesale products (e.g. WLA products, leased lines) where the RFS can be relied upon, it is necessary for us to make best use of the available accounting and operational information that records the relevant revenues and costs.

6.33 We are aware of the risk pointed out by TalkTalk of inconsistencies arising when using multiple sources, and that it is possible that BT could use this to its advantage

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[362] [✂]
[363] [✂]
[364] Paragraph 6.15, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

when submitting compliance data. As a result, we would use historical audited data in the first instance (such as the BT Consumer management accounts) in the assessment itself and would cross-check data from other sources that BT has provided.

6.34 In the following sub-sections, we set out the data sources we consider would be most appropriate for calculating each cost and revenue item and detail the methodology we would apply to build the cost and revenue stacks for the superfast broadband portfolio.

6.35 If there is short-term volatility in revenues or costs (for example, if it were the case that BT makes payments to a supplier intermittently rather than on an ongoing basis), we would consider whether estimates based on the assessment period are consistent with averages based on a longer time period.

Weighting approach

6.36 As discussed in Section 5, we consider that it is appropriate to assess the VULA margin earned on BT's entire portfolio of superfast broadband bundles (the 'fibre portfolio'), which includes dual-play and triple-play BT Consumer Infinity products and Plusnet Fibre products. Accordingly, we would calculate weighted average revenues and costs across individual products within BT's fibre portfolio (e.g. BT Infinity 1, Unlimited BT Infinity 2 with BT TV, Plusnet Fibre etc.). The weights used in the calculation would reflect the volumes of subscribers acquired for each product during the assessment period. If these volume weights appeared to be subject to unusual volatility, we would consider volume weights calculated over a longer time period as part of a sense check.

Guidance

When assessing BT's compliance with SMP condition 14 during a particular time period, we would seek to use the best available data. Where possible, we would use historical, audited data covering the assessment period. If data for the period in question is not yet available, we would use the most recent data that is available unless that data is not appropriate.

In order to assess BT's fibre portfolio, we would calculate weighted average revenues and costs across individual bundles within BT's fibre portfolio. The weights used in the calculation would be the volumes of subscribers acquired on each product during the assessment period.

Adjustments to BT's costs and revenues

6.37 As discussed in Section 5, we consider that an adjusted EEO approach is appropriate. It is therefore necessary to consider what adjustments should be made under this approach.

6.38 In the 2014 VULA Margin Consultation, we applied a framework to identify which costs and revenues should be adjusted. We considered that it would be appropriate to use the following two considerations in order to identify whether a particular item should be adjusted.

- First Consideration – is there evidence that BT's costs/revenues materially differ from those of other operators, and if so, is it likely to be possible for other operators to match BT's costs/revenues?

- Second Consideration – would the adjustment meet our objective by allowing an operator with slightly higher costs than BT (or some other slight commercial drawback relative to BT) to profitably match BT's superfast broadband retail offers?

6.39 On the basis of these criteria, we proposed to make adjustments to BT's ACL and its unit bandwidth costs.

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6.40 TalkTalk argued that the adjusted EEO concept needs to be more clearly defined. TalkTalk said that the outcome of an adjusted EEO test depends on both the starting point (i.e. the EEO) and what adjustments are made to the EEO benchmark, and that neither of these stages was well enough defined by Ofcom. In relation to the starting point (the EEO), TalkTalk said that Ofcom has presumed that the EEO revenues and costs are synonymous with BT's revenues and costs. However, TalkTalk argued that in fact there is a large difference between an EEO's revenues/costs and BT's revenues/cost. It stated that that the EEO should reflect the usage characteristics of the contestable cohort of customers, rather than BT's actual customer base.[365]

6.41 TalkTalk was also concerned that the criteria for deciding on the adjustments to make to BT's costs/revenues were ambiguous. Further, the consequences of a conflict between the First and Second Consideration were unclear.[366] TalkTalk argued that the clearest and best way of defining the adjusted EEO is to define clearly the end-point/outcome (i.e. the type of operator that the adjusted EEO aims to reflect). TalkTalk suggested that the adjusted EEO test should reflect "*whether a scale benchmark competitor could realistically match BT's offers if it were as efficient as BT in controllable aspects*."[367]

6.42 TalkTalk proposed a number of additional adjustments to take into account:

- other differences in usage characteristics, e.g. line rental saver, bandwidth used, PPV movies watched (we discuss these in paragraph 6.51);
- product volume mix (we discuss this in paragraph 6.51);
- economies of scale and scope in relation to overhead costs (we discuss these in paragraphs 6.202 to 6.210); and
- "*free advertising*" benefits to BT Consumer from using Openreach's access infrastructure (we discuss this in paragraphs 6.413 to 6.418).[368]

6.43 Confidential respondent [✂] submitted that the application of the Second Consideration by Ofcom is an error and that the First Consideration alone is sufficient. Specifically, confidential respondent [✂] made the following points in relation to the Second Consideration.

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[365] Paragraphs 3.14-3.22, Ibid.
[366] For example, if the First Consideration points towards making a number of adjustments but the Second Consideration suggests that those adjustment are (collectively) too large.
[367] Paragraphs 3.17-3.22, Ibid.
[368] Paragraph 3.50, Ibid.

- In the light of the substantial evidence that competition in the superfast broadband market segment is currently failing, it is highly unlikely that there are any material advantages held by non-BT operators which would outweigh the need to make an adjustment to BT's costs/revenues once Ofcom has determined that the First Consideration is met.

- The First Consideration already directly addresses Ofcom's concern that if BT has lower costs for a particular item this might simply reflect different commercial strategies by different operators. Having met this first test, there is no need to apply a second filter.

- Failing to make an adjustment when the First Consideration is met risks inhibiting effective competition from, or discouraging further investments in the market by, smaller operators and new entrants.

- Ofcom's indicative assessment in the 2014 VULA Margin Consultation showed that BT would be close to the proposed minimum VULA margin boundary. Given the current state of competition in the superfast broadband market segment, this indicates that the Second Consideration is unnecessary and that Ofcom's current proposal will not achieve Ofcom's regulatory objective, since it will simply result in the continuation of the status quo.[369]

6.44 Confidential respondent [✂] argued that a number of additional adjustments should be made to BT's costs/revenues. The adjustments it proposed and where we consider them are listed below:

- customer acquisition costs (we discuss this in paragraphs 6.413 to 6.418);

- scale advantages, e.g. corporate overheads, router costs (we discuss these in paragraphs 6.202 to 6.210 and 6.427); and

- call revenues (we discuss this in paragraphs 6.82 to 6.96).[370]

6.45 Vodafone argued in favour of adjusting BT's bandwidth costs and out of package call revenues (set out in further detail in paragraphs 6.127 to 6.172 and 6.82 to 6.96). Vodafone also favoured further adjustments, including to consumer usage profiles given there are particularities of BT's customer base (e.g. with respect to out of bundle costs) and taking into account the potential costs of an equally efficient new entrant particularly in the case of quad-play offers. Vodafone said that it may be important to re-assess the weighted average cost of capital ('WACC') for a hypothetical efficient entrant.[371]

6.46 BT submitted that Ofcom should consider the following points when designing an adjusted EEO approach.

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[369] [✂]
[370] [✂].
[371] Page 9, *Vodafone response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.

- Clearly evidence the adjustments Ofcom proposes to make to BT's costs, including why, for competition purposes, any adjustments are deemed appropriate. Such adjustments must have regard to the circumstances currently pertaining and likely to pertain in the foreseeable future. For instance, different operators may target different customer segments and consequently adopt very different pricing and/or proposition structures. These other operators may therefore experience different costs of supply and different revenue streams. Adjustments should not simply be applied wherever Ofcom observes differences between BT and other operators in terms of unit costs and revenues, especially without conducting an analysis of overall costs. Adjustments should be underpinned by identification of a structural problem that may give rise to clearly identified actual or potential foreclosure concerns from all or a critical part of the downstream market.

- Consider whether the overall impact of any adjustments (to reflect any areas where Ofcom believes adjustments are justified) are balanced against an assessment of areas where other operators may enjoy advantages relative to BT. In some cases (for example bandwidth costs and wholesale input costs) BT's competitors may in fact have lower costs; however, no provision is made for these cost advantages in the VULA margin assessment. Conversely, where Ofcom has identified what it deems to be a cost disadvantage (for example, ACL), this is adjusted for. BT considered that this approach is inconsistent with Ofcom's stated objective.[372]

Ofcom's considerations

6.47 We consider that the responses highlight the need for a robust framework for identifying the particular adjustments to BT's costs/revenues that would achieve our regulatory aim. We recognise that there are likely to be differences between each operator's costs and revenues, but that this may reflect their individual commercial strategies and operational choices.[373] It would not be right to adjust for specific items of cost or revenue merely because BT appeared to differ from a rival. Individual differences could simply reflect those different commercial strategies or operational choices.

6.48 We first consider the concerns raised by TalkTalk and confidential respondent [✂] on applying the two considerations.

6.49 There was some uncertainty about the practical implications of the First Consideration. The purpose of the First Consideration is to rule out adjustments to cost/revenue items where (i) the materiality of the item and/or the difference between BT and other operators is so small as to have an insignificant impact on the VULA margin; or (ii), where it is possible for other operators to match BT's costs/revenues within a reasonable timeframe. We therefore consider that it is appropriate to make an adjustment where a difference is material and where that difference is likely to be unmatchable.

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[372] Paragraph 8.9, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[373] For example, TalkTalk submitted information indicating that [✂] (TalkTalk, "*Margin squeeze regulation of SFBB products, discussion with Ofcom*" presented at meeting between TalkTalk and Ofcom on 26 July 2014).

6.50 We consider that an advantage is likely to be unmatchable where there exist factors, including economies of scale, first-mover advantages, or a lack of technical replicability, which may be linked to BT's position as the legacy incumbent. However, in practice it is likely to be difficult to identify the causes of observed differences in operators' costs and revenues. We have thus had to exercise our judgment. As set out in further sub-sections, we have taken into account such factors when considering whether it is appropriate to make adjustments.

- **Unit bandwidth costs – adjustment (floor):** we consider that it is possible that BT could have advantages with respect to unit bandwidth costs that are unmatchable due to BT's larger scale in the supply of non-broadband bandwidth dependent services. However, these advantages may not currently be reflected in BT's regulatory accounts due to the assumptions currently made when they are prepared (see paragraphs 6.127 to 6.172).

- **ACL – adjustment:** we have gathered data showing that all the other major operators using VULA to provide superfast broadband services have consistently had shorter standard broadband ACLs than BT for a number of years. We have therefore considered whether it is possible that BT's longer customer lifetime relative to its competitors provides it with an unmatchable advantage by virtue of its legacy subscriber base (see paragraphs 6.436 to 6.467).

- **Call revenues – no adjustment:** we have considered whether BT serves a group of non-contestable customers who generate particularly high call revenues. While call revenues appear to be [✂], we have considered whether or not BT enjoys a material advantage in retaining customers with higher caller revenue (see paragraphs 6.82 to 6.96).

6.51 We note that TalkTalk (see paragraph 6.42), confidential respondent [✂] (see paragraph 6.44) and Vodafone (see paragraph 6.45) submitted that a number of additional adjustments related to customer mix and usage profiles should be made, e.g. line rental saver take-up, bandwidth used, PPV movies watched and product volume mix. However, we do not consider such additional adjustments are required.

- We consider that such customer base differences are likely to reflect the variety of commercial strategies being deployed by different operators. For example, an operator that sells bundles with numerous product features and add-ons (e.g. cloud storage, premium TV content) may attract customers with usage characteristics and budgetary constraints that differ from customers who take cheaper bundles with fewer product features and no add-ons.

- In general, an assessment would use cost and revenue data relating to superfast broadband subscribers.[374] Such subscribers have made an active decision to upgrade, rather than being entirely disengaged from the broadband market. Accordingly, these customers are generally unlikely to be 'captive' to BT.

6.52 We disagree with BT's argument that an approach that makes adjustments where BT may hold advantages but does not use other operators' costs for areas where other operators may hold advantages (e.g. bandwidth and wholesale input costs) is inconsistent with our objective. Even if in aggregate BT's advantages (e.g. representing £5 lower ongoing costs) were to be completely offset by the advantages

[374] Although there are exceptions, such as the ACL (see below).

a hypothetical other operator holds in other areas (e.g. also representing £5 lower ongoing costs), we consider that BT's advantages should be adjusted for if they are the result of a 'structural problem' of the nature set out in paragraphs 6.49 to 6.50 (i.e. unmatchable).

6.53 On the one hand, in such a scenario a VULA margin set on the basis of BT's costs and revenues with no adjustments would be sufficient to allow the hypothetical other operator to profitably match BT's retail superfast broadband offers. However, we are concerned that such a test would disregard the investments and business decisions the hypothetical other operator has made to develop its advantages and would dampen its incentives to compete by developing such capabilities in the future. As a result, we consider that it is necessary to take into account each and every material unmatchable advantage BT holds in order to avoid neutralising other operators' incentives to engage in the competitive process.

6.54 We note that TalkTalk and confidential respondent [✂] both disagreed with applying the Second Consideration (whether the adjustment would allow an operator with slightly higher costs than BT (or some other slight commercial drawback relative to BT) to profitably match BT's superfast broadband retail offers). In light of these responses, we have concluded that there is no need for the Second Consideration in addition to the First Consideration. We consider that because we will adjust only cost/revenue items that are material and where BT has a likely unmatchable advantage, it is necessary to take each and every adjustment into account in order to achieve our regulatory aim of ensuring that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted which has adverse consequences for end users.

6.55 Moving further away from an operator that is similar to BT would forego the benefits of adopting an adjusted EEO approach (as set out in Section 5) and open up the question of whether to adopt an REO standard in other relation to other aspects of BT's business (e.g. BT Sport).

6.56 We now consider the various other points raised by stakeholders.

- TalkTalk appears to argue that the EEO (even before any adjustments are applied) need not have the same costs and revenues as BT. Insofar as this is TalkTalk's position, we would not agree. In our view, an operator equally efficient to BT can be represented by one which is identical to BT in relation to downstream superfast broadband services. The issue we are considering in this sub-section is what adjustments to make to that EEO's costs and revenues (in line with the adjusted EEO approach set out in Section 5).

- In relation to TalkTalk's view that the adjusted EEO approach should be defined by identifying the end-point/outcome, and in particular the type of operator that the adjusted EEO aims to reflect, Section 3 already sets out our view on the most appropriate way to achieve our objective (namely Option 2). We consider that we have clearly defined the benchmark that we will use (namely an operator that has slightly higher costs than BT or some other slight commercial drawback relative to BT).

- In terms of each of the additional cost/revenue adjustments suggested by TalkTalk, confidential respondent [✂] and Vodafone, we discuss each of these individually in the sub-sections below.

Conclusion

6.57 In summary, in deciding how to implement the adjusted EEO approach, and in particular the adjustments to make to BT's costs/revenues, we have applied the following framework:

- is there evidence that BT's costs/revenues materially differ from those of other operators; and, if so,

- is it likely that other operators could match BT's costs/revenues?

Simplification and our approach to FTTP and Plusnet services

6.58 When carrying out an assessment of the VULA margin, we would simplify our modelling in order to focus on the most material factors. We would focus our analysis on BT Consumer's Infinity FTTC products. BT Consumer's FTTP services (with speeds up to 200Mbit/s and 300Mbit/s) are currently only purchased by a relatively small number of subscribers.[375] Given that our output increment consists of all BT's superfast broadband bundles, in principle bundles provided using FTTP VULA should be taken into account. However, in practice such bundles are likely to have a relatively small [✂] impact. Accordingly, we would not specifically take these into account when carrying out modelling to assess the VULA margin.[376]

6.59 Similarly, we would treat Plusnet products in a simplified way. Plusnet products currently make up a relatively modest proportion of BT's superfast broadband portfolio with about [✂] subscribers acquired in the first three quarters of 2013/14 representing about [✂] per cent of BT's superfast acquisitions during this period.[377] However, BT operates Plusnet as a separate business unit and as a result there [✂]. We would include Plusnet in our assessment by taking the following pragmatic approach:

- where specific costs and revenues regarding Plusnet products can be sourced using publicly available information (e.g. Openreach prices and retail subscription prices) or by using the Plusnet management accounts (e.g. [✂]), we would use these as the basis of our analysis; and

- for other costs and revenues, we would apply our estimate for Infinity products supplied by the rest of BT Consumer to the relevant Plusnet products.

6.60 Adopting the simplifications discussed above, the remainder of this section sets out the approach we would take when assessing the VULA margin to calculating the costs and revenues of BT Consumer Infinity FTTC products only.

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[375] As of 14 February 2014, BT had [✂] subscribers on Infinity 3 and Infinity 4 packages representing [✂] per cent of BT's superfast broadband subscribers (BT response to question 4 of the s.26 notice of 14 February 2014).

[376] However, we might revisit this approach in the event that the number of subscribers to bundles using FTTP VULA as an input was to increase and account for a more substantial share of BT's overall fibre subscribers.

[377] [✂]

Guidance
When carrying out an assessment of the VULA margin, we would simplify our modelling in order to focus on the most material factors. In particular we would:

- not specifically take FTTP bundles into account when carrying out modelling; and
- analyse Plusnet subscribers by using data on the costs and revenues for superfast broadband products supplied by the rest of BT Consumer, except where data on Plusnet's specific costs and revenues can be easily sourced using publicly available information or Plusnet's management accounts.

Focus on new customers

6.61 BT sets different prices for residential superfast broadband subscribers depending on when they took out their subscription.[378] We proposed to assess the VULA margin by reference to the prices charged to new superfast broadband subscribers.

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6.62 BT and confidential respondent [✂] supported Ofcom's proposal to focus on the cohort of new customers.

6.63 BT said that such a focus emphasises the need to ensure that Ofcom's approach is truly forward-looking, and does not take an overly static view of unit costs and revenues. BT added that the focus on the prices charged to new customers also supports a more flexible approach to common cost recovery across broadband offers to support migration from standard to superfast broadband, and allows BT to adopt approaches that are open to its competitors.[379] BT also stated that other NRAs tend to focus on both new and existing subscribers.[380]

6.64 Confidential respondent [✂] said that the focus on new customers does, to a certain extent, address concerns that BT will be able to "*cross-subsidise*" between products within its fibre portfolio. It also argued that a focus on new customers is necessary to prevent BT from cross-subsidising excessively low prices to new customers from higher margins on existing customers.[381]

Ofcom's considerations

6.65 We have considered whether, when assessing the VULA margin, we would take into account:

- the prices paid by BT's entire base of superfast broadband subscribers regardless of when they took out their subscription; or
- the prices BT charges to new superfast broadband subscribers only.

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[378] In January 2014, BT increased the price charged to Infinity subscribers [✂].
[379] Paragraphs 8.32-8.33, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[380] Paragraphs 1.9-1.11, *BT Response to the 2014 VULA Margin Consultation – Annex D: Margin squeeze test implementation by other NRAs in the EU*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_D_-_Margin_squeeze_tests_by_other_NRAs.pdf.
[381] [✂]

6.66 We consider that the use of the prices BT charges to new superfast broadband subscribers only is likely to support our regulatory aim.

6.67 The prices BT offers to new subscribers are the most relevant prices when considering a rival operator's ability to acquire new subscribers and to compete effectively against BT. We also agree with confidential respondent [✂] that using the prices paid by BT superfast broadband subscribers regardless of when they took out their subscription would potentially allow BT to support a low margin on new subscribers by setting a high margin to its existing subscribers. We are concerned that other operators may find it difficult to replicate such a pattern of prices and may thus find it difficult to compete for new superfast broadband subscribers. This is because BT currently has a larger existing base of superfast broadband subscribers than other operators using VULA on its network (see Section 3).[382]

6.68 While the new SMP condition set out in this statement applies to new superfast broadband subscribers, the fair and reasonable terms, conditions and charges VULA obligation will continue to apply to existing subscribers. As such, if we were to observe behaviour in relation to the margin earned from existing BT superfast broadband subscribers which raised concerns, we could consider intervention on the basis of this condition to address such behaviour.

Guidance
When assessing the VULA margin we would consider the prices that BT charges to new superfast broadband subscribers.

Approach to bundled services not currently offered by BT (e.g. mobile services)

6.69 The purpose of this guidance is to give stakeholders some detail on how we intend to analyse data on BT's costs and revenues to provide BT with further clarity on what is required under the SMP condition and transparency to other operators about our approach.

6.70 We have assembled the guidance based on the set of superfast broadband bundles BT currently offers. However, during the market review period it is possible that BT will change its product offerings and introduce new services to include in its superfast broadband bundles. For example, BT Openreach could introduce a new GEA product or BT Consumer might begin including additional TV content or offering bundles that include mobile telephony services ('quad-play' bundles). As set out in Section 5, we would include the costs and revenues of all elements bundled with superfast broadband services when assessing the VULA margin. Hence, even though the approach to services that BT subsequently introduces during the market review period would not be included in this guidance, the relevant costs and revenues would nevertheless be included in VULA margin assessments.

[382] We do not think that it follows that a focus on the price charged to new customers supports a flexible approach to common cost recovery i.e. potentially recovering fewer common costs from these consumers (as argued by BT). Our response to BT's arguments about the level of flexibility when assessing common cost recovery are set out in Section 5. As explained in Section 4, we do not consider the approaches adopted by other NRAs to be relevant to the appropriate approach to adopt in the UK.

6.71 We note that a number of stakeholders raised the possibility that BT will begin bundling mobile services during the review period. It is not possible for us to provide detailed guidance on the treatment of mobile services before they have been launched – even if it was certain that BT will begin to offer mobile services, the assessment approach would likely depend on how BT configures its mobile network and how it sets charges to end users. However, to provide a general indication of our likely approach, we provisionally set out the elements we would likely consider when assessing the costs and revenues of mobile services.

Revenues

6.72 We would seek to take into account all the revenues earned from superfast broadband subscribers. Our revenue assessment would likely include the following elements:

- **ongoing package revenues:** any incremental revenue from monthly charges (above the monthly charges payable by customers who take superfast bundles without mobile included);
- **mobile service set-up fees:** such as activation charges and handset charges;
- **out of package revenues:** for services in excess of the included allowance, e.g. call minutes/types not in the allowance, SMS text, MMS text, data download and upload, roaming; and
- **incoming termination revenues:** revenue received by BT for terminating calls to mobile phones on its network.

Costs

6.73 We would seek to take into account all the costs associated with supplying mobile services to superfast broadband subscribers (assessed on a LRIC+ basis). Our cost assessment would likely include the following elements:

- **outbound termination costs:** payments made by BT to terminate calls made by its mobile customers to customers on the networks of other operators;
- **payments to mobile virtual network operator (‘MVNO’) partners (i.e. EE):** for call origination for outbound calls from BT’s mobile customers, call termination for inbound calls to BT’s mobile customers, and data and SMS usage;
- **mobile overhead costs:** e.g. technical support, number portability charges, IT systems;
- **mobile subscriber acquisition costs:** e.g. marketing, sales agent fees, handset costs (not covered by mobile service set-up fees); and
- **mobile network set-up costs:** an allocation of the investments required to set-up and operate a mobile network, e.g. spectrum costs, base-station roll-out/leasing from other operators, and femtocell equipment roll-out.

6.74 In relation to mobile network set-up costs, we would need to decide how these costs should be recovered over time and how they should be allocated across different customers in the VULA margin assessment. Clearly, we would need to consider the details of the service in question in order to decide on an appropriate approach. However, it is likely we would assume that 'lumpy' one-off costs associated with the launch and initial promotion of the service are recovered over a reasonable economic lifetime (rather than recovered immediately).

Guidance
The VULA margin assessment would include the costs and revenues of any new services BT begins to bundle with superfast broadband during the market review period (e.g. mobile services).

Cost of capital

6.75 Our analysis of the payback period requires an assumption on the cost of capital, which is used to discount future margins. We proposed to apply the prevailing pre-tax nominal WACC for the 'rest of BT'.[383]

Responses to 2014 VULA Margin Consultation

6.76 Vodafone suggested that Ofcom should consider an adjustment to reflect the WACC for a hypothetical efficient entrant.[384]

Ofcom's considerations

6.77 We acknowledge the level of the WACC will vary between operators, depending on a multitude of factors that include business structure, level of gearing and the business risk of its assets. However, neither Vodafone nor any other stakeholder has submitted any evidence that shows that BT has an advantage in relation to the WACC that major competitors like Sky or TalkTalk cannot match.[385]

6.78 We would therefore apply the prevailing pre-tax nominal WACC relevant to the BT Consumer business at the time of the assessment. This is currently the pre-tax nominal 'rest of BT' WACC, which was most recently estimated at 10.8 per cent.[386]

Guidance
We would use the prevailing pre-tax nominal WACC relevant to the BT Consumer business at the time of the assessment in order to project forward BT's ongoing costs and revenues.

Ongoing monthly revenues

6.79 Ongoing revenues cover the payments BT collects from superfast broadband subscribers each month. These payments are monthly subscription, line rental, out of

[383] There are three separate estimates of WACC for BT: one for Openreach, one for BT Group and one for the rest of BT.
[384] Page 9, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.
[385] Insofar as Vodafone's position is that we should instead reflect an entirely new entrant with significantly higher costs, we do not agree for the reasons given in Section 3 for adopting Option 2 rather than Option 3.
[386] Paragraph 7.9, Ofcom, *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies,* 26 June 2014, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/.

package call revenues, call termination revenues and out of package data usage. Below, we set out guidance on how we would calculate each of these items.

Monthly subscription revenues

6.80 Monthly subscription revenues are the payments subscribers make each month to BT for the supply of a broadband service.

Guidance
Headline monthly subscription prices for the product tiers in the superfast broadband portfolio would be the prices applicable during the assessment period. We would make an adjustment to the headline monthly subscription prices to take into account loyalty/retention discounts which BT offers to certain customers. The level of the adjustments would be estimated by calculating the average percentage discount given on each product tier over the assessment period.

Line rental revenues

6.81 As explained in Section 5, when fibre broadband services are supplied using VULA we will assume that the voice service is supplied using WLR. It is common practice for consumers to pay a charge for line rental. Currently BT customers can pay for line rental either on a monthly basis or as a lump sum for the forthcoming year by taking the annual line rental saver option.[387]

Guidance
Line rental prices would be the line rental prices applicable during the assessment period. To take into account the different prices of standard line rental and line rental saver, the average line rental price would be estimated on the basis of the volumes of BT superfast broadband customers using each option over the assessment period.

Call revenues

6.82 BT sells all of its superfast broadband services in bundles that include voice services. Call revenues consist of both ‘package’ fees and ‘out of package’ (‘OOP’) call revenues. Package fees are earned when customers pay extra for a particular call package (e.g. unlimited calls to certain telephone numbers at all times of the week) or certain call bolt-ons (e.g. paying a monthly fee to reduce the cost of international or mobile calls). OOP revenues are earned when customers make fixed landline calls outside of those included in their call package. As of January 2015, all of BT’s superfast broadband offers, bar Infinity 1 (which did not include any bundled call packages), included BT’s Weekend Calls[388] call package at no extra charge.

6.83 In the addendum to the 2014 VULA Margin Consultation, we noted that estimates submitted by one stakeholder suggested that it may earn materially lower OOP revenues on average than BT. We proposed not to make an adjustment to OOP call revenues on the basis that there could be a wide range of reasons why BT earns

[387] As at December 2014, the standard monthly line rental price (excluding VAT) was £14.16, working out at £169.90 over a year, while line rental saver was priced at £133.20 (excluding VAT) for the year, which is equivalent to £11.10/month.
[388] Calls made on the weekend of up to an hour to 01, 02, 03, 0845 and 0870 numbers, excluding the Channel Islands, indirect access numbers and dial-up internet access.

higher OOP call revenues than other operators and that there was no clear evidence that other operators cannot compete for customers that generate higher revenues.

Responses to 2014 VULA Margin consultation

6.84 TalkTalk contended that BT has, as a result of its incumbency, a base of legacy customers who make a very high volume of calls and do not tend to switch provider. It argued that rivals are unable to attract these customers (i.e. they are effectively non-contestable) and it is therefore wrong to include these customers when considering the VULA margin that an efficient rival requires.[389] In particular, TalkTalk argued that the following features mean there is a significant difference between BT's call revenues and those its competitors could realistically achieve.

- TalkTalk argued that BT has a customer base which other operators will not be able to attract, even if they offer prices below BT's. This is because switching levels are low due to minimum contract periods and switching costs. Further, BT is a long-term incumbent with a strong brand and a base of customers who have never switched provider.[390]

- TalkTalk argued that customers who have never switched provider have identifiable differences in behaviour/usage from customers who have switched, and in particular yield higher average call usage/revenue (and therefore margin) for a given price level.[391]

6.85 TalkTalk argued that, as a result, any higher average call revenues accruing to BT may not be a result of BT being more efficient than its competitors, but rather due to its legacy customer base. TalkTalk added that, in such a situation, an operator will be unable to match BT's call revenues (and therefore margins) if it prices at the same levels as BT. TalkTalk argued that we should therefore adjust BT's call revenues to reflect the revenues that an operator who did not benefit from BT's incumbent status would be able to obtain.[392]

6.86 TalkTalk compared its monthly call revenues for its Simply Broadband[393] customers (approximately [✂] between February 2014 and July 2014) with its estimate of BT's OOP call revenues (between [✂] and [✂]) and concluded that the only plausible explanation for BT's higher out-of-package call revenues must be that BT customers have significantly higher usage. TalkTalk argued that if this is the case, it demonstrates that customers who have never switched provider have identifiable differences in behaviour/usage from those who have switched.[394]

6.87 In order to make the adjustment, TalkTalk stated that Ofcom could specify the level of usage that we would likely assume in a VULA margin assessment (in minutes per month by call type). However, it noted that it is likely to be difficult to forecast usage over the review period, which raises the risk of regulatory error. As an alternative, therefore, TalkTalk suggested that we could include call revenues for superfast

[389] Paragraph 1.17, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[390] Paragraph 3.29, Ibid.
[391] Paragraph 3.29, Ibid.
[392] Paragraphs 3.29-3.34, Ibid.
[393] This superfast broadband package does not include any 'in-package' call minutes.
[394] Paragraph 3.41, Ibid.

broadband customers who have been with BT for eight years or less only.[395] It argued that calculating call revenues in this way would remove the impact of inert legacy customers who are not accessible to other providers and would focus on customers which could be attracted by different operators (i.e. would be 'contestable'). TalkTalk added that such an approach should not lead to any uncertainty for BT since it has the data required to implement this methodology.[396]

6.88 BT submitted superfast broadband churn and call revenue data which it argued showed the following.

- [✂] had been BT customers for longer than 8 years [✂]. It is therefore misleading to argue that all customers who have been with BT longer than 8 years are "non-contestable".[397]

- Average call revenues [✂] were [✂] those of the alleged cohort of 'contestable' customers (i.e. those that have been with BT less than 8 years) that TalkTalk argued could be used to implement an adjustment ([✂]), with [✂]. As such, it is not correct that customers with the highest call revenues are non-contestable.[398]

6.89 Confidential respondent [✂] stated [✂]. Confidential respondent [✂] stated that, to the extent that BT does have materially higher average call revenues per customer, this would most likely reflect its legacy customer base of fixed line customers, many of whom have never switched broadband provider.[399]

6.90 Vodafone argued that it is important to adjust call revenues under the adjusted EEO approach if BT's competitors have a far lower revenue stream for this cost item.[400]

Ofcom's considerations

6.91 In determining how we implement the adjusted EEO approach, we have considered whether BT's call revenues should be adjusted by reference to the framework set out in paragraph 6.57.

6.92 We recognise TalkTalk's arguments that there may be a material difference in the call revenues between BT and other operators. In particular, we note its argument that BT, as the legacy incumbent, may have a base of subscribers who have never switched and who may be more likely to make calls. Indeed, we observe that BT's call revenues [✂]. We also note that BT's [✂] call revenue [✂].

6.93 However, it is not clear to us that BT's higher call revenue is necessarily a result of its incumbency position, nor that it is an advantage that other operators could not match. In particular, BT may attract comparatively more customers who have a higher

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[395] Eight years is the period of time for which TalkTalk considers competition has been active in the broadband market. TalkTalk contended that customers who have been with BT for more than eight years are likely only ever to have taken broadband from BT, and will likely be completely disengaged from the market (paragraphs 1.18 and 3.56, Ibid).
[396] Paragraph 3.48, Ibid.
[397] Page 2, BT follow up of 7 November 2014 to the s.135 notice of 10 October 2014.
[398] BT response to questions 1-4 of the s.135 notice of 10 October 2014.
[399] [✂]
[400] Page 9, *Vodafone response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.

propensity to purchase call packages or make OOP calls. [✂][401][✂]. [✂]. [✂] suggests that at least part of the differences in call revenues could reflect operators' different positioning in the market, and in particular that BT may have positioned itself to win customers who tend to make more calls/generate higher call revenue.

6.94 In addition, we consider that if other operators do struggle to compete for a subset of BT's customers that account for high call revenues (as argued by TalkTalk and confidential respondent [✂]), we might expect to observe materially lower call revenues from customers that did switch away from BT than its average. However, data from BT shows that the average call revenue in 2012/13 from superfast broadband customers who subsequently churned away from BT in 2013/14 ([✂]) was relatively close to the overall average call revenue for superfast broadband subscribers in 2012/13 ([✂]) – i.e. a difference of [✂]. In other words, the superfast broadband subscribers who left BT (presumably for another operator) account for a similar amount of call revenues to BT's superfast broadband base as a whole.[402]

6.95 In light of this, we do not consider that there is sufficient evidence to conclude that BT's higher call revenues stem from a group of customers who are not contestable (as argued by TalkTalk).[403] As a result, we remain of the view that there is not a reasonable case to suggest that the differences in call revenues between BT and other CPs are particularly difficult for other operators to match. We thus consider that it is not appropriate to make an adjustment to call revenues and so continue with the approach of using the call revenues for the entire base of BT Infinity customers.

6.96 We note that the use of total base revenues requires us to use total base costs (which are likely to be higher than the costs for the more recent cohort). However, we consider that this has practicality advantages for compliance monitoring for BT (and Ofcom) when the VULA margin control is in force.

Guidance
The call revenues earned from a superfast broadband customer would be sourced from BT's database[404] and would be based on the average revenues earned from the entire base of BT's superfast broadband customers over the assessment period. This would include revenues earned from package fees and OOP calls.

Out of package data usage revenues

6.97 Revenues from OOP data usage are earned when consumers take a superfast broadband product with a monthly data usage cap (e.g. 20GB for Infinity 1 in January

[401] Note this average only reflects the period June 2013 to March 2014.
[402] In contrast, TalkTalk's and confidential respondent [✂] argument that other operators struggle to compete for a subset of BT's customers that account for high call revenues would imply that the call revenues from customers that did switch away from BT should be materially lower than BT's average call revenues.
[403] We note TalkTalk also argued that switching costs and minimum contractual periods will lead BT to have a customer base which is not contestable by other CPs, giving it an advantage over its rivals. However, we consider that these two elements are relevant for all subscribers and all CPs competing for subscribers, and therefore it is not clear that this would give BT a material advantage over its rivals which they are unable to match.
[404] BT currently operates a database, known as [✂], which collects the calling records of each of its customers' accounts and includes information on the pence per minute call charges and costs applicable in a given month (by call type, time of day and package) (BT response to question 23 of the s.26 notice of 20 August 2013).

2015) and exceed their cap. In January 2015, BT charged £4.42 (excluding VAT) per incremental 5GB of data used in excess of the cap.

Guidance
The OOP data usage revenues earned from a superfast broadband customer would be sourced from BT's system[405] and would use the average OOP data usage earned from superfast broadband customers over the assessment period.

Advertising revenues

6.98 Advertising revenue is generated by a variety of means (e.g. selling inventory on the portals used by customers and premium search engine results). [✂].[406]

Guidance
We would estimate the amount of advertising revenue earned from a superfast broadband customer by taking the amount recorded in the most recent annual Broadband management accounts and dividing by the average broadband customer base over the period the accounts cover and converting to a monthly figure.

TV revenues

6.99 As discussed in Section 5, we consider that it is appropriate to take triple-play bundles into account when assessing the VULA margin. It is thus appropriate to include BT TV in our overall assessment by considering the revenues earned (and costs incurred, which are covered in paragraphs 6.230 to 6.233 and 6.434) in addition to those earned for dual-play Infinity packages (fibre broadband and voice).

6.100 Consistent with our approach to weighting the fibre portfolio in relation to the products taken as described in paragraph 6.36 (e.g. Infinity 1, Infinity 2, etc.), the proportion of customers taking BT TV assumed in the VULA margin assessment would be based on the volumes of triple-play subscribers acquired during the assessment period. For example, if during the assessment period BT acquired 50 dual-play and 50 triple-play customers, the weighting of triple-play customers in the fibre portfolio would be 50 per cent.

Subscription revenues

6.101 TV subscription revenues are the additional monthly fees triple-play BT subscribers pay to receive BT TV.

Guidance
The headline monthly subscription prices for BT TV would be the prices applicable during the assessment period.

On-demand revenues

6.102 On-demand revenues are earned when BT TV customers purchase an on-demand TV programme or film.

[405] Currently known as [✂].
[406] [✂]

Guidance
We would estimate on-demand revenues by taking the total on-demand revenues reported in the most recent annual BT TV management accounts and dividing by the average number of TV subscriptions in the period covered by the accounts and converting to a monthly figure.

6.103 As explained in paragraphs 6.436 to 6.467, we propose assuming an ACL of 5 years. During this period, some triple-play superfast broadband customers are likely to cease taking BT TV (i.e. revert to dual-play). We would adjust ongoing TV revenues to take this into account. In its internal governance modelling [✂].[407]

Guidance
We would adjust ongoing TV revenues downwards to account for those triple-play superfast broadband customers who cease taking BT TV before the 5-year superfast broadband ACL has concluded. We would reduce ongoing TV revenues by [✂] per cent after the first [✂] months of the ACL (i.e. assume that [✂] per cent of triple-play customers continue to receive BT TV for the remaining [✂] months of the ACL). We would revisit this figure in the event that more accurate evidence was available.

Ongoing monthly wholesale costs

Wholesale GEA and WLR charges

6.104 BT Consumer incurs two wholesale charges, payable to Openreach, when providing a customer with a superfast broadband product: GEA and WLR. Openreach offers various GEA products which differ by download and upload speeds available.[408] Should Openreach offer volume discounts on the price of GEA and WLR we would take these into account.

Guidance
When assessing the VULA margin we would take the wholesale charges applicable during the assessment period (including volume discounts) as published on the Openreach website.

Ongoing monthly retail costs

Call costs

6.105 As set out in paragraph 6.82, customers can make calls which are either included in-package or are out of package.[409] Call costs cover the costs BT incurs as a result of customers making and receiving these calls, over and above the WLR charge (which is discussed in paragraph 6.104). These costs include the following.

- **Product Unit Costs (‘PUCs’):** these are charges associated with the conveyance of calls across the BT network ([✂]).

[407] BT response to question 3 of the s.26 notice of 1 October 2013.
[408] As at December 2014, Openreach offered the following FTTC products: GEA up to 40Mbit/s downstream and up to 2Mbit/s upstream; GEA up to 40Mbit/s downstream and up to 10Mbit/s upstream; and GEA up to 80Mbit/s downstream and up to 10Mbit/s upstream.
[409] As set out in paragraph 6.82, this includes both the call packages that are bundled with superfast broadband offers (e.g. weekend calls) and the additional call packages customers can purchase.

- **Payments to Other Licensed Operators ('POLOs'):** these are call termination payments to other licensed operators.

- **Uncostable Revenues:** these refer to call types that are not costed within BT's database[410] (such as 0844/0871, premium rate, and directory enquiries calls). BT has previously assumed that the costs of these call types equal revenues when calculating call costs for superfast broadband subscribers.[411]

<u>Responses to 2014 VULA Margin consultation</u>

6.106 TalkTalk argued that it is not correct that where voice calls from superfast broadband customers are terminated on BT's own network, then no termination costs are included in Ofcom's margin test (either as a cost incurred by BT or a charge paid). TalkTalk said that if the call terminates on BT's network, there will be an incremental cost incurred by BT to provide this service and this cost must be included (by applying the standard BT fixed termination charge, since this is set at LRIC).[412]

<u>Ofcom's considerations</u>

6.107 We disagree with TalkTalk that the cost of the termination of calls on BT's own network should be included in the test.

6.108 As set out in Section 5, we are assuming that, for the purposes of the VULA margin assessment, the copper access input being used is WLR. As a result, we include the costs that result from calls the EEO's customers make to customers of Virgin and LLU operators – this is included in the cost stack under PUCs and POLOs. BT has confirmed that non-BT WLR operators do not incur a termination cost or receive termination revenues when their customers receive calls from Virgin or LLU operators (the termination costs and revenues are retained by BT Wholesale). Similarly, in relation to calls made by non-BT WLR operators' customers to BT Consumer customers and vice-versa, BT has confirmed that no termination costs are incurred or termination revenues are received.[413]

6.109 In addition, as set out in Section 5, our decision to consider the position of an operator that uses WLR means that we would not take into account costs associated with LLU-related equipment such as Multiple Service Access Node ('MSAN'), ports, tie cable, a test head, space/power, and voice servers.

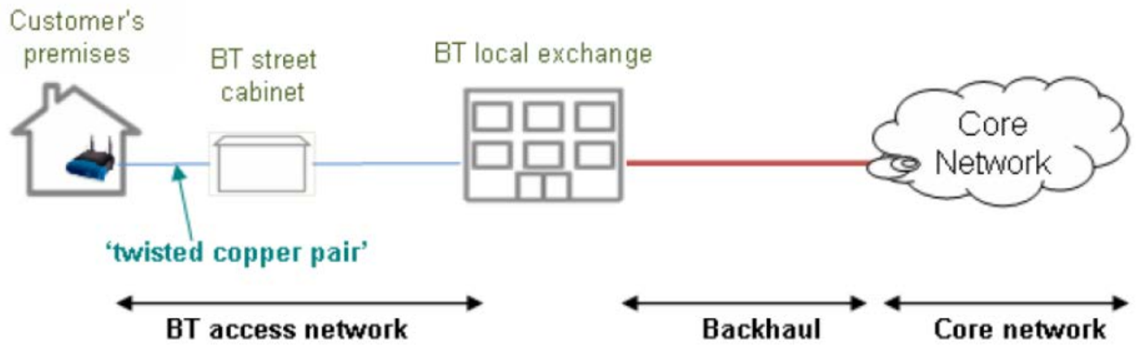
Guidance
The call costs of serving a superfast broadband customer would be sourced from BT's database[414] and would be based on the average calls made by superfast broadband customers over the assessment period. This would cover both in-package and OOP calls and would include PUC costs and POLOs, while the call costs will be assumed to be equal to the revenues for call types for which costs are not available in BT's database (e.g. 0844, 0870, premium rate and directory enquiry calls).

[410] See footnote to paragraph 6.96.
[411] BT response to question 6 of the s.26 notice of 3 June 2013.
[412] Paragraph 6.10, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[413] BT response to question 2 of the s.135 notice of 7 October 2014.
[414] See footnote to paragraph 6.96.

Network costs

6.110 Network costs relate to the cost of providing the necessary bandwidth to a superfast broadband customer. Figure 6.1 shows the part of the network that these costs cover. The access network connects the customer's premises to the BT local exchange. This access is covered by the wholesale costs discussed in paragraph 6.104 (i.e. WLR and GEA). The network costs discussed in this sub-section refer to the backhaul and core network. These represent the connection between the local exchange and the Internet.

Figure 6.1 – Illustration of network



6.111 For BT, the backhaul and core network costs are incurred by BT Wholesale rather than BT Consumer. Due to the structure of BT Group, BT Consumer purchases WBA products (for example Wholesale Broadband Connect ('WBC') and Wholesale Broadband Managed Connect ('WBMC')) from BT Wholesale in order to provide broadband services. BT is not dominant in the provision of wholesale broadband access in the areas where the majority of superfast broadband connections are available.[415] We therefore estimate the network costs incurred by BT Wholesale (rather than using the prices it charges for WBA products).

Guidance
We would estimate network costs using the following approach:

Network costs = Unit bandwidth cost x Average capacity available to each end user

[415] Paragraph 4.91,Ofcom, *Review of the wholesale broadband access markets: Statement on market definition, market power determinations and remedies*, 3 December 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/wba/statement/wbastatement.pdf; and paragraph 5.98 (referring to Market B), Ofcom *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies, 26 June 2014*, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/.

6.112 The discussion of unit bandwidth costs is structured as follows:

- BT's unit bandwidth costs;
- further analysis of BT's unit bandwidth cost and need for a cost floor;
- the level of the bandwidth cost floor; and
- our conclusions and guidance.

6.113 We then discuss the average capacity available to each user.

BT's unit bandwidth costs

6.114 The unit bandwidth cost is the cost of supplying 1Mbit/s of bandwidth to a customer. Broadly speaking, bandwidth costs can be separated out into backhaul and core, as shown in Figure 6.1. The former will include the cost of backhaul links (leased lines) between local exchanges and from local exchanges to other aggregation points in BT's network. The latter will include all costs that relate to the core network, including the cost of routing and switching at Metro and Core nodes, the Broadband Remote Access Server ('BRAS') which provides management of the end-user's internet sessions, and links between Core nodes and the Internet. In addition, Ethernet-based Multiple Services Interconnect Links ('MSILs') or Cablelink Interconnect links are required to serve as transmission bearers between aggregation points and BT's core network.

