Ofcom

Response to the Fixed Access Market Review: WLA related issues

Annexes to Part 1 of TalkTalk Group submission

Non-confidential version

October 2013

1 Market definition and SMP analysis

1.1 Ofcom sets out its position on market definition and SMP analysis in section 7 of the Consultation. This annex provides TalkTalk's response to the analysis contained therein.

1.2 In essence, TalkTalk maintains its position, as expressed in its earlier responses to the call for inputs ('**CFI**') that BT's loop-based products are in a separate product market from any other potential wholesale SBB or SFBB products, including those of Virgin Media. The reason for this is the ineffectiveness of the indirect constraints which Ofcom relies on to make a case that Virgin Media acts as an effective competitive constraint on BT wholesale pricing. For reasons set out below, TalkTalk believes that it is however likely that BT acts as a constraint on Virgin, and that the product market may therefore be asymmetric.

1.3 Notwithstanding our view that there are or will be separate product markets, TalkTalk believes that Ofcom has reached the correct conclusion regarding the market power of BT, and as such it may be appropriate for Ofcom to leave it as an open issue whether Virgin acts as a competitive constraint on BT. This would enable Ofcom to revisit the issue in the 2017 WLA review. TalkTalk considers that such a fundamental review is likely to be merited at that time, given the rapidly changing dynamics of the WLA markets, and the implications for market definition.

1.4 As regards geographic markets, TalkTalk agrees with Ofcom's conclusion that the relevant geographic market is national, for various strategic, reputational, and economic reasons which affect BT's pricing incentives.

1.1 Theoretical framework for analysis

1.5 TalkTalk considers that when conducting an economic assessment, it is vital to start from a sound theoretical framework. A well-considered basis for analysis can avoid errors that could lead to incorrect conclusions and inappropriate remedies.

1.6 TalkTalk's theoretical framework used in this section is based on a conventional SSNIP-style approach.[1] Under a SSNIP approach, market definition starts with the narrowest possible economic market encompassing solely the focal product. It is then determined whether a hypothetical monopolist ('**HM**') in that market could profitably impose a SSNIP in that market.[2] If an HM could impose a SSNIP and increase its profits by doing so, then that market is a relevant economic market. If a SSNIP would not increase the HM's profits, then the market is insufficiently wide, and products or geographic areas are added into the market progressively, with the test being undertaken again as each product is added, until it is profitable for the HM to impose the SSNIP. As soon as a potential market is reached

[1] SSNIP stands for 'small but significant non-transitory increase in price'.
[2] In practice, small but significant in this context is usually considered to be 5-10%.

where it is profitable to impose a SSNIP, that defines the relevant economic market for the assessment of market power.

1.7 It is important to note that, with differentiated products, there is no reason to suppose, *a priori*, that properly defined markets are symmetric; this can only be ascertained by detailed analysis.[3] Potential asymmetry in markets is vital to understand in the context of WLA markets. For example, whether Virgin's products act as a competitive constraint on BT Openreach's says nothing meaningful about whether BT Openreach acts as a competitive constraint on Virgin; similarly SFBB products may constrain SBB products but not visa-versa. Inappropriately assuming markets must in some sense be symmetric is one of the most common errors in competition analysis of markets.

1.8 As such, in the context of this submission, our approach is to commence defining markets by considering each of the firms active in the supply of wholesale local access separately, as individual firms represent the narrowest possible product market. Starting from each firm individually also naturally allows findings of asymmetric markets where this is appropriate.

1.9 Further, a key element of product market definition is that the features of products are of little relevance when determining relevant economic markets. As Niels, Jenkins and Kavanagh ('**NJK**') say:

> *Market definition based on economic principles is about substitution and price pressure between products. It is not about the physical characteristics of products... a market definition that relies solely on product characteristics can become economically unsound.*[4]

1.10 Geographic market definition is somewhat more difficult in the context of telecoms markets. In principle, the narrowest possible relevant geographic market is a single household. A strict application of the SSNIP test may lead to the conclusion that this single household is the relevant