6.115 In the 2014 VULA Margin Consultation, we proposed that BT's unit bandwidth cost of supplying superfast broadband services would be estimated based on the WBC Bandwidth unit FAC in Market 3 (under the old designations)[416] or Market B (under the new designations)[417] according to the regulatory financial system used to prepare the most recent annual RFS at the time of the assessment. For the core element of these costs, we considered that the Market 3/Market B WBA input costs would be appropriate for estimating the bandwidth cost of superfast broadband services. This is because the majority of fibre-enabled exchanges are located in Market 3/Market B. For the backhaul element, we considered that the Market 3/Market B EoI input costs would be appropriate for estimating the bandwidth cost of superfast broadband services, as we observed little variation in unit backhaul costs across different geographic markets in 2012/13.

[416] Market 3 consists of: (i) exchanges where four or more principal operators ('POs') are present or forecast; and (ii) exchanges where three POs are present or forecast but where BT's share is less than 50 per cent. POs are an operator capable of providing a material constraint in the market. (Paragraph 1.19, Ofcom, *Review of the wholesale broadband access markets: Statement on market definition, market power determinations and remedies*, 3 December 2010, http://stakeholders.ofcom.org.uk/binaries/consultations/wba/statement/wbastatement.pdf.)

[417] In the 2014 WBA Statement, we decided to change the market designations from Markets 1-3 to Markets A and B. In Market A there are no more than two POs present or forecast to be present. In Market B there are three or more POs present or forecast to be present. (Paragraph 1.23, Ofcom, *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies, 26 June 2014*, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/.)

Responses to 2014 VULA Margin Consultation

6.116 BT said that Ofcom's proposal to use BT's RFS costs for WBC bandwidth in Market 3 to assess the unit cost of bandwidth for providing superfast broadband services requires adjustments. This is because the RFS data actually relates to standard broadband services. In particular, standard broadband services use Ethernet Access Direct ('EAD') links to carry traffic originating on remote MSANs (i.e. not collocated with Ethernet switches). By contrast, superfast broadband nodes are all collocated at Ethernet Switch nodes, and they do not therefore need to use EAD links to reach those nodes. Hence, in the regulatory accounting system, the cost of EAD links required to provide bandwidth services is only allocated on the basis of standard broadband WBA traffic and not superfast broadband traffic. For 2013/14, the removal of the costs of EAD EoI charges from the fibre cost results in a reduction of approximately [✂] per Mb per month. In addition, fibre nodes have higher traffic levels and better network economics (than copper nodes). Therefore the unit costs of EBD will be lower for superfast broadband than for standard broadband.[418]

6.117 BT said that, contrary to Ofcom's view (at paragraph 6.60 of the 2014 VULA Margin Consultation) that MSILs are required to serve as transmission bearers between aggregation points and BT's core network, BT uses a mixture of MSILs at some aggregation points and Cable Links at others. Furthermore, MSIL and Cable Link costs are not included in the Market 3 WBC Bandwidth service since they are not part of a WBC service. These costs therefore need to be assessed based on measuring the volumes of MSILs/Cable Links being used to support broadband traffic.[419]

6.118 BT also argued that the test should reflect that BT and all its competitors have constructed networks to meet the projected growing demand for bandwidth and unit costs will fall as these are utilised. It said that Ofcom should at least ensure that any guidance notes this point and allows for flexibility in the approach to be adopted.[420]

6.119 Lastly, BT said that to preserve consistency, Ofcom ought to use both costs and average end-user usage levels from the same period, whether adopting historic or forward-looking information. BT suggested that RFS data (which is always historic and not published until three months after the year in question has finished) could either be used to derive end-user bandwidth costs by utilising usage for that historic year or, if up to date usage is to be used, then the anticipated rate of ongoing cost reductions would need to be factored in.[421]

Ofcom's considerations

6.120 We have considered BT's submission that the WBC bandwidth costs in Market 3 need to be adjusted for the purposes of the VULA margin assessment.

6.121 In relation to backhaul costs, we acknowledge that costs are lower for superfast broadband services as (unlike standard broadband nodes) superfast broadband nodes are all co-located with Ethernet switches and therefore do not need to use

[418] Paragraphs 8.73-8.76, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[419] Paragraphs 8.81-8.83, Ibid.
[420] Paragraph 8.80, Ibid.
[421] Paragraph 8.84, Ibid.

EAD links. We have gathered further information from BT to better understand the differences between the backhaul used to support standard and superfast broadband services. BT explained that, in general terms, the footprint of the superfast broadband service broadly aligns with the footprint of Openreach's EBD platform, whereas the footprint of the standard broadband service extends well beyond the footprint of the EBD platform. The key differences between superfast broadband and standard broadband therefore reflect where the access services are handed over in relation to the Openreach backhaul platforms. BT confirmed that GEA services are all handed over from Openreach at Ethernet Switch sites and that EBD is used to carry traffic from Ethernet Switch sites to Metro nodes.[422]

6.122 As a consequence, we consider that the Market 3 WBC bandwidth cost given in the RFS, which relates to standard broadband services, should be adjusted downwards to reflect the lower backhaul costs of superfast broadband services. We would calculate the adjustment to backhaul costs on the basis of data from BT's regulatory financial reporting system for Market 3/Market B. Removing the EAD EoI charge would reduce the 2013/14 WBC bandwidth cost in Market 3 by [✂].[423] We note that backhaul is provided using Openreach products that are subject to EoI obligations. We would expect total EBD EoI charges to be calculated by multiplying the prices of the relevant EBD products by the volume of links used to support broadband services. Unit bandwidth EoI charges would then be calculated by dividing by total relevant bandwidth volumes.

6.123 In relation to the cost of transmission bearers, we accept that BT uses MSIL links at some aggregation points and Cable Links at others to link aggregation points and BT's core network. We also note that MSIL and Cable Link costs are not part of the WBC Bandwidth service and therefore need to be taken into account as a separate item in the assessment. We have estimated that the inclusion of transmission bearer costs would increase the 2013/14 unit bandwidth cost by approximately [✂]. As with backhaul costs, transmission bearer costs would be calculated by multiplying the prices charged by BT Wholesale (for MSILs) and Openreach (for Cable Links) by the total number of links used to support broadband traffic.

6.124 As for BT's other points, we recognise that unit bandwidth costs are likely to decrease over the ACL. This trend would be principally driven by economies of scale in the core network resulting from the bandwidth being used by residential broadband end users. As set out in paragraph 6.111, the network costs included in the VULA margin assessment will be calculated by multiplying the unit bandwidth cost by the average capacity available for each end user (i.e. bandwidth usage per superfast broadband customer). As a result, the impact on the VULA margin of the trend in network costs will depend on the relative magnitudes of the changes in unit costs and the usage per superfast broadband customer.

6.125 It is not clear that there will be large changes in network costs over the coming years.

- We have calculated that network costs have [✂] by approximately [✂] per cent between 2012/13 and 2013/14 based on BT's Market 3 WBC Bandwidth unit costs[424] and its actual average capacity available for each end user.[425]

[422] BT response to question 4 of the s.135 of 10 September 2014.
[423] BT response to question 3 of the s.135 of 10 September 2014.
[424] BT response to questions 1 and 3 of the s.135 of 10 September 2014.

- According to the regulatory reporting system underlying BT's RFS, the Market 3 WBC Bandwidth (WBA input) unit costs (i.e. not including EoI charges) [✂] from [✂] in 2011/12 to [✂] in 2012/13.[426] Taking into account the change in actual average capacity available to each end user between 2011/12 and 2012/13[427], this indicates there was a year-on-year [✂] in network costs.

- Similarly, [✂][428] [✂][429] [✂].

6.126 Hence we would use historical unit cost data and average end-user usage levels that cover the same period. We consider that the use of consistent time periods for costs and usage will take into account potential increases or decreases in network costs that occur over the market review period. Since the unit cost data will be based on the latest available RFS data, it will not become available until at least 3 months after the year in question has finished. We will take this into account when selecting the relevant time period to use for average capacity available to each superfast broadband user.[430]

Further analysis of BT's unit bandwidth costs and use of a cost floor

6.127 In order to decide whether it would be appropriate to make adjustments to BT's costs, we have considered whether where there is a reasonable case that BT has a material advantage in relation to unit bandwidth costs that is particularly difficult for other operators to match.

6.128 In the 2014 VULA Margin Consultation, we found that in 2011/12 and 2012/13 both Sky and TalkTalk had lower unit bandwidth costs than BT and concluded that an adjustment at the present time would not be warranted. However, we noted that BT has the ability to review the allocation of common costs to WBC Bandwidth in the RFS (and we considered that it was likely to do so), which might lead to considerably lower reported unit bandwidth costs in the future. We considered the possibility that any cost advantages BT may hold in relation to bandwidth are unmatchable by other operators as they could be driven by large economies of scale and scope in the core network. Accordingly, we proposed safeguarding against the possibility that BT's estimated unit bandwidth costs will become materially lower than those of other operators by specifying a floor for these costs in the SMP condition, and to predetermine the level of that floor for the whole of the market review period.

Responses to 2014 VULA Margin Consultation

6.129 A number of stakeholders expressed concern with BT's ability to change the cost allocations to WBC bandwidth in the RFS as a means of gaming the VULA margin regulation.

6.130 Sky said that while BT should be allowed to change its approach to allocating common costs if there is a good reason for adopting a different approach, permitting

[425] BT response to question 5 of the s.135 notice of 10 November 2014.
[426] BT response to questions 1-4 of the s.26 notice of 17 April 2014.
[427] According to BT's response to question 3 of the s.26 notice of 3 June 2013, the average capacity available to each superfast broadband user was [✂] in 2011/12 and [✂] in 2012/13.
[428] BT response to question 26 of the s.26 notice of 20 August 2013.
[429] [✂].
[430] For example, for a VULA margin assessment carried out in May 2015, we would likely use both RFS cost data and superfast broadband end-user usage data covering 2013/14.

BT to adopt a new approach to common cost allocation principally to reduce the constraint imposed by the VULA margin regulation would be inappropriate. Sky also argued that allowing BT to change its approach to common cost allocation risks undermining previous regulatory assessments and decisions that were predicated on the original common cost allocations. Sky argued that instead, for consistency, BT should be required to maintain current allocations unless it provides compelling reasons for adopting a different (and consistent) set of allocations to Ofcom. Sky argued that this approach is consistent with current Ofcom policy in relation to BT's regulatory accounting.[431]

6.131 Vodafone contended that BT has an established history of gaming regulatory cost models. Many of BT's costs are common and arguably may be attributed by multiple methods, and reallocating reported costs can make the difference between a product being profitable or otherwise. Vodafone also said that because the detail of BT's gaming often does not become transparent until future RFS reporting and charge control cost modelling, it has serious reservations concerning the redactions of cost data and the absence of fully reported costs and cost methodologies in the RFS.[432]

6.132 TalkTalk [✂]. TalkTalk noted that [✂].[433] TalkTalk added that there is an urgent need for Ofcom to implement its decision to take more control of BT's regulatory reporting.[434]

6.133 TalkTalk[435], confidential respondent [✂][436] and Vodafone[437] said that they supported the proposal to impose a minimum unit bandwidth cost for the test as a means of safeguarding against the possibility of BT changing/gaming its cost allocations.

6.134 BT submitted that Ofcom ought to use BT's RFS costs as the basis for its calculations and not establish a lower bound on such costs within the VULA margin assessment. BT gave the following reasons against the use of a bandwidth cost floor.

- The fact that network costs comprise a large proportion of downstream costs makes the cost of the regulatory failure which might arise from setting an inappropriate floor particularly distortionary. In addition, the derivation of the bandwidth cost floor using Sky and TalkTalk's costs lacks transparency.

- The changes to the calculation of network costs in the 2013/14 RFS was to reflect better cost causality in a fast evolving part of BT's network. Furthermore, any future changes to cost methodologies used in producing RFS estimates are to be subject to Ofcom's prior agreement – methodology changes will have to be accepted by Ofcom as being valid and justified.

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431 Paragraphs 5.3-5.4, *Sky Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
432 Page 5, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.
433 Paragraph 6.2, *TalkTalk Response to the 2014 VULA Margin Consultation*http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
434 Paragraph 6.16, Ibid.
435 Paragraph 6.2, Ibid.
436 [✂]
437 Page 10, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.

- Ofcom has found no evidence that BT has lower unit costs due to economies of scale. Accordingly the need for an adjustment is just speculation.[438]

6.135 The Bit Commons said that its preferred position is to use the lowest cost of bandwidth. It argued that the user experience needs to be protected and including a floor on unit bandwidth costs might adversely impact how packages are planned and provisioned during this period.[439]

Ofcom's considerations: changes to BT's cost allocation methodologies

6.136 We acknowledge the concern of a number of stakeholders that BT could use its ability to change its cost allocations in the RFS as a means of gaming the VULA margin regulation. Bandwidth costs make up a material proportion of downstream costs.[440] As a result, if BT alters the cost allocations in its regulatory financial reporting system such that unit bandwidth costs reduce by a material amount, this could significantly impact the minimum VULA margin.

6.137 It is for this reason that we would estimate unit bandwidth costs on the basis of data that has been subject to financial audit, such as those within BT's RFS rather than data that would not have been subject to such rigorous checks.[441] We note, however, that within BT's 2014 RFS, BT has based its allocation of 21CN costs on "estimates, forecasts and extrapolation from limited sampling".[442] Furthermore, PWC, the auditors of BT's RFS, raised an "*Emphasis of matter*" regarding the allocation of 21CN costs.[443] The allocation of these costs will come under increasing audit scrutiny in the future, with, as BT has noted, any future changes to costs methodologies used in the RFS to be notified to Ofcom. These activities should provide further assurance that the RFS will become a more reliable data source for unit bandwidth costs going forward.

6.138 As expected in the 2014 VULA Margin Consultation, BT's 2013/14 RFS adopts different cost allocations to its 2012/13 RFS for WBC Bandwidth.[444] The net result is that bandwidth costs reduced significantly in the 2013/14 RFS.[445] We have therefore

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[438] Paragraphs 8.67-8.72, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[439] Page 6, *The Bit Commons Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/The_Bit_Commons.pdf.
[440] Our indicative assessment of BT's costs of supplying its superfast broadband portfolio indicates that bandwidth costs make up approximately [✂] [25-45 per cent] of ongoing monthly retail costs.
[441] For example, the 21C Forecast model data BT submitted during the Superfast Broadband Competition Act Investigation ([✂]).
[442] Page 11, BT, *Current cost financial statements 2014*, http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2014/Current_Cost_Financial_Statement_2014.pdf.
[443] Page 21, Ibid.
[444] [✂]
[445] For example, the external WBC bandwidth full allocated unit costs reported in the 2013/14 RFS for Market 1 was £14.73 in 2013/14 and £17.47 in 2012/13 (pages 104 and 107, *BT, Current cost financial statements 2014*, http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2014/Current_Cost_Financial_Statement_2014.pdf). The corresponding 2012/13 unit cost in BT's 2012/13 RFS was £24.47 (page 113, BT, *Current cost financial statements 2013*, http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2013/CurrentCostFinancialStatements2013.pdf).

considered it necessary to examine the methodology changes for the purposes of determining our VULA margin regulation. In particular, we gathered information from BT to understand the reasons for the changes and their impact on the VULA margin. This indicated that there were three main methodology changes in the 2013/14 RFS that affected the costs allocated to WBA services.[446]

- **First Change – allocations to broadband services:** BT explained that in the 2012/13 RFS it allocated 21CN broadband costs only to standard broadband, and did not allocate any costs to superfast broadband, TV Connect ('TVC') or Wholesale Content Connect ('WCC'). As a result, too great a proportion of costs were allocated to standard broadband ('WBC Bandwidth'). In the 2013/14 RFS, BT allocated 21CN across all the relevant services: standard broadband, superfast broadband, TVC and WCC. The effect of this change was to allocate costs across higher volumes and thus reduce bandwidth unit costs.[447]

- **Second Change – review of Ethernet utilisation:** BT explained that it allocates 21CN costs between downstream Ethernet and broadband services based on bandwidth volumes. In the 2012/13 RFS, BT calculated the bandwidth volumes used by broadband services by multiplying the number of end users by the average peak throughput per end user. For Downstream Ethernet services, it used headline bandwidth rates (e.g. a 1Gbit/s service was assumed to consume 1Gbit/s through the core network). However, BT's analysis showed that in practice Downstream Ethernet services use around 25 per cent of the headline rate. As a result, in the 2013/14 RFS BT applied a 25 per cent usage factor to the headline bandwidth for the allocation of costs to Downstream Ethernet. This change increased bandwidth unit costs as it reduced the volume over which costs were allocated.[448]

- **Third Change – 21CN core transmission costs:** BT explained that in the 2013/14 RFS it no longer allocated the costs of core transmission across the 21CN core network to standard broadband in order to align with the WBA product description included in Ofcom's 2014 WBA market review.[449] To do this, BT created a new cost component called Core to Core Transmission (CN906) which was not allocated to standard broadband services, but to residual services only (this includes superfast broadband, TVC and WCC as well as standard broadband services such as WBMC). This change reduced bandwidth unit costs compared to those reported in BT's 2012/13 RFS.[450]

6.139 BT also stated that in addition to the methodology changes set out above, the 2013/14 unit FAC was lower than the 2012/13 unit FAC due to a year-on-year

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[446] These changes are consistent with the "*Statement of change in Allocations for 21CN Costs in the 20131/4 Regulatory Financial Statements*" that BT published in December 2014. http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2014/StatementofChangeinAllocationsfor21CNCosts.pdf.
[447] BT response to question 2 of the s.135 notice of 10 September 2014.
[448] Ibid.
[449] BT stated that paragraphs 2.7-2.8 of the 2014 WBA Statement confirmed that WBA products comprise the connection from customer premise to local exchange, the broadband equipment at the local exchange, backhaul connectivity across the network and the functionality of the Broadband Access Remote Server ('BRAS').
[450] BT response to question 2 of the s.135 notice of 10 September 2014.

increase in bandwidth volumes.[451] Table 6.1 sets out the impact of each of the methodology changes.

Table 6.1: Impact of methodology changes on External WBC Bandwidth in Market 3 for 2013/14

	Monthly cost per Mbit/s
2013/14 WBA input unit FAC (2012/13 RFS method)	[✂]
First Change: Allocations to broadband services	[✂]
Second Change: Review of Ethernet utilisation	[✂]
Third Change: 21CN core transmission costs	[✂]
2013/14 WBA input unit FAC (2013/14 RFS method)	[✂]

Source: BT response to question 1 of the s.135 notice of 27 October 2014 (23rd notice).

6.140 On the basis of the information BT has provided, we are satisfied that the First and Second Changes are likely to be more consistent with cost causality principles than those BT used to prepare its 2013 RFS. We therefore consider that it would be appropriate to use these revised allocation methods when estimating unit bandwidth costs for the VULA margin assessment.

6.141 In relation to the Third Change, we recognise that BT has made the changes to align with the product descriptions set out in the 2014 WBA Statement. However, given that [✂][452], we consider that it is necessary to take these costs into account when calculating the unit bandwidth cost applicable to superfast broadband. Otherwise, those unit bandwidth costs would be understated, resulting in a minimum VULA margin that could be set too low to meet our regulatory objective. In order to include the costs of 21CN core transmission within unit bandwidth costs, we would add the result of dividing total 21CN core transmission costs[453], including a return on mean capital employed, by the total bandwidth volumes of the services that use 21CN core transmission.

6.142 Table 6.2 shows our estimate of BT's unit bandwidth costs for 2013/14 which we would use instead of the RFS figures for that financial year.

[451] BT response to question 1 of the s.135 notice of 27 October 2014 (23rd notice).
[452] BT response to question 2 of the s.135 notice of 27 October 2014 (23rd notice).
[453] Recorded under component CN906 in BT's 2013/14 RFS.

Table 6.2: 2013/14 unit bandwidth cost (per Mbit/s, per month) for VULA margin assessment

	Monthly cost per Mbit/s
2013/14 Market 3 WBC Bandwidth	[✁][454]
Inclusion of MSIL and Cable Link	[✁]
Adjustment to backhaul	[✁]
Inclusion of 21CN transmission	[✁]
2013/14 unit bandwidth cost for VULA margin assessment	[✁]

Other changes to BT's cost allocation methodologies

6.143 There are two other changes that impact on BT's published 2014 RFS data. These relate to the allocation within BT's 2014 RFS of some 21CN costs on a future benefits basis, and core and backhaul duct costs. These are explained in more detail below.

21CN costs on a future benefits basis

6.144 In the 2014 WBA Statement, we found that BT had allocated some 21CN costs to WBA services, notably IPstream services which did not use 21CN equipment, on the basis of "*future benefits*".[455] The future benefits principle assumed that, as IPstream users might migrate to WBC services in the future, they should pick up a share of the costs of establishing the 21CN platform before they migrate. Within the WBA charge control model we decided that this was not appropriate and so excluded the costs of 21CN equipment that were not used to supply IPstream services.[456] We also excluded from the compliance formulae EoI charges that BT had allocated within its RFS on a future benefits basis.[457] We consider that it is appropriate to reflect our approach in the 2014 WBA Statement in our estimate of BT's unit bandwidth costs.

6.145 In the recent Directions for Regulatory Financial Reporting Consultation,[458] we have proposed that BT must not allocate costs on a future benefits basis within its RFS. We intend to publish our statement on Directions for Regulatory Financial Reporting

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[454] [✁] is the sum of the WBA input cost of [✁] (as shown in Table 6.1) and EoI charges of [✁].
[455] This approach allocated costs relating to new 21CN technology to legacy services, such as IPstream Connect, on the basis that 21CN based services might replace these legacy technologies in the future. BT's justification for this approach is that customers who currently use legacy services will benefit from investments in new 21CN technology once they switch to services based on the new technology (see paragraph 7.219, Ofcom, *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies,* 26 June 2014, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/).
[456] Paragraph 7.221, Ibid.
[457] Annex 2 (Legal Instruments), Annex to Condition 7, Part C, Ibid.
[458] Ofcom, *Directions for Regulatory Financial Reporting – consultation*, 10 December 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/financial-reporting/summary/Consultation.pdf.

in Spring 2015, which will require implementation within BT's 2014/15 RFS. This is likely to increase WBC bandwidth unit costs, both for backhaul and in the core.

6.146 To understand the likely impact of this change we asked BT to provide data on how it currently allocates its 21CN costs to WBC services and other relevant components. We also asked BT for its best estimates on the likely impact of no longer allocating these costs on a future benefits basis. We have reviewed both and the impact on the bandwidth unit costs in 2013/14 is likely to be of the order of [✂].[459]

Backhaul and core duct costs

6.147 We have established that BT has not allocated any backhaul and core duct costs to 21CN Fibre Plant Groups relevant to WBC services.[460] We will address this as part of our review of the way BT currently allocates its costs in the RFS. This review is part of our wider work to establish new regulatory reporting guidelines that will provide the accounting rules to be followed when BT prepares its future regulatory financial statements. We expect to publish these guidelines in spring 2016. It is only after a decision has been made in relation to the appropriate allocation of these costs that we will reflect any changes in the unit bandwidth costs for our VULA margin assessment.

6.148 However, in order to understand the likely impact of allocating some backhaul and core duct costs to 21CN Fibre Plant groups, we asked BT to provide data on how it currently allocates its backhaul and core duct costs.[461] We believe it reasonable to expect that these would be allocated in a similar way to how fibre costs are currently allocated in the backhaul and core networks. We have estimated that such a change would increase the unit bandwidth costs in 2013/14 by around [✂] with a further [✂] for the cost of transmission across the 21CN core network.

6.149 In summary, we consider that our analyses of the allocation methodologies that underlie BT's 2014 RFS provide sufficient assurance that the 2013/14 unit bandwidth cost data that will be relied upon in the VULA margin assessments are reasonable. Looking forward to subsequent assessment periods, we are confident that the increasing scrutiny of the cost allocations underlying the RFS as a result of Ofcom's work to establish new regulatory reporting guidelines will provide additional certainty that the RFS is a suitable data source for estimating bandwidth costs for the purposes of the VULA margin assessment. Any decisions arising from our work in this area will be taken into account at the point from which any decisions are made, in our calculation of BT's unit bandwidth costs.

Ofcom's considerations: placing a floor on unit bandwidth costs

6.150 We have again considered whether it may be necessary to adjust BT's unit bandwidth costs by first considering whether there is a material difference between BT's unit costs and those of other operators. We have gathered FAC bandwidth cost

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[459] BT response to question 3 of s.135 notice of 27 November 2014 and its response to question 2 of non-statutory question on cost allocations of 27 November 2014. In providing this data, BT made a number of representations in relation to this basis of allocation. We do not consider that these representations are relevant to our consideration of the impact of no longer allocating 21CN costs on a future benefits basis that reflects the decision made in the 2014 WBA Statement.
[460] BT's response to question 2 of the s.135 notice of 27 November 2014.
[461] BT response to question 1 of the s.135 notice of 27 November 2014.

data and volume data from Sky[462] and TalkTalk[463] for 2013/14 to update the comparison with BT's unit costs. Table 6.3 sets out this comparison.

Table 6.3: Comparison of unit bandwidth costs (per Mbit/s, per month)

	2011/12	2012/13	2013/14
BT	[✂]	[✂]	[✂]
Sky	[✂]	[✂]	[✂]
TalkTalk	[✂]	[✂]	[✂]

6.151 Noting the difficulties in comparing the costs of different operators[464] and BT's changes to its allocation methodologies between 2012/13 and 2013/14, we consider that Table 6.3 indicates that BT's reported unit bandwidth costs were higher than Sky and TalkTalk in 2013/14. As a result, we consider that an adjustment to BT's unit bandwidth costs is currently not appropriate.

6.152 Nevertheless, the possibility remains that in the future, unit bandwidth costs as reported within BT's RFS may reduce to a level below that of other operators. We consider that it is possible that BT could enjoy larger economies of scale and scope than other operators with respect to bandwidth costs because of the higher volumes of non-broadband bandwidth dependent traffic it carries compared to other operators. For example, BT provides many leased lines services, including backhaul connectivity to mobile network operators[465], over the same network used to provide broadband services. If BT does have cost advantages, we consider that such a level of unit bandwidth costs would be difficult for other operators to replicate as they may not have the same scale in the supply of non-broadband bandwidth dependent services.

6.153 Therefore we consider that it is appropriate to specify a minimum figure for unit bandwidth costs to be used when assessing the VULA margin. This minimum would reflect the costs of other operators and would act as a floor for unit bandwidth costs when assessing the VULA margin. Should the estimate of the WBC Bandwidth unit costs in BT's regulatory financial reporting system fall below the minimum during the market review period, the floor would come into effect. This would effectively adjust BT's unit bandwidth costs upwards to reflect the costs incurred by other operators.

6.154 We consider that specifying a floor for bandwidth unit costs satisfies the framework for making adjustments to BT's costs/revenues set out in paragraph 6.57:

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[462] Sky response to question 4 of the s.135 notice of 7 October 2014.
[463] TalkTalk response to question 4 of the s.135 notice of 7 October 2014.
[464] For example, ensuring costs covering the same network components are being compared and similar approaches to the allocation of overhead costs have been taken.
[465] BT Wholesale is the largest purchaser of Ethernet leased lines services: 66 per cent of Openreach's AISBO Non-WECLA circuits were leased to BT Wholesale in 2013/14 (pages 76-77, *BT, Current cost financial statements 2014*, http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2014/Current_Cost_Financial_Statement_2014.pdf).

- As set out 6.152, if BT's reported unit bandwidth costs become lower than those of other operators during the market review, we consider that this could be driven by BT's larger scale in the supply of non-broadband bandwidth dependent services. We consider that it that it is unlikely that other operators would be able to replicate the scale of these operations.

- As set out in paragraph 6.136, bandwidth costs make up a material proportion of downstream costs.

6.155 In order to allow BT to take the bandwidth cost floor into account when monitoring compliance with the minimum VULA margin, we have specified the level of the floor within the SMP condition. Paragraphs 6.158 to 6.170 set out how we have determined the level of the floor.

6.156 As noted above, there will be safeguards in place that may reduce the chances of BT changing its cost allocations to reduce the minimum VULA margin. However, we consider that specifying a minimum bandwidth cost floor will provide further protection. Therefore, we consider that the bandwidth cost floor will provide BT's competitors with added certainty during a period when they will be making decisions about acquiring and migrating customers onto superfast broadband services.

6.157 In relation to BT's objections to using a bandwidth cost floor, having explained in paragraphs 6.150 to 6.155 the reasons why we consider that it would allow operators with slightly higher costs to profitably match BT's retail superfast broadband offers, we reiterate that it would only bite if BT's reported unit bandwidth costs were lower than those of other operators. We note that BT did not submit any evidence that possible advantages it holds with respect to bandwidth costs would be due to reasons other than economies of scale or scope. In any case, we note that the difference in 2013/14 between BT's unit bandwidth cost ([✂]) and Sky ([✂]) and TalkTalk's ([✂]) unit bandwidth costs suggests there is a strong likelihood that the floor will not bite over the market review period. Imposing a floor on unit bandwidth costs is thus unlikely to impose a disproportionate burden on BT.

The level of the bandwidth cost floor

6.158 In the 2014 VULA Margin Consultation, we proposed to use £12.40, [✂] Sky and TalkTalk's unit bandwidth costs in 2012/13, as a base year estimate. On the basis of unit cost trend data gathered from Sky, TalkTalk and BT, we proposed a range for the annual change in unit bandwidth costs of 12-40 per cent, with a preferred figure of 20 per cent.

Responses to 2014 VULA Margin consultation

6.159 In relation to the calculation of the bandwidth cost floor, a number of stakeholders provided comments on the proposed approach.

6.160 TalkTalk suggested [✂]. It considered that this is likely [✂].[466]

[466] Paragraph 6.3, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

6.161 Confidential respondent [✂] said that it is concerned that Ofcom's proposal will understate actual unit bandwidth costs because the base year level is too low. Confidential respondent [✂] said that the [✂].[467]

6.162 Sky[468] said that if Ofcom concludes that its proposed approach remains appropriate, Ofcom should adjust the proposed floor to include: (i) co-location costs; and (ii) an allocation of group overhead costs. In relation to the former, Sky noted that in calculating the proposed floor, Ofcom has removed the costs of co-location in BT exchanges when calculating Sky's bandwidth costs and it does not appear that co-location costs[469] are taken account of elsewhere in the VULA margin assessment. In relation to the latter, Sky noted that Ofcom did not include any allocation of group overheads in its estimate of Sky's bandwidth costs, and argued that costs attributed to the core network category in BT's RFS are likely to include an allocation of BT's group overheads.[470]

Ofcom's considerations

6.163 We first discuss our views on stakeholders' responses and then go on to explain how we have calculated the bandwidth cost floor.

- We agree with TalkTalk's point that the levels of unit bandwidth costs and usage per customer [✂]. However, TalkTalk's suggestion of [✂]. In other words, it would effectively require us to forecast two elements, usage per customer and unit bandwidth costs, instead of unit bandwidth costs only. We thus do not consider that TalkTalk's proposal alleviates the inherent uncertainties involved in forecasting a suitable floor.

- We disagree with confidential respondent [✂] that the base year level of costs used for the proposed floor was too low. We sought data on unit bandwidth costs from the confidential respondent but, [✂], it was unable to provide a suitable figure.[471] [✂].

- Sky is correct that, for the consultation, we excluded co-location costs when calculating Sky's unit bandwidth cost. For the reasons set out in Section 5, we have decided to carry out the VULA margin assessment assuming that WLR is the copper-access product that is used in combination with GEA for fibre-access. While it is necessary for operators that use MPF with GEA to locate their equipment in BT exchanges in order to connect the local access network and to provide broadband services, this co-location is not necessary for operators that use WLR with GEA.[472] Therefore we consider that it is necessary for us to continue to exclude co-location costs from Sky's bandwidth cost stack. Further, we accept that the core network costs included in BT's WBC Bandwidth costs will

[467] [✂]
[468] Paragraph 5.6-5.7, *Sky response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
[469] Sky described co-location costs as the costs incurred by CPs associated with locating their equipment in BT exchanges in order to connect to the local access network and to provide broadband services (Ibid.).
[470] Sky suggested finance, human resources and legal costs as examples (paragraph 5.9, Ibid.)
[471] [✂]
[472] Operators using WLR with GEA can collocate at BT exchanges in order to have deeper caching. Our understanding is that few operators who use WLR with GEA use this configuration.

include a certain amount of group overheads[473], and therefore it is correct to include an allocation of Sky and TalkTalk's group overheads to properly reflect the costs of other operators. We have ensured that the Sky costs we have used to calculate the bandwidth cost floor now include a proportion of group overhead costs.

6.164 In summary, we consider that it is appropriate to calculate the bandwidth cost floor in line with the approach proposed in the consultation, taking into account our considerations of Sky's comments on how to calculate its costs.

6.165 As set out in paragraph 6.150, we have updated the estimate of Sky and TalkTalk's unit bandwidth costs by gathering 2013/14 bandwidth cost and volume data. We have used this data to calculate both the base year level of the floor and to forecast the annual percentage change in the floor. We have also taken into account the annual changes in unit costs predicted in BT's 21C Forecast Model from 2012/13 to 2013/14 and from 2013/14 to 2014/15.[474] While we are proposing not to use this model to estimate the absolute figure for unit bandwidth costs, we consider that the assumptions it uses with respect to volume forecasts for 2013/14 and 2014/15 and cost-volume relationships within the core network are likely to provide useful information on future changes in unit bandwidth costs. Table 6.4 sets out the BT 21C Forecast Model estimates of unit bandwidth costs.

Table 6.4 – BT 21C Forecast Model estimates of unit bandwidth costs

	2012/13	2013/14	2014/15
Unit bandwidth cost	[✄]	[✄]	[✄]
Annual change		[✄]	[✄]

Source: 21C Forecast Model (BT response to the s.26 notice of 20 August 2013).

6.166 As a starting point, we take [✄] Sky and TalkTalk's unit bandwidth costs in 2013/14. This gives an estimated unit bandwidth cost of £9.20 per Mbit/s as the base year level of the floor.

6.167 In order to forecast unit bandwidth costs for the period to 2016/17, we have projected forward the base year estimate by applying an annual percentage change. This percentage change is based on the data we have from Sky, TalkTalk and BT on their bandwidth costs. In relation to Sky and TalkTalk, we have taken into account their decreases in unit costs between 2011/12 and 2012/13 and between 2012/13 and 2013/14. We therefore take [✄] per cent, [✄] per cent, [✄] per cent and [✄] per cent as the relevant data points, noting that the cost trends between 2012/13 and 2013/14 for the two operators were very similar. From BT's 21C Forecast Model, the data points we have used are [✄] per cent and [✄] per cent.

[473] Specifically captured in the SG&A Broadband (CN609) component.
[474] We consider that the unit cost change set out in BT's 21C Forecast Model for 2011/12 to 2012/13 is less likely to be relevant to the time period we are forecasting given that it is significantly different to the change in subsequent years ([✄] per cent as compared to [✄] per cent and [✄] per cent).

6.168 Calculating an average on the basis of the six data points results in an annual decrease in the unit bandwidth cost of 22 per cent. Taking the base year level of the floor for 2013/14 and applying the annual percentage decrease to calculate subsequent years results in the following unit bandwidth cost floor:

- 2013/14 – a floor of £9.20 per Mbit/s;
- 2014/15 – a floor of £7.17 per Mbit/s; and
- 2015/16 – a floor of £5.59 per Mbit/s.

6.169 We remind stakeholders that, due to the delays in producing cost data, the time period used for the calculation of bandwidth costs will not align with the assessment period. In particular, the costs according to the most recently available BT RFS should be compared against the bandwidth cost floor covering the same period. For example, a VULA margin assessment carried out in April 2016 will refer to the costs according to BT's 2014/15 RFS and compare this with the 2014/15 floor of £7.17 (whichever is higher shall be used in the assessment).

6.170 In order to provide BT with a sufficient level of certainty, the unit bandwidth cost floor will be included in the SMP condition.

Conclusions and guidance on unit bandwidth costs

6.171 We have provided guidance on how we would calculate BT's unit bandwidth costs when assessing the VULA margin.

6.172 This explains that BT's unit bandwidth cost would be calculated using data sourced from BT's regulatory financial reporting system in the following way.

Guidance

We would estimate BT's unit bandwidth cost of supplying superfast broadband services on the basis of the WBC Bandwidth unit FAC in Market 3/Market B according to the regulatory financial system used to prepare the most recent annual RFS at the time of the assessment.

Insofar as not already reflected in the RFS methodology, we would make a downward adjustment to accurately reflect the lower backhaul costs of superfast broadband services. The adjustment would be to remove the EAD element of the EoI unit charge in Market 3/B.

Insofar as not already reflected in the RFS methodology, we would separately include the cost of MSILs and Cable Links used as transmission bearers. Transmission bearer costs would be calculated by multiplying the prices charged by BT Wholesale (for MSILs) and Openreach (for Cable Links) by the total number of links used to support broadband traffic.

Insofar as not already reflected in the RFS methodology, we would separately include the cost of 21CN core transmission. We would calculate the amount of 21CN core transmission costs to include in the unit bandwidth cost by dividing the total FAC (including a return on mean capital employed) of the components that cover transmission on the 21CN core network (currently component CN906) by the total bandwidth volumes of the services that use 21CN core transmission.

Insofar as not already reflected in the 2014/15 RFS methodology, we would include in the unit bandwidth cost an appropriate allocation of costs that had previously been allocated on a future benefits basis. We would also consider whether any equivalent adjustment should be made to BT's 2013/14 RFS.

If there are any future policy decisions affecting the calculation of BT's unit bandwidth costs within its RFS, we would take these into account at the point from which any decisions are made.

Average capacity available to each user

6.173 As set out paragraph 6.111, in order to calculate the costs of providing the bandwidth necessary to supply superfast broadband customers, we would multiply the relevant unit bandwidth cost by the average capacity available to each user.[475]

6.174 Average capacity available to each user represents the total capacity available divided by the number of users that share it. For example, if the total capacity was 1,000Mbit/s and this was shared by 2,000 users then the average capacity available to each user would be 0.5Mbit/s. The level of capacity reflects the usage of superfast broadband customers, and is closely related to the peak demand they require.[476] It is therefore reflective of the amount of bandwidth, and consequent cost, for which an operator will need to provision.

Guidance
We would use the average capacity available to each user for each product in the superfast broadband portfolio covering the same time period as the unit bandwidth cost data relates to.

Network rental overheads

6.175 These are the SG&A and product line costs of providing wholesale level network services that support the provision of retail services to end users.[477] In the 2014 VULA Margin Consultation, we proposed to include network rental overheads as a separate item in the cost stack.

Responses to 2014 VULA Margin Consultation

6.176 BT noted Ofcom's proposal to request data from BT Wholesale to estimate the network rental overheads of serving a superfast broadband customer. BT said that it understands that Ofcom has used BT's bottom-up estimate of these costs in its VULA margin assessment. It added that because Ofcom is now proposing to estimate bandwidth costs using information from BT's regulatory financial system for Market 3 (now Market B) WBC Bandwidth, this figure already includes costs of an "*SG&A component*", which itself includes costs relating to BT Wholesale network overheads of serving a fibre broadband customer. Without any offset, there will be a

[475] The amount of bandwidth each consumer uses is rising (see, for example, paragraph 3.88 of Ofcom, *Infrastructure Report 2014*, 8 December 2014, http://stakeholders.ofcom.org.uk/binaries/research/infrastructure/2014/infrastructure-14.pdf). As a result, operators are likely to increase the average capacity available to each user over time. This is linked to the trend of falling unit bandwidth costs discussed in paragraph 6.167 and will, at least in part, offset the impact of that trend.
[476] BT response to question 3 of the s.26 notice of 3 June 2013.
[477] BT response to question 5 of the s.26 notice of 3 June 2013.

double count of costs given that SG&A costs are already included in the bottom-up calculation. BT added that, if it is to be adopted, the bottom-up estimate needs to be updated as costs will have changed since 2012/13.[478]

Ofcom's considerations

6.177 We accept that the WBC Bandwidth cost for Market 3/Market B includes SG&A Broadband (CO609) component costs, which relate to BT Wholesale network overheads of serving superfast broadband customers. In order to avoid double-counting, a separate item covering network rental overheads should not be included in the VULA margin assessment.

Guidance
To avoid the double-counting of SG&A costs, we will not include a separate network rental overheads item in the VULA margin assessment.

Platforms and portal fees

6.178 Platform costs cover the costs of [✂] peering and transiting and [✂] to manage broadband platforms. Portal fees cover the [✂] online portal and value added services.[479] [✂]. In the 2014 VULA Margin Consultation, we proposed to allocate platform costs and portal fees equally across all broadband customers (i.e. standard and superfast broadband).

Responses to 2014 VULA Margin Consultation

6.179 TalkTalk argued that these costs should be allocated in proportion to the bandwidth used by different customers in the same way as network costs are allocated in proportion to the bandwidth used by different customers (and using the same data). It considered that the volume and spend on peering/transiting (which is effectively the link into the Internet) is proportional to the capacity of the links.[480]

Ofcom's considerations

6.180 We agree with TalkTalk that the cost of peering and transiting of data is likely to be driven by the capacity of the broadband connection. As a result, we have amended our approach. Platform costs would be allocated in proportion to the bandwidth used by different customers (i.e. average capacity available to each user). This would involve:

- calculating the total capacity available to BT's standard and superfast broadband customers ('Total Capacity') by multiplying the average capacity available to each user for each of BT's broadband products by the volume of customers on each broadband product;

- calculating the proportion of Total Capacity used by each of BT's standard and superfast broadband products; and

[478] Paragraphs 8.77-8.78, *BT response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[479] BT response to question 4 of the s.26 notice of 5 July 2013.
[480] Paragraph 6.6, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

- multiplying the total platform costs reported in the relevant management accounts by the proportion of Total Capacity used by each of BT's standard and superfast broadband products.

6.181 In relation to portal fees, we will continue with the approach of allocating an equal proportion to each broadband customer.

> **Guidance**
> We would estimate the platform costs of serving a superfast broadband customer by allocating the amount recorded in the most recent annual Broadband management accounts in proportion to the total capacity used by customers on each superfast broadband product during the same period (and converting to a monthly figure).
>
> We would estimate the portal fees of serving a superfast broadband customer by taking the amount recorded in the most recent annual Broadband management accounts and dividing by the average broadband customer base during the same period (and converting to a monthly figure).

Product feature costs

6.182 BT Consumer's Infinity superfast broadband offers currently include a number of additional services, including NetProtect Plus, Wi-Fi, BT Cloud storage and BT SmartTalk.

<u>NetProtect Plus</u>

6.183 BT Consumer's Infinity packages include NetProtect Plus anti-virus software which customers can opt to take-up at no extra charge.

> **Guidance**
> To calculate the cost of providing NetProtect Plus to superfast broadband customers, we would multiply the licence charge [✂] by the proportion of new superfast broadband customers who take up this product feature during the assessment period.

<u>BT Cloud</u>

6.184 BT Consumer's Infinity packages include BT Cloud storage which allows customers to save or back up files and folders remotely as online storage at no extra charge.

> **Guidance**
> To calculate the cost of providing BT Cloud to superfast broadband customers, we would multiply the monthly licence fee by the proportion of superfast broadband customers who take up this product feature. The proportion of superfast broadband customers who take up BT Cloud would be based on volumes during the assessment period.

<u>Wi-Fi</u>

6.185 BT Consumer Infinity packages are provided with access to BT's public Wi-Fi network at no extra charge. [✂].

6.186 In the 2014 VULA Margin Consultation, we assumed that [✂][481] and proposed to not include a cost for providing Wi-Fi to superfast broadband customers.

Responses to 2014 VULA Margin Consultation

6.187 TalkTalk and confidential respondent [✂] were concerned about the proposed treatment of Wi-Fi costs.

6.188 Confidential respondent [✂] argued that BT's Wi-Fi services are an important element of BT's retail bundles, as evidenced by a number of public statements made by BT, and should accordingly be taken into account in assessing the VULA margin. At the very least, BT's costs of advertising and promoting its Wi-Fi services should be accounted for.[482]

6.189 TalkTalk said that excluding any cost for providing Wi-Fi seems unjustified since it would be highly unusual that a service could be provided without incurring any costs.[483]

Ofcom's considerations

6.190 We agree with respondents that BT's Wi-Fi service is a relevant bundle element and that, for the reasons set out in Section 5, it should therefore be included in the assessment of BT's retail superfast broadband products. Our position is not that Wi-Fi should be excluded but that the net cost of offering the service is zero. As a result, superfast broadband subscribers do not need to make a contribution to this service. We have reached this conclusion on the basis of the following information.

- There are two Wi-Fi networks that BT combine to offer its Wi-Fi proposition – the 'FON network' and the 'Premium Hotspots network'.

- The FON network is provided by means of the public service set identifiers ('SSIDs') emitted from BT Home Hubs (BT's routers). BT has explained that there are no incremental costs associated with providing Infinity customers access to this Wi-Fi network, as both the Home Hub costs and the incremental costs of the chipset, including bandwidth, are included elsewhere in the VULA margin assessment.[484]

- The Premium Hotspots network consists of Wi-Fi hotspots set up in public places and commercial premises. BT has estimated the incremental cost per customer, covering network monitoring and maintenance, backhaul, and an allocation of SG&A costs, were close to zero. For example, in 2013/14 BT calculated that the cost per Mbit per month of the Premium Hotspots was [✂]. Multiplying this by the total data traffic consumed at the hotspots of [✂] and dividing by BT's approximately 5 million broadband customers gives a monthly cost per broadband subscriber of [✂].[485]

[481] BT response to question 9 of the s.26 notice of 3 June 2013.
[482] [✂]
[483] Paragraph 6.14, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[484] BT's response to question 9 of the s.26 notice of 3 June 2013.
[485] BT's response to question 37 of the s.26 notice of 27 November 2013.

- In addition, as with our treatment of BT Sport, we take a net cost approach by taking into account direct revenues generated by the service. [✂].

Guidance
While we include BT Wi-Fi in the VULA margin assessment, we would assume that the costs of the service are zero.

<u>SmartTalk</u>

6.191 BT Consumer's Infinity packages include SmartTalk, which is an application that uses a Wi-Fi or mobile data connection to make calls that are charged to the registered BT account holder (i.e. any calls made using the application will cost the same as calls from the customer's home phone rather than using mobile rates or minutes).

6.192 Our understanding is that BT treats calls made using the SmartTalk app function as if they were made from the customer's home calling plan.[486] As a result, calls made via SmartTalk will be included in the voice costs as recorded in BT's database[487], as discussed in paragraphs 6.105 to 6.107.

Guidance
We would not include a separate item for SmartTalk costs.

Fibre development

6.193 BT has incurred a cost as a result of taking its suite of consumer fibre products from development to final consumer readiness ([✂]). [✂].[488] Development spend post launch is discussed as part of SG&A costs below.

Guidance
To estimate the fibre development cost of acquiring a superfast broadband customer, we would take the development spend incurred before the launch of BT's superfast broadband products and divide by the total base of BT superfast broadband customers at the time of the assessment.

Ongoing SG&A costs

6.194 BT Consumer incurs some SG&A costs in the supply of its broadband, voice and TV services. In the BT Consumer management accounts, these costs are not allocated to individual services. [✂]. Accordingly, we would need to consider what proportion of these costs to allocate to BT's fibre portfolio. In addition, BT incurs certain costs that are fixed and common across the entirety of BT Group. [✂]. For the reasons set out in Section 5, LRIC+ is the appropriate cost standard when assessing the VULA margin. Consequently, we would allocate a proportion of these costs to the fibre portfolio cost stack.

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[486] BT response to question 7 of the s.26 notice of 20 August 2013.
[487] See footnote to paragraph 6.96.
[488] BT response to question 9 of the s.26 notice of 21 June 2013 and to question 21 of the s.26 notice of 20 August 2013.

6.195 The discussion of ongoing SG&A costs is structured as follows:

- the SG&A costs to include in the cost stack;
- whether it is appropriate to make an adjustment to BT's costs; and
- the methodology for allocating SG&A costs.

SG&A costs to include in the cost stack

Breakdown of SG&A costs

6.196 There are a number of ongoing SG&A costs recorded in BT Consumer's management accounts that are relevant when assessing the VULA margin. They include:

- SG&A costs BT incurs as a direct result of supplying the services within its superfast broadband packages, e.g. marketing retention and billing & bad debt – we have categorised these as 'Short-run variable'; and
- SG&A costs that are either shared across all products that BT Consumer supplies and could be thought of as overheads [✂] (e.g. [✂]) or SG&A costs that are fixed and common with respect to the provision of superfast broadband services (e.g. [✂]) – we have categorised these as 'Long-run variable/Fixed'.

6.197 Guidance Table 1 lists the SG&A costs that we would take into account when assessing the VULA margin.

Guidance
We would take each of the SG&A costs in Guidance Table 1 into account when assessing the VULA margin.

Guidance Table 1 – Ongoing SG&A costs

Cost item	Cost type	Description
Marketing – retention	Short-run variable	[✂]
Customer services – ongoing	Short-run variable	[✂]
Billing & bad debt	Short-run variable	[✂]
Total Labour Cost – retention	Short-run variable	[✂]
Total Labour Cost – management	Short-run variable	[✂]
Development	Short-run variable	[✂]
Marketing – non-campaign	Long-run variable/Fixed	[✂]
Customer services – overheads	Long-run variable/Fixed	[✂]
Accommodation	Long-run variable/Fixed	[✂]
Other internal/external spend/recoveries	Long-run variable/Fixed	[✂]
People related costs	Long-run variable/Fixed	[✂]
IT spend	Long-run variable/Fixed	[✂]
Marketing platform spend	Long-run variable/Fixed	[✂]
TSO – direct, indirect and fixed	Long-run variable/Fixed	See explanation in paragraphs 6.198 to 6.200.
Miscellaneous costs	Long-run variable	

Source: BT responses to questions 10,19 and 20 of the s.26 notice of 21 June 2013, questions 7, 9, 10, 11 and 13 of the s.26 notice of 20 August 2013 and questions 4 and 14 of the s.26 notice of 1 October 2013.

TSO costs

6.198 TSO can be thought of as the 'back office of BT' which provides support and services to all the 'market facing units' ('MFUs') (i.e. Openreach, BT Wholesale, BT Global Services and BT Consumer). BT has provided the following list of responsibilities and activities undertaken by BT TSO:

- responsible for the lifecycle of BT's global networks and systems;
- manages BT's voice, data and TV networks and IT applications, which make up the core infrastructure of BT's products and services;
- designs and delivers the networks and platforms that are used by BT's MFUs;

- manages BT's long-term technology strategy and research and innovation programmes (including BT's worldwide patent portfolio); and

- manages BT Group's energy consumption.[489]

6.199 Due to the fact that TSO does not trade with customers outside of BT Group, its costs are recharged to the MFUs and BT Group to reflect the services provided to them. Costs include total labour costs, IT and network maintenance, accommodation and energy (including charges relating to operational estate such as exchanges and data centres), and other external costs (e.g. consultancy, fleet and conferencing).[490]

6.200 There are three broad categories of TSO costs, as follows.

- **Direct:** these include volume-based trades-specific contracts between TSO and the MFU ([✂]);

- **Indirect:** these are set at the start of the year and costs are recovered from MFUs based on best known cost drivers ([✂]). [✂].

- **Fixed:** these are costs that cannot be directly or indirectly attributed to an MFU and are mainly related to BT wide activities or in support of TSO activities. They include accommodation and energy and TSO overheads. [✂].[491]

6.201 Taking into consideration the use of a LRIC+ cost standard, we would include a share of all three categories of TSO costs in the VULA margin assessment. We set out below how we would calculate the specific share to allocate to the fibre portfolio cost stack.

Whether it is appropriate to make an adjustment to BT's costs

6.202 In the 2014 VULA Margin Consultation, we proposed to not make an adjustment to BT's SG&A costs on the basis that there was no evidence indicating a material difference between BT's commercial and overhead costs and those of other operators such as Sky and TalkTalk.

Responses to 2014 VULA Margin Consultation

6.203 Confidential respondent [✂] and TalkTalk commented on adjustments to account for BT's economies of scale and scope with respect to overhead costs.

6.204 Confidential respondent [✂] submitted that BT's scale may also justify additional adjustments. It suggested that Ofcom should collect information from each operator as to their overhead costs and the total volumes over which they need to be recovered. Confidential respondent [✂] contended that [✂].

6.205 TalkTalk said that Ofcom should adjust for any economies of scope between Openreach and BT Consumer/Plusnet since it is not possible for a competitor to replicate Openreach. On the other hand, TalkTalk said that it does not consider an adjustment should be made to BT Global Services since it is arguably possible for

[489] BT response to questions 1-7 of the s.26 notice of 27 November 2013.
[490] Ibid.
[491] BT response to question 18 of the s.26 notice of 14 February 2014.

competitors to replicate this business. TalkTalk said that it does not consider that an adjustment should be made to account for economies of scale if fixed costs are small. On the other hand, if this is not the case then adjustments should be made to reflect any material economies of scale.[492]

Ofcom's considerations

6.206 We have considered the overhead costs that are included in the fibre portfolio cost stack and whether BT is likely to have materially lower costs in this regard.

6.207 The majority of SG&A costs included are either costs BT incurs as a direct result of supplying the services within its superfast broadband packages, or costs that are used to support the functioning of BT Consumer. We consider that a share of each of these SG&A costs are incremental to the fibre portfolio. While a proportion of these costs is likely to be fixed and would be subject to some economies of scale, it is not clear to us that BT would have material advantages in this regard. BT's main rivals in the supply of retail superfast broadband services all offer a comparable range of residential services (e.g. voice, standard broadband, superfast broadband, TV) and serve substantial customer bases. As a result, other operators are likely to incur similar levels of such overhead costs in order to support their residential businesses.

6.208 In relation to [✂], BT explained that these costs comprise a range of overheads including [✂].[493] As such, [✂] can be considered as overheads that are fixed and common with respect to the fibre portfolio. As explained above, BT TSO supports the full range of BT's operations by carrying out 'back office' activities. We consider that the need to operate a separate back office division will be at least partly due to the scale and scope of BT's operations.[494] In addition, the scale and organisational complexity of BT's operations will likely result in added head office expenses such as accounting and management personnel. While we recognise that such fixed and common overhead costs will exhibit economies of scale, we do not consider that it is clear that these efficiencies will outweigh the added costs of running a large multiproduct business that is to the scale of BT.

6.209 Consequently, we do not consider that there are prima facie reasons to believe that BT has materially lower overhead costs than other operators. We have also taken into consideration that TalkTalk has submitted some cost information which indicates [✂].[495]

6.210 In summary, we consider that BT's overhead costs do not satisfy our framework for making adjustments, as set out in paragraph 6.57. We have therefore decided not to make an adjustment to BT's overhead costs.

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[492] Paragraph 3.50, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[493] BT response to questions 1-7 of the s.26 notice of 27 November 2013.
[494] In relation to the scale and scope of BT's operations, as well as being a large player in the supply of residential voice and broadband services (BT Consumer), BT operates the local access network and supplies backhaul services (Openreach), has a large downstream leased lines business (BT Wholesale) and provides network management and IT solutions (BT Global Services).
[495] TalkTalk, "*Margin squeeze regulation of SFBB products, discussion with Ofcom*", presented at meeting between TalkTalk and Ofcom on 26 July 2014. Confidential respondent [✂] did not provide estimates of its own overhead costs to enable a comparison with BT.

Methodology for allocating SG&A costs

6.211 As the SG&A costs in the management accounts cover all the products BT Consumer supplies (standard broadband, superfast broadband, voice, TV), we would need a method to allocate these costs to the fibre portfolio.

6.212 In the 2014 VULA Margin Consultation, we proposed to allocate SG&A costs from the management accounts to the fibre portfolio cost stack on a pro-rata basis according to the fibre portfolio's share of customers or products in BT Consumer, depending on the nature of each individual cost item.[496]

Responses to 2014 VULA Margin Consultation

6.213 TalkTalk commented that Ofcom's proposed approach to allocating variable shared costs seems broadly sound and submitted the following points about particular types of costs.

- A better way of allocating at least some acquisition related costs should be to reflect the number of products that are being sold (or the quantum of revenue from the customers). This will appropriately reflect that acquisition costs will be higher where, for instance, there is a bundle including line, calls, superfast broadband and TV rather than just a line and calls.

- Customer retention costs should reflect the number of products taken since BT is likely to spend more retaining customers who take more products as they generate higher revenue.

- Ofcom should base the allocation of bad debt and billing on the basis of the number of products sold (or better still in the case of bad debt, on the revenue of each product). It is intuitive that the level of bad debt and complexity of billing would increase with the number of products a customer takes (or revenue in the case of bad debt).

- An allocation based on the method in BT's RFS (which allocated on the basis of weighted assets and FTE) would be inappropriate since the RFS does not reflect the true manner in which BT Group costs will change in response to increases in superfast broadband volumes.[497]

[496] The following illustrative example shows the difference between the 'customer' and 'product' approaches. Assume BT has around 10m customers in total, 1m of which have superfast broadband (i.e. 10 per cent). BT sells around 16m products, 2m of which are purchased by superfast broadband customers (i.e. 12.5 per cent). Suppose an SG&A cost item is £10m per year. Under the 'customer' approach, we would allocate £1m to the superfast broadband portfolio (i.e. £10m X 10 per cent) – or £1 per superfast broadband customer. Under the 'product' approach, we would allocate £1.25m to the superfast broadband portfolio (i.e. £10m X 12.5 per cent) – or £1.25 per superfast broadband customer.

[497] BT allocates certain BT Group and TSO costs in proportion to weighted assets. This does not reflect causality since the vast majority of the costs are not caused by assets – instead they are caused by the level of revenue, opex, headcount and capex.

- Ofcom should make clear its assumptions regarding the split of acquisition and regrade costs.[498]

6.214 BT expressed concerns with Ofcom's treatment of SG&A costs. BT argued that many of the SG&A costs within BT Consumer (e.g. customer service overheads, accommodation and total labour costs) will not be variable in a linear manner and that treating them as fully scalable is a significant over-simplification of how costs would differ with the size of BT's superfast broadband business.[499]

6.215 BT said that choosing the product-based method is particularly likely to overstate the costs allocated to superfast broadband services compared to the customer-based approach. For example, for customer service and labour it is an unrealistic assumption that costs increase linearly with the number of products (e.g. a dual-play customer is unlikely to use a call centre twice as intensely as a single-play customer). BT argued that Ofcom's approach effectively assumes that economies of scope from bundling services are non-existent and takes no account of possible differences in attitudes across customer types (e.g. voice-only users may be more likely to contact a call centre than dual-play users who could use internet-based troubleshooting tools).[500]

6.216 In addition, BT claimed that its general concern was demonstrated by the fact that BT Consumer's SG&A costs have only increased by [✂] per cent year-on-year between 2012/13 and 2014/15 while superfast and overall broadband volumes have increased at a substantially higher rate over the same period.[501]

6.217 In TalkTalk's submission on BT's response to the 2014 FAMR Consultation, it critiqued some of BT's points regarding the allocation of shared costs.

- SG&A costs will to a large degree (in the long run) vary with respect to the number of customers, rather than being fixed and common.

- BT has used an incorrect time frame for assessing whether costs are variable. For LRIC, the variability of a cost in the long run is relevant; this will extend beyond the current market review period.

- BT notes that BT Consumer SG&A costs have increased at a lower rate than superfast and overall broadband volumes. TalkTalk noted there are many other factors that would affect BT Consumer's SG&A costs over this period, particularly efficiency improvements (which are potentially large).[502]

6.218 The CWU was concerned that it will be difficult for Ofcom to accurately separate the fibre-related costs from the copper-related costs when allocating costs, particularly

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[498] Paragraph 6.6, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf. TalkTalk also considered that the vast majority of BT Group overheads are incremental in the long run.

[499] Paragraph 8.90, *BT response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

[500] Paragraph 8.91, Ibid.

[501] Paragraph 8.92, Ibid.

[502] Paragraph 3.101, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.

when using a measure of customers served or products sold. On that basis, the CWU believed that it would be more appropriate to allow BT the flexibility to choose how to allocate common costs, including labour costs, where they are relevant to the copper network.[503]

Ofcom's considerations

6.219 First, we note BT's concern that many SG&A costs will not be variable in a linear manner and that consequently our proposed binary treatment of costs is an over-simplification. We acknowledge that our binary approach to estimating the LRIC of shared costs is unlikely to be precise as the cost-volume elasticities ('CVEs')[504] of many costs are likely to be somewhere between 0 and 1. However, given that we cannot estimate CVEs with precision, and as there is no LRIC model underpinning the management accounts, we consider our approach to be both reasonable and practical.

6.220 Second, we consider views on whether to use the share of customers or products as the volume measure for allocating costs. BT has argued that the product-based method will incorrectly overstate the allocation to superfast broadband, while TalkTalk has argued that for certain types of SG&A costs the customer-based approach will incorrectly understate the allocation.

6.221 In relation to Short-run variable SG&A costs, we have given careful consideration to the nature of individual items and whether costs are likely to be principally driven by the number of customers or the number of products being taken.[505] Using the information contained in the BT Consumer management accounts and further detail gathered from BT, we have selected what we consider are well-suited allocation methods.

6.222 However, we have not been able to identify a better cost-driver for Long-run variable and Fixed SG&A costs (e.g. [✂]). Hence, the choice of allocation method to apply to these costs will necessarily be somewhat arbitrary – it could be argued that a number of different approaches are equally valid. As set out above, when carrying out the VULA margin assessment we will need to exercise a degree of judgement and to choose an approach that we consider is most appropriate. If our guidance were to set out a number of plausible assumptions without choosing between them then this would fail to provide sufficient certainty to stakeholders about our approach.

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[503] Page 7, *CWU response to the 2014 VULA Margin consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Communication_Workers_Union.pdf

[504] CVEs measure the percentage change in costs for a given change in volumes. A CVE of 1 means that costs are fully variable with volumes, whereas a CVE of 0 means that costs are invariant to changes in volumes. For example, suppose an operator sells 1 million products and incurs annual billing costs of £10 million. If the CVE of billing costs is 1, then increasing the number of products sold by 100 per cent (i.e. by another 1 million) would result in annual billing costs increasing by 100 per cent as well (i.e. an additional £10 million). If the CVE is 0.5, then a 100 per cent increase in volumes would result in a 50 per cent increase in billing costs (i.e. an additional £5 million). If the CVE is 0, then annual billing costs would not change.

[505] Where we consider there are economies of scope from bundling services (i.e. costs will not vary much depending on whether a bundle is dual-play or triple-play), we would use the customer-based approach. Where we consider that this is unlikely to be the case, we would use the product-based approach.

6.223 We note that the use of the Product approach[506] on which we consulted would allocate a larger amount of Long-run variable and Fixed SG&A costs to superfast broadband ([✂] based on our indicative assessment) than the Customer approach[507] considered in the consultation ([✂]). Given the fact that our assumption on CVEs is likely to overstate the share of these SG&A costs that are variable with respect to superfast broadband services, we consider that, of the various allocation methods available to us, it is appropriate to choose one that results in a lower share being allocated to superfast broadband.

6.224 We note that an allocation approach that is based on the revenues superfast broadband customers generate as a percentage of total BT Consumer revenues (‘Revenue approach’) results in an allocation to superfast broadband that is lower than the Product approach ([✂]). Therefore, taking into account the fact that revenue shares are often used where there are no clear cost drivers with which to allocate overhead costs[508], we consider that the Revenue approach is in our view the most appropriate way to allocate Long-run variable and Fixed SG&A costs.

6.225 We note the following in relation to the various other points raised by stakeholders.[509]

- It is not clear that a comparison of BT Consumer SG&A costs with broadband volumes from year to year provides evidence on whether SG&A costs are fixed and common. As TalkTalk has pointed out, the relevant time horizon for assessing variability is the long run, which will extend beyond the market review period. In addition, the output increment for assessing the VULA margin is the fibre portfolio, which comprises superfast broadband, voice and TV services. This increment is considerably larger than the increase in broadband customers from one year to the next. BT’s analysis therefore does not answer the relevant question of whether SG&A costs would materially fall in the long run if BT did not supply all of the services within the fibre portfolio.

- In relation to billing and bad debt costs, TalkTalk considers it intuitive that the complexity of billing would increase with the number of products a customer takes (or revenue in the case of bad debt).[510] BT’s management accounts do not report billing and bad debt costs separately, so we are unable to distinguish between the two. While we accept that bad debt costs are likely to be proportional to the revenues generated by a customer, we do not believe that billing costs would materially increase as a customer takes an additional product. We therefore consider that allocating billing and bad debt costs using the product approach would result in an over-estimate and so we maintain the customer-based approach.

[506] The Product approach allocates based on the number of products (i.e. voice, broadband and TV) superfast broadband customers subscribe to as a percentage of the total number of products sold by BT Consumer.
[507] The Customer approach allocates based on the number of superfast broadband customers as a percentage of the BT Consumer customer base.
[508] We note, for example, that BT recovers fixed TSO costs across different MFUs based on adjusted revenues (BT response to questions 1-7 of the s.26 notice of 27 November 2013).
[509] As we adopt a LRIC+ standard, we do not consider that it is relevant whether or not BT Group costs are included in a LRIC based test (see Section 5).
[510] Paragraph 6.6, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

- [✂].[511]

Conclusions and guidance

6.226 Having considered responses, we have decided how we would allocate ongoing SG&A costs to superfast broadband services based on the following two-step approach.

6.227 First, we have considered the internal operational systems which specifically deal with certain cost categories maintained by BT.[512] For categories where we have found that this information provides a reasonable basis for allocating costs to the superfast broadband portfolio, we would allocate on this basis. We refer to these categories as 'BT Breakdown' in Guidance Table 2.

6.228 Second, for all ongoing SG&A cost items for which BT does not hold what we consider to be a reasonable breakdown to individual product lines, we would allocate to the superfast broadband portfolio on a pro-rata basis using one of the following approaches.

- Customer – certain types of ongoing costs will have economies of scope in that their magnitude varies with the number of customers being served but not the number of products each customer subscribes to. We would allocate such costs on the basis of the number of superfast broadband customers as a percentage of the BT Consumer customer base. For example, if a quarter of the BT Consumer customer base is made up of superfast broadband customers, we would allocate a quarter of the total costs to the superfast broadband portfolio cost stack.

- Product – other ongoing costs are more to vary in direct proportion to the number of products being sold. We would allocate such costs on the basis of the number of products (i.e. voice, broadband and TV) superfast broadband customers subscribe to as a percentage of the total number of products sold by BT Consumer. For example, if a quarter of the total number of products being supplied by BT Consumer is to superfast broadband customers, we would allocate a quarter of the total costs to the superfast broadband portfolio cost stack. This method assumes that a dual-play customer bears twice the cost of a voice-only customer and that a triple-play customer bears three times that of a voice-only customer.

- Revenues – where there is no obvious cost driver, we would allocate such costs on the basis of the revenues superfast broadband customers generate as a percentage of total BT Consumer revenues. For example, if a quarter of total BT Consumer revenues is to superfast broadband customers, we would allocate a quarter of the total costs to the superfast broadband portfolio cost stack.

6.229 The guidance below sets out the allocation approach we would apply to each ongoing SG&A cost item.

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[511] BT response to questions 1-7 of the s.26 notice of 27 November 2013; BT response to question 18 of the s.26 notice of 14 February 2014.
[512] For example, for certain customer service costs, [✂].

Guidance
For short-run variable SG&A costs, we would use either the Customer or Product approaches depending on whether the cost item is principally driven by the number of customers being served or the number of products being sold.

For long-run variable or fixed and common SG&A costs, we would use the Revenue approach to allocate costs to the superfast broadband portfolio.

Guidance Table 2 sets out the allocation approach we would apply to each ongoing SG&A cost item to allocate to the superfast broadband portfolio stack. Once we have calculated the appropriate allocation to the fibre portfolio, we would then calculate the ongoing monthly SG&A cost per superfast broadband customer by dividing the amount allocated by the average base of superfast broadband customers over the assessment period and converting this to a monthly figure.

Guidance Table 2: Allocation approaches applied to SG&A costs

SG&A cost category	Allocation method
Marketing – retention	Customer
Customer services - ongoing	BT breakdown
Billing & bad debt	Customer
Total Labour Cost – retention	Customer
Total Labour Cost - management	Product
Development	BT breakdown
Marketing – non-campaign	Revenue
Customer services - overheads	Revenue
Accommodation	Revenue
Other internal/external spend/recoveries	Revenue
People related costs	Revenue
IT spend	Revenue
Marketing platform spend	Revenue
Miscellaneous costs	Revenue
TSO – direct and indirect	Revenue
TSO Fixed	Revenue

Ongoing TV costs

6.230 As discussed in Section 5, we consider that it is appropriate to take triple-play bundles into account when assessing the VULA margin. Ongoing TV costs include content, bandwidth/network, licences, customer premise equipment ('CPE') and fixed costs.

Content and bandwidth

6.231 Content includes the cost of providing TV content to BT TV subscribers, [✂]. Bandwidth covers the network costs of providing IPTV [✂].[513]

[513] BT response to question 3 of the s.26 notice of 1 October 2013.

Guidance
We would estimate content and bandwidth costs of serving a triple-play superfast broadband customer by taking the amounts reported in the most recent BT TV management accounts for each BT TV package (Essentials package, Essentials Extra package) and dividing by the number of subscribers on each TV package during the period covered by the accounts. Average content and bandwidth costs per superfast broadband customer would be calculated by weighting on the basis of the number of customers acquired on each TV package in the assessment period.

Licences, CPE and fixed costs

6.232 Licences include the cost of licences for boxes and platforms. CPE is the ongoing cost associated with set-top boxes ([✂]). Fixed costs include licences, production, platforms ([✂]), digital terrestrial television (‘DTT’) ([✂]) and certain YouView costs ([✂]).[514] Unlike content and bandwidth, licences, CPE and fixed costs do not vary depending on the TV package that customers choose.

Guidance
We would estimate licences, CPE and fixed costs by taking the amounts reported in the most recent annual BT TV management accounts and dividing by the total TV subscribers during the period covered by the accounts.

6.233 Similar to our treatment of revenues as explained in paragraph 6.103, we would adjust ongoing TV costs to take into account those subscribers that cease taking BT TV but continue to take broadband from BT.

Guidance
We would adjust ongoing TV costs downwards to account for those triple-play superfast broadband customers who cease taking BT TV before the 5-year superfast broadband ACL has concluded. We would reduce ongoing TV costs by [✂] per cent after the first [✂] months of the ACL (i.e. assume that [✂] per cent of triple-play customers continue to receive BT TV for the remaining [✂] months of the ACL). We would revisit this figure in the event that more accurate evidence was available.

Treatment of BT Sport

Introduction

6.234 BT currently bundles access to its suite of BT Sport channels[515] with its superfast and standard broadband packages. As explained in Section 5, we consider that the costs and revenues associated with these channels should be taken into account when assessing the VULA margin.

6.235 In this sub-section, we provide guidance on how we would treat BT Sport when carrying out such an assessment. This guidance reflects the way in which BT Sport is currently distributed. Accordingly, we first provide a brief factual description of BT Sport.

[514] BT response to question 3 of the s.26 notice of 1 October 2013.
[515] BT Sport 1, BT Sport 2 and ESPN. These channels are available in both standard definition (‘SD’) and high definition (‘HD’).

6.236 BT has acquired the rights to broadcast a number of sporting events including 38 Football Association Premier League ('FAPL') matches, Football Association Cup matches, Aviva Premiership rugby, WTA women's tennis, NBA basketball, MotoGP and UFC World Championships. The sports broadcast by BT (and the associated costs and revenues) are likely to change over the period covered by this market review. In particular, BT has acquired the rights to live Champions League and Europa League matches for three seasons from 2015/16 for just under £900m (the 'UEFA rights'). Moreover we expect the rights to live FAPL matches for the 2016/17 season onwards to be sold in early 2015.

6.237 BT Sport is distributed in the following ways.[516]

- **Satellite distribution:** BT Sport on the Sky TV platform in SD is available for free to any BT Consumer standard and superfast broadband subscriber. BT Consumer broadband customers wishing to obtain the channels on Sky TV in HD currently pay BT £3/month. BT Sport is available to Plusnet standard and superfast broadband subscribers for £5.99/month in SD or £7.49/month in HD. Sky TV subscribers that do not purchase broadband from either BT or Plusnet pay £13.50/month in SD or £16.50/month in HD for access to the BT Sport channels.[517] Note that BT retails BT Sport directly to customers on the Sky TV platform, not to Sky itself.

- **Cable distribution:** BT wholesales BT Sport content to Virgin, which in turn resells the channels (in HD) as part of its highest-tier TV XL package or as a premium standalone pay TV product for £15/month for those on lower-tier TV services.

- **BT TV:** BT TV customers that take superfast broadband obtain BT Sport in SD for no additional charge. BT Sport in HD costs an additional £3/month. Prior to February 2014, some BT Sport channels were available via DTT to some BT TV subscribers using older set-top boxes without requiring a superfast broadband subscription.[518] This offer has since been withdrawn to new customers.[519] BT noted that, since May 2014, BT Sport was made available to BT TV subscribers with BT's standard broadband via copper multicast.[520]

- **Distribution online or via an app:** BT Consumer broadband customers (both standard and superfast) can access BT Sport online or via the BT Sport app. Customers who pay for BT Sport on the Sky TV satellite platform can also access

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[516] Correct as of 15 December 2014.
[517] From 1 October 2014, BT raised BT Sport subscription prices from £12/month for BT Sport in SD and £15/month for BT Sport in HD to £13.50/month and £16.50/month, respectively (http://assets.bt.com/v1/btmail/_2014/Sport/Espresso/2014-07-21/cell7/bt_espresso_cell7_online.html).
[518] Namely BT Sport 1 and BT Sport 2 in SD.
[519] BT, *How to get BT Sport with BT,* http://bt.custhelp.com/app/answers/detail/a_id/43272/related/1/session/L2F2LzEvdGltZS8xMzkyMTM4NTgxL3NpZC8xZmttcUdNbA%3D%3D.
[520] Paragraph 2.72 (a), *BT Comments on responses to the 2014 VULA Margin Consultation*, 23 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf.

BT Sport online and via the app, although Plusnet subscribers and Virgin subscribers cannot.[521]

6.238 In order to obtain BT Sport for 'free' for the first time on the Sky TV platform or on BT TV, BT Consumer broadband customers are required to contract with BT for at least 12 months.[522] However, access online or via the app does not require customers to re-contract with BT.[523]

Overview

6.239 In this section, we first explain the methodology we will use to incorporate BT Sport in the VULA margin assessment. In particular, we consider:

- first, what conceptual approach should be used when assessing the provision of BT Sport to broadband customers;
- second, some key features of the methodology we would use to calculate the net costs of BT Sport, in particular:
  - o whether to reduce the net costs of BT Sport to reflect overall losses; and
  - o the timing of cost recovery; and
- third, the methodology we would use to allocate the net costs of BT Sport between standard and superfast broadband subscribers.

6.240 We then set out our detailed guidance on how we would calculate the specific cost and revenue items of BT Sport and how we would allocate those net costs between standard and superfast broadband subscribers.

Conceptual approach

Proposals as set out in the 2014 VULA Margin Consultation

6.241 In the 2014 VULA Margin Consultation, we concluded that we would likely use the net costs of BT Sport when assessing BT's costs of providing BT Sport to its broadband customers.[524] We would likely calculate the net costs as the total costs of BT Sport minus direct revenues from BT Sport (such as wholesale payments from Virgin and revenues from paying subscribers on the Sky TV platform). The net costs

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[521] BT, *How can I watch BT Sport?*, http://www.plus.net/tv/btsport/.

[522] If subscribers on the Sky TV platform wish to retain the BT Sport subscription once they are outside a minimum broadband contract term, they can re-contract BT broadband for further 12 months in order to access BT Sport at the discounted rate of £0/month. If they do not re-contract, then BT Sport in SD is available at the discounted rate of £6.75/month. There is no requirement for subscribers on the BT TV platform to re-contract BT broadband in order to retain their BT Sport subscription at the discounted rate of £0/month.

[523] See BT Sport terms and conditions, paragraphs 53 and 54, http://www.productsandservices.bt.com/consumerProducts/displayTopic.do?topicId=35950&pageTitle=Sport+Terms+and+Conditions.

[524] Paragraph 6.132, Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

would reflect the amount that needs to be recovered from subscriptions to broadband packages if BT is to cover the total costs of BT Sport.

Responses to the 2014 VULA Margin Consultation

TalkTalk and confidential respondent [✂]

6.242 TalkTalk and confidential respondent [✂] agreed with Ofcom's proposal to use the net costs to derive the relevant costs of BT Sport.[525]

Sky

6.243 Sky argued that the net costs approach is appropriate where rivals are able to spend a similar amount to BT on "*alternative products that appeal to similar numbers on groups of end users*" even if "*they are not able to access BT Sport*".[526]

6.244 However, Sky argued that Ofcom's guidance should not be set in stone and should be based on a different approach if circumstances change.[527] Sky argued that the rationale for using the net costs approach could be weaker in the future[528] should BT Sport become a "*key determinant*" of the choice of superfast broadband provider for a significant number of consumers and when "*competing retailers do not have other products available to them which appeal to this group of customers*".[529] In this case, according to Sky, either the wholesale price charged to other operators, or the notional input price of BT Sport based on a standalone retail price should be used when assessing the VULA margin.[530]

BT

6.245 BT disagreed with the net costs approach. BT commissioned Compass Lexecon to consider the economic effects of including the costs of BT Sport in the margin squeeze test. BT pointed out that the Compass Lexecon report concluded that the cost-based approach may result in "*excess margin*" for BT's competitors, such that BT would be overly constrained in its pricing of fibre broadband bundles.[531] In the report submitted as Annex C to BT's response to the 2014 VULA Margin Consultation and a further submission, Compass Lexecon identified four main issues with the cost-based approach.

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[525] Paragraphs 1.19 and 4.3, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf; [✂].
[526] Paragraph 6.5, *Sky Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
[527] Letter from Mark Shurmer (BT) to David Clarkson (Ofcom) dated 29 October 2014.
[528] Paragraph 6.2, *Sky Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
[529] Paragraph 6.6, Ibid.
[530] Paragraphs 6.9 and 6.10, Ibid.
[531] Paragraphs 7.14 and 7.15, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

- Compass Lexecon argued that Ofcom's economic objective is to prevent anti-competitive exclusion.[532] While the cost-based test could assess profit sacrifice[533], it may not necessarily imply actual or potential competitors are excluded given the presence of product differentiation, where rivals enjoy their own advantages and/or switching costs.[534] Therefore, in such circumstances, exclusion needs to be assessed separately.[535]

- Compass Lexecon suggested that BT's offer of BT Sport for free to its broadband subscribers could be considered akin to offering a voucher. It argued that BT's rivals would not need to provide BT Sport to compete with BT.[536] Compass Lexecon argued that since sports rights are supplied on an exclusive basis (i.e. they cannot be acquired by both BT and its rivals at the same time), there is no inherent reason why the costs of BT's rivals should mirror the costs of BT Sport.[537] Compass Lexecon concluded that BT's rivals need only to offer a price cut equal to consumers' valuation of BT Sport or offer a greater value in some other way.[538]

- Even if rivals were not able to match BT's offer with respect to some groups of customers, Compass Lexecon argued that exclusion or marginalisation could only arise if other superfast broadband retailers are unable to reach a minimum efficient scale ('MES').[539] Compass Lexecon argued that consumers clearly have

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[532] Paragraphs 21 and 22, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf.
[533] Paragraphs 29. 31, and 85, Ibid.
[534] Paragraph 35, Ibid; Paragraph 22, BT, *Compass Lexecon additional submission on the treatment of BT Sport,* 7 November 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group-Compass_Lexecon_additional_submission_on_the_treatment_of_BT_Sport.pdf.
[535] Paragraph 36, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf.
[536] Paragraph 15, BT, *Compass Lexecon additional submission on the treatment of BT Sport,* 7 November 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group-Compass_Lexecon_additional_submission_on_the_treatment_of_BT_Sport.pdf.
[537] Paragraph 20, Ibid
[538] Paragraph 15, Ibid
[539] Paragraph 7.13, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; paragraph 48, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf.

heterogeneous valuations for sports content.[540] In the case where BT's rivals may target or reposition themselves to target customers that have zero or low valuation of BT Sport in order to achieve MES, a cost-based test may overstate the amount of VULA margin that BT's rivals need to remain competitive.[541]

- Compass Lexecon concluded that only a limited share of BT broadband users is likely to attach high value to BT Sport (indeed, it considered that the current total costs of BT Sport exceed its current value to final consumers).[542] Therefore, it argued, operators would be able to reach MES even if a low amount (or even zero) is attributed to BT Sport in the VULA margin assessment.[543]

6.246 BT and Compass Lexecon argued that the minimum VULA margin should allow BT to recover whichever is the lower of (i) the cost of BT Sport or (ii) the value of BT Sport to those customers that contribute to the MES of BT's rivals.[544] Compass Lexecon went on to explain the practical implementation of the value-based test.[545]

TalkTalk comments on BT's response

6.247 TalkTalk disagreed with BT's and Compass Lexecon's argument that profit sacrifice by BT would not lead to exclusion in the retail superfast broadband market. TalkTalk argued [✄], profit sacrifice will lead to exclusion in the medium term.[546]

6.248 The Frontier Economics report submitted by TalkTalk argued that it is unlikely that the costs of sports rights overstate consumers' valuation of those rights.[547] The report

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[540] Paragraph 105, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf.

[541] Paragraph 106, 110, and 112, Ibid.

[542] Paragraph 103 and 104, Ibid; Paragraph 26, 27, 29, 32, and 44, BT, *Compass Lexecon additional submission on the treatment of BT Sport,* 7 November 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group-Compass_Lexecon_additional_submission_on_the_treatment_of_BT_Sport.pdf.

[543] Based on data on the actual take-up of BT Sport offer among BT's broadband customers as well as the results of the survey commissioned by TalkTalk in its response to the 2014 VULA Margin Consultation (paragraph 56 and 57, BT, *Compass Lexecon additional submission on the treatment of BT Sport, 7 November 2014*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group-Compass_Lexecon_additional_submission_on_the_treatment_of_BT_Sport.pdf).

[544] Paragraph 7.13, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; paragraphs 98 and 99, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf.

[545] Paragraphs 51, 55, 66, 72-87, BT, *Compass Lexecon additional submission on the treatment of BT Sport,* 7 November 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group-Compass_Lexecon_additional_submission_on_the_treatment_of_BT_Sport.pdf.

[546] Paragraphs 3.14 and 3.15, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.

also argued that Compass Lexecon understated the number of customers that need to be contestable to prevent a distortion in competition. It argued that BT's main rivals target different segments of the retail market and may not be able to perfectly target the individual customers with low valuations for BT Sport.[548] Therefore an appropriate approach would be to allow such rivals to compete for all segments of the retail market.[549]

Ofcom's analysis

6.249 Based on consultation responses, below we consider three distinct conceptual approaches to including BT Sport within the VULA margin assessment:

- the net costs of BT Sport (as proposed in the 2014 VULA Margin Consultation);
- the value of BT Sport to those final consumers necessary for rivals to attain MES (as advocated by BT); and
- the wholesale price or a notional input price of BT Sport (as advocated by Sky, should circumstances change).

Net costs is the most appropriate approach

6.250 We consider that a net costs approach is the most appropriate approach to including BT Sport in the VULA margin assessment.

6.251 Use of a net costs approach implies that the VULA margin is sufficient to allow the part of the total BT Sport costs that is not recovered from other revenue sources to be recovered from BT's broadband subscribers. We consider that this is reasonable given that, as set out in Annex 1, BT has developed BT Sport to support its broadband business and has chosen to price and distribute the channel to promote broadband take-up. The net costs approach implicitly tests whether the margins earned across the different forms of distribution of BT Sport in aggregate cover the costs of BT Sport. Therefore, the net costs approach is consistent with an EEO test because an EEO that wished to profitably make the same offer to its broadband customers would have to incur the net costs of BT Sport.

6.252 Use of a net costs approach is also consistent with assessing other parameters by reference to cost, including 'free' elements of BT's superfast broadband packages, such as Wi-Fi.

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[547] Based on BT's public statements and since BT would presumably not have acquired content if it were not profitable to do so. Frontier also argued that in order to rely on a claim that the value of BT Sport to customers was less than the costs, BT would need to announce publicly that BT Sport is loss making. Paragraph 3.7, *TalkTalk October 2014 Frontier Economics report*, 22 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Frontier_Economics_report_on_BTs_response.pdf. TalkTalk also argued that the Ipsos MORI survey (which Compass Lexecon referred to) was not well-designed to elicit precise customers' valuations for BT Sport (paragraph 1.20, TalkTalk, *Response on further issues*, 28 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Response_on_further_issues.pdf).

[548] Paragraph 3.11, *TalkTalk October 2014 Frontier Economics report*, 22 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Frontier_Economics_report_on_BTs_response.pdf.

[549] Paragraph 3.12, Ibid.

6.253 BT raised a number of issues in relation to setting the VULA margin control on the basis of the net costs of BT Sport, by arguing that:

- the net costs approach does not necessarily imply exclusion, which would only occur if BT's rivals are denied the ability to reach MES;
- BT's rivals could compete against the BT Sport offer by offering a price cut of equivalent value and they could do so by incurring costs that are lower from those incurred by BT; and
- the net costs approach is likely to result in "*excess margin*" for BT's rivals.

6.254 We consider that these points essentially relate to the claimed merits of BT's preferred approach. Therefore, we considered BT's points together with its suggested approach below.

Use of the value of BT Sport to consumers contributing to MES

6.255 Rather than assessing the position of an EEO (i.e. a firm that is identical to BT), BT analysed firms that were differentiated from BT. There are two key elements to BT's arguments, which we discuss in turn below, namely that:

- the minimum VULA margin should simply be sufficient to allow other operators to attain MES; and
- the VULA margin assessment should be based on whichever is the lower of (i) the value of BT Sport to final consumers that contribute to the MES of BT's rivals and (ii) the net cost of BT Sport.

6.256 We disagree with BT that the minimum VULA margin should simply be sufficient to allow BT's rivals to compete for those customers that they need to acquire to attain MES.

- BT's proposal would allow it to effectively reserve for itself those broadband customers beyond the minimum needed for its rivals to attain MES. BT could do so by using its dominant position in the supply of WLA to set a low VULA margin. Specifically, it could set a VULA margin at a level that would not even allow BT (i.e. an EEO) to compete profitably for these customers.[550] We do not accept this as a point of principle. In our view, this is inconsistent with our regulatory objective of ensuring that BT does not distort competition.
- BT also suggested that its rivals are likely to attain MES by attracting those customers that attach zero or low value to BT Sport. This implies that the majority of customers that attach a high value to premium sports content would not be needed by BT's rivals to attain MES and therefore (on Compass Lexecon's reasoning) the VULA margin could be insufficient to allow other operators to compete for them. However, BT's main rivals currently offer premium sports content within their triple-play broadband packages and thus are currently competing for customers that attach a higher value to sports content.

[550] It follows from this that an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) would also be unable to profitably match BT's retail superfast broadband offers.

- We also note that in practice there is unlikely to be a clear MES, below which a broadband operator is an ineffective competitor and above which all operators are equally effective competitors. Rather, the impact of an operator's scale on its ability to compete is likely to be more gradated. Further, even if the rival was able to match BT's offer in respect of enough customers to reach MES, the ability to match BT's offer may not translate into actually winning the necessary share of those customers.[551]

6.257 We now consider BT's argument that the VULA margin assessment should be based on whichever is the lower of (i) the value of BT Sport to final consumers and (ii) the net cost of BT Sport. Our assessment of this point is based on the following arguments:

- first, the consumer value approach may have perverse impacts on BT's incentives to improve the attractiveness of BT Sport;
- second, in certain circumstances the value-based test could allow BT to recover any costs it incurs on BT Sport from the wholesale charges that BT's rivals pay for VULA;
- third, allowing other operators sufficient margin to make a price cut equal to the consumer value of BT Sport may not negate the competitive advantage BT enjoys as a result of including BT Sport in its broadband bundles; and
- fourth, the approach suggested by BT is internally inconsistent.

6.258 First, and in general, we consider that a test that is only based on consumers' valuations could result in perverse outcomes. It may lead to outcomes that are inconsistent with encouraging investment and competition that creates additional value to final consumers. Further, the consumer-value based test implies that the entire value of BT's investment in premium sports content to superfast broadband consumers should be reflected in the VULA margin.[552]

- Under a cost-based test, BT could provide an offer that creates additional value to final consumers, beyond the costs that it paid, that would enable it to gain a competitive advantage over its rivals. However, under a consumer-value based test, BT would be required to either (i) give away its competitive advantage by adjusting downwards the VULA price; or (ii) extract all of the additional value that

[551] To illustrate, suppose that a rival needs to capture X per cent of BT's base in order to reach MES. Suppose that a rival competes for that customer base against BT by providing an identical product. Given these customers can now choose between two identical products, only a fraction of that X per cent will switch to BT's rival, and a remainder of X per cent will remain with BT. It then follows that a rival, in order to acquire X per cent of BT's customer base, should be able to match the BT Sport offer for a larger than X per cent of BT's customer base.

[552] As explained above, it is not appropriate for the minimum VULA margin to simply be sufficient to allow BT's rivals to compete for those customers that they need to acquire to attain MES. Accordingly, if we were to adopt a consumer-value based test, we consider that we would need to assess the value of BT Sport to BT's superfast broadband base as a whole.

consumers enjoy by raising the retail prices of its superfast broadband packages.[553]

- The converse would occur were BT to acquire costly content to which consumers attach little value. In these circumstances, in a competitive market BT would be at a disadvantage compared to its competitors.[554] However, this would not be the case under the consumer value-based test. BT would be able to set a very low VULA margin (and thus a low retail price) that is insufficient to cover the costs of BT Sport incurred by BT.

6.259 Second, we are concerned about the possibility of gaming by BT. In particular, BT could erroneously claim that the value of BT Sport to consumers is lower than the cost of BT Sport (particularly as we may find it challenging to evaluate whether or not this is the case). In these circumstances the value-based test could allow BT to recover any costs it incurs on BT Sport from the wholesale charges that BT's rivals pay for the VULA input.[555]

6.260 Third, we also disagree with Compass Lexecon's premise that BT's broadband rivals could match the BT Sport offer by offering a price cut equivalent to the value of BT Sport to final consumers. We consider that the BT Sport offer and how it is deployed is likely to give BT a range of competitive advantages in seeking to retain and attract broadband customers (e.g. in respect of marketing, targeting BT's broadband offers and supporting or developing BT's general market positioning) and potentially influencing how competition plays out between BT and its rivals. These competitive advantages may not be adequately matched with a simple price cut equivalent to the value placed on BT Sport by those customers that currently take the channel. This may be seen from the following examples.

- As TalkTalk noted, an operator may not have perfect knowledge about customer preferences for sports content, and it may not be able to perfectly target customers by offering them a price cut equivalent to each customer's individual valuations of BT Sport, even if it had such knowledge.

- There may be synergies between the BT Sport offer and BT's wider retail activities (e.g. BT Sport might yield a significant marketing benefit). These might

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[553] To illustrate, suppose BT increases the value of its superfast broadband offers to consumers by £5. Under the consumer-value based approach to assessing the VULA margin, it would need to increase that margin by £5. One option would be to reduce the wholesale price of VULA by £5, thereby allowing its rivals to enjoy the benefits of its improvement to its superfast broadband packages. Alternatively, BT could raise its retail superfast broadband prices by £5, meaning that the full value of that improvement is extracted from consumers via a higher price. As a result, consumers would not benefit from that improvement.

[554] We discuss from paragraph 6.280 whether to write-off some of the net costs of BT Sport to reflect overall future losses.

[555] To illustrate, suppose the retail price of a superfast broadband bundle were £15. Suppose the cost of supplying BT Sport and its true value to consumers were £10. However, suppose that Ofcom incorrectly believes that consumers only value this content at £8. Assuming (for simplicity) that there are no other costs, under a value-based approach the minimum VULA margin would need to be £8 (i.e. reflecting our incorrect view of the consumer value). Accordingly, BT could set a wholesale VULA price of £7 (i.e. £15 minus £8). In contrast, under a cost-based approach the minimum VULA margin would be £10 and thus BT could set a wholesale VULA price of £5. Comparing these two approaches highlights that under BT's value-based approach, BT could recover the £2 of the costs of BT Sport from its competitors via a higher wholesale VULA price.

not be detected by examining customer valuations, and thus a retail price cut equal to those valuations would not allow another operator to offset the impact of BT including BT Sport in its retail bundles.

- To the extent that BT strengthens its market position in broadband through its sports offer, BT Sport may generate strategic benefits for BT not captured by customer valuation.

6.261 Finally, we consider that BT's argument that the test for exclusion should be based on the lower of costs or the value of BT Sport is internally inconsistent. If, as BT has argued, consumer value is the relevant parameter for assessing whether operators can effectively compete against BT, then it is unclear why BT also considers costs to be relevant in an *ex ante* context.

6.262 For the reasons outlined above, we do not consider that the test as proposed by BT is appropriate to achieve and be consistent with our regulatory aim. Our preferred approach, following standard practice in margin assessments, is to assess the margin by reference to the costs of BT Sport.

6.263 We also disagree with BT's argument that the net costs approach may result in "*excess margin*" for BT's rivals. BT argued that the approach proposed in the 2014 VULA Margin Consultation could:

- result in higher prices for some of BT's customers;
- lead to higher overall superfast broadband prices as BT cannot respond to competition though retail price reductions (without reducing the wholesale VULA price by a corresponding amount); and/or
- allow "*cream-skimming*" by BT's rivals who could win those BT customers that attach little value to BT Sport.[556]

6.264 We do not consider that the factors identified by BT should lead us to adopt its proposed approach to assessing the VULA margin.

- We consider that the first and second adverse consequences identified by BT (higher retail prices to reflect its retail costs) are reasonable and are not disproportionate to our regulatory aim.[557] The alternative is allowing BT to set a VULA margin that means even BT would be unable to profitably match its retail prices. We consider that such an outcome is likely to distort competition. Moreover, an alternative means for BT to increase the VULA margin without raising retail prices to consumers is to reduce its wholesale VULA price. In any event, this point is not specific to BT Sport. Any control on the VULA margin could, were it to 'bite', result in higher retail prices, at least from BT (competition between other operators would still act to constrain the prices they set) and/or

[556] It also argued that BT's incentives to invest in pay TV content would be weakened (paragraphs 13-14, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf). We discuss the wider impacts on TV and content acquisition in Section 7.
[557] We consider whether to adjust the net costs of BT Sport to reflect overall losses in paragraphs 6.280-6.289.

lower wholesale VULA prices. We consider that such a control is appropriate for the reasons set out in Section 3.

- We consider that the third consequence identified by BT is a consequence of its commercial decision to charge the same retail price to consumers regardless of whether or not they take BT Sport. It is this strategy that creates the risk of "*cream-skimming*" and it could be avoided were BT to raise prices to those consumers that take BT Sport. Moreover, in practice, BT's rivals do compete for customers that value premium sports content.

Inferring the costs from wholesale and retail price of BT Sport

6.265 We have discussed this approach in detail in the 2014 VULA Margin Consultation.[558] We understand that Sky is arguing in response that, were BT to be found to have SMP in the provision of premium sport channels, it would be appropriate to use the wholesale price of BT Sport (or an estimate of that wholesale price) rather than the net costs. In these circumstances, we consider that there would be merit in the approach proposed by Sky. Such an approach would be consistent with our treatment of VULA itself. Our VULA margin control uses the wholesale VULA price, rather than the underlying cost to BT of providing this service.

6.266 However, Sky's argument relates to a potential future development and we do not believe that the circumstances described by Sky apply at present. Our proposal to use the net costs of BT Sport assumes that BT continues to supply these channels in a similar fashion to the way it does at present. If BT were to make a material change to the way it distributes its channels, we may need to reconsider our approach.

Conclusion on the use of a net costs approach

6.267 We conclude that unless there is a material change in the circumstances around the supply of BT Sport, we would use the net costs approach to infer the costs of the provision of BT Sport to broadband customers.

The approach to calculating the net costs of BT Sport

Proposals as set out in the 2014 VULA Margin Consultation

6.268 In the 2014 VULA Margin Consultation, we considered two high level aspects of the net cost calculation in relation to the timing of the recovery of sports rights costs and the treatment of sunk costs. Our provisional conclusion in the 2014 VULA Margin Consultation was to:

- make no adjustment to reflect the possibility that BT may incur overall losses; and

- spread the costs of sports rights evenly over the duration of the relevant rights agreement and spread the launch costs over three years.

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[558] Paragraphs 6.126-6.128, Ofcom, *Fixed Access Market Reviews: Approach to the VULA Margin*, 19 June 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/summary/VULA_Margin_Consultation.pdf.

Responses to the 2014 VULA Margin Consultation

TalkTalk

6.269 TalkTalk argued that if BT Sport is a loss-making business, Ofcom should make no adjustments to the net costs to reflect for this inefficiency. TalkTalk argued that under the EEO test, an operator is assumed to be equally inefficient as BT and incurs losses if BT does. TalkTalk considered that BT's losses are in this sense "*replicable*". They argued that an adjustment to the costs to exclude such losses could only be justified if BT's rivals were not subject to the same risk of incurring losses.[559]

6.270 The October 2014 Frontier Economics report submitted by TalkTalk argued that BT would need to announce publicly that BT Sport is loss making, otherwise such an assertion should not be relied upon. This report also considered it unlikely that the costs of sports rights overstate consumers' valuation of these rights since BT would be expected to make a profit on the acquisition of content (or otherwise it would not have acquired it) and, according to BT's public statements, its financial outlook remained unchanged following the FAPL and the UEFA rights auctions. [560]

6.271 TalkTalk also agreed with Ofcom's proposal to spread the costs of rights over the duration of the rights agreement.[561] TalkTalk noted that it is appropriate to assume that the channel launch costs are recovered over the first three years.[562] It considered that spreading the costs of rights over a longer period would only be justifiable in light of clear evidence of future super-normal profits or a significant exit value for BT's investment in sports channels.[563] TalkTalk then argued that neither future profits nor a significant exit value are likely or plausible because the rights costs are likely to rise in the future, regulation would prevent BT from earning supernormal profits and because there is little economic or brand value of the channels once rights expire, as demonstrated by the exit value of Setanta and ESPN.[564] TalkTalk considered that no clear evidence has been provided by BT to suggest otherwise.[565] TalkTalk disagreed that BT Sport should be treated as a long term strategic investment in a standalone sports channel.[566] It argued that, in light of the evidence on BT's strategy in relation to BT Sport, BT Sport is primarily designed to increase broadband take-up and retention.[567] TalkTalk also noted that if sports rights were amortised over a longer period, the margin test would need to rely on "*wholly speculative and arbitrary assumptions.*" Finally, TalkTalk noted that spreading

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[559] Paragraph 4.26, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.
[560] Paragraph 3.7, *TalkTalk October 2014 Frontier Economics report*, 22 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Frontier_Economics_report_on_BTs_response.pdf.
[561] Paragraph 4.3, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[562] Paragraph 4.21, Ibid.
[563] Paragraph 4.16, Ibid.
[564] Paragraph 4.17, Ibid; paragraph 4.27, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.
[565] Paragraph 4.19, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[566] Paragraph 4.9, Ibid.
[567] Paragraph 4.10, Ibid.

the costs of rights over a longer period would be inconsistent with how BT treats other costs and how it amortises BT Sport in its own accounts.[568]

Sky

6.272 Sky also agreed with Ofcom's proposal to amortise the sports rights over the duration of the contract because this reflects the "*principle that assets should be expensed over their useful economic lives*".[569] Sky argued that the potential rationale for spreading rights into the future would be that BT was an entrant into pay TV services.[570] However, Sky argued that BT was not acting as a normal new entrant into pay TV services [✂].[571] In addition, Sky considered that spreading the rights costs into the future is likely to result in "*an arbitrary allocation*" of costs and agreed with Ofcom's position that such an approach would be subject to errors and potential gaming.[572]

BT

6.273 BT disagreed with Ofcom's approach, arguing that we failed to recognise that BT is a new entrant in the provision of sports content and that the costs of BT Sport should be considered in this context. It argued that, to the extent BT Sport may losses in the current market review period, these losses are being driven by BT's entry into a new market rather than by BT's activities in the provision of superfast broadband bundles.[573] Compass Lexecon argued that the current total costs of providing the BT Sport channels are likely to exceed the total value placed on it by customers [✂].[574] BT argued that the inclusion of BT Sport in broadband bundles is simply the approach that minimises BT's losses[575] and that this should not be viewed as an ongoing cost in providing superfast broadband bundles.[576] BT considered that treating the costs of BT Sport on a static and short term basis will affect "*BT in its (already limited) attempts to compete against Sky and other CPs…creating a further distortion in related markets.*"[577] It also added that Ofcom had failed to consider whether these proposed constraints were a proportionate response to addressing competition issues in the provision of superfast broadband services.[578]

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[568] Paragraph 4.19, Ibid.
[569] Paragraph 7.2, *Sky Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
[570] Paragraph 7.5, Ibid.
[571] [✂]
[572] Paragraph 7.4, Ibid
[573] Paragraph 7.23(a), *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[574] Paragraphs 103-104, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf; paragraphs 26, 27, 29, 32, and 44, BT, *Compass Lexecon additional submission on the treatment of BT Sport, 7 November 2014*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group-Compass_Lexecon_additional_submission_on_the_treatment_of_BT_Sport.pdf.
[575] Paragraph 7.23(b), *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[576] Paragraph 7.24, Ibid.
[577] Paragraph 7.26, Ibid.
[578] Paragraphs 7.26 and 7.27, Ibid.

6.274 BT considered spreading the rights costs evenly over the contract duration to be inappropriate. It argued that BT Sport is in a "*start-up*" phase and that BT would not expect to recover costs evenly over this period. It also argued that the value of the content over the period of a sports contract is not likely to be equal in each period, arguing that i) there are periods in the contract where no content is shown which will affect revenues; and that ii) within a contract the relative attractiveness of content will vary (e.g. later rounds in a sports event may be more attractive than earlier rounds). It considered that by not taking this volatility into account we may overly constrain BT's superfast broadband pricing.[579]

6.275 BT also considered that it is unrealistic to assume that the costs and revenues associated with BT Sport (which affect the net costs) will stay constant over the average expected customer lifetime of five years. BT argued that BT may change the terms on which BT Sport is supplied which would affect its revenues, and also that it has no guarantee that it will continue to have the same content after the current contracts expire. [580] In relation to this, BT provided evidence demonstrating that rights costs in 2014 have increased by [✂] per cent compared to their costs in 2012.[581]

6.276 [✂].[582] BT argued that it bid for FAPL rights [✂]. BT had anticipated pre-auction that it [✂].[583] In October 2013 (shortly after the launch of BT's FAPL coverage), BT forecast that a channel based on the minority FAPL rights would have a lifetime NPV of [✂]. However, if [✂].

Overview of our analysis

6.277 As with other costs and revenues, we consider that it is appropriate to adopt a static approach to assessing the net costs of BT Sport. In other words, we will calculate the net costs of BT Sport that are relevant to the period under assessment. We will use this to calculate the ongoing monthly margin and consider whether this is sufficient to cover the upfront net costs (as described in paragraph 6.16). We recognise that both costs and revenues of BT Sport may be subject to certain changes, as BT pointed out in its response. However, as set out in paragraph 6.20, we consider that it is reasonable to assume that the overall margin BT earns on its superfast broadband package remains constant over the ACL since rises or falls in costs are ultimately passed on to consumers through higher or lower retail prices.

6.278 Within this framework, there are two high level considerations relevant to how we calculate the net costs of BT Sport.

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[579] Paragraph 7.29(a), Ibid.

[580] Paragraph 7.29(b), Ibid.

[581] Page 8, slide pack presented at meeting between BT and Ofcom on 20 October 2014.

[582] Pages 4 and 16, BT submission on the relevance of questions 1-4 submitted in response to the s.135 notice of 10 November 2014. Similarly, as set out in paragraph 6.245, Compass Lexecon advanced the related argument that the current total costs of BT Sport exceed its current value to final consumers.

[583] In one pre-auction presentation BT indicated a [✂] NPV for BT Group of [✂] if it was to end up with [✂] FAPL packs ([✂]) (Page 8, *BT Group plc – Project Thomas, Gavin Patterson, CEO BT Retail, 31st May 2012,* submitted as Annex 4-03 in BT response to questions 4 and 5c of the s.26 notice of 5 July 2013). Earlier, BT indicated [✂] if it won packs [✂] (Page 8, *Project Thomas Presentation to Sir Michael Rake, 24th May 2012*, submitted as Annex 1A.05 in BT response to question 1 of the s.26 notice of 18 June 2013). In the event, BT won packs A and G, [✂] (26 matches containing 13 first picks). Pack G had only 12 matches ([✂]) but includes 5 first picks ([✂]). BT indicated that [✂] (Page 7, Ibid.)

- **First, whether BT incurs overall losses:** this refers to a scenario where the BT Sport investment is loss making in aggregate irrespective of how long a period we consider, implying that a part of its costs would never be recovered. This would raise the question of whether those losses should be 'written down' i.e. never incorporated into the VULA margin.

- **Second, the timing of cost recovery:** once the total costs that we attribute to BT Sport are decided, we then need to decide on the specific profile of the recovery of these costs over time. For example, fewer costs could be recovered through the VULA margin in the short term, but more costs in the future. This might be justified if the profitability of BT Sport were expected to increase or if certain cost items are 'lumpy' i.e. there is a single item of cost incurred at a specific time.

6.279 These two considerations raise different analytical issues and have different consequences for the VULA margin. We thus evaluate them separately below. In particular, if there were overall losses it might be appropriate to reduce the costs attributed to BT Sport and thus the VULA margin in every time period. In contrast, changing the profile of cost recovery might involve a lower VULA margin in the short term but a higher VULA margin in the longer term.

Assessment of overall losses

6.280 In the 2014 VULA Margin Consultation, we stated that we were unlikely to make any adjustments to the net cost calculations to reflect the possibility that BT may not fully recover any sunk costs of sports rights.[584]

6.281 We have carefully considered [✂] we have decided not to make an adjustment to BT Sport costs to reflect any overall losses for the reasons set out below.

6.282 The primary purpose of the VULA margin assessment is to ensure that BT recovers its costs of providing superfast broadband (subject to certain adjustments) including, where relevant, its costs from bundling sports content with superfast broadband. If such costs are not recovered there is a concern that the VULA margin could be insufficient to allow effective retail competition in superfast broadband. Arguments to the effect that categories of costs should be written down need to be treated with caution.

6.283 BT stated that [✂]. Acceptance of 'downside' risk is a normal feature of acquisitions in conditions of uncertainty. We also recognise that the potential for an 'upside' outcome exists. In a scenario where BT expects to earn more from sports rights than the cost of those rights, it would not be appropriate to expropriate that gain by imputing into our margin assessment a higher amount for sports rights than BT actually spent.[585] By the same token we do not think it appropriate to subtract any BT

[584] Paragraphs 6.143-6.146, Ofcom, *Fixed Access Market Reviews: Approach to the VULA Margin*, 19 June 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/summary/VULA_Margin_Consultation.pdf.

[585] [✂].

losses that may result from the auction [✂]. This general approach is consistent with the 'fair bet' principle that we use widely in other aspects of telecoms regulation.[586]

6.284 [✂].[587] [✂].[588] [✂].[589] [✂].[590] [✂].

6.285 [✂]. However, in practice BT Sport has acquired important additional rights in the form of the UEFA rights.

6.286 More generally, we would have reservations about relying on business plans and forecasts to make adjustments to BT's costs. It is very difficult for us to check and verify how well specified BT's plans and forecasts were, how well they captured the various strategic considerations that might arise from the sports rights acquisitions[591] and what BT's assessments of the risks of the various projections arising were. The high degree of uncertainty attested to by BT itself[592], the evolution of BT's plans over time and [✂] provide further reasons to be cautious in using business plan evidence to justify or calibrate a write-off to reflect overall losses.

6.287 For example, if a business plan were to show overall losses it is difficult to check or verify whether BT might have been able to reduce them by adopting a different strategy for pricing or distributing the BT Sport channel. [✂] BT's business planning documents from time to time do provide analyses of [✂][593], but it is difficult for us to evaluate the profitability impact if BT had adopted a different distribution strategy.

6.288 Finally, we note [✂] implies that we should assume that [✂]. [✂].

- In 2007/8-2009/10, Setanta paid [✂] for 46 matches, [✂]. Moreover, while BT has slightly fewer matches (38) than Setanta, Setanta's rights did not include any of the valuable first picks (BT has 18 first picks) – [✂].[594]

- Setanta bid [✂] for 2010/11-2012/13 for 23 matches, fewer than BT's 38 matches and not including any first picks, [✂]

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[586] Indeed, deducting an estimate of overall losses from the net cost of BT Sport allows BT to set a lower VULA margin and could result in a higher VULA price, to the disadvantage of BT's rivals.
[587] [✂]
[588] [✂]
[589] [✂]
[590] [✂]
[591] In preparing its UEFA Champions League bid, BT referred to [✂] (page 13, *TV Volume Analytics - Update 11 October 2013*, submitted as Annex 1-A8 in BT response to question 1a of the s.135 notice of 10 November 2014).
[592] BT stated, *"Long term forecasting is inherently uncertain across multiple rights periods and simplified assumptions were therefore made about the outcomes of future auctions…"* (page 3, BT submission on the relevance of questions 1-4 submitted in response to the s.135 notice of 10 November 2014).
[593] Before the FAPL auction, BT envisaged that if it won [✂] (page 8, *BT Group plc – Project Thomas, Gavin Patterson, CEO BT Retail, 31st May 2012*, submitted as Annex 4-03 in BT response to questions 4 and 5c of the s.26 notice of 5 July 2013). Following the auction, BT concluded that providing the channels as a "*free*" add-on to broadband was [✂], which was the model adopted. [✂] (page 6, *TV Volume Analytics - Update 11 October 2013*, submitted as Annex 1-A8 in BT response to question 1a of the s.135 notice of 10 November 2014).
[594] Estimates by [✂]. (Page 8, *Project Thomas Executive Steering Group 23rd May 2012*, submitted as Annex 1A.01in BT response to questions 4 and 5c of the s.26 notice of 5 July 2013.)

6.289 Overall, we do not consider that it is appropriate to make any write-off. The appropriate focus of our margin assessment is the actual cost and revenues incurred and we consider that there is a very high threshold before departing from that approach. We do not think it is appropriate to adjust costs to compensate BT for downside risks, especially where these were knowingly accepted. We do not consider that we can place strong weight on documentary records of BT's business plans to make cost adjustments, and in any case the evidence that has been submitted does not appear to strongly support BT's claims. [✂] implies that we should assume that the FAPL rights cost BT only [✂] ([✂] per season) which seems inconsistent with the outcomes of previous auctions. Accordingly, we are not adjusting BT Sport net costs to compensate BT for the overall future losses.

The timing of cost recovery

6.290 We now consider the timing of cost recovery. Our assessment is structured as follows:

- we first consider the overarching issues associated with adjusting the profile of cost recovery to reflect future costs and revenues; and
- we then consider two specific issues: the treatment of lumpy launch costs and the treatment of rising direct revenues.

Adjusting the profile of cost recovery to reflect future costs and revenues

6.291 When determining the net costs of BT Sport for the purposes of the VULA margin assessment, we considered whether it is appropriate to adjust the profile of cost recovery to reflect future costs and revenues associated with BT Sport. In particular, BT disagreed with our proposal in the 2014 VULA Margin Consultation to evenly spread the costs of sports rights over the duration of the relevant rights agreement, arguing that such treatment of costs on a "*static and short term basis*" would not recognise that BT is an entrant into the pay TV market that may incur initial losses. One way of changing the profile of cost recovery would be by assuming that, in the early years of the BT Sport business, sports rights are recovered over a longer period than the duration of the relevant contract.[595] Spreading the costs of sports rights over a longer period of time than the duration of these rights would reduce the costs BT needs to recover during the current rights agreement, but increase the costs BT needs to recover in future.

6.292 As a matter of principle, we accept that where a new business expects its profitability to increase in the future, it may be appropriate to defer the recovery of some costs. We have applied a similar principle in other decisions.[596] We have thus considered carefully whether such an approach would be appropriate in relation to BT Sport when assessing the VULA margin. In doing so, we have particularly focused on practicality and whether there is a risk of undermining the effectiveness of our VULA margin regulation. As set out below, we have two key concerns.

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[595] These deferred costs would instead be recovered in later years, on top of whatever other costs are incurred in those later years themselves.

[596] In the case of mobile call termination, Ofcom has applied an economic depreciation methodology, rather than accounting approaches. That economic depreciation methodology effectively allocates fewer costs to earlier years when volumes were lower, resulting in a smoother path of unit costs. Paragraphs A5.244-A5.245, Ofcom, *Mobile Call Termination*, 27 March 2007. http://stakeholders.ofcom.org.uk/binaries/consultations/mobile_call_term/statement/statement.pdf.

6.293 Our first concern is the risk that adjusting the profile of cost recovery to reflect future costs and revenues incorporates the rewards of BT's behaviour in the supply of VULA. As set out in Annex 1, there is extensive evidence suggesting that BT expected [✄] from its BT Sport investment to come from its broadband business. These additional margins of newly acquired and retained broadband customers may also improve the future profitability of BT Sport. BT's fibre broadband base is forecast to grow and it is reasonable to assume that some of that growth is attributable to the BT Sport offer.

6.294 There is a risk that forecast future growth in the profitability of BT's superfast broadband business reflects the outcome of a distortion of competition. As explained in Section 3, our concern is that BT could set a low VULA margin in the short term and, as a result, strengthen its position in the retail supply of superfast broadband in future. Thus, adjusting the profile of cost recovery to reduce the cost of BT Sport (and thus the minimum VULA margin) in the short term, in order to reflect increased future superfast broadband profitability, risks enabling precisely the behaviour that our VULA margin regulation is seeking to prevent.

6.295 We consider that, in practice, it is extremely difficult to distinguish between legitimate and illegitimate growth in the future profitability of BT's superfast broadband business. We therefore do not consider it appropriate to take such forecast growth into account in the VULA margin assessment by changing the profile of cost recovery for BT Sport. This is consistent with our overall approach to assessing the VULA margin. As explained in paragraphs 6.17 and 6.18, for the same reason we also assume that BT's fibre broadband monthly ongoing margin remains constant over the entire ACL.

6.296 Our second concern relates to the practicalities of adjusting the profile of cost recovery to reflect future costs and revenues. Specifying the profile of cost recovery in this way inherently requires relying on long term forecasts of how the costs and the revenues associated with BT Sport will change in future. This creates a significant risk of regulatory failure and may result in a number of perverse outcomes.

- One option would be to specify the cost recovery profile on the basis of profit forecasts in advance. This would involve Ofcom obtaining a full understanding of the value drivers for BT, determining a suitable forecast as part of this statement and then relying on that forecast until the next market review period. However, such a forecast is likely to be subject to considerable uncertainty. In particular, we would need to forecast the outcomes in the future sales of sports rights sales (in terms of what rights BT acquires and the price that it pays). We would also need to forecast BT's strategy and pricing in relation to BT Sport. Therefore, such an approach would be subject to significant risk of regulatory error, i.e. setting the minimum VULA margin too high or too low. To illustrate, consider the following points.
    - o Suppose we adjusted the net costs of BT Sport downward in year 1, but uplifted the net costs in year 2 based on a forecast of higher profitability in year 2 onwards. However, subsequently BT's profitability in year 2 onwards is expected to be lower than we originally forecast (e.g. because BT fails to win the sports rights that we forecast it would or does so at a significantly higher cost or because BT changes its commercial strategy).
    - o In these circumstances, applying the uplift to the net costs in year 2 that results from our original forecast would result in a minimum VULA margin in

that year which is too large and therefore places BT at a commercial disadvantage.[597]

  - o However, our forecast error also allowed BT to set a VULA margin in year 1 that was unduly low. That low VULA margin may give rise to the distortion of competition that our VULA margin regulation is seeking to prevent.

- This emphasises the difficulties in constructing a suitable forecast. In particular, BT has a regulatory incentive to argue that future revenues will be high in order to secure a low VULA margin in the short term. Those forecasts will depend on BT's business strategy and are thus susceptible to arguments from BT (acting on this regulatory incentive) that we have underestimated the effectiveness of its future business strategies. In the face of such opposition from BT, it is likely to be particularly difficult for Ofcom to judge whether a given forecast of BT's future business strategy is reasonable.

- An alternate option would be to specify the cost recovery profile on the basis of the most recent profit forecast provided by BT every time the VULA margin assessment is carried out.

  - o However, relying on BT's forecasts in this way is likely to expose the VULA margin controls to the risk of gaming. As explained above, it is unlikely to be straightforward for us to assess whether BT's forecasts for future growth in BT Sport profitability are reliable. There is the risk that BT errs upwards in its forecasts, resulting in a lower figure for net costs in the short term and thus a lower VULA margin. This creates the potential for BT to undermine the effectiveness of our VULA margin control.

  - o Under this option, we would also be required to consider how we would re-adjust the allocation of costs over time should we find that BT's latest forecast differed from previously used forecasts. We consider that any re-adjustment in light of ongoing developments, such as the changes to BT Sport take-up, BT's strategy of distributing BT Sport or outcomes in future rights auctions is likely to create uncertainty and would undermine the effectiveness of VULA margin control.[598]

6.297 In light of these concerns, we consider that changing the profile of cost recovery to take the future profitability of BT Sport into account (for example by changing the profile for the recovery of sports rights costs) would expose the VULA margin regulation to considerable risks at a crucial point in the development of competition in the retail superfast broadband market. As a result, our guidance is that we would spread the costs of sports rights across the duration of the relevant rights agreement, rather than a longer period of time. In addition, we would spread the costs of sports

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[597] One option might be to revisit our forecasts. However, this begs the question of how to treat the downward adjustment we previously made to net costs in year 1. If that adjustment is not offset by uplifts to the net costs of BT Sport in later years, then this risks Ofcom allowing BT to set a VULA margin that fails to recover the cost of BT Sport over time.

[598] If the actual direct revenues are lower than BT's forecasts used in a preceding assessment period, it would imply that too many costs were allocated to future periods based on these overoptimistic direct revenue forecasts and too few costs allocated to preceding periods. This implies that the VULA margin was too low in those early years. As a result, competition in the retail superfast broadband market may have been distorted. Furthermore, any re-adjustment to compensate for such distortion is likely to require a complex assessment and create additional uncertainty.

rights evenly over their duration, consistently with our approach to smoothing direct revenues of BT Sport, explained below.

6.298 We also consider that this position is reasonable since, as set out later in this Section, our indicative assessment suggests that BT is [exceeding] the minimum VULA margin. In other words, our assumed profile of cost recovery (for the purposes of the VULA margin assessment) does not require BT to adopt a significantly different commercial strategy to the one it is currently pursuing.

6.299 This is not to imply that our approach allows BT no flexibility. In particular, we propose to make two additional adjustments to the calculation of the net costs. This may provide more flexibility to BT as to how it recovers these net costs over time – see paragraphs 6.303 to 6.313.

6.300 Given the concerns set out in paragraphs 6.293 to 6.296, we do not consider it appropriate to change the profile of cost recovery to take the future profitability of BT Sport into account.

6.301 We also note that the evidence BT has submitted on the future profitability of BT Sport is [✂]. However, it is difficult for us to verify these forecasts or to assess to what extent any gains relate to improvements in BT's market position in superfast broadband.[599] BT argued that the future of BT Sport is characterised by significant uncertainty. It noted that the costs of content were subject to significant inflation in the past.[600]

6.302 TalkTalk, referring to a report by Enders Analysis, argued that the costs of content are expected to increase even further, by as much as an additional 60 per cent, in future content auctions.[601] TalkTalk's argument that the exit values of ESPN and Setanta were relatively insignificant suggests that the value associated with perishable rights after the rights agreement has expired may be limited.[602]

The treatment of lumpy launch costs

6.303 BT incurred costs in relation to the initial launch of the BT Sport channels in 2013/14. We do not regard it as reasonable to assume that these lumpy costs are recovered immediately. We noted in the 2014 VULA Margin Consultation that in its first year (2013/14), BT Sport costs are projected to be higher than in subsequent years; we

[599] As noted at paragraph 6.295, we would not want to take into account future profit increases that reflected the rewards of setting the VULA price on terms that did not support competition in superfast broadband by rivals.
[600] Paragraph 7.31, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; paragraph 44, BT, *Compass Lexecon additional submission on the treatment of BT Sport*, 7 November 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group-Compass_Lexecon_additional_submission_on_the_treatment_of_BT_Sport.pdf.
[601] Paragraph 4.27, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation*, 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf.
[602] See footnote to paragraph 6.271.

considered that this is due to BT facing additional costs in launching the business.[603] We considered that the majority of these launch costs are related to the distribution, sales and support of the current BT Sport content, in particular the FAPL rights for the three year period until 2015/16. [604] Therefore, consistent with the treatment of the FAPL content costs, in the 2014 VULA Margin Consultation we proposed spreading these initial launch costs over a three year period between 2013/14 and 2015/16.

6.304 We did not receive any stakeholder responses which disagreed that we should adjust for the launch costs. Our conclusion is that it remains appropriate to adjust for BT Sport's initial launch costs. However, as explained in paragraphs 6.376 and 6.377, in light of stakeholder responses we have revisited our position in relation to the time period over which we would spread the initial launch costs. We now consider that we would spread these costs over a five year period from 2013/14 to 2017/18. In paragraphs 6.379 to 6.384 (and in particular Table 6.8), we set out an estimate of the initial launch costs that we would use to calculate the amount of these costs that needs to be recovered over the current regulatory period.

6.305 In the 2014 VULA Margin Consultation, we also recognised that around the time that BT begins broadcasting live Champions League and Europa League matches (together, 'the UEFA matches') in July 2015, it may also incur additional costs (e.g. marketing) akin to those incurred when it initially launched the BT Sport business (i.e. over and above those costs it will incur in later years). We noted that it is unlikely that the additional UEFA launch costs would be as significant as the initial launch costs and that it may be more difficult to arrive at a reliable estimate of the size of these costs. Accordingly, we proposed in the 2014 VULA Margin Consultation not to amortise any costs associated with BT beginning to broadcast the UEFA matches. However, we also noted that in the event there was evidence that these costs are substantial and a reasonably reliable estimate of their magnitude could be established, we may consider amortising the additional costs associated with including the UEFA matches over the three year term of the UEFA rights agreement.

6.306 We have also revisited our approach to the additional costs associated with the launch of the UEFA matches in the light of the more general submissions we received on the timing of cost recovery. Our view now is that we are likely to spread these costs, if such costs are identified by BT, over a five-year period from 2015/16 to 2019/20 when conducting the VULA margin assessment. The effect of spreading these UEFA launch costs would be to diminish the net costs of BT Sport in 2015/16 but increase the net costs by a corresponding amount in 2016/17-2019/20. We consider that making such an adjustment would be consistent with our approach to

[603] BT forecast the costs and revenues associated with BT Sport in early 2013 (BT responses to question 30 of the s.26 notice of 20 August and questions 21, 22, 24 and 25 of the s.26 notice of 1 October 2013) (which we refer to as the Launch Forecasts) and after the launch of BT Sport (BT response to questions 11, 11A and 13 of the s.26 notice of 27 November 2013) (which we refer to as the Updated Forecasts).

[604] We recognise that our estimate of the initial launch costs (in particular those related to programing and SG&A costs) is derived from BT's forecasts (see paragraph 6.375 where we explain the methodology we proposed to identify these one off costs). We consider that in general there may be issues with using BT's forecasts to adjust the cost recovery profile, as such approach would be subject to gaming and uncertainty (see paragraph 6.296). As explained in paragraph 6.375, [✂]. Given we considered it inappropriate to require BT to recover all the costs incurred in the initial year immediately, we had to propose an alternative methodology to identify the launch costs we would spread over a longer period of time. We consider that doing so on the basis of BT's forecasts for a three year period is the most appropriate approach, given the information available to us.

the initial BT Sport launch costs.[605] We provide guidance on how we would likely estimate these lumpy costs in paragraphs 6.386 to 6.388.

The treatment of rising direct revenues

6.307 We have also revisited how we should take into account that the direct revenues from BT Sport (e.g. subscription revenues from self-retail on the Sky TV platform or commercial revenues from ‘pubs and clubs’) may grow over time. We note that BT’s purchase of the UEFA rights represents a major addition to the costs of BT Sport. Therefore, we recognise that the direct revenues from BT Sport may change substantially once BT launches the UEFA matches on the BT Sport channels.

6.308 In the 2014 VULA Margin Consultation we stated that in order to calculate the net cost of BT Sport, we would deduct the historical direct revenues of BT Sport during the period under assessment.

6.309 We note that simply averaging these historical revenues over the assessment period may potentially underestimate the direct revenues that BT earns over the ACL in those instances where such revenues are expected to grow over time. Although the growth in the direct revenues associated with the current tranche of the FAPL rights may be [✂][606], the growth may be [✂] substantial once BT launches the UEFA matches on BT Sport.

6.310 Accordingly, when calculating the level of direct revenues we would first consider whether the revenues in question were growing over the assessment period. Then, depending on the outcome of that analysis, we would adopt one of the following two approaches.

6.311 Where the evidence submitted by BT shows that the revenues were growing over the assessment period, we will assume that the direct revenues from BT Sport stay, over the remainder of the ACL, at their level as at the end of the assessment period. When calculating the relevant figure that should be used in the VULA margin assessment, we would smooth the revenues over the entire ACL, reflecting their actual figures during the assessment period and their assumed level over the remainder of the ACL.[607] In the case where revenues were growing, this approach would result in higher assumed revenues over the ACL than averaging the historical revenues earned over the assessment period. Figure 6.2 illustrates the difference in the assumptions under the two approaches.

- Figure 6.2 assumes that direct revenues are expected to rise over time (the red dashed line shows illustrative direct revenue forecasts). The VULA margin assessment is carried out based on the costs and revenues in a discrete period. Projection 1 assumes that direct revenues in the future are equal to the historical

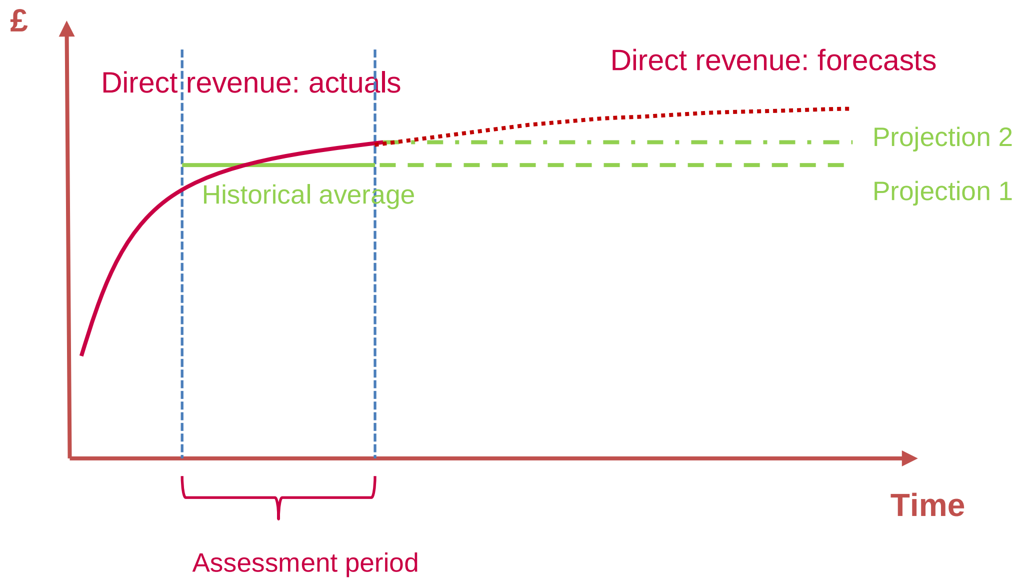
[605] For the avoidance of doubt, this would not involve spreading the cost of the UEFA rights themselves over a five-year period (in the same way that our treatment of the initial BT Sport launch costs in 2013/14 does not involve spreading the costs of the FAPL rights over a five-year period).
[606] BT response to question 1 of the s.135 notice of 21 October 2014.
[607] In the illustrative figure below, we would take into account the actual revenues (red line) over the assessment period and the forecast revenues over the remaining ACL as reflected in Projection 2, and smooth these revenues over time. We explain the detailed methodology of how we smooth revenues in paragraph 6.392.

average of direct revenues over the assessment period only. This reflects the approach we proposed in the 2014 VULA Margin Consultation.

- Our revised position is that we would calculate direct revenues in accordance with Projection 2. This assumes that the direct revenues in the future are equal to the level at the end of the assessment period.

- We recognise that this could potentially be lower than the forecast level of direct revenues from the start of the assessment period onwards (as it would be in this illustrative example where direct revenue forecasts show further growth after the assessment period – see the red dashed line). However, relying on this figure is subject to the uncertainties and drawbacks of relying on forecasts, as discussed above.

Figure 6.2 – Illustration of different treatments of direct revenues



6.312 In those cases where the revenues were not growing over the assessment period, we will use the average over that period (i.e. the historical average) to estimate the relevant figure of the direct revenues from BT Sport used in the VULA margin assessment.[608]

6.313 We note that the inclusion of the UEFA matches from summer 2015 is likely to have a significant impact on the compliance assessments that BT submits covering the periods 1 April 2015 to 30 September 2015 and 1 October 2015 to 31 March 2016. In the case where the majority of the growth in the direct revenues of BT Sport associated with the UEFA rights takes place in the initial months, our approach would largely reflect this in the assumed direct revenues of BT Sport.

[608] We consider that the direct revenues from BT Sport are most likely to be growing or fluctuating to reflect the seasonality in the sporting events broadcast on BT Sport. We consider it unlikely that BT Sport would become a declining business over the current review period. However, should the evidence show that the direct revenues from BT Sport are in decline, we may revisit our approach to treating the direct revenues from BT Sport.

Conclusion

6.314 In summary, when assessing the VULA margin, we will estimate the net costs of BT Sport for the period under assessment. In estimating these net costs we would:

- spread the costs of sports rights evenly over the duration of the relevant rights agreement;
- spread the initial launch costs over the five year period from 2013/14 to 2017/18;
- spread any additional UEFA launch costs evenly over the five year period from 2015/16 to 2019/20;
- assume, in those cases where it is found that the revenues were growing over the assessment period, that the direct revenues from BT Sport stay, over the remainder of the ACL, at their level as at the end of the assessment period, or, alternatively, assume that the revenues remain at the historical average over the assessment period; and
- smooth the revenues over the ACL, reflecting their actual changes during the assessment period and their assumed level over the remainder of the ACL.

Allocating the net costs to superfast broadband

Proposals as set out in the 2014 VULA Margin Consultation

6.315 In the 2014 VULA Margin Consultation, we considered two alternative methods for allocating the net costs of BT Sport between BT's standard and superfast broadband customers – the Take-Up method and the All Broadband method.

6.316 The Take-Up method allocates a proportion of the net costs of BT Sport to BT's superfast broadband business in proportion to the share of BT's residential broadband subscribers that take BT Sport via superfast broadband (as opposed to standard broadband). The All Broadband method involves dividing the net costs of BT Sport by the total number of BT's residential broadband subscribers.

6.317 In the 2014 VULA Margin Consultation, we considered that the choice between these two methods was finely balanced. However, we concluded that we were likely to use the All Broadband method in the VULA margin assessment.

Responses to the 2014 VULA Margin Consultation

Vodafone and confidential respondent [✂]

6.318 Vodafone and confidential respondent [✂] disagreed with the proposed All Broadband method. They considered that the costs of BT Sport should not be allocated to subscribers who do not make use of it and that the only appropriate method of cost allocation is across the customers who "*have subscribed or make use of the service*".[609]

TalkTalk

6.319 TalkTalk considered that the All Broadband method of allocating the costs of BT Sport was not appropriate. TalkTalk argued that the cost allocation should "*reflect the take-up and usage of BT Sport*" if margin test is to be effective.[610] TalkTalk provided a number of reasons in support of its views.

- First, TalkTalk argued that those customers who have a high value for BT Sport will cause BT to incur more costs in the long run because BT will be willing to spend more on sports rights to retain those customers.[611] TalkTalk added that there was significant evidence from BT's external statements on BT's pricing and marketing strategy[612] that BT is using BT Sport to drive take-up of superfast broadband and that therefore superfast broadband customers cause more of the costs of BT Sport.[613] Similarly, TalkTalk argued that BT had imposed restrictions on access to BT Sport[614] that encouraged customers who wanted BT Sport to take a superfast, rather than standard, broadband package.[615] TalkTalk then concluded that the All Broadband method is inconsistent with the principle of cost causality[616] and, as a result, is also likely to be inconsistent with allocative efficiency.[617]

- Second, TalkTalk asserted that the more subscribers value BT Sport, the higher the level of discounts that rivals will have to offer to compete with BT. TalkTalk considered that the All Broadband method understates the value that superfast broadband customers attach to BT Sport.[618] TalkTalk considered that this effect

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609 Page 4, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf; [✂].
610 Paragraph 4.26, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
611 Paragraph 4.27, Ibid. Paragraph 5.5.2, *TalkTalk Response to the 2014 VULA Margin Consultation – Frontier Economics Report on Ofcom's VULA margin test*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Frontier_Economics_-_Report_on_Ofcom's_VULA_margin_test.pdf.
612 Paragraphs 5.18-5.20, Ibid.
613 Paragraph 5.5.2, Ibid.
614 TalkTalk claimed that BT has restricted HD on BT TV to superfast broadband subscribers only, and provided BT Sport on BT TV standard broadband packages where superfast broadband was not available.
615 Paragraphs 4.29-4.31, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf; paragraph 5.19, *TalkTalk Response to the 2014 VULA Margin Consultation – Frontier Economics Report on Ofcom's VULA margin test*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Frontier_Economics_-_Report_on_Ofcom's_VULA_margin_test.pdf.
616 Paragraph 5.5.2, Ibid
617 Paragraph 5.6.2, Ibid.
618 Paragraph 4.28, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf; paragraphs 5.37 and 5.39, *TalkTalk Response to the 2014 VULA Margin Consultation – Frontier Economics Report on Ofcom's VULA margin test*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Frontier_Economics_-_Report_on_Ofcom's_VULA_margin_test.pdf.

was compounded given that the All Broadband method "*ignores the available evidence that customers are likely to place a higher value on watching BT Sport on a TV, rather than on an app*".[619]

6.320 TalkTalk then considered that Ofcom's reasons for rejecting the Take-Up method, as set out in the 2014 VULA Margin Consultation[620], are immaterial and can be readily addressed.[621]

- First, TalkTalk argued that Ofcom's concern that the Take-Up method only reflects the preferences of BT's current broadband subscribers is "*inconsistent with Ofcom's adjusted EEO model".*[622] TalkTalk added that Ofcom's concern that BT's customers were not representative of the contestable customers could be addressed by analysing the take-up of BT Sport only for "*contestable customers*" (which TalkTalk considered to be those who have switched to BT broadband only in the past 8 years).[623] TalkTalk further argued that, if some of BT's existing customers are not contestable, Ofcom should not be applying an aggregate test across all of BT's superfast broadband customers.[624]

- Second, TalkTalk argued that it was unlikely that there would be a distortion of BT's incentives by encouraging the migration of customers that do not take BT Sport from standard to superfast broadband if the Take-Up method was used. Moreover, if any distortion did occur then consumers would not be harmed in any case. TalkTalk argued that this was unlikely to be a successful strategy as it involved expending effort on less committed and profitable customers.[625] It added

[619] Paragraphs 1.12, and 5.42, Ibid. In support of this position, TalkTalk cited the survey it had commissioned from Ipsos MORI (discussed in paragraph 6.321), BT's strategy and pricing of BT Sport on TV as compared to pricing of BT Sport via other means, as well as TalkTalk's TV product offering (paragraphs 5.22-5.27, Ibid.).
[620] Paragraphs 6.160-6.162, 6.164-6.167 and 6.169, Ofcom, *Fixed Access Market Reviews: Approach to the VULA Margin*, 19 June 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/summary/VULA_Margin_Consultation.pdf.
[621] Paragraph 4.34, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[622] Paragraph 4.37, Ibid.; paragraph 5.46, *TalkTalk Response to the 2014 VULA Margin Consultation – Frontier Economics Report on Ofcom's VULA margin test*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Frontier_Economics_-_Report_on_Ofcom's_VULA_margin_test.pdf.
[623] Paragraph 4.36, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[624] Paragraph 5.49, *TalkTalk Response to the 2014 VULA Margin Consultation – Frontier Economics Report on Ofcom's VULA margin test*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Frontier_Economics_-_Report_on_Ofcom's_VULA_margin_test.pdf.
[625] Paragraph 4.38, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf; paragraph 5.52, *TalkTalk Response to the 2014 VULA Margin Consultation – Frontier Economics Report on Ofcom's VULA margin test*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Frontier_Economics_-_Report_on_Ofcom's_VULA_margin_test.pdf.

that it is unlikely that BT would have the ability to discriminate in this way.[626] [✂].[627]

- Third, TalkTalk considered that neither Ofcom nor BT had provided an adequate explanation as to why it was easier for BT to predict the number of BT broadband customers (as required by the All Broadband method) than the number of BT Sport subscribers (as required by the Take-Up method).[628]

6.321 TalkTalk then asserted that the cost allocation should reflect the relative value different customers attach to BT Sport.[629] TalkTalk commissioned a survey of BT's broadband customers from Ipsos MORI. The survey provided information on the means by which the different groups of BT's broadband customers[630] access BT Sport and the value these customers place on BT Sport.[631] TalkTalk argued that this provided evidence that supported allocating even more costs to BT's superfast broadband customers than under the Take-Up method for two reasons.[632]

- BT's broadband customers that primarily accessed BT Sport on TV were found to have higher average willingness to pay for BT Sport (£3.59/month) than those customers that primarily accessed BT Sport online or via an app (£1.85/month).[633] TalkTalk then used these estimates of customers' willingness to pay to weight the allocation of the net costs of BT Sport across the different groups of BT's broadband customers, and concluded that 31 per cent more costs should be allocated to BT's superfast broadband customers than BT's standard broadband customers.[634]

- BT's superfast broadband customers with access to BT Sport (online, via app and TV) were found to value BT Sport on average 39 per cent more than BT's standard broadband customers with access to BT Sport (online, via app and TV). TalkTalk then adjusted this figure to reflect the differences in propensity to access to BT Sport and concluded that 58 per cent more costs should be allocated to

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[626] Paragraph 1.14, Ibid.
[627] Paragraph 4.39, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[628] Paragraph 4.41, Ibid; paragraphs 5.57 and 5.59, *TalkTalk Response to the 2014 VULA Margin Consultation – Frontier Economics Report on Ofcom's VULA margin test*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Frontier_Economics_-_Report_on_Ofcom's_VULA_margin_test.pdf. The report also noted that BT would have to predict these numbers for the purposes of business planning anyway.
[629] Paragraph 4.44, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[630] TalkTalk focused on four customer segments: BT's standard broadband customers watching BT Sport via an app or online; BT's standard broadband customers watching BT Sport on TV; BT's superfast broadband customers watching BT Sport via app or online; and BT's superfast broadband customers watching BT Sport via TV.
[631] Paragraph 4.46, TalkTalk, *IpsosMori survey on BT Sport customers – data tables*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_-_Annex_-_Ipsos_MORI_Survey_data.xlsx.
[632] TalkTalk's analysis relies on estimates of different customer groups' relative valuations of BT Sport. As set out in paragraph 6.340, TalkTalk considered that it would be inappropriate to use the absolute valuations taken from its survey in the VULA margin assessment.
[633] Paragraph 4.50, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[634] Paragraphs 4.53-4.55, Ibid.

BT's superfast broadband customers than BT's standard broadband customers.[635]

BT

6.322 BT did not provide detailed comments on the merits of either of the net cost allocation approaches. However, BT noted that Ofcom's proposed approach, based on the All Broadband method, is similar to the appropriate test for profit sacrifice.[636]

6.323 BT also commented on TalkTalk's proposed cost allocation method (which reflects the relative values that the different groups of BT's broadband customers place on BT Sport). BT argued that such an approach would disregard the (absolute) value customers actually place on BT Sport and the value of content provided by TalkTalk (and other suppliers such as Sky or Virgin) when competing with the BT Sport offer.[637]

Candidate methodologies

6.324 In the 2014 VULA Margin Consultation, we considered two alternative methods for allocating the net costs of BT Sport to BT's superfast subscribers when assessing the VULA margin – the Take-up method and the All Broadband method.

6.325 The Take-Up method involves the following steps:

- calculate what proportion of BT's residential broadband subscribers that take BT Sport do so via superfast broadband (as opposed to standard broadband)[638];
- that proportion of the net cost of BT Sport is then allocated to BT's residential superfast broadband subscribers; and
- that amount is then divided by the total number of residential BT superfast broadband subscribers, giving the contribution that the average residential superfast broadband subscriber makes to the recovery of the cost of BT Sport.

6.326 The All Broadband method involves dividing the net cost of BT Sport by the total number of BT's residential broadband subscribers. This gives the contribution that the average residential broadband (both on standard and on superfast broadband) subscriber makes to the recovery of the cost of BT Sport.

6.327 To illustrate, assume that BT has a total of 1,000 residential broadband subscribers. Of these, 250 take BT Sport. The split of these subscribers between standard and

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[635] Paragraph 4.56, Ibid.
[636] Paragraph 85, *BT Response to the 2014 VULA Margin Consultation – Annex C: Compass Lexecon report on the appropriate treatment of BT Sport*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_Annex_C_Compass_Lexecon_The_appropriate_economic_treatment_of_BT_Sport.pdf.
[637] Paragraph 2.68, *BT Comments on responses to the 2014 VULA Margin Consultation*, 23 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_comments_on_stakeholder_responses.pdf.
[638] We discuss in paragraph 6.345 the potential consequences of the precise definition chosen for "*taking BT Sport*".

superfast broadband is shown in Table 6.5. This example assumes that a relatively large number of the broadband subscribers that take BT Sport are on superfast broadband (or, equivalently, that superfast broadband subscribers are more likely to take BT Sport).

Table 6.5 – Allocation of BT Sport costs – illustrative example

	Standard broadband	Superfast broadband	Total
BT residential broadband subscribers that take BT Sport	150	100	250
Total BT residential broadband subscribers	800	200	1,000

6.328 To complete the illustrative example, assume that the net cost of BT Sport is £500/month.

- **Take-Up method:** 40 per cent of the BT broadband subscribers that take BT Sport are on superfast broadband (i.e. 100 divided by 250). Accordingly £200/month of the costs of BT Sport need to be recovered from superfast broadband subscribers (i.e. 40 per cent of £500). This implies that each superfast broadband subscriber needs to make a contribution of £1/month (i.e. £200 divided by the total number of superfast broadband subscribers, namely 200).

- **All Broadband method:** each superfast broadband subscriber makes a contribution of £0.50/month (i.e. £500 divided by the total number of subscribers, namely 1,000). In this case 20 per cent of BT Sport costs are allocated to superfast broadband (i.e. the same proportion of the entire BT broadband base that is accounted for by superfast broadband subscribers).

6.329 During the period covered by this market review, the contribution that the average superfast broadband subscriber makes to the recovery of the net cost of BT Sport is likely to differ between the Take-Up method and the All Broadband method.[639] Based on the actual take-up of BT Sport from August 2013 to September 2014, BT residential superfast broadband subscribers were more likely to subscribe to BT Sport than its standard broadband subscribers.[640] In other words, a relatively larger number of the residential BT broadband subscribers that take BT Sport were on superfast broadband. As shown in the illustrative example in paragraphs 6.327 to

[639] As BT's subscriber base migrates from standard to superfast broadband, the difference between the two methods is likely to diminish. In the very long run, if all BT subscribers migrate to superfast broadband, both methods will produce the same outcome. To illustrate, consider the case where, instead of the subscriber numbers set out in Table 6.5 being used, we assumed that all 250 subscribers who take BT Sport and all 1,000 BT broadband subscribers are on superfast broadband. In these circumstances both the Take-Up method and the All Broadband method imply that superfast broadband subscribers need to make a contribution of £0.50/month to BT Sport.
[640] Ofcom analysis of BT Sport subscriber figures. See BT response to question 20 of the s.26 notice of 1 October 2013; BT response to question 10 of the s.26 notice of 27 November 2013; BT response to question 1 of the s.26 notice of 6 January 2014; BT response to question 19 of the s.26 notice of 14 February 2014; BT response to question 1 of the s.135 notice of 21 October 2014.

6.328, this means that, under the Take-Up method, a larger contribution to the recovery of the costs of BT Sport (and thus a higher VULA margin) is required from BT's average superfast broadband customer than under the All Broadband method.

6.330 In light of TalkTalk's response to the 2014 VULA Margin Consultation, we have also considered a third candidate methodology. We refer to this as the Adjusted Take-Up method, which involves the following steps.

- Use estimates of BT's broadband customers' valuations for BT Sport (for example, those obtained from the survey commissioned by TalkTalk)[641] as weights to adjust the numbers of residential standard and superfast broadband subscribers that take BT Sport. This modifies the first step of the Take-Up method (see paragraph 6.325).

- The proportion of that weighted take-up figure accounted for by superfast broadband subscribers is the proportion of the net cost of BT Sport that is then allocated to BT's residential superfast broadband subscribers (similar to the second step of the Take-Up method).

- That amount is then divided by the total number of residential BT superfast broadband subscribers. This gives the contribution that the average residential superfast broadband subscriber makes to the recovery of the cost of BT Sport (equivalent to the third step of the Take-Up method).

6.331 To illustrate the Adjusted Take-Up method, assume that in the example above, each of the 100 BT superfast broadband customers that takes BT Sport attributes 50 per cent more value to BT Sport than each of the 150 BT standard broadband customers that takes BT Sport. Under the Adjusted Take-Up method, it would imply that 50 per cent (i.e. 100 x 1.5 divided by 150 + (100 x 1.5)), or £250/month (i.e. 50 per cent of £500/month) of the costs of BT Sport are allocated to BT's superfast broadband business. This implies that each superfast broadband customer needs to make an average contribution of £1.25/month (i.e. £250 divided by the total number of superfast subscribers, namely 200).

6.332 Note that all three methods implicitly identify the contribution to the net cost of BT Sport that needs to be covered from superfast broadband subscribers in aggregate. In line with our view that the most appropriate output increment is BT's superfast

[641] TalkTalk provided two different methodologies for applying the results of its survey under the Adjusted Take-Up method and concluded that, depending on the particular calculation used, 32 per cent or 58 per cent more costs should be allocated to an average superfast broadband customer than to an average standard broadband customer. We have not considered TalkTalk's methodologies in detail, given that, as set out in paragraph 6.354, we do not propose to use the Adjusted Take-Up approach. However, given that TalkTalk arrives at two different estimates (i.e. 32 per cent and 58 per cent) by using the same set of results, this would suggest that at least one of their methodologies is erroneous. We generally consider that under the Adjusted Take-Up method, in order to apply the weights to the take-up based allocation, we should use the value estimates obtained for each particular customer group, provided this estimate is robust and representative of the actual preferences of BT's broadband customers within that group. See paragraphs 4.50-4.57, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

broadband portfolio as a whole (see Section 5), BT has flexibility over how it recovers that sum from different superfast broadband subscribers.[642]

Analysis: key features of the candidate cost allocation methodologies

6.333 In light of the responses to the 2014 VULA Margin Consultation, we have considered the following features of the three candidate cost allocation methodologies:

- how well they reflect consumer behaviour in relation to BT Sport;
- the potential distortive impact they may have on BT's commercial incentives; and
- their impact on the predictability of our regulatory approach.

Consumer behaviour in relation to BT Sport

6.334 Consumer behaviour in relation to BT Sport can be interpreted using a number of different conceptual approaches. Below we discuss this issue from the perspectives of (i) fairness; (ii) the extent to which different services are enhanced; and (iii) the allocation of common costs in line with the consumer value that they generate.

6.335 One way of approaching cost allocation is to consider the usage that different consumers make of a service, in this case BT Sport. Reflecting usage when allocating costs can be regarded as intuitively fairer (i.e. more equitable). To illustrate, consider the following.

- By way of analogy, consider the example of two flatmates each of whom watches their own television. One of those flatmates watches television 7 days per week whereas the other only watches television once a week. The cost of a television licence could be split equally (50:50) between them – this would be analogous to the All Broadband method. However, splitting the cost of a television licence 7:1 between them (i.e. the amount of days per week each watches television) could be seen as fairer – this would be analogous to the Take-Up method.
- Taking an extreme case to illustrate the issues clearly, suppose only a single standard broadband consumer watches BT Sport whereas all of BT's superfast broadband subscribers do. In these circumstances it could be seen as intuitively unfair for the average standard broadband subscriber (almost all of whom make no use of BT Sport) to make the same contribution as the average superfast broadband subscriber (all of whom do make use of BT Sport). This example highlights how the All Broadband method can be seen as leading to a less fair outcome than the Take-Up method.

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[642] In our illustrative example, superfast broadband subscribers (in aggregate) make a contribution of £200 under the Take-Up method, £250 under the Adjusted Take-Up method and £100 under the All Broadband method. While on average this equates to £1 per superfast broadband subscriber under the Take-Up method, £1.25 per superfast broadband subscriber under the Adjusted Take-Up method and £0.50 per superfast broadband subscriber under the All Broadband method, in practice some superfast broadband subscribers could contribute more than this average and some could contribute less. This is because our VULA margin regulation allows BT the flexibility to have different margins on different superfast broadband services.

6.336 Approached from this perspective, the Take-Up method appears more appropriate since it allocates BT Sport costs to superfast broadband in proportion to the number of customers using it.

6.337 Another perspective is to regard BT Sport as a common asset that enhances two separate downstream services, namely standard and superfast broadband. If BT Sport is taken up by more superfast broadband consumers than standard broadband consumers then it can be regarded as enhancing superfast broadband by more than standard broadband. As a result, allocating a greater proportion of the (net) costs of that common asset to superfast broadband would appear to be reasonable. Again this suggests that the Take-Up method is more reasonable than the All Broadband method.

6.338 TalkTalk adopted a different perspective. As noted in paragraph 6.321, TalkTalk argued that the net costs allocation should reflect the relative value different customers attach to BT Sport. The Take-Up method is likely to partially reflect these relative valuations. If BT's superfast broadband customers have, on average, a greater interest in BT Sport, then a relatively larger number of those that take BT Sport are likely to be on superfast broadband. However, the Take-Up method simply distinguishes between those customers that do and do not take BT Sport. It does not take into account how they access BT Sport (via TV or via an app) or any difference in the value that standard and superfast broadband takers attribute to BT Sport. The Adjusted Take-Up approach takes these factors into account and could thus, in principle, better reflect consumer valuations. However, while relative customer valuations are one possible reference point, we do not start from a presumption that this is the most appropriate conceptual approach to cost allocation.[643]

6.339 The effectiveness and appropriateness of the Adjusted Take-Up method is inherently conditional on the ability to obtain robust and reliable estimates for the value that broadband customers attach to BT Sport. However, the value that customers attach to BT Sport may change in the current review period as this business develops and reaches a mature stage. Therefore, it may not be appropriate to refer to values reflecting a snapshot in the past, such as those obtained from TalkTalk's survey, for the following two reasons.

- It is likely that the composition of the BT Sport subscriber base will change over time. Changes in the demographic mix may result in changes to average consumer valuations.[644]

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[643] It is important to distinguish between BT's approach of assessing BT Sport using the value that superfast broadband consumers attribute to that content and TalkTalk's approach based on the (net) cost of providing BT Sport, where that cost is allocated between standard and superfast broadband subscribers in line with their preferences. As explained in paragraphs 6.257 to 6.262, we do not consider it appropriate to assess BT Sport by assuming that BT's rivals can replicate BT Sport by offering a discount or a price cut equal to the value that consumers receive from this content.

[644] While TalkTalk's survey results show that the average willingness to pay across certain customer groups (such as superfast broadband customers that watch BT Sport on TV) tends to be relatively higher than for other groups (such as customers watching BT Sport via an app), the results do not show how much of that outcome can be explained by different demographic factors. For instance, the results also show that younger, male respondents are more likely to take superfast broadband and are more likely to have a subscription to the BT TV. The survey also found that this customer segment attributes a relatively higher value to BT Sport. If any differences in willingness to pay stem from demographic factors then changes in the demographic mix will change average consumer valuations.

- It is likely that the average values that customers attribute to BT Sport will change over time as the content on BT's channels changes. For instance, BT will begin broadcasting the UEFA matches on BT Sport in mid-2015. Similarly, we expect that the rights to FAPL matches from the 2016/17 season onwards will be sold in early 2015. Depending on the outcome of that sale process, the FAPL matches broadcast on BT Sport may change from mid-2016.

6.340 We have considered the detailed estimates from the survey commissioned by TalkTalk and identified a number of issues related to the format of the survey as well as to the statistical significance and interpretation of the results.

- TalkTalk itself suggested that the survey may not have been well-designed to elicit precise customer valuations for BT Sport.[645] TalkTalk argued that any bias that arose in the results would mainly affect absolute valuations. As such, the relative values would be "*approximately correct*", although they may understate the difference between standard and superfast broadband consumers preferences.[646] We consider TalkTalk's conclusion to be speculative and, in our view, the limitations that it has identified are likely to indicate a lack of robustness and precision in the reported results.

- TalkTalk's finding that a superfast broadband subscriber that takes BT Sport attaches more value than a standard broadband subscriber that takes BT Sport is not statistically significant.[647] There appears to be no statistically significant difference between the values attributed by standard and superfast broadband customers, even if these results are filtered by the means of access i.e. app[648] or TV.[649]

6.341 We consider that the results of TalkTalk's survey may not provide a sufficient and robust evidential basis for the use of the Adjusted Take-Up method. TalkTalk argued that, should we find that its survey is insufficiently robust, Ofcom should commission

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[645] This was for a number of reasons. First, consumers are unlikely to be used to identifying their willingness to pay and respondents faced no consequences if they provided an inaccurate answer. Second, respondents may have an incentive to understate their willingness to pay if they believe their answer may be used to set retail prices in the future. Third, the survey was conducted before the FAPL season started (paragraph 1.20, TalkTalk, *Response on further issues*, 28 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Response_on_further_issues.pdf).

[646] Paragraph 4.50, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf; Paragraph 1.21, TalkTalk, *Response on further issues*, 28 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Response_on_further_issues.pdf.

[647] The 95 per cent confidence interval for the value of BT Sport to a standard broadband subscriber is £1.87-£3.17; for a superfast broadband subscriber it is £2.60-£4.18. These confidence intervals thus overlap in the range of £2.60-£3.17. Adopting even wider confidence intervals (e.g. to reflect the survey design) would increase the size of this overlap.

[648] The 95 per cent confidence interval for the value of BT Sport to a standard broadband subscriber watching mainly via the app is £0.90-£3.14; for a superfast broadband subscriber it is £0.69-£2.47. These confidence intervals thus overlap in the range of £0.90-£2.47. Adopting even wider confidence intervals would increase the size of this overlap.

[649] The 95 per cent confidence interval for the value of BT Sport to a standard broadband subscriber watching mainly via TV is £2.14-£3.78; for a superfast broadband subscriber it is £3.10-£5.16. These confidence intervals thus overlap in the range of £3.10-£3.78. Adopting even wider confidence intervals would increase the size of this overlap.

its own survey given the importance of the issue.[650] We consider that if we were to adopt the Adjusted Take-Up method then this would involve a complex process of conducting and publishing a number of surveys to reflect the likely changes to the value that customers attach to BT Sport discussed above.

6.342 In principle, it could be argued that the Adjusted Take-Up method better reflects Ramsey pricing principles and thus results in a more efficient pattern of retail prices (although TalkTalk has not advanced this argument).[651] However, we doubt whether the additional complexity associated with the Adjusted Take-Up method materially improves the price signals sent by BT's retail superfast broadband prices. While it is desirable to allow BT the opportunity to set a reasonably efficient pattern of retail prices (in terms of relative standard and superfast broadband prices, as well as the relative price of different superfast broadband offers) there are limits on the extent to which the pattern of retail prices can be 'fine-tuned' by regulating the VULA margin. In particular, as discussed in Section 5, the VULA margin assessment is conducted in relation to BT's superfast broadband portfolio as a whole – we are not requiring BT to set a particular pattern of retail superfast broadband prices and we do not regulate the level of retail standard broadband prices.

6.343 Conceptually, both the Take-Up method and the Adjusted Take-Up method reflect the preferences for BT Sport of BT's *existing* superfast broadband base (as of the time that the assessment is carried out).[652] We recognise that BT has argued that, in practice, BT's rivals could focus on consumers that have little interest in BT Sport (rather than competing for the entirety of BT's existing superfast broadband base). However, as argued by TalkTalk, focusing on BT's existing subscriber base is consistent with an EEO approach. Moreover, as explained in paragraph 6.256, BT's main rivals currently offer premium sports content within their triple-play broadband packages and thus are currently competing for customers that attach a higher value to sports content.[653]

Distortive impact on BT's commercial incentives

6.344 We now consider two aspects of the impact on BT's commercial incentives. First, the impact on BT's incentives to make BT Sport available. Second, the impact on BT's incentive to migrate particular customer groups from standard to superfast broadband.

6.345 In terms of the impact on BT's incentives to make BT Sport available.

- **Gaming the definition of the 'take-up' of BT Sport:** the allocation of the net costs of BT Sport under the Take-Up method depends on the definition of which

[650] Paragraph 4.45, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

[651] Although clearly the Adjusted Take-Up method does not reflect a formal application of the Ramsey pricing approach.

[652] A point made in paragraphs 6.159-6.160 of the 2014 VULA Margin Consultation and to which TalkTalk responded as set out in paragraph 6.320.

[653] As set out in paragraph 6.320, TalkTalk also argued that the Take-Up method could be adapted to focus on the take-up of BT Sport among those broadband customers that other operators do compete for (specifically by focusing on subscribers that have switched to BT's services in the past 8 years). We do not need to address this particular TalkTalk argument given the position already set out in paragraph 6.343 addresses BT's point.

subscribers ‘take’ BT Sport. This raises the question of precisely what counts as ‘taking’ BT Sport and whether our chosen definition allows BT to artificially manipulate the volumes in question. For example, if a household is treated as ‘taking’ BT Sport if it had access to the BT Sport online player, then the Take-Up method could be manipulated were BT to automatically provide that access to its standard broadband subscribers or if BT were to offer standard (but not superfast) broadband subscribers a voucher for watching a single game online. Similar issues could arise under the Adjusted Take-Up method. For example, BT could also provide automatic access to BT Sport to those customers who would be likely to attribute an insignificant (or effectively zero) value to this content. By doing so, it could manipulate the cost allocation under the Adjusted Take-Up method if the estimates of average valuations used in the cost allocation fail to reflect that a greater proportion of BT Sport subscribers now attribute a low value to BT Sport. In contrast, under the All Broadband method, the allocation of the net costs of BT Sport does not depend on which subscribers ‘take’ BT Sport.

- **Gaming the definition of who is ‘eligible’ to access BT Sport:** under the All Broadband method, the costs are effectively allocated to those BT broadband customers who are eligible to receive the same BT Sport offer. However, this similarly raises the question of what counts as being ‘eligible’ for the BT Sport offer. BT may similarly manipulate the definition of ‘eligible’ were it to provide BT Sport to its standard broadband customers but under substantially less attractive terms (e.g. by offering a limited range of BT Sport channels).[654] This would be consistent with the strategy to drive superfast broadband take-up. As a result, each standard broadband subscriber would be making the same average contribution to the costs of BT Sport as each superfast broadband subscriber, despite the former having access to a substantially inferior version of BT Sport.

6.346 In the 2014 VULA Margin Consultation we expressed concerns that the Take-Up method risks distorting BT’s commercial objectives to migrate particular customer groups. Under the Take-Up method there could be an additional incentive[655] for BT to migrate those standard broadband customers that do not take BT Sport to superfast broadband, but not those that do. It is important to note the following in particular.

- If residential BT standard broadband subscribers that do not take BT Sport migrate to superfast broadband, then the proportion of the net cost of BT Sport allocated to BT’s superfast broadband subscribers remains unchanged. However, the total number of superfast broadband subscribers is higher, so the contribution that the average residential superfast broadband subscriber makes towards the

[654] As noted in paragraph 6.319, TalkTalk argued that BT had imposed a number of contractual restrictions that would oblige customers who wanted to access BT Sport to take a superfast, rather than standard, broadband package. For example, BT TV customers with a BT standard broadband contract were not able to access BT Sport under the same terms as BT TV customers with a BT superfast broadband contract.

[655] Absent regulation, BT’s incentives to migrate subscribers from standard broadband would depend on the relative costs and revenues of these two services (which, in turn, are affected by consumer preferences). That rate of migration would take into account the trade-off associated with offering a lower superfast broadband price (or spending more costs on marketing). It makes superfast broadband more attractive for consumers (compared to standard broadband) and thus encourages faster migration, while at the same time lowering the attractiveness of superfast broadband customers for BT (by reducing the margin they generate).

costs of BT Sport falls. All other things being equal, this means that a lower VULA margin is needed.[656]

- Conversely, if residential BT standard broadband subscribers that take BT Sport migrate to superfast broadband, then a greater proportion of the net cost of BT Sport is allocated to BT's superfast broadband subscribers. As a result, the contribution that the average residential superfast broadband subscriber makes towards the costs of BT Sport rises. All other things being equal, this means that a higher VULA margin is needed.

6.347 The Adjusted Take-Up method may have a similar impact on BT's migration incentives in that it would create additional incentives to migrate not only those standard broadband customers that do not take BT Sport, but also those customers that take BT Sport yet attribute a relatively low value to it. As before, such migration would have little or no impact on the proportion of the net costs allocated to BT's superfast broadband services. However, it would imply that the allocated costs are spread over a larger BT superfast broadband base and that the necessary contribution from the average subscriber is lower.

6.348 As discussed in Section 3, over the period covered by this review, significant numbers of consumers are expected to migrate from standard to superfast broadband. The total number of VULA subscriptions is expected to increase from 3m in Q2 2014[657] to around [✂] in 2016/17.[658] Given the magnitude of the expected migration and its importance to the development of competition in retail superfast broadband in the future, we have considered whether our approach to the VULA margin assessment distorts BT's incentives to migrate certain customers from standard to superfast broadband.

- However, we agree with TalkTalk[659] that the harm resulting from BT driving superfast broadband take-up among those customers that are not interested in sports content may be limited, so long as BT has a sufficient retail VULA margin across the entire superfast broadband portfolio to absorb higher marketing costs or lower retail revenues from that particular group of customers. Put simply, targeting marketing at one group of subscribers rather than another (absent an adverse impact on competition) may not cause significant consumer detriment.

- Contrary to TalkTalk's suggestion, we consider it likely that BT would have the ability to identify the customers with low interest in BT Sport in order to migrate them to superfast broadband, for example by offering a reduction in the price of a

[656] If a residential BT standard broadband customer that does not take BT Sport migrates to superfast broadband and also starts taking BT Sport, there are two competing effects. On the one hand, there is a larger pool of superfast broadband subscribers in total, which tends to lower the BT Sport cost per superfast broadband subscriber. On the other hand, a greater proportion of the net costs of BT Sport are allocated to superfast broadband subscribers. The net effect is that the contribution that the average residential BT superfast broadband subscriber makes towards the cost of BT Sport can either rise or fall.

[657] Page 4, BT, *Results for the first quarter to 30 June 2014,* 31 July 2014, http://www.btplc.com/News/ResultsPDF/q114-release.pdf.

[658] The Third BT Forecast predicts [✂] VULA connections in 2016/17 (BT response to question 4(b) of the s.135 notice of 7 October 2014).

[659] See paragraph 6.320.

superfast broadband package for those subscribers that do not take BT Sport.[660] Alternatively BT could seek to migrate Plusnet customers to superfast broadband, given that they do not have access to 'free' BT Sport. However, we agree with TalkTalk that BT's incentives to do so may be limited. As the evidence on BT's strategy and marketing in relation to BT Sport suggests, BT expected to use BT Sport to drive superfast broadband take-up in particular. It is thus less likely that BT would choose an opposite strategy of discouraging BT Sport subscribers from taking its superfast broadband packages. We also note that, even should BT choose to do so, the gains in terms of a lower required minimum retail VULA margin would appear to be fairly limited.[661]

6.349 Similarly, under the All Broadband method BT may have additional incentives to migrate to superfast broadband those customers that are not eligible for the BT Sport offer (e.g. Plusnet customers), but not those that are eligible (non-Plusnet broadband customers).[662] However, the incentives to do so may be equally limited given Plusnet is a minority business unit in BT's superfast broadband portfolio.

6.350 Therefore all candidate methodologies to allocating the net costs of BT Sport may potentially distort BT's incentives to migrate certain groups of customers to superfast broadband. However, overall we consider that these incentives are likely to be limited.

Predictability

6.351 As set out in Section 4, we are particularly mindful of the certainty that our approach to regulating the VULA margin may provide to BT and other CPs. We recognise that, in order to comply with its SMP obligations, BT will need to make some forward-looking estimates of costs and revenues. For example, as part of its internal governance procedures for approving a price change, BT is likely to consider whether those prices will (in the months ahead) result in an unduly low VULA margin.

6.352 We consider that the Take-Up method and the All Broadband method have similar properties in terms of predictability and certainty. Under the Take-Up method, BT would need to predict the proportion of the net costs allocated to superfast broadband and thus the proportion of BT Sport subscribers who are on superfast broadband. While BT does not need to predict this number under the All Broadband method, it would need to predict the overall number of its broadband customers, including those on standard broadband.

6.353 As explained in paragraphs 6.340 to 6.341, under the Adjusted Take-Up method, we do not consider it appropriate to use the values obtained from the survey commissioned by TalkTalk. To ensure compliance under this method, it is likely that we (or BT) would need to produce a forecast of the average values that different broadband customer groups attribute to BT Sport and update that forecast regularly. We consider that it may be difficult to predict precisely how the valuations that

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[660] Or, equally, offer a superfast broadband package at a higher price if a customer subscribes to BT Sport.

[661] To illustrate, based on our indicative VULA margin assessment set out below in this Section, if BT migrated 100,000 standard broadband customers that do not take BT Sport to superfast broadband, it would reduce the required minimum retail VULA margin under the Take-Up method by only [✂].

[662] In this case the proportion of the net costs that is allocated to BT's superfast broadband portfolio remains unchanged but it is spread over a larger base, which includes Plusnet customers. All other things being equal, this means that a lower VULA margin is needed.

different customers attach to BT Sport will develop given this variable is not directly observable and must be therefore inferred. Natural statistical variability means that there could be some instability in the results of even a well-designed survey. Therefore we consider that the Adjusted Take-Up method provides less predictability to BT and other CPs.

Conclusion

6.354 Based on the above analysis, we consider that the choice between different cost allocation methods is finely balanced. Our provisional view in the 2014 VULA Margin Consultation was that, on balance, the All Broadband method would likely be the most appropriate cost allocation method. In light of stakeholder responses, our view has changed. We would use the Take-Up method in the assessment of the VULA margin. This is for the following reasons.

- Deciding between the different ways of allocating a common cost between two different services that use it is not straightforward. As explained above, consumer behaviour can be interpreted from a number of perspectives: (i) that it is fairer to reflect consumers' usage of BT Sport; (ii) that take-up reflects the extent to which different services are enhanced by BT Sport; and (iii) that take-up reflects the relative valuation of BT Sport by standard and superfast broadband consumers. From all of these perspectives, the Take-Up method better reflects consumer behaviour than the All Broadband method.

- We would not use the Adjusted Take-Up method. While relative customer valuations are one possible reference point, we do not start from a presumption that this is the most appropriate conceptual approach to cost allocation. The Adjusted Take-Up method depends on the availability of robust estimates of the value that different BT broadband customers attach to BT Sport. We are concerned that the implementation of such an approach may place a disproportionate weight on this evidence. This makes the Adjusted Take-Up method more difficult to apply in practice and potentially makes it less certain and predictable from the perspective of BT and other CPs. Moreover, we doubt whether the additional complexity associated with the Adjusted Take-Up method materially improves the price signals sent by BT's retail superfast broadband prices. Further, TalkTalk's finding that a superfast broadband subscriber that takes BT Sport attaches more value than a standard broadband subscriber that takes BT Sport is not statistically significant. In contrast, the Take-Up method is likely to be simpler to apply and – as explained above – still reflects consumer behaviour.

- Having considered in more detail the impact on BT's incentives to migrate particular consumer groups (following stakeholder responses), we now place less weight on this factor than we did in the 2014 VULA Margin Consultation. We consider that in this regard the relative merits of the various methods are less clear-cut, given all methods have differing impacts on BT's incentives.

- We recognise that the Take-Up method does allow scope for BT to alter its commercial behaviour in an attempt to game the resulting cost allocation. However, we seek to address this through our detailed guidance on how we would apply this approach (see below).

Detailed discussion of the estimation of net costs

6.355 In this sub-section we set out how we would assess the net costs of BT Sport. As explained in paragraph 6.241the net costs of BT Sport are the total costs of BT Sport minus the direct revenues from BT Sport. Our analysis is structured as follows.

- We first set out how we would calculate the total costs of BT Sport.
- As set out in paragraph 6.304, we consider that when conducting the VULA margin assessment, it is appropriate to spread the initial launch costs of BT Sport over a five-year period between 2013/14 and 2017/18. We discuss this issue next and provide guidance on the level of these initial launch costs.
- As set out in paragraph 6.306, we consider that when conducting the VULA margin assessment, it is likely to be appropriate to spread the costs related to the start of broadcasting the UEFA matches on BT Sport (the 'UEFA launch costs') over a five year period from 2015/16 to 2019/20. We discuss this issue next and set out guidance.
- Finally, we set out how we would calculate the direct revenues.

<u>BT Sport costs</u>

6.356 In order to calculate the net costs of BT Sport, we would first estimate the total costs of BT Sport. Since those net costs are then allocated between BT's standard and superfast broadband subscribers, we would exclude any costs of BT Sport that are incremental to subscribers that take standard broadband.

6.357 The costs of BT Sport can be broadly broken down into four categories.[663]

- **Sports rights:** [✂].
- **Programming costs:** [✂].
- **Transmission and distribution:** [✂]. We would not include the costs of DTT as this cost is only associated with BT's standard broadband subscribers.
- **SG&A Costs:** [✂].

6.358 We discuss each of these cost categories in turn below. For each category we provide guidance on the treatment of ongoing costs.

Sports rights costs

6.359 We did not receive any stakeholder responses in relation to the detailed treatment of the costs of sports rights.

6.360 [✂].[664] Rather than use the costs for sports rights as they fall due (which would lead to volatile net costs), we would convert these costs into a constant monthly payment.

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[663] Ofcom analysis of Launch Forecasts and Updated Forecasts.
[664] [✂]

When assessing compliance over any given period, we would average the monthly costs of sports rights across that period.

6.361 For some sporting events there are gaps between successive seasons. For example the 2015/16 FAPL season ends in May 2016 but the subsequent season does not begin until August 2016. We would amortise these rights over a longer period as if the events were continuous. In the case of BT's current rights agreement for live FAPL matches, we would amortise the costs of these rights over the period from August 2013 to July 2016. In the case of BT's agreement for the UEFA matches, we would amortise the cost of these rights over the period from August 2015 to July 2018.

6.362 For each sports rights agreement we would calculate the NPV of the cost of the contract (as at the start date) based on when BT incurs the payments for the sports rights. We would then calculate what would be the constant monthly payment that would equal that NPV if considered over the duration of the contract.[665] In doing so, we would use the WACC prevailing during the assessment period.[666] We would undertake this calculation for each of BT's committed sports contracts.

6.363 This calculation provides an estimate of the smoothed monthly costs of sports rights. This monthly estimate will vary as BT gains or loses sports rights.[667] To estimate a representative cost over any given period, we would take an average across that period. For example, should a given sporting event only occur for two months whereas we are assessing compliance over a six month period (say) then the average over the six month period for the cost of rights to that event will be 33 per cent of the amount applying during the two months when they are active. This effectively allows smoothing within that six month period.

Programming costs

6.364 We did not receive any stakeholder responses in relation to the detailed treatment of the costs of programming. Our position thus remains unchanged from the 2014 VULA Margin Consultation, namely that we would include ongoing programming costs.

[665] As an example, with a WACC of 10 per cent, if BT incurred quarterly costs of £100m (paid at the end of the first month of each quarter), the NPV over a year would be £382.3m. This is equivalent to a monthly payment of £33.61m (which provides the same NPV over a year).

[666] We recognise that alternative approaches may also be reasonable, such as using the WACC rate that was prevailing at the time when a particular item of costs was incurred, and/or updating our estimates of the costs of holding capital when the WACC rate changes in the future. However, any changes to the WACC rate are likely to have a very immaterial impact on our estimates. Our preferred approach is thus to use a methodology that is simple and practical. We note that using the WACC rate prevailing during the assessment period is also consistent with how we would take discounting into account in relation to other elements of the VULA margin assessment, e.g. when testing whether the ongoing superfast broadband margin is sufficient to recover the upfront customer acquisition costs.

[667] For example, if contract A starts in January (at an average of £5m/month) and contract B starts in April (at an average of £10m/month) then the costs will be £5m/month January to March and £15m/month from April to June. This leads to an average over the six month period of £10m/month.

Transmission and distribution costs

6.365 Based on BT's current strategy, BT Sport is distributed over four different platforms – satellite, BT IPTV Multicast, DTT, and 'over the top' (OTT) via the BT Sport app and online. We would not include the costs of transmission and distribution over DTT as these are entirely related to standard broadband subscribers and therefore should not be included in the net costs that are subsequently allocated to superfast broadband subscribers.

6.366 We would take into account a number of different cost categories, relating to provision of channels over satellite and IPTV platforms.[668]

- [✂]
- [✂]
- [✂]
- [✂]
- [✂]

6.367 Should there be any additional costs related to BT Sport that are not listed above, we would take these into account.

SG&A costs

6.368 We would take any SG&A costs incurred in relation to BT Sport into account.

6.369 In response to the 2014 VULA Margin Consultation, BT's considered that Ofcom's estimate for the SG&A costs in the context of the Superfast Broadband Competition Act Investigation was subject to double-counting and thus needed correcting.[669]

6.370 In our decision on the Superfast Broadband Competition Act Investigation, we recognised that there was a risk that the SG&A costs may be double-counted. This risk had arisen because in the calculation of BT's superfast broadband headroom available to absorb the costs of BT Sport, BT's 2012/13 management accounts were used and these management accounts may have already included certain SG&A cost items relevant to BT Sport. As a result, we excluded certain SG&A cost items from the net costs calculation.[670]

6.371 Conversely, the VULA margin assessment is carried out on an ongoing basis during the remainder of this market review period, and as such will not be based on BT's management accounts for 2012/13. Therefore the potential issue with double counting identified in the Superfast Broadband Competition Act Investigation is no longer relevant.

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[668] Ofcom analysis of Launch Forecasts and Updated Forecasts.
[669] Paragraph 7.30, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[670] Paragraph A3.201, *CW/01103/03/13: Complaint from TalkTalk Telecom Group plc against BT Group plc about alleged margin squeeze in superfast broadband pricing – Decision*, 21 October 2014, http://stakeholders.ofcom.org.uk/binaries/enforcement/competition-bulletins/closed-cases/all-closed-cases/cw_01103/CW-01103-03-13.pdf.

Guidance
We would use BT's actually incurred costs as set out in its accounts for ongoing costs.

We would calculate BT's monthly costs for each sport right by converting its actual expenditure on each sports right into a constant monthly payment. We would do this by calculating the NPV of each sports rights contract over the entire contract duration up until the next contract is available (based on each contract's start date) and convert this into an equivalent ongoing monthly cost equal to that NPV. We would use the 'rest of BT' WACC rate prevailing during the assessment period when carrying out this calculation.

When assessing compliance over any given period, we would average the monthly costs of sports rights across that period.

Initial launch costs

6.372 As explained in paragraph 6.30, when assessing BT's compliance with the VULA margin condition during a particular time period, where possible we would use historical, audited data covering that period to calculate the relevant revenues and costs.

6.373 However, in the 2014 VULA Margin Consultation we noted that there are likely to be costs associated with the initial launch of BT Sport.[671] We considered that it is reasonable to assume that these start-up costs are recovered over a three year period (rather than all being recovered in the period shortly after launch). Accordingly, we concluded that we would likely uplift the net costs of BT Sport during the period covered by this market review to reflect the start-up costs incurred in 2013/14.

Responses to the 2014 VULA Margin Consultation

6.374 BT agreed that it faces launch costs which should be recovered over a longer period of time. However, BT argued that spreading these one-off costs over a three year period is inappropriate, noting that three years is an insufficient period of time to recover start-up costs of a long term business. BT added that Ofcom's treatment of the one-off costs is inconsistent because although we spread the initial launch costs over the period from 2013/14 to 2015/16, we assume that these costs are "*incurred every month over the entire customer lifetime*", notwithstanding when a particular customer is acquired.[672]

Ofcom's analysis

6.375 [✂]. [673] [✂].[674] We consider it is reasonable to assume that the relatively higher costs in the first year (compared to those incurred in the last year of the FAPL rights,

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[671] Paragraph 6.142, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.
[672] Paragraph 7.63, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.
[673] [✂]

2015/16),[675] as well as any costs incurred in 2012/13 (prior to the channel being made available), are BT's costs of launching BT Sport.

6.376 In light of BT's response, we have reconsidered the time period over which we would spread these initial launch costs. We recognise that, based on the proposed methodology, we could identify the costs that are truly one-off (e.g. development costs) and that could be recovered over the BT Sport business lifetime. Other one-off costs as identified by our methodology, such as marketing costs associated with BT's efforts to commercialise its FAPL content, may be relevant to a shorter period of time (e.g. the three year period for which BT acquired its current FAPL rights). Estimating the relevant period for each individual item of the initial launch costs is likely to be difficult. Any detailed adjustments are also likely to have an immaterial impact on the estimates of the appropriate VULA margin. Therefore we consider it appropriate to choose a relevant time period that will apply to all the initial launch costs.

6.377 We have used our judgment in deciding on the relevant time period over which we would spread all the initial launch costs and consider that a five year period from 2013/14 to 2017/18 is appropriate. We consider that the period should be longer than three years since it seems likely that BT will continue to offer sports channels beyond 2015/16. A five year period seems reasonable, reflecting the term over which BT has acquired a number of assets that support the BT Sport business.[676]

6.378 BT argued that incorporating these costs into the profitability assessment over the customer lifetime may overstate the launch costs as it would assume that any adjustment for launch costs applies in every year of the ACL.[677] However, we consider that our treatment of the initial launch costs is appropriate and consistent with the overall approach which assumes that the overall margin that BT earns on its superfast broadband packages remains constant over the ACL (see paragraph 6.16). Given the uncertainties in relation to the costs and revenues of BT Sport in the long term, we have not speculated on whether the costs will differ in the future in a way that is not reflected in movements in BT's future pricing.

Detail on the level of initial launch costs

6.379 Below we set out an estimate of the level of the initial launch costs that we would use. For BT Sport programming and SG&A costs, we have calculated the initial launch costs by comparing BT's estimate of the difference in forecast costs between 2013/14 and 2015/16 and assumed that any difference is related to initial launch costs.[678] In addition, BT has identified launch costs in relation to [✂].[679]

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[674] [✂]

[675] We recognise that our proposed methodology relies on BT's forecasts and could thus be subject to uncertainty and gaming. However, as set out in the footnote to paragraph 6.303, we consider it is the most appropriate methodology given the data available to us.

[676] For example, [✂].

[677] Our approach is symmetric. Spreading launch costs over 5 years essentially reduces BT Sport costs in year 1 and increases costs in years 2 to 5. Under our static approach, when carrying out an assessment in year 1 the resulting margin (which reflects the cost reduction) is assumed to apply in every further year (without taking the costs that are shifted to years 2 to 5 into account). Adopting a symmetric approach is also relevant given that we are likely to make a similar adjustment to the costs associated with adding the UEFA matches to BT Sport in 2015/16 – see below.

[678] If the costs for 2013/14 were £1m/month and the estimate of the costs for 2015/16 were £0.7m/month, then we consider that £0.3m/month are launch costs.

6.380 We would spread initial launch costs by converting them into an equivalent ongoing monthly cost over five years with a NPV equal to our estimate of the initial launch cost incurred. We would assume the following.

- The discount rate is equal to the monthly 'rest of BT' WACC.[680]
- [✂].[681] [✂] all the launch costs were incurred at the beginning of 2013/14 and that they are spread over 60 months to the end of 2017/18.

6.381 Based on the methodology set out in paragraph 6.379, we have estimated BT's initial programming costs as the difference between BT's forecasts for programming costs for 2013/14 of [✂][682]/month[683], and its estimate for 2015/16 of [✂/month[684] leading to launch costs of [✂]. In addition to this we have included [✂][685] of programming costs that were incurred in 2012/13, prior to the launch of BT Sport. Accordingly we would use a total figure of [✂] for the initial launch programming costs which we will spread over the period from 2013/14 to 2017/18.

6.382 Our estimates of the transmission and distribution costs (a total of [✂]) associated with the launch of BT Sport are summarised in Table 6.6.

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[679] Ofcom analysis of Launch Forecasts and Updated Forecasts.

[680] In calculating the level of initial launch costs below, we have used the rest of BT pre-tax nominal WACC of 10.8 per cent that was used in 2014 to calculate the WBA charge control. The annual WACC of 10.8 per cent is converted to a monthly WACC using the following formula. Monthly WACC = (1+annual WACC)^(1/12)-1. This equals 0.86 per cent. In the event that a more up to date estimate of the WACC is available, the estimates of launch costs would also need to be updated. (See paragraph 7.9, Ofcom, *Review of the wholesale broadband access markets: Final statement on market definition, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/consultations/review-wba-markets/statement/.)

[681] Ofcom analysis of Launch Forecasts and Updated Forecasts.

[682] All the figures presented in this sub-section are rounded to the nearest £100,000 for presentation purposes. In our analysis, we would likely use the actual figures without rounding.

[683] [✂]

[684] [✂]

[685] [✂]

Table 6.6 – Calculation of BT Sport launch costs related to transmission and distribution

	[✂]	[✂]
[✂]	[✂][686]	[✂]
[✂]	[✂][687]	[✂]
[✂]	[✂][688]	[✂]
[✂]	[✂][689]	[✂]
	[✂][690]	[✂]
	[✂][691]	[✂]
[✂]	[✂]	[✂]
[✂]		[✂]

[✂]

6.383 Our estimates of the SG&A costs (a total of [✂]) associated with the initial launch of BT Sport are summarised in Table 6.7.

686 [✂]
687 [✂]
688 [✂]
689 [✂]
690 [✂]
691 [✂]

Table 6.7 – BT Sport SG&A launch costs

	Notes	12/13	13/14	Total
Marketing & research	[✂][692][✂][693]	[✂]	[✂]	[✂]
Customer service & sales	[✂][694] [✂][695]	[✂]	[✂]	[✂]
Channel team	[✂][696]	[✂]	[✂]	[✂]
Studio	[✂][697]	[✂]	[✂]	[✂]
Development	[✂][698]	[✂]	[✂]	[✂]
Other	[✂][699] [✂][700]	[✂]	[✂]	[✂]
Total one-off		[✂]	[✂]	[✂]

Source: BT

Summary of the initial launch costs

6.384 Table 6.8 summarises our estimates of the costs associated with the initial launch of BT Sport. This table also sets out our estimate of the equivalent ongoing monthly cost that, over a five-year period, has an NPV that is equal to our estimate of the launch costs.[701]

[692] [✂]
[693] [✂]
[694] [✂]
[695] [✂]
[696] [✂]
[697] [✂]
[698] [✂]
[699] [✂]
[700] [✂]
[701] As explained in the footnote to paragraph 6.380, this has been calculated assuming an annual WACC of 10.8 per cent.

Table 6.8 – Summary of the BT Sport initial launch costs

	Upfront costs
Sports rights	[✂]
Programming	[✂]
Transmission and distribution	[✂]
SG&A	[✂]
Total	[✂]
Converted to a monthly equivalent	[✂]

Source: BT

> **Guidance**
> We would include an additional [✂]/month until March 2018 to reflect the initial launch costs of BT Sport. In the event that a more up to date estimate of the WACC is available, we would consider whether to update this figure.

<u>UEFA launch costs</u>

6.385 When BT begins broadcasting the UEFA matches on BT Sport in July 2015, it may incur a number of transmission and distribution, programming and/or SG&A costs ('the UEFA launch costs') akin to those incurred when it originally launched BT Sport. As explained in paragraph 6.306, we are likely to spread any such costs over a five year period.

6.386 We currently do not have a reliable estimate of the amount of the UEFA launch costs. In estimating these costs, it is important to guard against gaming by BT.[702] Recognising this risk, we propose to provide guidance on the maximum level of the UEFA launch costs that we would likely consider reasonable.[703]

6.387 We consider that it is appropriate to specify the maximum reasonable level of the UEFA launch costs with reference to the initial launch costs that BT incurred when it started broadcasting BT Sport (which we estimate to be around [✂][704] – see Table 6.8). The UEFA rights relate to important and high profile content that will be broadcast on BT Sport for the first time. In addition, BT's internal documents suggest

[702] For example, BT could err downwards in its forecast estimate of BT Sport costs in 2018/19 (i.e. the last year of the term of the agreement for the UEFA rights). If we were to reapply our methodology for identifying the initial launch costs (see paragraph 6.375, this would result in a larger part of the costs incurred in 2015/16 (i.e. the first year of the term of the agreement for the UEFA rights) being spread over the five year period (as opposed to being recovered in the same year, 2015/16).
[703] As set out in paragraph 6.5, the guidance is intended to reflect our current view of the approach we would adopt when assessing the VULA margin; we may depart from it if circumstances change. For example, if BT were to provide clear and unequivocal evidence that the UEFA launch costs are above the specified maximum level then we would consider adopting that higher figure.
[704] This excludes the costs of [✂]. BT currently has [✂] for a five year period that covers both the terms of the current FAPL rights and the UEFA rights.

that it [✂].[705] However, the scale of upfront costs associated with launching coverage of the UEFA matches seems unlikely to be greater than the initial launch costs for the whole channel. We thus consider it is reasonable to assume that BT would not incur higher marketing, sales, customer support or programming costs when launching the UEFA matches on BT Sport than the costs it incurred when it initially launched BT Sport in 2013/14. We thus consider that it is unlikely that the UEFA launch costs are more than [✂], adjusted for inflation since 2013/14 by using CPI.

6.388 When assessing the VULA margin in 2015/16, we would expect BT to provide suitable evidence on the level of the UEFA launch costs. Assuming those costs were below the level of the maximum specified in our guidance, we would be likely to amortise them over the five-year period, consistently with our approach to treating the initial launch costs, by using the same methodology as described in paragraph 6.380. Having determined the level of the UEFA launch costs in 2015/16, we are unlikely to revisit that figure.[706]

Guidance
We would likely adjust the total costs of BT Sport to smooth the UEFA launch costs in 2015/16. We would expect BT to provide suitable evidence on the level of these UEFA launch costs. We are unlikely to accept that the level of these costs is higher than [✂] uplifted for CPI inflation since 2013/14.

We would likely spread the UEFA launch costs over five years by converting them into an equivalent ongoing monthly cost with a NPV equal to the cost incurred. In calculating that NPV we would likely assume that the discount rate is equal to the monthly 'rest of BT' WACC rate prevailing during the assessment period.

Direct revenues

6.389 In order to calculate the net cost of BT Sport, we would deduct the direct revenues BT earns from other sources during the period under consideration. We would take into account the following revenue sources.

- Monthly subscription revenues from residential customers – revenue comes from residential Sky TV subscribers who take BT Sport (both in SD and in HD). While BT Sport in SD is generally free for those customers that take BT broadband, BT also receives revenues from BT broadband customers on the Sky TV and on the BT TV platforms that wish to receive BT Sport in HD.[707]

- Monthly sublicensing to Virgin.

- Monthly sublicensing to Setanta in the Republic of Ireland.

[705] Page 4, Annex 08, BT response to question 1 of the s.135 notice of 10 November 2014.
[706] This ensures consistency over time. It also guards against the possibility of gaming by BT, for example by arguing in 2015/16 that the level of UEFA launch costs are high (which has the effect of reducing the net costs in that year) but then revisit them in 2016/17 to instead claim that they were low (which reduces the amount of net costs shifted to that year from 2015/16).
[707] See paragraph 6.237.

- Monthly subscription revenues from commercial premises – [✂].[708]
- Advertising – [✂].[709]

6.390 Should BT generate any new revenue sources from the current BT Sport channels, such as additional wholesale deals or further sub-licensing, we would include these direct revenues when assessing the VULA margin. Our approach to the treatment of BT Sport costs and revenues in relation to the UEFA matches would depend on how BT chooses to distribute and price the UEFA matches. We distinguish two particular cases to this.

- First, suppose BT sells the subscriptions to the UEFA matches only on a standalone basis, and does not offer this content at a discounted price to its broadband customers or operate any form of buy through. Given the subscription to the UEFA content is not part of BT broadband packages in this case, we would not include the UEFA costs and revenues when assessing the VULA margin.
- Second, suppose BT begins charging BT broadband customers for access to the UEFA matches (or some other BT Sport content). Given that the UEFA matches are a part of BT's broadband packages in this case, we would include the UEFA costs and revenues when assessing the VULA margin. We would do so by adopting a similar approach as set out in this guidance in relation to the current costs and revenues of BT Sport. In particular, our calculation would involve (i) calculating the relevant net costs; (ii) allocating the net costs to BT superfast and standard broadband customers on the basis of the take-up of the extra UEFA content; and (iii) including any extra revenues earned from superfast broadband subscribers alongside all the other revenues earned from these customers (such as subscription charges, call revenues etc.).

6.391 In calculating the monthly revenues of BT Sport, we would use historical, audited data covering the assessment period. As explained in paragraphs 6.310 to 6.311, we would first assess whether the evidence submitted by BT demonstrates that the direct revenues from BT Sport were growing over the assessment period. We would consider that the revenues were growing if the total direct revenues in the last month of the assessment period are higher than the total direct revenues in the first month of the assessment period.[710]

- If growth occurred, we would assume that the direct revenues from BT Sport stay, over the remainder of the ACL, at their level as at the end of the assessment period.
- As explained in paragraph 6.312, in those cases where we find that the revenues were not growing, we would use the historical average over the assessment period to estimate the direct revenues from BT Sport used in the VULA margin assessment.

[708] Ofcom analysis of Launch Forecasts and Updated Forecasts.
[709] Ofcom analysis of Launch Forecasts and Updated Forecasts.
[710] If clear evidence were presented that the level of direct revenues in the first and/or last month of the assessment period was an atypical outlier then we would consider whether to adopt a different approach.

6.392 We would then smooth the assumed revenues over the ACL. For this purpose, we would first use the assumed monthly revenue profile over the ACL to calculate the NPV of the BT Sport revenue flow, discounted to the start of each assessment period. We would then calculate the stream of constant monthly revenue over the ACL that would result in the same NPV if discounted back to the start of the assessment period. This approach takes into account the time value of money and discounting, i.e. that the revenues received at later periods may have a lower present value than those revenues received more immediately. In this calculation we would use the 'rest of BT' WACC rate prevailing during the assessment period.

6.393 There may also be provisioning revenues, which refer to one-off charges to new BT Sport subscribers. For example, based on the BT Sport pricing at the launch of the channels, BT was charging an activation fee of £15 incl. VAT (£12.50 excl. VAT) for those taking BT Sport over the Sky TV platform that are not re-contracting to BT broadband ([✂]).[711] [712] We would also take provisioning revenues into account when assessing the VULA margin.

6.394 We consider that it would be reasonable to spread provisioning revenues over several years, rather than just the month in which they were received. We recognise that the most appropriate period over which to spread these provisioning revenues is a matter of judgement. In the absence of better evidence, we would adopt a five year period on the grounds that this is the same duration over which we spread launch costs (see paragraphs 6.304 and 6.306). This would mean that, for example, any provisioning revenues that occurred in August 2014 would be amortised over a five year period from August 2014 to September 2019, acquisitions in July 2015 would be amortised over the five year period from July 2015 to June 2020 and so forth.

Guidance

In assessing the direct revenues associated with BT Sport we would take into account BT's monthly subscription revenues from residential subscribers and commercial premises as well as BT's monthly sublicensing revenues, advertising revenues and provisioning revenues.

We would use historical, audited data covering the assessment period. We would assume that the direct revenues over the remainder of the ACL remain:

- at their level as at the end of the assessment period, where evidence shows that revenues were growing over the assessment period; and
- at the historical average over the assessment period, where evidence shows that revenues were not growing over the assessment period.

We would calculate BT's monthly revenues by converting the assumed revenues over the entire ACL into a constant monthly estimate. We would do this by calculating the NPV of revenues over the entire ACL and converting this into constant ongoing monthly revenue with an equivalent NPV. We would use the 'rest of BT' WACC relevant to the assessment period when carrying out this calculation.

In the absence of better information, we would use the same methodology to smooth the provisioning revenues over a period of five years using the 'rest of BT' WACC.

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[711] BT response to question 2 of the s.26 notice of 5 July 2013.

[712] However, currently BT does not charge an activation fee, correct as of 14 January 2015. BT website, *BT Sport packages on Sky Digital Satellite Platform*, http://www.productsandservices.bt.com/products/bt-sport-on-sky-packages/.

Detailed discussion of the application of the Take-Up method

6.395 As set out in paragraph 6.325, the allocation of the net costs under the Take-Up method involves two main steps:

- first, allocating the net costs of BT Sport in proportion to the number of superfast and standard broadband subscribers that take BT Sport; and
- second, calculating the average contribution per customer within the increment, i.e. BT's residential superfast broadband portfolio.

Calculating the proportion of the net costs allocated to superfast broadband subscribers

6.396 We first set out our guidance of how we would allocate the net costs in proportion to the number of residential BT or Plusnet broadband customers that take BT Sport at the discounted rate.

6.397 We would consider that a residential BT broadband subscriber takes BT Sport if they have an active BT Sport connection, i.e. they meet the requirements to watch these channels without taking further action.[713] Our definition of taking BT Sport would include only those BT broadband subscribers that receive BT Sport at a discounted price (compared to the price paid by those that do not subscribe to BT broadband).[714]

6.398 In light of this definition, we understand that the BT broadband consumers that would currently be deemed to take BT Sport are those that:

- have activated access to BT Sport online player on their BT account and downloaded the BT Sport app (Category 1); or
- subscribe to Sky's satellite pay TV service and have subscribed or re-contracted for at least 12 months for a BT Consumer broadband service and requested enabling their SSSL viewing card to receive BT Sport (Category 2); or
- subscribe to Sky's satellite pay TV service and subscribe to BT broadband service (including Plusnet) and pay a discounted monthly subscription fee for access to BT Sport via satellite (Category 3); or
- subscribe to a BT TV service that includes access to some or all of the BT Sport channels (Category 4).

6.399 In light of this, we would calculate the total number of BT residential broadband subscribers falling within Categories 1 to 4. We would use whatever proportion of that

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[713] Currently, BT broadband subscribers typically have to take some positive action to activate their BT Sport connection. We recognise that BT could potentially manipulate our definition of take-up by automatically activating BT Sport for some consumers. We discuss this in paragraph 6.345.
[714] For example, consider the hypothetical situation where BT does not offer BT Sport over the Sky TV platform at a discounted price to BT broadband subscribers. In this situation, a BT broadband subscriber that did not access BT Sport online (via the BT Sport app) but did subscribe to the BT Sport channel over Sky TV would not count as 'taking' BT Sport for the purpose of the Take-Up method. Note, however, that the full price that they pay for their BT Sport subscription on the Sky TV platform would be deducted from when calculating the net cost of BT Sport.

total is accounted for by superfast broadband subscribers to determine the proportion of the net costs of BT Sport that are allocated to superfast broadband subscribers. For example, if 1 million subscribers fall into Categories 1 to 4, of which 0.6m subscribe to standard broadband and 0.4m subscribe to superfast broadband then 40 per cent of the net costs of BT Sport would be allocated to superfast broadband subscribers.

6.400 As explained in paragraph 6.345, we recognise that such a definition of 'take-up' could be potentially manipulated by BT, for example, by providing automatic access to BT Sport online. Artificially inflating the take-up of BT Sport among standard broadband customers would reduce the costs that are allocated to BT's superfast broadband portfolio. Should BT change the terms under which BT broadband customers can watch BT Sport in a way that we consider manipulates our measure of the take-up of BT Sport, we would reconsider our approach to calculating the proportion used to allocate the net costs of BT Sport.

Calculating the average contribution per superfast customer

6.401 Once the net costs of BT Sport are allocated to BT's residential superfast broadband portfolio, we would then calculate the contribution that the average residential superfast broadband subscriber makes to the recovery of these costs. The increment we are proposing to use to assess the VULA margin is the superfast broadband portfolio. Therefore, in order to calculate the net BT Sport cost per residential superfast broadband customer, we would divide the net BT Sport cost allocated to BT's superfast broadband portfolio by the total number of BT Consumer Infinity and Plusnet Fibre customers.

Guidance
When allocating the net costs of BT Sport to BT's superfast broadband portfolio, we would adopt the following two step approach.

First we would calculate the total number of BT residential broadband subscribers that (i) have an active BT Sport connection (i.e. they meet the requirements to watch these channels without taking further action); and (ii) pay a discounted price for BT Sport (relative to non-BT broadband subscribers) or receive it for 'free'. We would use whatever proportion of that total is accounted for by superfast broadband subscribers to determine the proportion of the net costs of BT Sport that are allocated to superfast broadband subscribers. Should BT change the terms under which BT broadband customers can watch BT Sport in a way that we consider manipulates our measure of the take-up of BT Sport, we would reconsider our approach to calculating the proportion used to allocate the net costs of BT Sport.

Second, we would calculate the net BT Sport cost per superfast broadband customer by dividing the net costs of BT Sport allocated to BT's superfast broadband portfolio by the total number of BT Consumer Infinity and Plusnet Fibre customers during the assessment period.

Upfront costs

6.402 In this section, we set out the method we would use to assess the upfront costs of acquiring superfast broadband customers.

Connection costs

6.403 As set out in Section 5, we will assess the costs of an operator that supplies superfast broadband using GEA+WLR. We have grouped the costs that are incurred when connecting a customer to GEA and WLR into the following categories.

- **GEA Connection:** this is the charge paid to Openreach for all superfast broadband connections.

- **GEA Managed Install:** this is a charge paid to Openreach for all GEA connections. It covers the cost of the connection of a base module, CP router and a PC to the network.

- **WLR Connection:** these are the charges paid to Openreach to connect customers who are either switching from other operators using WLR/MPF access or being provided with a new line (e.g. customers who previously did not have a broadband or voice service or are switching from a cable-based broadband service). The amount of the charge depends on which of these two categories a customer belongs to. Where customers upgrade from a standard broadband service using WLR to a WLR+GEA service from the same operator, no WLR connection charge is payable.

- **Retail-level connection activities:** this covers costs incurred by the retail business (over and above the charges paid to Openreach) when connecting a new superfast broadband subscriber with a new WLR line [✂].[715]

Responses to 2014 VULA Margin Consultation

6.404 TalkTalk commented that BT's competitors using VULA predominantly use MPF to offer standard broadband services. Therefore, to reflect the realistic costs that an efficient scale competitor would incur, the VULA margin assessment needs to include the cost of migration from MPF to WLR in the case where a customer upgrades from standard to superfast broadband. According to TalkTalk, this cost is £30.83 and should be included as an upfront cost.[716]

Ofcom's considerations

6.405 WLR Connection costs will depend on the proportions of customers being connected that (i) have been acquired from MPF operators; (ii) have been acquired from WLR operators; and (iii) are existing customers (either currently taking standard broadband or superfast broadband services):

- an MPF to WLR migration charge is payable to Openreach when connecting customers who are switching away from an operator who uses MPF for copper access;

- a (lower) migration charge is payable when connecting customers who are switching away from another operator who uses WLR access; and

[715] [✂]
[716] Paragraph 6.9, *TalkTalk Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.

- no charge is payable when upgrading a customer from standard broadband to superfast broadband as the same WLR line will be used to provide the copper access element of both connections.

6.406 As such, in response to TalkTalk's comment, the MPF to WLR migration charge is included as an upfront cost but only in proportion to the number of customers BT acquires from LLU operators during the assessment period.

Guidance
We would take into account the costs of GEA Connection, GEA Managed Install, WLR Connection (or any future equivalents) and retail-level connection activities.
- GEA Connection charges and GEA Managed Install charges would be the charges applicable during the assessment period.
- To estimate the WLR Connection cost, we would firstly calculate the proportion of connections that incur Openreach charges based on the volumes of superfast broadband customers that were acquired from other operators in the assessment period. We would then calculate the average charge paid for these connections applicable during the assessment period on the basis of the split of acquired customers that required a new line and those that needed an existing line to be migrated using the most recent data available from BT's management information system.[717]
- Retail-level activity costs would be estimated using the most recent data available from BT's regulatory financial reporting system.[718]

SG&A costs – upfront acquisition

6.407 BT incurs certain SG&A costs that are associated with customer acquisition, such as marketing acquisition costs, affiliates/pay-per-click expenditure and upfront customer services costs.

6.408 In the 2014 VULA Margin consultation, we did not propose to make any adjustments to upfront acquisition SG&A costs.

Responses to 2014 VULA Margin consultation

6.409 Confidential respondent [✂] argued that BT holds a significant advantage in relation to customer acquisition costs and that in particular, in confidential respondent [✂]'s experience, the marketing costs associated with acquiring superfast broadband subscribers will be significantly reduced with a larger existing customer base [✂].[719] It argued that BT's high share of retail residential and SME broadband customers gives it much greater potential than TalkTalk to grow its superfast broadband customer base quickly by switching its standard broadband customers to superfast. In contrast, [✂] will be much more dependent on acquiring customers from other operators. Confidential respondent [✂] said that Ofcom should obtain data from the other operators so as to determine the extent to which BT is likely to be advantaged

[717] Currently known as [✂].
[718] [✂].
[719] Confidential respondent [✂] said that because a customer's existing operator has knowledge about that customer's behaviour, the incumbent operator can more effectively target those customers that have a greater propensity to upgrade to superfast broadband services (e.g. those with high usage or very low speeds on standard broadband) and thereby reduce its overall marketing spend.

through lower fibre customer acquisition costs as a result of its larger overall share of broadband customers.[720]

6.410 Confidential respondent [✂] also argued that an adjustment should be made to BT's general advertising costs to account for BT's overall scale.[721]

6.411 TalkTalk contended that BT Consumer benefits from free advertising on Openreach property (particularly 40,000+ cabinets and 15,000 vans) since the Openreach logo says "*Openreach … a BT Group business*" with a large BT globe. TalkTalk argued that an adjustment should be made to account for this benefit as it is not replicable by BT's competitors.[722]

6.412 Sky noted that, currently and over the period covered by this market review, marketing of superfast broadband services is likely to comprise a high proportion of BT's total marketing budget.[723] Sky said that Ofcom's proposed approach, whereby BT Consumer's marketing spend is aggregated and spread over all acquisitions within each period, effectively enables BT to allocate a share of the costs of acquiring superfast broadband customers to other services. It is Sky's view that this approach is inappropriate and that the costs of marketing superfast broadband services should instead be identified separately, with the full amount included in the VULA margin assessment.[724]

Ofcom's considerations

6.413 We note that responses were focussed mainly on the treatment of marketing/advertising costs. We first consider whether adjustments should be made to BT's marketing/advertising costs and second consider how upfront acquisition SG&A costs would be calculated in the VULA margin assessment.

Whether an adjustment should be made to BT's marketing or advertising costs

6.414 We have considered confidential respondent's [✂] contention that an adjustment should be made to account for the lower marketing costs of upgrading existing standard broadband customers to superfast. We have gathered information from BT on the marketing spend on upgrading existing customers ([✂]) and acquiring new customers ([✂]) and the volumes of the different type of acquired customers in 2012/13.[725] The data indicates that BT's marketing spend on acquiring new customers is [✂] its spend on upgrading existing customers. We recognise that other operators may follow a different strategy to BT with regards to customer acquisition and consequently will have different acquisition cost profiles to BT. However, under our EEO approach we consider that the relevant consideration for the VULA margin assessment is BT's marketing costs.

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[720] [✂]
[721] [✂]
[722] Paragraph 3.50, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[723] Sky estimated that currently around 30 per cent of BT's media spending of over £130 million per year is devoted to marketing superfast broadband services.
[724] Paragraph 8.1, *Sky response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Sky.pdf.
[725] BT response to questions 13, 15 and 16 of the s.26 notice of 20 August 2014.

6.415 Confidential respondent [✂] argued that BT's large base of standard broadband customers gives BT an advantage in acquiring superfast broadband customers. However, BT's main rivals in superfast broadband all have substantial standard broadband customer bases.[726] In addition, we note that other rivals such as EE and Vodafone have considerable mobile customer bases to which they would have the ability to sell superfast broadband services. We consider that past experience of operators being able to cross-sell standard broadband to their pay TV customers suggests that such a strategy can be successful.

6.416 We consider that it would not be appropriate to adjust BT's advertising costs. Confidential respondent [✂] did not provide any evidence to support its submission that BT's advertising costs should be adjusted to account for scale (e.g. its own cost information). Moreover, BT's rivals currently have established brands as broadband providers. It is currently reasonable to assume that those brands support their superfast broadband operations.[727] We have therefore not considered this further.

6.417 Similarly, there is no evidence to support TalkTalk's contention that BT Consumer has an advantage stemming from 'free advertising' on Openreach property. Again, noting that BT's main rivals have established brands and will also likely benefit from their own marketing synergies, we consider that it is unclear that the BT Group branding on Openreach cabinets and vans provides BT's superfast broadband business with any material benefit.

6.418 In conclusion, we consider that BT's marketing/advertising costs do not satisfy the framework set out in paragraph 6.57 and therefore will not adjust BT's costs.

Calculation of upfront acquisition SG&A costs

6.419 We acknowledge Sky's concern about the allocation of marketing costs to the fibre portfolio. As set out in paragraph 6.226 to 6.229, we would consider whether BT's internal management systems provide an adequate breakdown of costs to BT Consumer services. Based on our analysis of BT's internal system spend in 2012/13[728], we currently consider that this does not provide a sufficient breakdown for the purposes of the VULA margin assessment. For example, BT's system allocated [✂] per cent of marketing spend on new customer acquisitions to voice services despite the fact that broadband customers accounted for a large proportion of acquisitions. We consider that our allocation method, which considers the share of customers acquired onto superfast broadband bundles as a proportion of all BT Consumer customer acquisitions during an assessment period, is a more reasonable basis upon which to allocate these marketing costs.

6.420 More generally, we consider that a customer-based allocation approach is appropriate for upfront acquisition costs, as most of these costs (for example, TV campaigns, online and outdoor advertising, dealing with orders, direct mail-outs) are unlikely to vary significantly with the number of products a customer takes. This

[726] According to internal Ofcom data, in Q2 2014, Sky, TalkTalk and Virgin had standard broadband bases of approximately [✂], [✂] and [✂] subscribers respectively.
[727] Standard and superfast broadband currently comprise a single retail market as consumers do not consider there to be a significant difference between them. This suggests that an operator's reputation and established brand in marketing one is likely to be transferable to the other.
[728] BT response to question 13 of the s.26 notice of 20 August 2014.

approach assumes that the cost of acquiring a voice-only customer is the same as the cost of acquiring a dual- or triple-play customer.

Guidance
Guidance Table 3 sets out the upfront acquisition SG&A costs that we would take into account.

For upfront acquisition SG&A costs, we would allocate on the basis of the number of superfast broadband customers acquired as a percentage of the total number of customers acquired by BT Consumer during the assessment period. For example, if a third of all BT Consumer customer acquisitions are for superfast broadband products, we would allocate a third of the total SG&A upfront acquisition costs to the superfast broadband portfolio cost stack. To calculate acquisition SG&A costs per superfast broadband customer, we would then divide this figure by the number of superfast broadband customers acquired during the assessment period.

Guidance Table 3 – SG&A upfront acquisition costs

Cost item	Description
Marketing – acquisition	[✂]
Affiliates/pay-per-click	[✂]
Customer services – upfront	[✂]

Source: BT response to questions 19-20 of the s.26 notice of the 21 June 2013, question 7 of the s.26 notice of 13 August 2013 and s.26 notice of 1 October 2013.

Sales

6.421 Sales costs cover the cost of processing sales and commissions to sales agents. [✂].[729]

Guidance
We would source sales costs from BT's most recent system[730] which provides a breakdown of the various activities [(✂)] The sales costs to be allocated to the superfast broadband portfolio would be estimated by multiplying the proportion of staff time used to acquire superfast broadband customers by the total labour cost of such staff time. To calculate sales costs per superfast broadband customer acquired, we would then divide this figure by the number of superfast broadband customers acquired during the assessment period.

Voucher costs

6.422 BT provides Sainsbury's vouchers to new Infinity subscribers acquired via BT.com. [✂].[731]

[729] [✂]
[730] Currently known as [✂].
[731] [✂]

Guidance
To calculate the cost of vouchers used for the purposes of acquiring a superfast broadband customer, we would take BT's spend on vouchers during the assessment period and divide this by the number of superfast broadband customers BT acquired during this period.

Discount costs

6.423 BT typically offers a discount to the monthly subscription prices of its superfast broadband offers for a number of months to newly acquired subscribers.[732]

Guidance
We would treat several months' discount to the monthly subscription prices for newly acquired superfast broadband customers as an upfront cost by multiplying the amount of the discount by the number of months during which it applies. In order to estimate the discount to the average superfast broadband customer, we would estimate the proportion of superfast broadband customer acquisitions that were eligible for the discount during the assessment period.

Router costs

6.424 BT provides a router to new subscribers to its superfast broadband packages. As of January 2015, all BT Consumer Infinity packages came with Home Hub 5, while Plusnet fibre packages came with a 4-port wireless-n technology router.

6.425 In the 2014 VULA Margin Consultation, we did not propose to make an adjustment to router costs.

Responses to 2014 VULA Margin Consultation

6.426 Confidential respondent [✂] argued that an adjustment should be made to BT's router costs to account for BT's overall scale. It said that [✂].[733]

Ofcom's considerations

6.427 As set out in paragraph 6.57, we would only consider adjustments to BT's costs or revenues where there is a material difference between BT and other operators (and where we do find evidence of a material difference, we then consider whether or not other operators could overcome those differences by matching BT's costs/revenues). The magnitude of the fixed costs of specifying, commissioning and testing a new router would have an immaterial impact on the VULA margin given that these costs are spread over broadband bases that are generally in the order of millions of customers.[734] Hence we consider that these router costs fail to meet the materiality threshold of our framework and therefore we would not adjust BT's router costs in the VULA margin assessment.

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[732] [✂]
[733] [✂]
[734] We have taken into consideration that the same routers can be used to provide both standard broadband and superfast broadband services.

Guidance
We would source the router cost related to the acquisition of a superfast broadband customer from the unit price as set out in the contract BT has agreed with its supplier. We would not include the cost of delivery of the router, as this would be covered by an equivalent postage and packaging charge received from new customers.

Event charges

6.428 Event charges cover engineering services carried out by Openreach, typically when new subscribers are connected to a superfast broadband service.

Responses to 2014 VULA Margin Consultation

6.429 TalkTalk said that Ofcom's estimates of event charges did not include special fault investigations ('SFIs') and time-related charges ('TRCs') (which relate to fault repair not included in the standard charge) since:

- if the fault is on the customer's network the charge is fully passed onto the customer; or
- if the fault is on Openreach's network then there is no charge.[735]

6.430 TalkTalk considered [✂].[736]

6.431 TalkTalk also said that the current GEA product includes a minimum contract term which means that a CP has to pay outstanding rental charges where that CP cancels the GEA rental within the first 12 months. This results in a cost for downstream rivals. TalkTalk argued that this cost should be reflected in the VULA margin assessment as an additional wholesale cost.[737]

Ofcom's considerations

6.432 In relation to SFIs and TRCs, we recognise that it is unlikely that operators will in all cases pass the charge onto the end-users to which the repairs relate (e.g. it may be that operators choose to recover SFIs and TRCs indirectly from their entire customer bases when setting monthly subscription prices). As a result, we agree with TalkTalk that it is necessary to include a separate item to account for these costs. We set out below how we would calculate the SFI and TRC costs to include in the VULA margin assessment.

6.433 The GEA product includes a minimum contract term, which means that an operator has to pay outstanding rental charges where that operator cancels the GEA rental within the first 12 months, resulting in a cost for downstream operators.[738] However, this cost is likely to be directly passed onto retail customers – operators typically commit their retail customers to a minimum contract of at least 12 months and charge

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[735] Paragraph 6.11, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[736] Paragraph 6.11, Ibid.
[737] Paragraph 6.13, Ibid.
[738] [✂]

early termination fees if they end the contract before the end of this term.[739] We therefore would not include this in the cost stack.

Guidance

We would include the following event charges in the upfront acquisition cost stack.

- BT Expedites – a charge payable to Openreach to carry out the customer installation more quickly than is standard. We would calculate the BT Expedite cost of acquiring a superfast broadband customer by taking the spend on expedites for superfast broadband products over the assessment period and dividing this by the number of superfast broadband customers acquired during this period.
- BT Abortive Visits – a charge payable to Openreach when an engineer visit is unsuccessful due to not being able to access the customer's property. We would calculate the BT Abortive Visits cost of acquiring a superfast broadband customer by multiplying the abortive visits charge by the percentage of superfast broadband customers acquired who had an abortive visit over the assessment period.
- Modify upstream order charges – a charge payable to Openreach to cancel, amend or modify a customer order. We would calculate the Modify upstream order charge cost of acquiring a superfast broadband customer by multiplying the modify order charge by the percentage of superfast broadband customers acquired who had an order cancelled or amended over the assessment period.
- SFI and TRC – charges payable to Openreach to cover the cost of engineers investigating and repairing faults on the Openreach network. We would calculate the average SFI and TRC costs incurred to serve a superfast broadband customer by (i) multiplying the total payments BT Consumer made to Openreach for these services during the assessment period by the percentage of BT Consumer lines that were taken by superfast broadband customers during this period; and (ii) dividing this figure by the average superfast broadband customer base over the assessment period and converting to a monthly figure.

Upfront TV costs

6.434 We would include BT TV in our assessment by considering the costs incurred over and above those for superfast broadband. There are two types of upfront costs we would include for TV – the YouView box and other connection costs.

Guidance

We would take the following upfront TV costs into account when assessing the VULA margin:

- YouView box – superfast broadband customers who sign-up to BT TV are provided with a YouView set-top box at no extra charge. We would source the YouView box cost to be included in the superfast broadband portfolio cost stack from the contract BT has agreed with its supplier.
- Other connection costs – there are a number of connection costs BT incurs when connecting customers with its TV service, including [✂]. We would estimate the other connection costs to include in the superfast broadband portfolio cost stack by taking the amount recorded in the most recent annual BT TV management

[739] See, for example, details of BT's product offers at http://www.productsandservices.bt.com/products/broadband/packages.

accounts and dividing by the number of TV additions during the period covered by the accounts.

Upfront revenues

6.435 In January 2015, a connection charge of £30 (including VAT) was payable by new subscribers to Infinity 1 and Unlimited Infinity 1. In addition, for customers taking up BT TV, a TV activation fee of £19 (including VAT) was payable.

Guidance
We would use the connection revenues applicable during the assessment period.

Average customer lifetime

6.436 As set out in paragraphs 6.10 to 6.11, it is appropriate to assess whether the ongoing monthly margin, which equals ongoing monthly revenues minus ongoing monthly downstream costs (both wholesale costs and retail costs), recovers net upfront acquisition costs within the ACL. The expected customer lifetime over which to make this assessment is therefore an important input in the calculation.

6.437 In the 2014 VULA Margin Consultation, we proposed to assume a 5-year ACL. This was based on the standard broadband churn rates of operators that purchase VULA from BT (not including BT's churn rates). We proposed that the adjustment to the ACL should form part of the SMP condition as this would provide certainty to BT and clarity to other operators.

Responses to 2014 VULA Margin Consultation

6.438 TalkTalk broadly supported our proposals, and argued that the use of the standard broadband ACL of BT's rivals has the following advantages:

- it correctly reflects the customer characteristics of BT's rivals;
- there is no reason to believe that BT's standard broadband churn will not be an appropriate indicator of its future churn on superfast broadband (e.g. BT has not seen any improvement in customer service that would reduce churn, and the gaining provider process for migration is likely to raise churn and reduce ACLs);
- it is easily understandable by both BT and other stakeholders; and
- it avoids fluctuations in measured profitability if there are short-term factors impacting on ACLs.[740]

6.439 Vodafone argued that while it understands the difficulties of estimating an appropriate ACL and hence accepts the adoption of standard broadband churn at this point in time, it considered that it may be important to define a more forward-looking ACL adjustment method. However, Vodafone did not advance such an approach.[741]

[740] Paragraph 6.4, *TalkTalk response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[741] Page 10, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.

6.440 Confidential respondent [✂] agreed with our proposal to make a specific adjustment to reflect the shorter ACLs faced by competitors and to provide certainty by including this in the SMP condition. However, it argued that an ACL of 5 years will not adequately reflect the ACLs faced by non-BT operators using BT's VULA products in a competitive market. In particular, confidential respondent [✂] argued that superfast broadband early adopters are atypical and superfast broadband products relatively novel. As a result, confidential respondent [✂] expected superfast broadband customer lifetimes to be shorter than standard broadband throughout the market review period as operators bring innovative offers to the market. Therefore the ACL should be reduced by 30 per cent (to 3.5 years), at least for the period to 2017. It argued that this percentage reduction would be consistent with the trends demonstrated in the length of standard broadband contracts over time.[742] Confidential respondent [✂] also argued that the resulting 3.5-year ACL [✂], is longer than the periods assumed by the Dutch NRA and by competition authorities and is longer than the maximum 24 month minimum contract period. It also noted that Ofcom has previously found that the majority (57 per cent) of fixed broadband customers had been with their current provider for less than four years and argued that the potential reforms in consumer switching processes that Ofcom is proposing will reduce barriers to switching.[743]

6.441 BT disagreed with the proposal of a 5-year ACL (arguing it should be at least 12 months longer) for the following reasons.[744]

- **Ofcom incorrectly dismissed BT's historical superfast broadband churn rates for estimating future ACL:** in particular, BT argued that it has offered superfast broadband products for four years (and its fibre base stood at over 2 million from early May 2014), and with contract terms typically of 12-18 months approximately a [✂] of BT's fibre base are currently out of contract. Further, it argued that superfast broadband churn would be expected to be lower than standard broadband (a view supported by its own data) as it is inherently a more compelling product than standard broadband, with better speeds and overall service. As a result, its Infinity products lead to happier customers who tend to be more loyal, resulting in a longer ACL.[745] In this regard, BT noted that TalkTalk[746]

[742] Confidential respondent [✂] argued that Ofcom's Consumer Experience reports show that the percentage of customers in the overall market who had switched broadband suppliers in the last 12 months was relatively high in the early days of standard broadband (e.g. 13 per cent in 2005) but has fallen over time to 12 per cent in 2007 and 9 per cent in 2013. It argued that this suggests that market ACLs for standard broadband were around 30 per cent shorter in the early years when competition and product offerings were still developing.

[743] [✂] This cited paragraph 3.5, Ofcom, *Consumer Switching: A statement and consultation on the processes for switching fixed voice and broadband providers on the Openreach copper network*, 8 August 2013.

[744] Paragraphs 8.34-8.63, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

[745] BT stated that monthly surveys consistently show that fibre customers are more satisfied than copper customers. For example, in the 12 months from July 2013 to June 2014, on average [✂] per cent of BT's fibre customers were either "*extremely satisfied*" or "*very satisfied*" with their broadband service. This compares with an average of [✂] per cent for copper customers over the same period. (Paragraph 8.40, Ibid.)

[746] TalkTalk Telecom Group PLC, *Interim Management Statement for the 3 months to 30 June 2014 (Q1 FY15)*, 23 July 2014, http://www.talktalkgroup.com/press/press-releases/2014/q1-ims-2014.aspx.

and Ofcom[747] have both publically stated that superfast broadband is likely to generate higher customer satisfaction levels.

- **Including TV and BT Sport further reduces churn:** BT contended that Ofcom's ACL analysis focuses exclusively on standard broadband, thereby failing to capture the positive impact of triple-play and BT Sport on churn. BT stated that its data shows that a newly acquired Infinity customer who takes BT Sport will be [✂] per cent less likely to churn than a customer who does not take BT Sport. Similarly, a newly acquired standard broadband customer who takes BT Sport will be [✂] per cent less likely to churn than a customer who does not take BT Sport. BT stated that overall, from the announcement of BT Sport, churn has improved by approximately [✂] per cent, with Q4 of 2013/14 being [✂] per cent better than the prior year. BT also cited its monthly customer surveys as evidence that BT Sport has increased customer satisfaction levels.[748] BT added that it expects that over time its churn rate will fall further due to the beneficial impact of TV and BT Sport.[749]

- **Other CPs have lower churn than the figures assumed by Ofcom:** BT claimed that published data on churn rates indicate that Sky and TalkTalk do not have materially higher churn than BT when measured on a like-for-like basis.[750] Further, it argued that the churn rates reported by TalkTalk (which are already lower than Ofcom's assumed rates), are expected to fall further as it expands penetration of TV to its broadband base.

- **Ofcom is wrong to dismiss Virgin's churn as irrelevant:** increased speeds (such as those offered on the Virgin network) can equate to reduced churn and increased ACL.

- **The use of an average for comparing ACL is not appropriate given recent data and likely future trends:** BT raised concerns that the most recent data relied on by Ofcom was outdated, particularly given there has been a clear upward trajectory in BT's ACL over time. BT contended that this effect was industry-wide.[751]

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[747] See, for example, page 359, Ofcom, *2014 Communications Market Report*, 7 August 2014, http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/2014_UK_CMR.pdf.

[748] BT's monthly customer surveys show that since the launch of BT Sport in August 2013, on average [✂] per cent of BT's fibre customers who also subscribed to BT Sport were either "*extremely satisfied*" or "*very satisfied*" with their broadband service. This compares with an average of [✂] per cent for fibre-only customers over the same period. A similar trend emerges with respect to copper customers, with values of [✂] per cent and [✂] per cent respectively. (Paragraph 8.48, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.)

[749] BT stated that it has recently experienced materially improving churn rates for its TV customers on the back of its investments in the YouView platform. For example, churn rates on TV customers fell from [✂] per cent in Q1 of 2013/14 to [✂] per cent in Q1 of 2014/15. BT stated that it expects these rates to fall further as it improves its TV offering (paragraph 8.49, Ibid).

[750] For example, BT argued that Sky's latest results showed that while its levels of churn had increased in 2014, rates were still very low at 10.7 per cent and its reported churn rates in 2012 were as low as 9.9 per cent. It noted that TalkTalk's latest results reported reducing churn, at 1.4 per cent per month (or 16.8 per cent annually) compared to 1.5 per cent for the previous quarter and 1.4 per cent for the same quarter last year. (Paragraphs 8.54-8.55, Ibid.)

[751] Paragraphs 8.54-8.55, Ibid.

Ofcom's considerations

6.442 We have considered whether BT's ACL should be adjusted by reference to the framework set out in paragraph 6.57. To do this, we have gathered further evidence to assess whether there is a material difference in ACL between BT and other operators and consider whether other operators could match it. We asked BT, TalkTalk, EE, Sky and Virgin to provide us with quarterly churn figures for both standard and superfast broadband (BT's figures separated out Plusnet).

Use of superfast or standard broadband ACL data

6.443 In assessing the VULA margin, we consider it important to use the ACL for superfast broadband in a competitive market. In response to the 2014 VULA Margin Consultation, BT argued that we should consider superfast broadband churn (see paragraph 6.441). However, we do not consider that observed data on superfast broadband churn is reliable or a good estimator of the future ACL for superfast broadband subscribers.

6.444 In particular, as well as being a more limited dataset, the ACL derived from churn data for superfast broadband is volatile (as illustrated in Figure 6.3) because of its small sample base and, for example, since early adopters may have atypical preferences. Further, it is also potentially distorted (i.e. biased downwards, implying a longer customer lifetime) since superfast broadband only became available relatively recently. BT argued that its data shows that fibre has materially lower churn (see paragraph 6.441), and while it considered this reflects the characteristics of superfast broadband leading to higher levels of satisfaction, it may not be representative of a competitive market outcome given the current transition period (e.g. it could also reflect that early adopters may be atypical). In addition, many superfast broadband customers will still be within the minimum contract period, during which they are penalised if they switch to another operator. BT has argued that approximately a [✂] of its fibre base are currently out of contract (see paragraph 6.441), but this still leaves approximately [✂] (plus all new subscribers) who remain in contract.

Figure 6.3– Selected CPs' superfast broadband ACL

[✂]

Source: [✂] *Note:* [✂]

6.445 Therefore, we consider that current superfast broadband churn data may not reflect the level of churn we might expect in a competitive market, and so do not consider that it is suitable to use in the VULA margin assessment. In light of these concerns we instead need to use an alternative indicator. Therefore the ACL requires a forecast on our part, based on a proxy, which is a feature that differs from our assessment of most cost and revenue items (where we can use actual data).

6.446 To do this, we have considered the average ACL for standard broadband subscribers. We consider this is a suitable benchmark to use since the retail standard broadband market appears to be broadly competitive and we do not think that superfast broadband is so different that we should assume it will have intrinsically higher ACLs (indeed, they are currently considered to be in the same retail market). In particular, the essential difference between standard and superfast broadband is speed – the other characteristics of these services are thus broadly comparable (as are the CPs competing). It seems unlikely to us that this difference should result in large changes to the ACL. We note that TalkTalk and Vodafone broadly agreed with this approach for this review period.

6.447 BT argued that churn for superfast broadband may be expected to be lower due to greater customer satisfaction (see paragraph 6.441), which BT argued pointed to a higher ACL for superfast broadband than for standard broadband. However, one of the key considerations in consumer switching decisions is satisfaction with their existing retail offering (and CP) *relative* to alternative offers. Therefore, to the extent that consumers are more satisfied with superfast broadband, we might expect all CPs offering superfast broadband to benefit from this. As such, it is not clear that it would necessarily lead to all CPs experiencing a longer ACL (as the relative satisfaction may not change significantly). Accordingly, we do not agree that the faster speed of superfast broadband points to a conclusion that the ACL would be higher under competitive supply of superfast broadband than for standard broadband.

6.448 We also take the view that there are significant practical benefits in using standard broadband data for this review period, noting the limited time period this VULA margin control will be in place (before it is reviewed as part of the next market review cycle, when more data may be available), the unreliability of the superfast churn data to date (and our concerns that it may be biased downwards), and the risk of errors in estimating what a superfast broadband ACL might be.

6.449 Therefore we continue to use data on standard broadband churn to inform our analysis.

<u>Comparison of ACLs between different operators</u>

6.450 We have used quarterly churn data for standard broadband to estimate the ACL for superfast broadband in a competitive market.[752] Figure 6.4 shows BT's ACL on standard broadband (excluding Plusnet) over the period since Q2 2009. [✂].

Figure 6.4 – BT's standard broadband ACL (excluding PlusNet)

[✂]

Source: [✂]

6.451 The data on the ACLs of selected CPs that provide standard broadband services is provided in Table 6.9.

[752] ACL (in years) = -0.25 x LN (1 – quarterly churn rate).

Table 6.9 – Average customer lifetime of selected CPs

	2011*	2012	2013	Q1 to Q3 2014***	2011 to Q3 2014
BT	[✁]	[✁]	[✁]	[✁]	[✁]
Virgin	[✁]	[✁]	[✁]	[✁]	[✁]
Sky[753]	[✁]	[✁]	[✁]	[✁]	[✁]
TalkTalk	[✁]	[✁]	[✁]	[✁]	[✁]
EE[754]	[✁]	[✁]	[✁]	[✁]	[✁]
Plusnet	[✁]	[✁]	[✁]	[✁]	[✁]

Source: [✁]
Notes: [✁]

6.452 We have used this standard broadband ACL data to assess whether there is a material difference in ACL between BT and other operators.[755] In doing this, we have particularly focused on the experience of Sky and TalkTalk, since of the non-BT CPs who purchase VULA they are by far the largest retail rivals to BT. Between Q1 2011 and Q3 2014, on average the ACLs of Sky and TalkTalk were around [✁] and [✁] years respectively. In contrast, BT's ACL (excluding Plusnet) over that period was around [✁] years [✁]. The ACL is to some extent sensitive to the period over which the average is taken, but while there are some fluctuations in the averages for all CPs between individual years, [✁]. Further, we note that BT's ACL [✁] Therefore, while we note BT's arguments about industry-wide upward trends in ACLs (as summarised in paragraph 6.441), [✁]. In light of the standard broadband data, we thus consider that there is evidence of a material difference between BT's ACL and that of other operators.

6.453 We recognise that this comparison does not take into account Virgin. [✁]. However, we are concerned with identifying a proxy for CPs that use VULA in order to supply superfast broadband, which Virgin does not (it is instead a vertically integrated

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753 [✁]
754 [✁]
755 BT argued that other CPs have lower churn than the figures we presented in the 2014 VULA Margin Consultation (and referred to published data on churn rates from Sky and TalkTalk). While BT did not provide source data, similar figures as those quoted by BT do appear in Sky and TalkTalk's respective financial reports for 2014. However, in relation to Sky, the quoted figures appear to relate to churn across its total customer base (and not specifically to standard broadband, which is the focus of our consideration here for the reasons previously set out) and so will likely reflect churn of Sky's TV customers who do not take broadband from Sky (see Sky, *Sky Annual Report 2014*, http://corporate.sky.com/documents/annual-report-2014/annual-report-2014.pdf). In relation to TalkTalk, the figures also appear to relate to its total customer base [✁] (see TalkTalk, *TalkTalk Preliminary results for the 12 months to 31 March 2014 (FY14)*, 15 May 2014, http://www.talktalkgroup.com/~/media/Files/T/TalkTalk-Group/pdfs/reports/2014/preliminary-results-fy14.pdf). In light of this, we consider that the data formally collected via s.135 (as set out in Table 6.9) specifically in relation to standard broadband continues to provide a robust and up to date basis for considering the ACL.

operator with its own cable network, which makes it structurally different from non-BT CPs operating on the Openreach network). Therefore, although we consider Virgin to be part of the same retail broadband market as other CPs, we do not believe that Virgin's ACL is a good guide to the ACL of operators that purchase VULA from BT (and therefore what an adjusted EEO might reasonably achieve in this review period).[756] In addition, we note the following differences.

- Unlike non-BT CPs using the Openreach network, Virgin's vertical integration means that it is easier to tailor its network to support its retail proposition. For example, Virgin has upgraded its network to boost broadband speeds which allows it to market itself to retail consumers as the fastest operator in the UK. In contrast, operators such as Sky and TalkTalk have less influence over the GEA input that they purchase. Virgin's vertical integration is a differentiating feature between Virgin and Sky and TalkTalk.

- Switching between Virgin and a CP operating on the Openreach network may involve more inconvenience for consumers than switching between broadband providers using the Openreach network. For example, it may result in extra inconvenience and costs for a customer since a BT engineer would be required to either install a new line or reconnect an existing line which was disconnected when the customer started using services from Virgin.

6.454 In light of the above, we conclude that there is a material difference in ACL between BT and other CPs (Sky and TalkTalk in particular).

6.455 We further consider that, on balance, this would appear likely to be an advantage for BT that other operators cannot match. If BT's customers are less likely to churn, then by definition it is more difficult for other operators to win them.[757] The essential characteristic of a consumer that is particularly difficult for BT's rivals to attract is one with a lower propensity to switch (churn) away from BT. If customers are reluctant to switch they may be more likely to remain with BT (whereas customers of other CPs are likely to have switched at least once in order to move away from BT), and such customers will exhibit a longer ACL (given the way in which we have calculated it). [✂]

6.456 While we recognise that there may be other reasons for why BT has a longer ACL, it is not clear that they provide a clear or compelling alternative explanation for the observed differences (or that a clearly identifiable strategy available to other CPs that could enable them to match BT's longer ACL). For example, we note the following points.

- Based on the limited consumer research data collected by Ofcom in relation to satisfaction with CPs[758], there does not appear to be any evidence to suggest that consistently higher customer satisfaction relative to other operators provides a reasonable explanation for BT's lower churn (and resulting longer ACL). In fact,

[756] While we acknowledge BT's argument that Virgin's longer ACL could reflect higher customer satisfaction from higher speeds (see paragraph 6.441) and therefore should be taken into account, to the extent this were the case we consider it would support the view that Virgin's historic churn data (when it was typically supplying faster broadband speeds than other operators) does not provide a reliable data point for the ACL that CPs can expect in the future.
[757] [✂].
[758] Including the Ofcom Tech Tracker (Wave 1 2013 and Wave 1 2014), and Ofcom Quality of Customer Service 2014 report (based on an online survey conducted in October 2014).

for satisfaction with customer service in relation to broadband, Ofcom's data suggests BT was lower than the sector average in 2014.[759] [760]

- BT has suggested its sport content may increase customer satisfaction (and therefore ACLs). If this were the case then we may expect to observe such an effect in BT's standard broadband ACLs (given sport content is also available to these subscribers). However, we note that such an effect would only apply to data from 2013/14, when such content first became available to BT's subscribers, but the difference is evident prior to this period. In any event, we note other CPs (in particular, Sky) also offers sport content, and so it is not clear that this would explain the observed difference in ACLs. In addition, our CP standard broadband churn data reflects all standard broadband combinations in aggregate (e.g. broadband only, broadband plus telephony, and broadband plus TV where relevant), and so to the extent sport content did reduce churn for standard broadband customers, it will already be reflected in the ACLs.[761]

6.457 As we observed in the 2014 VULA Margin Consultation, the lower propensity of BT's broadband subscribers to churn (and consequential longer ACL) could be a consequence of BT's position as the legacy incumbent. This is because customers that are reluctant to switch may be more likely to remain with BT (as the incumbent telecoms network operator) whereas customers of other CPs are likely to have switched at least once (to move away from BT).[762] As a result, BT's average ACL across its standard broadband subscriber base may be increased due to a subset of customers that have a low propensity to change telecoms supplier.

6.458 In summary, we consider there is evidence that other operators are likely to have a materially shorter ACL than BT, that this difference appears to be persistent in nature between BT and [✂], and that this may be linked to BT's legacy position as the leading retailer of communications services. Therefore we are concerned that the material difference in ACL could potentially be an advantage which other CPs cannot match.

6.459 In light of this, we consider it appropriate to adjust BT's ACL to reflect the differences we observe. We consider that doing so would be practical, given we have data from which to estimate a suitable ACL for the purposes of the VULA margin assessment.

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[759] BT was also consistently close to the industry average in the previous four years for which data is available. See Figure 37, Ofcom, *Quality of Customer Service 2014 report*, December 2014, http://stakeholders.ofcom.org.uk/market-data-research/other/cross-media/quality-of-customer-service-annual-reports/2014/.

[760] If there were evidence that BT's longer ACL reflected superior customer satisfaction compared to other operators, then it would be more debatable whether an adjustment should be made to the ACL used when assessing the VULA margin. This is because other operators may be able to replicate BT's ACL by, for example, improving the quality of the service that they offer to consumers.

[761] The impact of TV and/or sports content on superfast broadband churn may not significantly differ from its impact on standard broadband churn given BT's own data (see paragraph 6.441) suggests that a newly acquired Infinity customer who takes Sport will be [✂] per cent less likely to churn than a customer who does not take Sport, while the corresponding figure for a newly acquired standard broadband customer is [✂] per cent.

[762] In this regard, we note relativities in the composition of that superfast churn data from BT. BT's churning superfast broadband customers appeared to be disproportionately skewed (relative to its overall superfast broadband customer base) towards those who have been with BT for a shorter length of time. [✂]. BT response to questions 1 and 2 of the s.135 notice of 10 October 2014. [✂]

Provided we specify that ACL in advance, it is straightforward for BT to take it into account when assessing compliance with the proposed VULA margin condition.

Final approach and calculating the ACL

6.460 Given the need for a forward-looking ACL estimate and the variability in the historic standard broadband ACL data (particularly the sensitivity to the time period used), we do not consider it appropriate (or desirable) to seek to base the ACL adjustment on a specific historic average or any other more complex calculation. Rather, we have exercised judgement on the basis of general observations of the data available to us on what an adjusted EEO might reasonably be able to achieve in this review period. For the reasons set out above, we have excluded both BT and Virgin churn data in forecasting the ACL to use in the VULA margin assessment so as to reflect what BT's VULA-based competitors might achieve [✂].

6.461 In the 2014 VULA Margin Consultation, we proposed to assume a 5-year ACL when conducting the VULA margin assessment. This 5-year figure reflected the experience to date in standard broadband of other major operators that purchase VULA from BT. [✂]. We have sought more recent churn data since the consultation (as set out in Table 6.9) to consider whether this position has changed. [✂]. Indeed, we recognise TalkTalk's indication that there could potentially be short-term factors which impact on ACLs (see paragraph 6.438), and that [✂].

6.462 While both TalkTalk and Vodafone supported our 5-year proposal for this review period (see paragraph 6.438 and 6.439 respectively), BT considered we should use a higher ACL (as discussed above) and confidential respondent [✂] argued that we should be using a shorter ACL (see paragraph 6.440).

6.463 In relation to BT's arguments that we should use a higher ACL than indicated by the standard broadband data (on the basis that superfast broadband ACLs will be higher than standard broadband due to greater customer satisfaction), we consider that it is not clear that a general increase in broadband speeds or the provision of TV and/or sport content would significantly reduce BT's churn relative to other CPs in a competitive market (for the reasons set out in paragraph 6.447 and 6.456 respectively). Further, while BT expects superfast broadband ACLs to be higher than standard broadband in the future, we are concerned that such an increase could reflect the outcome of a distortion of competition. This is because in a competitive market BT's rivals are assumed to be able to profitably match BT's broadband offers. In such a case, we would not expect ACLs to necessarily increase. As such, taking BT's expectations into account by setting a higher ACL (and thus a lower minimum VULA margin) risks incorporating the rewards of the diminution in retail broadband competition that we are seeking to prevent. Therefore, given the existing difference between ACLs for standard broadband, we do not consider it appropriate to extend the ACL indicated by the standard broadband churn data based on BT's expectation that it may legitimately be longer for superfast broadband (or indeed for customers with TV or sports content). In particular, the absence of clear supporting evidence suggests this would seem premature and highly speculative at this stage.

6.464 Conversely, confidential respondent [✂] argued that we should use a shorter ACL (see paragraph 6.440) since one might expect superfast broadband ACLs to be shorter in this review period. However, this is not reflected in the superfast broadband churn data we have received, which indicates consistently higher ACLs for superfast broadband (although as set out above, there are also reasons to suspect that these ACLs may be biased upwards (see paragraph 6.444)). Further, we note the following points.

- The broadband market is now very different compared to the early stages of standard broadband when there were a large number of smaller competing CPs and limited existing take-up of broadband. Therefore, while there is a transition period to superfast broadband, it is not clear to us that we would necessarily expect churn to reach the levels observed in standard broadband 10 years ago. Further, it would seem premature to seek to adjust the ACL to reflect those levels in light of the different market context, particularly since the smaller operators in this review period would still face competitive constraints from the larger operators (particularly Sky and TalkTalk, as discussed in Section 3).

- [✂];

- The ACLs used by other regulators and competition authorities in other countries are of little significance as they are likely to be affected by market specific circumstances and will have had their own motivations/focus.

- While proposed reforms to switching could reduce barriers to switching, these remain proposals and as such their impact on churn in this review period is uncertain.

- The maximum-permitted minimum contract period is largely irrelevant. While providing a potential floor to the ACL, the actual ACL experienced is markedly longer.

- Our use of actual churn data to determine an ACL will already reflect that some customers will have been with their current CPs for less than the average (while some will also have been with them for longer). Therefore it is not clear that the research to which confidential respondent [✂] referred significantly adds to the analysis of actual churn data.

6.465 As a result, we do not consider there to be sufficient justification to reduce the ACL by a further 30 per cent as argued by confidential respondent [✂]. As discussed in Section 3, there are drawbacks as well as benefits to increasing the VULA margin. We do not consider that it is appropriate to make adjustments to the minimum VULA margin without suitable evidence.

6.466 Therefore, having considered all of the above, we do not consider there to be sufficient evidence to justify a change to the 5-year ACL proposed in the 2014 VULA Margin Consultation. That ACL adjusts for the material difference that we observe between BT and other operators using its network which we consider is likely to be unmatchable. We consider that this achieves our regulatory aim.

6.467 We consider that this adjustment should form part of the proposed SMP condition. This is because we consider it is important to provide BT with a clear indication of its obligations under our proposed SMP condition. In particular, BT will not have data on other operators' ACLs. As a result, it would not be straightforward for BT to gauge how large an adjustment it should make without input from Ofcom. Specifying the proposed adjustment to ACLs in the SMP condition provides greater certainty to all stakeholders (including BT).

Indicative assessment of the VULA margin

Introduction

6.468 We have undertaken an indicative assessment of the impact of our VULA margin regulation on BT's current prices. This is for the purposes of transparency and providing certainty to stakeholders of the effects of our decision. As discussed in Section 7, this is also relevant to our assessment of the proportionality of this regulation.

6.469 The assessment is intended to give a broad indication of the magnitude of the effects of our VULA margin regulation. It is not intended to be a precise test of whether or not BT would be in compliance with the VULA margin regulation on the day that it comes into force. Rather (as explained in Section 4) BT is required to provide the data necessary to assess its compliance over the first month that the VULA margin condition applies.

Indicative assessment in the 2014 VULA Margin Consultation

6.470 We included an indicative assessment of the VULA margin in the 2014 VULA Margin Consultation. It showed that "BT would be close to the proposed VULA margin boundary. That is, either slightly falling short or slightly exceeding it."

Approach to conducting our revised indicative assessment

6.471 In carrying out our revised indicative assessment we have applied the approach described in Sections 5 and 6. We have used the following data sources.

- Costs have been estimated primarily on the basis of 2012/13 data derived from BT's management accounts and its internal systems.
- We have updated the estimate of network costs to take into account 2013/14 data. In particular we have used a unit bandwidth cost of [✂] per Mbit/s per month. We have also used 2013/14 data on the average capacity available to each user.
- The net costs of BT Sport were estimated using BT's October 2013 forecasts of its costs in 2014/15. The exceptions are direct revenues of BT Sport, take-up and broadband subscriber numbers which relate to September 2014.[763]
- We have used the WLR and GEA prices that Openreach charged in January 2015.
- Our assessment reflects the retail product bundles and prices that BT offered to new subscribers in January 2015. We have also used BT's call revenues from 2013/14.

[763] For the purposes of this assessment we have used data on the take-up of BT Sport from BT's response to question 1 of the s.135 notice of 21 October 2014. In allocating the net costs of BT Sport for this indicative assessment we have used the number of BT broadband subscribers that subscribed to BT Sport for free.

6.472 We recognise that using data sources relating to a mix of years means our indicative assessment will not precisely reflect the current position. However, given that our objective is simply to provide an indicative assessment of the impact of our decision, we consider that a degree of imprecision does not undermine the value of this exercise or the inferences that we draw in Section 7.

Results of our revised indicative assessment

6.473 Our indicative assessment of the VULA margin is set out in Table 6.10.

Table 6.10 – Indicative estimate of the impact of VULA margin regulation

	£ per subscriber per month
Starting headroom (using LRIC, before adjustments and including BT Sport costs)[764]	[✂]
Impact of LRIC+ and ACL adjustment	
Application of LRIC+ standard	- [✂]
Reduction in ACL from [✂] years to 5 years	- [✂]
Total impact of LRIC+ and ACL adjustment[765]	- [✂]
Indicative headroom	**[✂]**

6.474 The 'starting headroom' of [✂]/month in the first row of the table represents the monthly profitability of BT's average superfast broadband subscriber over a payback period (ACL) of [✂] years.[766] This takes into account upfront customer acquisition costs and ongoing revenues and costs, including the wholesale charges paid to Openreach for the supply of GEA and WLR. Costs have been assessed on a LRIC basis. BT Sport costs have been assessed using the Take-Up method.

[764] This comparator reflects a minimalistic view of the costs that BT should recover from the VULA margin. Assuming an EEO approach and a LRIC cost standard essentially shows whether BT's superfast broadband portfolio is incrementally profitable given the wholesale prices charged by Openreach. Assuming that BT Sport costs are assessed using the Take-Up method (i.e. the same method as in our proposed approach) strips out the effect of the BT Sport allocation method from the comparison set out in this table.

[765] Note the cumulative impact of the proposals ([✂]) is greater than the sum of the individual proposals because the impact of the application of a LRIC+ standard is dependent on the length of the ACL used. With a shorter 5-year ACL, the application of a LRIC+ standard reduces headroom by [✂].

[766] We discuss what ACL to assume in this 'starting headroom' case in the footnote to paragraph 6.475.

6.475 The following rows show the impact of our proposals for carrying out an *ex ante* assessment of the VULA margin, relative to the 'starting headroom' in the first row.

- The aggregate impact of these proposals is [✂]/month per superfast broadband subscriber. To place this in context, this equates to around [✂] per cent of BT's average monthly superfast broadband revenues ([✂], excluding VAT).

- The impact of assuming a 5-year ACL depends on the length of the ACL we would have assumed absent this adjustment. Compared to a [✂] year ACL, it reduces the amount of headroom (or, equivalently, increases the minimum VULA margin) by [✂].[767]

6.476 The final row indicates the difference between BT's actual monthly margin and the minimum VULA margin required by the SMP condition. It suggests that on the basis of our indicative assessment, BT is [exceeding] the minimum VULA margin by [✂]/month. This suggests that BT may not need to change its current prices.

6.477 [✂]. In particular, since the 2014 VULA Margin Consultation BT has increased its retail superfast broadband prices (e.g. higher line rental). Some of the cost figures have also changed, such as unit bandwidth costs, and we now apply the Take-Up method (rather than the All Broadband method) when allocating BT Sport costs.

6.478 Given the mix of data sources that we have used, we have considered a number of alternative scenarios which test the possible implications of updating some of the parameters underlying Table 6.10.

- As explained in paragraph 6.471, many of the cost estimates used in Table 6.10 relate to 2012/13 rather than 2013/14. We have estimated the impact if all costs other than BT's wholesale charges (such as WLR and GEA) and BT Sport costs were increased by 2 per cent (the Bank of England's inflation target).

- Call revenues are declining. We have estimated the impact if call revenues fall from [✂] (the 2013/14 figure) by 10 per cent to [✂].[768]

- The level of unit bandwidth costs could be affected by further cost allocation changes as discussed above. We have thus estimated the impact if the unit bandwidth cost increased by 10 per cent.

6.479 The results are shown in Table 6.11. This shows the indicative headroom in each of these scenarios as well as the change relative to the headroom presented in Table 6.10.

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[767] BT's actual ACL (and thus the benchmark against which the impact of a 5-year ACL is assessed) depends on the time period from which the churn data comes. When we carried out an indicative assessment for the 2014 VULA Margin Consultation, we assumed a [✂]-year ACL based on data for 2009-2013. Since then, BT's ACL has increased. If we assumed a [✂]-year ACL then the 'starting headroom' (i.e. the first row in the above table) would be [✂] and assuming a 5-year ACL would reduce this by [✂]. If we instead assumed a [✂]-year ACL then the 'starting headroom' would be [✂] and assuming a 5-year ACL would reduce this by [✂].

[768] [✂]

Table 6.11 – Indicative assessment: possible impact of parameter updates

	Call revenues decreased by 10%	2012/13 costs increased by 2%	Unit bandwidth costs increased by 10%
Indicative headroom	[✂]	[✂]	[✂]
Change in indicative headroom compared to Table 6.10	[✂]	[✂]	[✂]

6.480 [✂]

6.481 We have considered the potential impact of the UEFA rights agreement, assuming that all other parameters remain unchanged.

- If BT does not increase the amount of revenue that it earns from other sources, then the minimum VULA margin will increase (since the increased BT Sport costs need to be recovered from broadband). In this scenario the indicative headroom for the average superfast broadband subscriber would fall by [✂]/month. As a result, BT would be [✂]. Consequently. [✂].

- Clearly in practice, when BT begins broadcasting the UEFA matches, it is likely to increase the direct revenues that BT earns from sources other than BT broadband subscribers (e.g. paying subscribers on Sky's satellite TV platform). The scenario described in the preceding bullet is thus likely to overstate the impact on the VULA margin. For example, if BT Sport direct revenues increase by 50 per cent then the indicative headroom for the average superfast broadband subscriber would fall by [✂]/month rather than [✂]/month. [✂].[769]

[769] See also paragraphs 6.22 to 6.26 which relate to the treatment of any cost and revenue changes in the very short term.

Section 7

Conclusion, legal tests and consistency with European requirements

Conclusions on regulating the VULA margin

7.1 We set out in Sections 3 to 6 our conclusions on regulating the VULA margin. In summary, our view is as follows.

- Consistent with the applicable legal framework including section 88 of the CA03, our regulatory aim is to ensure that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted. We consider that this aim is most appropriately achieved in this review period by ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers.

- The most appropriate and proportionate option for achieving this aim is to impose an SMP condition requiring BT to set the VULA charge so as to maintain a minimum VULA margin, with a requirement on BT to provide the data necessary to monitor compliance every six months. This requirement is supplemented by guidance on our detailed approach to assessing compliance with the condition.

- This requirement will:
  - not include any analysis of the potential effects of BT's pricing;
  - use an adjusted EEO approach (specifically the ACL and, in certain circumstances, unit bandwidth costs should be adjusted);
  - assess the adjusted EEO's costs on a LRIC+ basis;
  - consider superfast broadband packages marketed at residential (rather than business) customers;
  - use the total fibre portfolio as an output increment (including all products, services or bundles of products or services, including, but not limited to, telephony and television services (including content));
  - use the costs of an operator that uses WLR technology; and
  - adopt the approach to assessing the VULA margin, including analysing data on BT’s costs and revenues, on the basis of our guidance. We recognise that it may be appropriate to depart from this guidance if there is a material change in circumstances.

7.2 The SMP condition implementing our approach is set out in Annex 2.[770] For the reasons set out in the preceding sections, we have sought to include the main elements of our conclusions in the SMP condition to provide legal certainty to BT. We do this by setting out in the SMP condition those requirements that we concluded on in Section 5. We also codify in the SMP condition our decision on the ACL adjustment and the floor on unit bandwidth costs that we describe in Section 6 given that these reflect data from other operators, meaning it is difficult for BT to quantify in the absence of us specifying them in the condition.

Legal tests

7.3 We explain below why we consider that our obligation requiring BT to set the VULA charge so as to maintain a minimum VULA margin is appropriate and satisfies the legal tests set out in the CA03.

7.4 Section 87(9) of the CA03 authorises Ofcom to set SMP services conditions imposing on the dominant provider: (a) such price controls as Ofcom may direct in relation to matters connected with the provision of network access to the relevant network or with the availability of relevant facilities; and (b) such rules as Ofcom may make in relation to those matters about the recovery of costs and cost orientation. Conditions authorised by section 87(9) include conditions requiring the application of presumptions in the fixing and determination of costs and charges for the purposes of the price controls, rules and obligations imposed by virtue of that section (87(10)).

7.5 Before setting conditions falling within section 87(9) we are required to:

- ensure that the condition satisfies the tests set out in section 88 of the CA03 as the VULA margin requirement equates to a condition about network access pricing (discussed in paragraphs 7.9 to 7.31); and

- be satisfied that the condition satisfies the test set out in section 47(2) that the condition is:

  - objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;

  - not such as to discriminate unduly against particular persons or against a particular description of persons;

  - proportionate to what the condition or modification is intended to achieve; and

  - in relation to what it is intended to achieve, transparent.

7.6 We discuss the section 47(2) tests in paragraphs 7.32 to 7.68.

7.7 We are also required to carry out our functions in accordance with our duties under section 3 of the CA03 and the Community requirements set out in section 4 of the CA03. We discuss these at paragraphs 7.69 to 7.72.

[770] We consider that it is appropriate to provide BT with a short period from publication of the final statement before the condition comes into force. As such, the draft SMP condition at Annex 2 specifies a provisional date of 1 March 2015 from which the condition will take effect.

7.8 We are further required in carrying out our functions to take due account of all applicable recommendations issued by the European Commission under Article 19(1) of the Framework Directive (by virtue of section 4A) and take the utmost account of any opinion, recommendation, guidelines, advice or regulatory best practice adopted by BEREC (by virtue of Article 3(3) of the Regulation 1211/2009).[771] We discuss these in paragraphs 7.74 to 7.136.

Section 88 tests

7.9 Section 88(1) of the CA03 requires that Ofcom is not to set an SMP condition falling within section 87(9) except where it appears to Ofcom from the market analysis carried out for the purpose of setting that condition that there is a relevant risk of adverse effects arising from price distortion, and it also appears to Ofcom that the setting of the condition is appropriate for the purposes of:

- promoting efficiency;
- promoting sustainable competition; and
- conferring the greatest possible benefits on the end-users of the public electronic communications services.

7.10 Under Section 88(2) of the CA03, when setting an SMP condition falling within section 87(9), we must take account of the extent of the investment in the matters to which the condition relates of BT.

Relevant risk of adverse effects arising from price distortion

7.11 For the reasons set out in Section 3, it appears to us from the market analysis carried out for the purpose of setting the VULA margin condition that there is a relevant risk of adverse effects arising from price distortion. Specifically, that BT might so impose a price squeeze as to have adverse consequences for end-users of public electronic communications services.[772]

Promoting efficiency

7.12 It appears to us that the VULA margin condition is appropriate for the purpose of promoting efficiency.

7.13 In the absence of regulation, we believe that BT would have the ability to price squeeze. There is also a significant and real risk that it has an incentive to do so. As explained in Section 3, we consider that if BT were to maintain an insufficient VULA margin, this is likely to result in a distortion of competition in retail superfast broadband. Competition is a key driver of both static and dynamic efficiency incentives, furthering incentives for cost minimisation (productive efficiency) and investment and innovation (dynamic efficiency), as well as leading to prices which may better reflect forward-looking costs (allocative efficiency). If BT is able to stifle

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[771] Regulation (EC) No 1211/2009 of the European Parliament and of the Council of 25 November 2009 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Office.

[772] See from paragraph 3.57.

the ability of rivals to compete in the superfast broadband market segment through imposing a price squeeze, such efficiency incentives may also be diluted.

7.14 The VULA margin condition may have a short term negative impact on productive and allocative efficiency by allowing CPs with slightly higher costs than BT to compete. However, as discussed in Section 3, the condition only seeks to ensure that CPs with slightly higher costs than BT (or some other slight commercial drawback) can profitably match BT's offers; it is not clear that this would result in significant productive or allocative inefficiencies.

7.15 Further, Ofcom recognises that there are benefits associated with competition which can be more important than any short term loss in static efficiency. In this case, we consider that any potential negative impact on productive efficiency, even if it did arise, would likely be outweighed by the long term dynamic efficiency benefits of future competition. Finding the appropriate balance between losses of static efficiency on the one hand and the gains from dynamic efficiency is a matter of judgement and Ofcom believes that it has struck a reasonable balance.

7.16 We also note that:

- the VULA margin condition provides BT with the flexibility to change its prices (subject to overall compliance with the VULA margin condition) to meet the necessary demand conditions by recovering common costs in the most efficient manner across its fibre portfolio; and

- investment is an important aspect of dynamic efficiency, and investment incentives are unlikely to be materially distorted by the VULA margin control (for the reasons set out in paragraph 7.24 onwards).

Promoting sustainable competition

7.17 It also appears to us that the VULA margin condition is appropriate for the purposes of promoting sustainable competition.

7.18 We consider that the condition is consistent with this requirement since it would achieve our regulatory aim of ensuring that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted.

7.19 The VULA margin condition will achieve our regulatory aim by ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers. As such, it will enable other CPs to effectively compete with BT in the retail provision of superfast broadband offers. This assessment is intended to allow CPs with slightly higher costs than BT to compete. BT argued that our proposals provide "*unnecessary and unwarranted margin*" for its competitors.[773] We do not agree. Rather, the increase in VULA margin that could result would be only to offset specific disadvantages of other CPs so they can profitably match BT's offers (so as to avoid a distortion to competition). In particular, in deciding which adjustments to make we have

[773] Paragraph 1.5, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

considered whether there is evidence that BT's costs/revenues materially differ from those of other operators and, if so, whether it is likely that other operators could match BT's costs/revenues (as set out in Section 6). We are of the view that this assessment will, therefore, promote competition which is sustainable and is unlikely to result in the sort of "*regulatory windfall*" suggested by BT (as discussed in Section 3).

Conferring the greatest possible benefits on the end-users of the public electronic communications services

7.20 It further appears to us that the VULA margin condition is appropriate for the purposes of conferring the greatest possible benefits on users of public electronic communications services.

7.21 We explain in Section 3 why it appears to us that there is a relevant risk of adverse effects arising from price distortion. Specifically, BT might impose a price squeeze so as to have adverse consequences for end users of public electronic communications services.

7.22 In this context and as discussed in Section 3, we consider that if BT could establish a degree of retail market power in the provision of superfast broadband as a consequence of imposing a price squeeze, there is a significant risk that the retail price of these services will rise in the future, especially as the constraint from standard broadband diminishes. Further, if competition in the provision of superfast broadband is weak, we would expect to observe reduced consumer choice and lower levels of innovation in the longer term since competition is a key driver of non-price improvements made by CPs. This would therefore have the effect of unwinding the benefits of competition that have been delivered in relation to standard broadband by LLU operators, leading to adverse consequences for end users.

7.23 By ensuring that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted, it appears to us that the VULA margin condition will confer the greatest possible benefits on the end-users of public electronic communications services by acting as a driver for greater choice, lower prices and product innovation.

The extent of investment

7.24 In our VULA margin condition, we have taken account of the extent of BT's investment in the matters to which the condition relates.

7.25 In response to the 2014 VULA Margin Consultation, BT suggested that Ofcom's brief assessment of this issue was wholly inadequate to meet the statutory requirement under s.88(2) of the CA03.[774]

7.26 In particular, BT suggested (by reference to Article 13(1) of the Access Directive) that Ofcom has a duty to allow BT to make a reasonable rate of return on its investment

[774] See paragraph 6.38, *BT Response to the 2014 FAMR Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf).

in superfast broadband.[775] In this regard, BT noted that it has invested £2.5 billion to roll out superfast broadband to two-thirds of UK consumer and business premises by the end of 2014[776] and that its investments in, for example, vectoring and new network technologies (Fibre to the Remote Node) are not complete and will have long pay back periods.

7.27 BT also put forward the following arguments.

- BT needs to be able to invest and innovate in order to compete and that the VULA margin condition risks placing it at a disadvantage for future investment compared to other CPs.[777]

- Ofcom's approach to the issue of investment is inconsistent with the reasoning set out in the 2014 FAMR Statement[778] and Ofcom appeared to be concluding that the need to provide entry assistance outweighs important regulatory consistency and investment considerations.[779]

- Ofcom's proposal to include the costs of BT Sport within the VULA margin condition draws BT's investment in premium sport content into the factors of which Ofcom should take account. As a result, Ofcom should give full weight to the extent of the investment made by BT in trying to build up its pay TV business and the impact of the condition on BT's incentives to make further investments in pay TV.[780]

7.28 We decided in the 2014 FAMR Statement not to impose cost-based regulation of the wholesale VULA price for a number of reasons. These included the harm to investment incentives if we were to constrain prices in a way that prevents BT from capturing the upside of risky investments.

7.29 The form of our VULA margin regulation is unlikely to have a material impact on BT's investment incentives in this review period.[781] This regulation is equivalent to a 'retail minus' control on the wholesale price. Protecting the retail margin in this way has a number of important differences compared to a 'cost plus' control on wholesale prices. The regulated firm retains the flexibility to set whatever level of wholesale prices it wishes (provided that its retail price is suitably above that wholesale price). As a result, our VULA margin condition should protect retail competition while still allowing BT to earn an appropriate return at the wholesale level.

7.30 We also disagree with BT's submission that Ofcom's approach to the issue of investment is inconsistent with the reasoning in the 2014 FAMR Statement. In the 2014 FAMR Statement we considered and rejected imposing cost based wholesale controls on the pricing of VULA. As explained in the preceding paragraph, such controls are very different in nature to a 'retail minus' control which allows BT to retain flexibility over the level of wholesale prices. Indeed, in the 2014 FAMR Statement, we explained that "*the flexibility to set VULA prices can promote*

[775] Paragraphs 6.37-6.40, Ibid.
[776] Paragraph 6.39, Ibid.
[777] Paragraph 6.42, Ibid.
[778] Paragraph 6.41, Ibid.
[779] Paragraph 6.43, Ibid.
[780] Paragraph 6.45, Ibid.
[781] See also our discussion of investment incentives from paragraph 3.121.

investment by BT as it enables it to trial different pricing arrangements in the early uncertain period of NGA development".[782] We remain of this view. Rather than applying a cost-based pricing obligation, we continue to consider (consistent with our view in the 2014 FAMR Statement) that an assessment of the VULA margin is more appropriate in this review period and will provide BT with pricing flexibility in setting the level of the wholesale VULA price.

7.31 To the extent that the VULA margin condition may have adverse effects on BT's investment in pay TV, we have considered this from paragraph 7.53 as part of our analysis of whether the VULA margin condition produces adverse effects which are disproportionate to our regulatory aim.

Section 47(2) tests

7.32 We are satisfied that the VULA margin condition satisfies the tests set out in section 47(2) of the CA03 and discuss our reasons for this in further detail below.

Objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates

7.33 We are satisfied that the VULA margin condition is objectively justifiable. For the reasons set out in Section 3, it is required to ensure that retail competition is not distorted by BT using its SMP in the WLA market to set the VULA margin over the period of the market review such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers.

Not such as to discriminate unduly against particular persons or against a particular description of persons

7.34 The VULA margin condition is not unduly discriminatory in that it only applies to BT, which is the only undertaking that provides VULA and that holds SMP in the WLA market for the UK excluding the Hull Area and the condition seeks to address that market position including BT's ability to price squeeze VULA and the significant and real risk that it has an incentive to do so. While we have found KCOM to hold SMP in the WLA market for the Hull Area, we decided in the 2014 FAMR Statement that imposing specific network access remedies on KCOM in the same form as BT (including price controls on those remedies), in the absence of clear evidence of demand for the equivalent access products to those currently supplied by BT, was disproportionate and inappropriate.[783]

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[782] This quote originally came from the 2010 WLA Statement, in which our approach to the VULA margin also went beyond competition law. (Paragraph 12.142, Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.)

[783] Paragraph 10.35, Ofcom, *Fixed access market reviews: wholesale local access, wholesale fixed analogue exchange lines, ISDN2 and ISDN30 Volume 1: Statement on the markets, market power determinations and remedies*, 26 June 2014, http://stakeholders.ofcom.org.uk/telecoms/ga-scheme/specific-conditions-entitlement/market-power/fixed-access-market-reviews-2014/statement/.

<u>Proportionate to what the condition or modification is intended to achieve</u>

7.35 We set out in sections 3, 4, 5 and 6 the basis for our decision to impose the VULA margin condition. This includes consideration of the following elements of that decision:

- that our regulatory aim should be to promote competition by ensuring that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted by virtue of imposing a price squeeze which has adverse consequences for end users of public electronic communications services (see paragraph 3.93);

- that our regulatory aim is most appropriately achieved in this review period by ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably match BT's retail superfast broadband offers (see paragraphs 3.101 to 3.133);

- that *ex post* competition law is insufficient to achieve our aim and, therefore, that it is appropriate to impose a form of *ex ante* margin regulation (see paragraph 4.15 to 4.23);

- that there should be a requirement on BT to maintain an appropriate minimum margin (see paragraphs 4.24 to 4.29);

- that we should not incorporate an assessment of the effect of the VULA margin on retail competition in superfast broadband within the margin regulation itself (see paragraphs 4.30 to 4.47); and

- our approach to assessing the VULA margin, including: in Section 5 to include the costs and revenues of all elements bundled with superfast packages; and in Section 6 on how we intend to calculate specific costs and revenues when carrying out our assessment.

7.36 At each point where we assessed each element relating to the nature of our remedy or the specific methodology that we should adopt, we have considered proportionality. We explain below why we are satisfied that our VULA margin condition is proportionate.[784] In doing so, we explain why the VULA margin condition:

- is effective to achieve our regulatory aim (appropriate);

- is no more onerous than is required to achieve that aim (necessary);

[784] In doing so, we respond to BT's criticisms that our VULA margin regulation is excessive and goes beyond what is necessary for Ofcom's purposes (see paragraph 6.1, *BT Response to the 2014 FAMR Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.)

- is the least onerous means of achieving our aim (if there is a choice of equally effective measures); and
- in any event, does not produce adverse effects which are disproportionate to our regulatory aim.

The VULA margin condition is effective to achieve our regulatory aim

7.37 In Section 3 we establish that our regulatory aim in this context is to promote competition by ensuring that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted by virtue of imposing a price squeeze which has adverse consequences for end users of public electronic communications services. We consider that this aim is most appropriately achieved in this review period by ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers.

7.38 In considering the elements which lead to the imposition of the VULA margin condition, we have assessed whether the available options are effective to achieve our regulatory aim. For those options that are appropriate, we go on to consider the other aspects of proportionality, while those options that are not effective are discounted at this stage.

The VULA margin condition is no more onerous than is required to achieve our regulatory aim

7.39 As explained above, in sections 3, 4, 5 and 6 we consider the elements that form the basis for our decision to impose the VULA margin condition. Each of these assessments focuses upon a discrete part of our SMP remedy which we then combine to form our overall VULA margin control. For each discrete part of our SMP remedy, we are satisfied that the options considered are no more onerous than is necessary. Having done so, we are satisfied that overall our VULA margin condition is no more onerous than is required to achieve our regulatory aim.

The VULA margin condition is the least onerous means of achieving our regulatory aim

7.40 For each of the elements that form the basis for our decision to impose the VULA margin condition set out in sections 3, 4, 5 and 6, having identified those options that are effective in achieving our aim, we go on to consider which is the least onerous means of achieving our aim.

7.41 In response to the 2014 VULA Margin Consultation, BT argued that we do not sufficiently consider whether a range of other less intrusive options would address our concerns.[785] We disagree with BT's view.

7.42 At each stage of our assessment we have considered a range of options and carefully assessed which of these is appropriate, necessary and the least onerous by

[785] Paragraphs 6.14-6.21, Ibid.

reference to our regulatory aim. This includes consideration of a range of less intrusive options, including the options set out by BT.

7.43 In particular, although our analysis is spread throughout this statement, we have carefully considered each distinct element of the "*less intrusive options*" suggested by BT.

Table 7.1 – Summary of less intrusive options

Element of BT option	Our assessment
A "*bright line margin squeeze test which is based on an EEO test …*"	We conclude that an obligation which applies an EEO cost standard would not achieve our regulatory aim (see paragraphs 3.105 to 3.113 and 5.24 to 5.25)
"*… and which is limited to testing only dual play offerings …*"	We conclude that an obligation which is limited to dual play offerings does not achieve our regulatory aim (see paragraphs 5.104 to 5.110)
"*… plus ex post competition law*"	We conclude that *ex post* competition law would not achieve our regulatory aim, (see paragraphs 4.15] to 4.23)
A "*bright line margin squeeze test… which is used for screening purposes and other measures to assess whether the pricing behaviour in question is actually likely to cause significant harm to consumers…*"	We conclude that a VULA margin control that incorporated a further assessment of the effects of the VULA margin set by BT (where the brightline test effectively becomes a screening test) would not achieve our aim (see paragraphs 4.30 to 4.47).
Cap on current GEA prices for the remainder of the control period	We conclude that a cap at the level of existing VULA charges would not achieve our regulatory aim (see paragraph 4.28)

7.44 Having undertaken this analysis, we further consider that not only are the distinct elements referred to above individually not effective in achieving our aim, they would still be ineffective in achieving our regulatory aim when combined. [786]

7.45 In particular, we have concluded in Section 4 that any remedy to achieve our aim must be effective and provide sufficient certainty as to how we would assess the VULA margin and as to its acceptable level. This certainty will ensure that BT

[786] [✂]

understands how to comply with the obligation and, in turn, assist other CPs in respect of their decisions to invest in winning superfast broadband subscribers. We consider that the distinct elements referred to above, when combined (to the extent that the sum of these is greater than its parts), would still not provide BT and other CPs with the level of certainty that we consider is necessary in order to achieve our regulatory aim or would not otherwise be effective in achieving our regulatory aim.[787]

The VULA margin condition does not produce adverse effects which are disproportionate to our regulatory aim

7.46 For the reasons set out below we are satisfied that the imposition of our VULA margin condition does not produce adverse effects which are disproportionate to our regulatory aim. Below we consider this in relation to telecoms products (which include superfast broadband) and pay TV products.

Effects on telecoms products

7.47 We do not consider that the VULA margin condition produces adverse effects on the WLA market or on retail competition in superfast broadband which are disproportionate to our regulatory aim.

7.48 First, we have not identified any potential adverse effects on the WLA market itself (for example, we do not consider that the VULA margin control will materially reduce BT's incentives to invest in superfast broadband, for the reasons set out in paragraph 7.24 onwards). As such, we do not consider that the VULA margin condition will produce adverse effects in the WLA market which are disproportionate to our regulatory aim.

7.49 Second, in relation to the retail provision of superfast broadband, BT suggested that our proposals would lead to higher retail superfast broadband prices than required to support competition (BT considered this could be by as much as £150m in 2016/17, and that the inclusion of BT Sport in the VULA margin assessment could inflate these by a further £350-£400m). It argued that this would lead to a dilution of the effectiveness of competition as rivals would either keep the extra margin or use it to inefficiently undercut BT to win increased market share. BT also argued that this could undermine its incentives to strategically invest to improve superfast broadband services.[788]

7.50 We do not agree that any increase in retail prices as a result of the VULA margin control would be higher than necessary to support competition. In particular, as set out in Section 3, we are concerned with ensuring that BT sets a VULA margin that means an operator with slightly higher costs than BT (or some other slight

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[787] In this context, we have also considered BT's suggestion that we should also consider a variant of any of the elements set out in the table above which involves "*testing on a dynamic and forward-looking basis, rather than a static analysis*". However, as explained in Section 6, there are a number of drawbacks associated with carrying out an assessment of the VULA margin on a dynamic and forward-looking basis.

[788] Paragraphs 1.5-1.8, 1.19-1.20 and 8.99-8.108, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; and paragraphs 8.2-8.3, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.

commercial drawback relative to BT) can profitably match BT's retail superfast broadband offers. Therefore, in our approach to assessing the VULA margin (including our treatment of costs and revenues, as discussed in Section 6) we are seeking to do the minimum necessary to achieve this aim and, as such, should only ensure a VULA margin which is sufficient to support competition (rather than a margin in excess of this).[789] While we recognise this may in itself still lead to BT having higher retail superfast broadband prices than might occur in the absence of the control, for the reasons discussed in Section 3 we are of the view that such an effect would be outweighed by the long term dynamic benefits of future competition.[790] Moreover, the indicative assessment in Section 6 suggests that BT is [exceeding] the minimum VULA margin and may thus not need to change its current prices.

7.51 As such, we do not consider that the adverse effects of such an increase (if they occurred) would be disproportionate to our regulatory aim, given our intervention seeks to address a clear and real risk of competition being distorted in superfast broadband, which we believe would have a significant negative impact on end users.

7.52 Therefore, in light of the above (and our analysis in Sections 3, 5 and 6 in particular), we consider the risk of our VULA margin condition producing adverse effects in the WLA market or on retail competition in superfast broadband to be limited. Consequently we do not consider that it will produce adverse effects which are disproportionate to our regulatory aim. We also note that the VULA margin control is only in place in its current form for the remainder of this review period (i.e. a little over two years) before it will be reviewed as part of the market review cycle.

Effects on pay TV products

7.53 BT submitted that our proposals are not proportionate due to the impact on related markets. In particular, it argued that the inclusion of triple play in the assessment of the VULA margin and the treatment of BT Sport harms investment incentives and risks significant negative effects on competition in both "*Pay TV*" and "*sports content*" markets.[791]

7.54 First, BT argued that it faces existing disadvantages in competing in pay TV, which it considered we should take into account in assessing the VULA margin. In particular, BT argued that in providing superfast broadband offers which include TV, it is competing against suppliers who have distinct advantages over BT. In particular, BT gave the following examples.[792]

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[789] The £150m and £350-400m figures were calculated by BT by multiplying by the forecast number of VULA superfast broadband connections on its network by the estimated impact on the margin of aspects of our proposals that it disagreed with (e.g. adjusting the ACL or including the costs of BT Sport). However, for the reasons set out in Sections 5 and 6, we consider that our approach to assessing the VULA margin is appropriate. Accordingly we do not regard these BT figures as a reliable guide to the impact of our proposals.

[790] We also note in Section 3 that if an adjustment to the VULA margin was required, BT could choose to adjust its wholesale VULA prices as well as (or instead of) increasing its retail prices.

[791] Paragraph 3.8(b) and (d), *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

[792] Paragraphs 4.69-4.74 and 7.21-7.22, Ibid.

- Due to Sky's ownership of critical content rights and channels, it is able to control wholesale access and terms of supply to its downstream retail competitors. As a result, Sky can limit the ability of others to compete for pay TV (and triple-play) subscribers, particularly those that place a high value on sport.[793] BT noted that it has been unable to access Sky's sport content on its YouView platform, while its main competitors (including Virgin and TalkTalk) do have access to this (as well as other Sky content to which BT does not).

- Virgin is a long term pay TV provider with almost the full range of Sky's content.

- TalkTalk (which also has access to the full range of Sky's content) is pursuing an entry strategy based on supplying set-top boxes at an upfront loss, which has been more effective than BT at winning customers to date.

7.55 BT stated that it had attempted to respond to this competitive landscape by investing in its own pay TV platform, but its ability to construct a compelling offering has been hampered by issues in access to key content. It argued that while Ofcom may consider resolution of these issues outside the scope of the FAMR (although it questioned relying on separate regulatory action which it considered both uncertain in scope and duration), this context should not be ignored when considering issues of profit sacrifice in relation to the provision of superfast broadband bundles including TV. In fact, BT stated that, on the assumption that the underlying competition problems with access to content are resolved by Ofcom, it continues to make significant investments in pay TV[794] with a view to building a profitable pay TV business and competing for triple-play customers.[795]

7.56 Second (and relatedly), BT argued that the VULA margin control restricts its pattern of cost recovery. This exacerbates BT's existing disadvantages in pay TV as well as undermines its ability to compete and invest in content, creating a significant barrier to entry and expansion in pay TV. In particular, BT argued that its investments in pay TV (including sports content) are intended to be longer term strategic investments, and so the costs incurred in doing so are not simply an "*expense*" of providing superfast broadband (the full detail of BT's response in relation to its investment in sports content is set out in Sections 5 and 6). BT argued that by requiring it to take a short term and static view of these investment costs (when no entrant would expect to recover incurred costs immediately), it imposes a significant burden by constraining the way they are recovered. BT argued that as well as directly affecting its investments, this constraint risks undermining its ability to compete effectively in pay TV and in the acquisition of content rights, causing distortions and further exacerbating the disadvantages it already faces.

7.57 As a result, BT argued that the VULA margin control would bite disproportionately (by creating a significant regulatory barrier to entry and expansion in pay TV), further restricting its (already limited) attempts to compete against Sky and other CPs, while Sky's market power in content is largely unrestricted. In this context, BT argued that

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[793] BT argued that even if an effective sports remedy was implemented, it would still remain at a disadvantage as, unlike its main rivals, it would not have access to Sky's full range of basic channels.
[794] For example, it referred to developing and launching its YouView TV and multicast capabilities.
[795] Paragraphs 4.69-4.74 and 7.21-7.22, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

we should adopt a more holistic approach to such linked issues (evaluating all the costs and benefits).[796]

7.58 Our approach to assessing the VULA margin reflects BT's current commercial strategy, and in particular the way it has chosen to sell its superfast broadband services. BT's investments in BT Sport and its approach to distribution have been adopted to support BT's retail broadband business (see Annex 1). That being so, for the reasons set out in Section 5, we consider it appropriate to assess the VULA margin incorporating BT Sports and BT TV.

7.59 As summarised above (see paragraph 7.54), BT argued that we should take into account the disadvantages it faces in competing in pay TV when considering the VULA margin (and in particular, when considering issues of profit sacrifice). There is some ambiguity in BT's response, but insofar as BT is arguing that it should be permitted to set a VULA margin that would distort competition in superfast broadband on the grounds that this might compensate for possible competitive disadvantages in pay TV, we do not consider that this would be appropriate. BT has been found to have SMP in the WLA market. If, in this context, we were to allow BT to set a margin on superfast broadband bundles that was insufficient to recover its costs, this would place other operators at a disadvantage in the provision of superfast broadband during a crucial period in its take-up. This is of particular concern since (notwithstanding the disadvantages BT claims to suffer itself, see paragraph 7.54) BT has been performing very strongly in superfast broadband and expects to continue to do so (as discussed in Section 3). We would therefore be particularly concerned if BT was able to exploit its SMP in the WLA market in order to further this position.

7.60 Notwithstanding this fundamental view, we now consider whether the VULA margin control significantly exacerbates the disadvantages BT claims to suffer, such that it might be considered disproportionate. To the extent that any disadvantage BT claims to suffer (as set out in paragraph 7.54) exists irrespective of the VULA margin control, this is only relevant as a baseline against which to assess any incremental adverse effects that are produced by imposing our VULA margin regulation. We consider that any pre-existing disadvantage should be addressed through separate regulatory action (if appropriate) rather than through regulation of the VULA margin.[797]

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[796] Paragraphs 7.4, 7.22-7.27, and 7.36-7.37, Ibid.; paragraphs 8.4-8.8, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.

[797] In this regard, we note that we are currently undertaking a review of the Wholesale Must Offer ('WMO') obligation, having recently published a consultation (see Ofcom, *Review of the pay TV wholesale must-offer obligation*, 19 December 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/wholesale-must-offer/summary/WMO_consultation.pdf). Therefore, to the extent that access to premium sports (or indeed basic) content is considered a barrier to competition in pay TV, we consider that this issue would be most appropriately addressed through this (separate) regulatory action, if appropriate. We note BT has said it continues to invest in pay TV on the basis of a similar assumption, as summarised in paragraph 7.55.

7.61 We consider that the disadvantages put forward by BT as a result of lacking access to Sky's sport and basic content[798], Virgin's position as a long term pay TV provider[799], and TalkTalk's set top box strategy appear to be largely independent of the VULA margin condition. It is therefore not clear that they would individually be directly or significantly increased as a result of our VULA margin control (and BT does not appear to suggest this is the case). However, we do recognise that our approach to assessing the VULA margin does to some degree constrain how BT recovers its costs and so could in principle affect the extent to which BT can respond to competition in pay TV in the future. We further accept that it will impact how BT responds to changes in the costs and revenues associated with its superfast broadband bundles, and that this might in principle have an impact on BT's incentives to invest in pay TV and acquire content (for example, given that additional content costs must be reflected in the superfast broadband margin). However, on balance, we do not consider that these potential adverse effects are disproportionate to our regulatory aim.

7.62 As set out in further detail in Section 3, we have found BT to have SMP in the WLA market in the UK excluding the Hull Area and identified that there is a relevant risk of adverse effects arising from price distortion in that BT might so impose a price squeeze as to have adverse consequences for end users of public electronic communications services. Given this, in this case we consider that it is appropriate for us to promote competition by ensuring that BT cannot use its SMP in the WLA market to set the VULA margin condition over the period of the market review such that it causes retail competition in superfast broadband to be distorted. Therefore our intervention seeks to address a clear and real risk of competition being distorted in superfast broadband which we believe would have a significant negative impact end users.

7.63 Against this, we have balanced the likely scale and impact of any effects on BT's ability to compete in pay TV. First, while it does impose some constraint on how BT recovers its costs (and therefore potentially how it can respond to competition), we consider that the VULA margin condition still allows BT considerable flexibility over its cost recovery.[800] In particular, we assess the VULA margin over BT's whole superfast broadband portfolio, rather than (for example) for individual offers (see discussion in

[798] We note that BT does now have access to Sky Sports 1 and 2 in light of the Competition Appeal Tribunal Judgement on BT's application to vary the interim relief order of the WMO obligation (Competition Appeal Tribunal, *Case 1152/8/3/10 (IR) British Sky Broadcasting Limited v Office of Communications (Interim relief)*, 5 November 2014, http://www.catribunal.org.uk/238-8679/Judgment-Application-to-Vary-Interim-Relief-Order-html).

[799] As discussed in Section 3, all CPs have their own advantages and disadvantages, and while Virgin may benefit to some degree from having been a pay TV provider for longer than BT, we note that BT itself will also have its own advantages (e.g. it is a long term telephony and broadband provider with a more extensive network than Virgin).

[800] It is this flexibility that means we do not consider that the VULA margin control exacerbates the disadvantage BT claims to face relative to TalkTalk's set top box strategy. In particular, differing commercial strategies (and therefore differentiation in retail offerings) in response to competition is not unexpected. Historically, the strategy of including set top boxes at an upfront loss (as per TalkTalk) was also available to BT, but it chose not to adopt this approach. Going forward under the VULA margin control, BT still has significant flexibility over cost recovery and so this would still appear to be an available strategy should it consider it to be commercially attractive. Indeed, the only restriction would be that such costs are recovered over the customer lifetime for an average superfast broadband subscriber (which we would not expect to place BT at a significant disadvantage in competing for pay TV customers, not least given set-top boxes likely represent a very small proportion of BT's total downstream monthly costs for an average superfast broadband subscriber).

Section 5). This includes allowing BT to recover the net costs of BT Sport that are allocated to superfast broadband from the aggregate margins of BT's superfast broadband portfolio, and therefore provide BT with flexibility in terms of setting different margins on different superfast broadband services.

7.64 We do not expect the VULA margin control to significantly restrict BT's current behaviour in relation to cost recovery, since our indicative assessment as set out in Section 6 suggests that BT is currently [exceeding] the minimum VULA margin (suggesting that it may not need to change its current prices). [✂].[801] Therefore we anticipate that the VULA margin condition will have a limited impact on BT's current approach to cost recovery in pay TV.

7.65 Given this context, we also consider the VULA margin control will have limited impact on BT's incentives to bid for future rights. We accept that, under our proposals, higher net BT Sport costs will increase the VULA margin that BT needs to maintain. However, even absent regulation, we would expect BT to only bid for content where the associated revenues outweigh the rights costs, and although our proposals do constrain the timing of that recovery, we have allowed some flexibility (see above). Further, we would not necessarily expect BT as a more established pay TV operator to start needing to incur losses on more recent (or future) rights purchases [✂]. Indeed, BT itself refers to such a pricing strategy or early losses as being relevant for a new entrant[802], and we note that the next tranche of FAPL rights relates to the seasons from 2016/17 when BT Sport will be three years old (while the next UEFA rights relate to 2018/19 when it will be five years old).

7.66 Therefore, for these reasons, we consider the impact on BT's ability to compete in pay TV is likely to be relatively limited. We also note that this regulation will be in place for just over two years before it will then be reassessed as part of the next market review cycle, which will provide an opportunity to revisit our approach.

7.67 In light of the above, given the importance we attach to preventing a distortion to competition in superfast broadband and the potential for this to have a significant negative impact on end users, on balance we do not consider that the impact on BT in pay TV resulting from our VULA margin condition causes adverse effects that are disproportionate to our regulatory aim.

The VULA margin condition is, in relation to what it is intended to achieve, transparent

7.68 Finally, we also consider that the VULA margin condition is, in relation to what it is intended to achieve, transparent. The aims and effects of the VULA margin condition are clear and it has been drafted so as to secure maximum transparency and is supplemented by detailed guidance. We discussed our proposals for the VULA margin condition in detail in the 2014 VULA Margin Consultation, as well as in this statement. The text of the condition has been published with this statement and its operation is aided by our explanations in this statement and, in particular, by the detailed guidance set out in Section 6.

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[801] [✂]

[802] Paragraphs 7.23-7.24, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

Ofcom's duties under section 3 and 4 of the CA03

7.69 We have considered our duties under section 3 and the Community requirements set out in section 4 of the CA03.

7.70 We consider that the VULA margin control will further the interests of citizens in relation to communications matters and further the interests of consumers in relevant markets, where appropriate by promoting competition. By imposing a requirement ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) from being able to profitably match BT's retail superfast broadband offers, we consider that retail competition will be promoted to the direct benefit of end users.

7.71 Further, our approach will provide incentives for CPs to provide retail services based on VULA, which should help secure the availability throughout the UK of a wide range of electronic communications services. In formulating our proposals, we have also had particular regard to the desirability of encouraging investment and innovation in relevant markets, the desirability of promoting competition in relevant markets and encouraging the availability and use of high speed data transfer services throughout the UK.

7.72 We also consider that the proposed SMP condition is consistent, in particular, with the Community requirement to promote competition in relation to the provision of electronic communication networks and services, including associated services and facilities, and to encourage network access and service interoperability for the purpose of securing efficiency and sustainable competition, efficient investment and innovation and the maximum benefit for the persons who are customers of communication providers and of persons who make associated facilities available.

Conclusion

7.73 For the reasons set out above, we consider that the proposed condition is appropriate to address the competition concerns identified, in line with section 87(1) of the CA03.

Consistency with European Commission recommendations and the BEREC Common Position and Guidance

7.74 We are required to take the utmost account of recommendations issued by the European Commission under Article 19(1) of the Framework Directive, including the NGA Recommendation[803] and the Costing and Non-discrimination Recommendation.[804] [805] We are similarly obliged to take utmost account of any opinion, recommendation, guidelines, advice or regulatory best practice adopted by

[803] EC, *Commission recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA)* (2010/572/EU), OJ L251/35, 20 September 2010, www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:251:0035:0048:EN:PDF.

[804] Consistent with this, section 4A of the CA03 requires Ofcom to take due account of all such Recommendations of the European Commission when carrying out its functions.

[805] EC, *Commission recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment*, 11 September 2013, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:251:0013:0032:En:PDF.

BEREC[806], including the BEREC Common Position[807] and BEREC Guidance[808]. If an NRA chooses to depart from a Recommendation it must inform the European Commission, giving the reasons for its position.

7.75 In Section 7 of the 2014 VULA Margin Consultation, we explained that in reaching our proposed remedies we had taken utmost account of the European Commission's NGA Recommendation and Costing and Non-discrimination Recommendation and the BEREC Common Position. To the extent that our proposals differed from these, we set out our reasoning.

7.76 BT stated that Ofcom's consideration of the European Commission recommendations in the 2014 VULA Margin Consultation was procedurally flawed. In particular, it said that Ofcom should have considered these *"__before__ settling on the most appropriate option".*[809] We do not understand BT's submission in this regard. As explained above, we are required to take utmost account of the EC recommendations and the BEREC Common Position. We have been cognisant of this requirement throughout our process of consideration and are satisfied that in setting the VULA margin condition we have done this.

Stakeholder responses to the 2014 VULA Margin Consultation

BT

7.77 BT submitted that Ofcom has not properly taken account of the European Commission recommendations and BEREC's Common Position. According to BT there were several areas of inconsistency.

- BT argued that Ofcom has departed from the Costing and Non-discrimination Recommendation by adjusting the EEO test for measuring downstream costs. It

[806] See Article 3(3) of Regulation (EC) No 1211/2009 of the European Parliament and of the Council of 25 November 2009 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Office.
[807] BEREC, BoR (12) 127, *BEREC common position on best practice in remedies on the market for wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location imposed as a consequence of a position of significant market power in the relevant market*, 8 December 2012, www.berec.europa.eu/files/document_register_store/2012/12/20121208163628_BoR_(12)_127__BEREC__COMMON_POSITION_ON_BEST_PRACTICE_IN_REMEDIES_ON_THE_MARKET_FOR_WHOLESALE.pdf
[808] BEREC, BoR (14) 190, *Guidance on the regulatory accounting approach to the economic replicability test (i.e. ex-ante/sector specific margin squeeze tests)*, 5 December 2014, http://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/4782-berec-guidance-on-the-regulatory-accounting-approach-to-the-economic-replicability-test-ie-ex-antesector-specific-margin-squeeze-tests.
[809] Paragraph 5.45, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf.

said that Ofcom has failed to justify this departure under one of the exceptions stipulated in Annex II to the recommendation.[810]

- BT considered that even if the adjustments to the EEO test are justifiable, they are not consistent with the Costing and Non-discrimination Recommendation in that they go beyond achieving a market structure with a sufficient number of qualifying operators to ensure effective competition. BT said that Ofcom has found the retail market to be competitive and that there is already a sufficient number of effective competitors in the market.[811]

- BT commented that Ofcom has also departed from Annex II of the Costing and Non-discrimination Recommendation in particular by proposing to evaluate the unit costs of BT Sport and BT TV on the basis of a "*static short term*" approach rather than a dynamic multi-period analysis (such as the DCF approach).[812]

- BT considered that Article 56(c) of the Costing and Non-discrimination Recommendation makes clear that any *ex ante* replicability test should only be concerned with preventing pricing "*which would significantly harm competition*". It said that this was particularly the case with tests that look at bundled products and referred to the European Regulators Group's ('ERG') *Report on the Discussion on the application of margin squeeze tests to bundles*.[813] According to BT, Ofcom should therefore adopt an effects based test which allows for an assessment of the harm to competition on downstream markets.[814]

TalkTalk

7.78 TalkTalk generally considered Ofcom's proposals to be consistent with the European Commission recommendations and BEREC's Common Position.

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[810] Paragraphs 3.11 and 5.46, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; paragraph 10.5, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[811] Paragraphs 3.12 and 5.47-5.48, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; paragraph 10.6, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[812] Paragraphs 7.33-7.34, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; paragraph 10.11, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.
[813] Paragraphs 111-114, ERG (09) 07, *Report on the Discussion on the application of margin squeeze tests to bundles,* 7 March 2009, http://berec.europa.eu/doc/publications/2009/erg_09_07_report_on_the_discussion_of_the_application_of_margin_squeeze_tests_to_bundles.pdf.
[814] Paragraphs 3.14-3.15, 6.11(d), 6.24-6.26, 7.40-7.42, *BT Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group.pdf; and paragraphs 10.8-10.10, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.

7.79 TalkTalk submitted that Ofcom's adjusted EEO approach is consistent with the European Commission's Costing and Non-discrimination Recommendation. This is because Ofcom has sound reason to diverge from the recommendation and use an adjusted EEO model since doing so is consistent with its objective of promoting competition and preventing competitive distortions.[815]

7.80 TalkTalk said that Ofcom has departed from the Costing and Non-discrimination Recommendation by proposing to assess the VULA margin on the whole portfolio of BT fibre products instead of only on "*flagship*" products. TalkTalk considered that this is one element of a reasonable approach to adopt. However, the approach needs to be complemented by a product-by-product test on a LRIC basis.[816] TalkTalk considered that the absence of pre-launch testing placed the UK behind European best practice, with the EC Costing and Non-discrimination Recommendation referring to products being tested before or soon after launch.[817]

7.81 In TalkTalk's response to BT's response, TalkTalk also noted by reference to case law that Ofcom is not bound by the Costing and Non-discrimination Recommendation but rather has to take "*utmost account*" of it and may deviate from it for good reason. In particular, it said that the EEO standard is:

> "*inconsistent with the underlying purpose of the recommendation which is "to ensure that economic replicability is a realistic prospect" since the EEO standard does not allow an efficient rival to profitably replicate BT's offering if they have non-replicable cost/revenue disadvantages*".[818]

Confidential respondent [✂]

7.82 A confidential respondent [✂] argued that Ofcom must include some form of VULA assessment applied at an individual product level, at least to BT's key "*flagship*" products, and that this approach is supported by the European Commission and BEREC. It said that Ofcom has failed to provide any compelling justification for not following the European Commission's recommendation in this respect.[819]

Vodafone

7.83 Vodafone responded that Ofcom's adjusted EEO approach for the assessment of the VULA margin aligns with the European Commission's Costing and Non-discrimination Recommendation.[820]

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[815] Paragraph 3.13, *TalkTalk Response to the 2014 VULA Margin Consultation*, 5 September 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group.pdf.
[816] Paragraph 3.76-3.84, Ibid.
[817] Paragraphs 7.13-7.14, Ibid.
[818] Paragraph 3.106, *TalkTalk comments on BT's response to the 2014 VULA Margin Consultation,* 17 October 2014, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/TalkTalk_Group_Comments_on_BTs_response.pdf. In particular, TalkTalk referred (at footnote 68) to paragraph 93 of Case T--109/06, *Vodafone Espana v Commission* and paragraph 69 of *R (Munjaz) v Mersey Care NHS Trust* [2006] 2 AC 148.
[819] [✂]
[820] Page 4, *Vodafone Response to the 2014 VULA Margin Consultation*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/Vodafone.pdf.

7.84 Vodafone also considered that Ofcom's approach to looking at BT's portfolio when conducting the VULA margin assessment should be complemented by a less aggregated analysis, such as on a product-by-product basis. It said that this is consistent with the European Commission's Costing and Non-discrimination Recommendation.[821]

The NGA Recommendation

7.85 The NGA Recommendation aims to foster the development of the single market by enhancing legal certainty and promoting investment, competition and innovation in the market for broadband services, in particular the transition to NGA networks. It does so by setting out a common approach for promoting the consistent implementation of remedies with regard to such networks. The NGA Recommendation sets out specific provisions regarding the "*margin squeeze*" tests it recommends the NRA should put in place in relation to NGA networks.

7.86 In reaching our conclusions, we have taken utmost account of the NGA Recommendation. Having done so, we consider that our conclusions are consistent with the NGA Recommendation for the reasons set out below. To the extent that our conclusions may differ from that recommendation, we consider this is justified by national circumstances and our reasons are set out below.

7.87 Article 27 states:

> *"…NRAs should ensure that a sufficient margin remains between wholesale and retail prices to allow for market entry by an efficient competitor. NRAs should thus verify the SMP operator's pricing behaviour by applying a properly specified margin-squeeze test over an appropriate timeframe. NRAs should specify in advance the methodology they will follow for identifying the imputation test, the parameters for the margin-squeeze test and the remedial mechanisms in case of established margin-squeeze".*

7.88 We consider that the conclusions contained in this statement are consistent with the recommendation to ensure a sufficient margin by applying a "*properly specified margin-squeeze test over an appropriate time frame*". These particularly include our decision to put in place an SMP condition on BT (supplemented by guidance) requiring it to set the VULA charge so as to maintain a minimum VULA margin, as set out in Section 4. We have set out our reasoning in relation to the specific recommendations of Article 27 below.

Appropriate timeframe

7.89 We have concluded that the ACL is the relevant time period over which we would conduct our assessment. For the reasons set out in Section 6, we are of the view that this this is an appropriate timeframe over which to conduct our VULA margin assessment. Therefore we consider that we are consistent with the NGA Recommendation in this regard.

[821] Page 5, Ibid.

Methodology for identifying the imputation test

7.90 In Section 5 of this statement, we detail the appropriate conceptual approach for assessing costs (i.e. imputation test)[822], namely an adjusted EEO approach. We note that Recital 26 states that an "*equally efficient competitor test*" or "*reasonably efficient test*" can be used with the latter normally being more appropriate:

> *"[i]n the specific context of ex ante price controls aiming to maintain effective competition between operators not benefiting from the same economies of scale and scope and having different unit network costs".*

7.91 We consider that our adoption of an adjusted EEO approach is consistent with the NGA Recommendation in that we have chosen an imputation test which falls within the range of conceptual imputation approaches recommended by the European Commission.

Parameters for the margin-squeeze test

7.92 As discussed in Sections 5 and 6, we have included certain parameters of the margin squeeze assessment in the SMP condition applicable to BT. These include using an adjusted EEO approach in relation to the ACL (and, in certain circumstances, unit bandwidth costs) and to assess the adjusted EEO's costs on a LRIC+ basis. Further, in Section 6 we provide detailed guidance on our treatment of BT's costs and revenues when assessing the VULA margin.

Remedial mechanisms

7.93 The remedies (i.e. remedial mechanisms) available to Ofcom are already clearly set out in the CA03 and we discuss the application of these in Section 4.[823]

The Costing and Non-discrimination Recommendation

7.94 The Costing and Non-discrimination Recommendation concerns the application of non-discrimination, price control, and cost accounting obligations. It sets out a common approach for NRAs for promoting their consistent and effective implementation and provides further guidance on the regulatory principles established by the NGA Recommendation, in particular the conditions under which regulation of wholesale access prices should or should not be applied.

7.95 In reaching our conclusions, we have taken utmost account of the Costing and Non-discrimination Recommendation. Having done so, we consider that, in most cases, our conclusions are consistent with the Costing and Non-discrimination Recommendation for the reasons set out below. To the extent that our conclusions may differ from that recommendation, we consider this is justified by national circumstances and our reasons are set out below.

[822] See from paragraph 5.12.
[823] See from paragraph 4.111.

7.96 Article[824] 49 provides:

> *"The NRA should decide not to impose or maintain regulated wholesale access prices on passive NGA wholesale inputs or non-physical or virtual wholesale inputs offering equivalent functionalities, pursuant to Article 13 of Directive 2002/19/EC, where – in the same measure – the NRA imposes on the SMP operator non-discrimination obligations concerning passive NGA wholesale inputs or non-physical or virtual wholesale inputs offering equivalent functionalities, pursuant to Article 10 of Directive 2002/19/EC, that are consistent with:*
>
> > *(a) EoI, following the procedure in point 51;*
> >
> > *(b) obligations relating to technical replicability under the conditions set out in points 11 to 18 when EoI is not yet fully implemented; and*
> >
> > *(c) obligations relating to the economic replicability test as recommended in point 56*
> >
> > *under the condition that:*
> >
> > *(d) the NRA can show that a legacy access network product offered by the SMP operator subject to a cost-oriented price control obligation in accordance with the costing methodology specified in points 30 to 37 or 40 constitutes a copper anchor and thus exercises a demonstrable retail price constraint; or*
> >
> > *(e) the NRA can show that operators providing retail services over one or more alternative infrastructures that are not controlled by the SMP operator can exercise a demonstrable retail price constraint. For the purposes of this condition, 'control' should be interpreted in accordance with competition law principles."*

7.97 On economic replicability, Article 56 sets out the basic requirement for the test:

> "*An NRA is deemed to impose the economic replicability obligations … when it includes the elements listed in points (a), (b) and (c), which have been subject to a consultation under Article 7 of Directive 2002/21/EC, in the same final measure in which it decides not to impose or maintain regulated wholesale access prices on NGA wholesale inputs*."

7.98 We published our 2014 FAMR Statement on 26 June 2014. In Sections 12 and 13 of Volume 1, we included our decision not to regulate wholesale NGA access prices and our decision to impose EoI on VULA, on technical replicability and on the

[824] Although these are referred to as "*Points*" in the Costing and Non-discrimination Recommendation, we use the term "*Article*" in this document.

existence of retail price constraints (including the application of a price control to the legacy access network product, LLU).

7.99 At the point of publication of the 2014 FAMR Statement, we were conducting a further consultation on our approach to the VULA margin, launched in light of significant stakeholder comments on the issue. Therefore it was not possible to conclude on economic replicability at the same time as we published our 2014 FAMR Statement. We did not consider it justified to further delay the 2014 FAMR Statement to align with our final statement in relation to the VULA margin as that would have prevented the entry into force of our other FAMR remedies, including LLU WLR charge controls and Quality of Service measures.

7.100 Following the 2014 FAMR Statement and the 2014 VULA Margin Consultation, in this statement we set out our approach to ensuring economic replicability.

Details of the test

7.101 The first specific requirement identified in Article 56(a) relates to the details of the *ex ante* economic replicability test that should specify as a minimum:

> *"(a) The details of the ex ante economic replicability test that the NRA will apply, which* should *specify, at least the following parameters in accordance with the guidance provided in Annex II below:*
>
> > *(i) the relevant downstream costs taken into account;*
> >
> > *(ii) the relevant cost standard;*
> >
> > *(iii) the relevant regulated wholesale inputs concerned and the relevant reference prices;*
> >
> > *(iv) the relevant retail products; and*
> >
> > *(v) the relevant time period for running the test."*

7.102 We deal with each of these in turn, noting that further detail on each is provided in Annex II of the Costing and Non-discrimination Recommendation.

"(i) the relevant downstream costs taken into account"

7.103 Annex II of the Costing and Non-discrimination Recommendation recommends that downstream costs should be "*estimated on the basis of the costs of the SMP operator's own downstream business*". It is recommended that NRAs should only make adjustments to the SMP operator's downstream costs for scale in order to ensure that economic replicability is a realistic prospect:

> "*where market entry or expansion has been frustrated in the past (as shown, for example, by past behavioural findings) or where very low volumes of lines and their significantly limited geographic reach as compared to the SMP operator's NGA network indicate that objective economic conditions do not favour the acquisition of scale by alternative operators*".

7.104 In Section 5, we have decided to use an adjusted EEO approach; that is, one based on BT's costs but with adjustments to reflect certain advantages that BT has. In Section 6 we identify these as:

- an adjustment to BT's ACL, in line with "*(v) the relevant time period for conducting the test*", as discussed from paragraph 7.105; and

- an adjustment to ensure that BT's unit bandwidth costs included within the VULA margin assessment should not fall below the unit bandwidth costs of other relevant operators.

7.105 In both instances this approach departs from the Costing and Non-discrimination Recommendation in that our justification for making these adjustments is on the basis that BT has certain material advantages which its competitors are unlikely to be able to match, rather than on the basis of the circumstances referred to in Annex II. However, we are of the view that the adjustments are justified by national circumstances for the reasons set out in Sections 3 and 6. We also consider that the reasons behind our adjustments to BT's ACL and unit bandwidth costs are consistent with the overall objective of the Costing and Non-discrimination Recommendation, i.e. to ensure that economic replicability is a realistic prospect.[825]

7.106 The Costing and Non-discrimination Recommendation states that, when making adjustments for scale, "the reasonably efficient scale identified by the NRA should not go beyond that of a market structure with a sufficient number of qualifying operators to ensure effective competition …" We consider that we are consistent with these aspects of the Costing and Non-discrimination Recommendation as:

- the starting point for the floor on unit bandwidth costs was calculated using data from Sky and TalkTalk rather than small broadband operators that lack scale (see paragraph 6.166); and

- the adjustment to BT's ACL does not relate to an economy of scale. Accordingly, this aspect of the Costing and Non-discrimination Recommendation is not relevant to the ACL adjustment.

7.107 We disagree with BT's comments that even if the adjustments that we have incorporated into our VULA margin regulation are justifiable under the Costing and Non-discrimination Recommendation, they still go beyond such a market structure with sufficient number of qualifying operators (as per item (i) of Annex II) or that they go beyond what is needed to achieve our objective. As explained in Section 3, we are satisfied that the retail broadband market is currently effectively competitive and therefore appears to exhibit a market structure with a sufficient number of qualifying operators. By ensuring that BT is unable to use its SMP in the WLA market so as to distort competition in the retail broadband market, our VULA margin condition has, therefore, been designed to retain this market structure.

[825] See recital 65 and Annex II, (i), *Commission recommendation on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment - C(2013) 5761*, 11 September 2013, http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=2735.

"(ii) the relevant cost standard"

7.108 Annex II, paragraph (ii) of the Costing and Non-discrimination Recommendation recommends that a LRIC+ model should be used to calculate the incremental cost and to add a mark-up for common costs and, as set out in Section 5[826] and the SMP condition in Annex 2, we are consistent with this.

"(iii) the relevant regulated wholesale inputs concerned and the relevant reference prices"

7.109 Annex II, paragraph (iii) of the Costing and Non-discrimination Recommendation recommends that NRAs should undertake the *ex ante* economic replicability test in order to assess the margin earned between the relevant retail products and the most relevant regulated input identified at the chosen NGA-based wholesale layer. When identifying the relevant reference wholesale price, NRAs should consider the access price that the SMP operator effectively charges third-party access seekers for the relevant regulated wholesale input, which should be equivalent to the prices that the SMP operator charges to its own retail arm.

7.110 Section 5[827] and the SMP condition in Annex 2 set out the wholesale input (i.e. VULA and WLR) that we intend to use in the assessment. The assessment takes into account the prices BT charges for VULA and WLR, which are published on its website (and charge controlled in the case of WLR) and offered to other CPs on an EoI basis.[828] This is consistent with the Costing and Non-discrimination Recommendation.

7.111 We note that Annex II of the Costing and Non-discrimination Recommendation states that *"NRAs should give due weight to the presence of volume discounts and/or long-term access pricing agreements"*. As explained in paragraph 6.104, should Openreach offer volume discounts on the price of GEA and WLR we would take these into account.

"(iv) the relevant retail products"

7.112 We note that Annex II, paragraph (iv) of the Costing and Non-discrimination Recommendation states that "NRAs should assess the most relevant retail products including broadband services ('flagship products') offered by the SMP operator on the basis of identified NGA-based wholesale access level".

7.113 We have decided that it is appropriate to assess compliance on the entire fibre portfolio, rather than on the basis of "*flagship products*". This approach departs from the Costing and Non-discrimination Recommendation. However, we are of the view that this is justified in the context of the WLA market in the UK excluding the Hull Area and, in particular, as a result of the nascent nature of fibre broadband services. In the case of superfast broadband in the UK, other operators in practice offer a portfolio of products similar to BT's. We also believe that it is appropriate to provide BT with greater flexibility to determine the margins on individual products within the

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[826] See from paragraph 5.3.
[827] See from paragraph 5.141.
[828] Thereby fulfilling the provision in Annex II of the Costing and Non-discrimination Recommendation that *"[t]hese wholesale access prices should be equivalent to the prices that the SMP operator charges to its own retail arm"*.

portfolio, in part because these services are still developing in the UK market. We discuss in detail why this is appropriate in Section 5, from paragraph 5.126.

"(v) the relevant time period for running the test"

7.114 Annex II, paragraph 5 of the Costing and Non-discrimination Recommendation states that profitability should be assessed "*on the basis of a multi-period analysis, such as the discounted cash flow (DCF) approach*". It also states that the relevant period for the assessment "*should be set in accordance with the estimated average customer lifetime*" and that, in estimating this, due account should be taken of "*the different characteristics and competitive conditions of the provision of services over NGA networks compared to the legacy copper network*".

7.115 Depending on the interpretation of "*a multi-period analysis*" we may deviate from the Costing and Non-discrimination Recommendation in this regard (as set out in Section 6, we have decided not to adopt a DCF approach). However, we believe that such deviation is justified because we consider that in most cases it is more appropriate to use historical financial data and known changes in order to estimate costs and revenues rather than rely on estimates and forecasts. As explained in paragraph 6.18, relying on forecast data in a DCF approach leads to the risk that they could be skewed in favour of BT or that a positive NPV could be due to the exclusion of competitors.

7.116 In Section 6, we also conclude that the ACL is the relevant time period over which we would conduct our assessment. In that section, we explain that the current data on superfast churn rates is not likely to be an appropriate estimator for future superfast ACL and therefore we have chosen to use standard broadband churn instead.[829] In doing so, we have considered the different characteristics and competitive conditions between copper and fibre broadband.

Procedure for the test

7.117 Part (b) of Article 56 states:

> *"(b) The procedure that the NRA will follow to conduct an ex ante economic replicability test, specifying that the NRA can start the procedure on its own initiative or at the request of third parties, at any time but no later than three months after the launch of the relevant retail product, and will conclude it as soon as possible and in any case within four months from starting the procedure. The procedure should make clear that the ex ante economic replicability test … is different from and without prejudice to margin squeeze tests that may be conducted ex post pursuant to competition law."*

7.118 Our approach to the VULA margin assessment deviates from the approach in the Costing and Non-discrimination Recommendation, which we believe is justified by national circumstances.

7.119 Our approach enables us to assess BT's VULA margin at any time either on our own initiative or in response to disputes brought by third parties, where we are required to resolve disputes within four months (except in exceptional circumstances). In the

[829] See from paragraph 6.442.

circumstances of the WLA market in the UK excluding the Hull Area, we consider that an ongoing obligation for BT to maintain a minimum VULA margin is important for the reasons set out in Section 4, from paragraph 4.93.

7.120 We require BT to provide us with a compliance report every six months, on the basis of which we will conduct a high-level assessment. This process is not contingent on specific product launches by BT because, as set out in Section 4, BT tends to make significant changes to its prices once or twice per year and our chosen approach will also allow us to monitor compliance within a reasonable timeframe of such price changes occurring.

Enforcement

7.121 Part (c) of Article 56 states:

> *"(c) The remedy it will adopt when the test is not passed using the enforcement tools provided under the Regulatory Framework to ensure compliance, including where appropriate a request for the SMP operator to address the economic replicability issue in accordance with the NRA's guidance and on the basis of the results of the ex ante economic replicability test performed. Where the NRA considers that a retail offer which is not economically replicable would significantly harm competition, it should make use of its powers under Article 10 of Directive 2002/20/EC to request the SMP operator to cease or delay the provision of the relevant retail offer pending compliance with the requirement for economic replicability."*

7.122 Article 57 states:

> *"Once the measure has been adopted, the NRA should make public on its website the roadmap and the details of the ex ante economic replicability test as part of the final measure. The NRA should consider using all the enforcement tools provided under the Regulatory Framework to ensure compliance with all aspects of the imposed measures."*

7.123 In Section 4, we explain that we have decided to assess on a case by case basis the remedial steps that Ofcom might take against BT if it were found to be in breach and the sanctions which we would impose. We consider that the range of possible remedies and sanctions is set out in sufficient detail in our published guidance.[830] We also consider that going beyond this and prescribing the remedies that we would use and the sanctions that we would impose in particular circumstances could potentially limit our ability to impose the most appropriate remedy in the future. We have therefore decided not to go beyond our published guidelines by setting out the remedial steps we would be likely to take or the sanctions that we would be likely to impose. However, as a minimum, we would look to bring any infringement to an end as soon as possible. We discuss this further in Section 4, from paragraph 4.111.

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[830] See, in particular, Ofcom, *Enforcement Guidelines,* 25 July 2012, http://stakeholders.ofcom.org.uk/consultations/draft-enforcement-guidelines/enforcement-guidelines/, and Ofcom, *Penalty guidelines*, 13 June 2011, http://www.ofcom.org.uk/about/policies-and-guidelines/penalty-guidelines/.

7.124 We note BT's comment that Article 56(c) of the Costing and Non-discrimination Recommendation makes clear that any *ex ante* replicability test should only be concerned with preventing pricing "*which would significantly harm competition*". We consider that our approach does ensure that we can intervene where a retail offer is not economically replicable and would significantly harm competition. As we set out in Section 4, economic harm is established through the finding of SMP and the relevant risk of adverse effects arising from that SMP.

Impact on investment

7.125 Finally, we note that Annex II states "When setting the parameters of the ex ante economic replicability test, NRAs should ensure that the SMP operator is not put at a disadvantage vis-à-vis access seekers regarding the sharing of the investment risk". We set out in Section 3 that we consider that our chosen approach is unlikely to have a significant negative impact on investment incentives in this review period.[831] We also explain from paragraph 7.24 how we have taken account of the extent of the investment in the matters to which the condition relates of BT.

Ofcom conclusions on the BEREC Common Position and the BEREC Guidance

7.126 The BEREC Common Position[832] on remedies in the market for wholesale (physical) network infrastructure access (including shared or fully unbundled access) sets out "*Best Practices*" that NRAs should follow in regulating this market.[833] BP49 (and the similar BP21) relates to obligations NRAs should put in place to prevent SMP operators from engaging in a "*margin squeeze*". We consider that our decision is consistent with the BEREC Common Position as it relates to the margin. Below we set out how we are consistent with each aspect of the BEREC Common Position that relates to the margin.

7.127 BP49a states that:

> "*In considering the minimum acceptable margin, NRAs need to strike a balance between short term efficiency, derived from the economies of scale and scope realisable by an SMP player, and the longer term benefits (assessed on a realistic basis) of a more competitive downstream market, brought about by new entrants*

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[831] See paragraphs 3.119-3.122.

[832] Berec, BoR (12) 127, *BEREC common position on best practice in remedies on the market for wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location imposed as a consequence of a position of significant market power in the relevant market*, 8 December 2012, http://www.berec.europa.eu/files/document_register_store/2012/12/20121208163628_BoR_(12)_127__BEREC__COMMON_POSITION_ON_BEST_PRACTICE_IN_REMEDIES_ON_THE_MARKET_FOR_WHOLESALE.pdf.

[833] Note that recommendation BP49 in the BEREC Common Position (which relates to "*obligations preventing SMP operators from engaging in margin squeeze*") is identical to recommendation BP42 in the BEREC Common Position in relation to WBA (BoR (12) 128 BEREC, *BEREC common position on best practice in remedies on the market for wholesale broadband access (including bitstream access) imposed as a consequence of a position of significant market power in the relevant market*, 8 December 2012, http://www.berec.europa.eu/files/document_register_store/2012/12/BoR_(12)_128_CP_WBA.pdf). Consistency with BP49 of the former document thus implies consistency with BP42 of the latter.

which should, in due course and to a reasonable extent, be able to match those economies."

7.128 In Section 3[834], consistent with BP49a, we assess the trade-off between effectiveness and costs (including on efficiency) of our preferred method[835] for achieving our regulatory aim.[836]

7.129 BP49b sets out two possible imputation tests (EEO and REO) and BP49c states that NRAs should evaluate which is better suited to attain the regulatory objectives pursued, which may include a combination of both EEO and REO. Consistent with these, Section 5 sets out the reasoning for adopting an adjusted EEO test.

7.130 In setting out our overall objective in Section 3 and our approach to the VULA margin assessment in Sections 5 and 6 respectively, we fulfil BP49d (and the similar BP21a) which states that the chosen principle and methodology for the assessment of a margin squeeze should be made known in advance. BP21b sets out that SMP operators should amend the existing wholesale product where "*economic replicability*" cannot be achieved (i.e. where the margin is unduly low). We have addressed our approach to enforcement in the case of non-compliance in paragraph 7.123.

7.131 BP49e and BP49f refer to the ability for cost-based access to help, but not remove, concerns about margin squeeze. We do not consider this issue in this statement, however we note that we decided not to set a cost-based charge control or require cost orientation for VULA in the 2014 FAMR Statement.

7.132 The BEREC Guidance provides guidance to NRAs from the regulatory accounting point of view on how to understand and deal with the relevant provisions of the Costing and Non-discrimination Recommendation related to the *ex ante* economic replicability test and how to run such an *ex ante* economic replicability test according to Annex II of that recommendation. In preparing this statement, we have taken utmost account of the BEREC Guidance.

7.133 In particular, the BEREC Guidance recommends that an economic replicability test should be applied intelligently and its parameters calibrated accordingly to ensure that both the Costing and Non-discrimination Recommendation's aim to provide more pricing flexibility to SMP operators and the economic replicability test's purpose to preserve competition are met. It states that:

> "*Whereas the Recommendation emphasizes the importance of promoting efficient investment and innovation in accordance with Article 8(5)(d) of Directive 2002/21/EC NRAs will also need to ensure that they act in accordance with Article 8(2)(b) by taking all proportionate and appropriate measures to promote competition in the provision of electronic communications networks and services by ensuring that there is no*

[834] See paragraphs 3.105-3.120.
[835] Namely ensuring that BT does not set the VULA margin such that it prevents an operator that has slightly higher costs than BT (or some other slight commercial drawback relative to BT) being able to profitably match BT's retail superfast broadband offers. See paragraph 3.131.
[836] Namely ensuring that BT cannot use its SMP in the WLA market to set the VULA margin over the period of the market review such that it causes retail competition in superfast broadband to be distorted. See paragraph 3.93.

distortion or restriction of competition – this may require a stricter form of ex-ante margin squeeze test than the economic replicability test."

7.134 The BEREC Guidance recommends that the choice on how strictly the test is applied must be made by the NRA in the light of the regulatory objectives to promote sustainable competition and efficient investment and based on the nature of the competition problem identified in the market analysis. We consider that we are consistent with this approach.

7.135 We note BT's submission that NRAs should exercise caution when applying margin squeeze tests involving bundled offers, to avoid a clear risk of incorrect infringement conclusions.[837] BT referred in support to a 2009 report by the ERG. The ERG stated that:

> "… *in the case of bundles, the difficulties pointed out in the design of tests means that their sole use as determinants of a MS [margin squeeze] taking place may not always be suitable. In such circumstances one may wish to consider other indicators in assessing the likelihood that a MS occurs as a result of the marketing of a specific bundle that has failed the test." However it also noted that "A large number of NRAs that responded to the questionnaire said that to proceed to action, the MS test outcome was the only or main consideration used to decide whether a MS was likely" and that "… from an ex ante perspective it is difficult to assess the impact of offers on demand, and having a clear-cut rule such as the one used by NRAs increases certainty for all operators*."[838]

7.136 As explained in Section 5, we consider that it is appropriate in the UK market to include the costs and revenues of bundled elements (including BT Sport and mobile services) when assessing the VULA margin and that the exclusion of such elements would undermine the effectiveness of our assessment. Further, as explained in Section 4, we are satisfied that a remedy which included a further effects analysis would not be effective in achieving our regulatory aim and, therefore, in addressing the clear and real risk of retail competition being distorted in superfast broadband which we believe would have a significant negative impact on end users. We accept that a brightline test represents a simplification and that it is possible that a bundled offer whose price just fails a brightline test does not harm competition. However, our view on the inappropriateness of a further effects analysis applies equally to our assessment of the margin on bundled offers.

[837] See paragraph 10.9, *BT Response to the 2014 VULA Margin Consultation – Annex B: The applicable legal framework*, http://stakeholders.ofcom.org.uk/binaries/consultations/VULA-margin/responses/BT_Group_-_Annex_B_-_The_applicable_legal_framework.pdf.

[838] Page 21 and paragraphs 112-113, ERG (09) 07, *Report on the Discussion on the application of margin squeeze tests to bundles,* 7 March 2009, http://berec.europa.eu/doc/publications/2009/erg_09_07_report_on_the_discussion_of_the_application_of_margin_squeeze_tests_to_bundles.pdf.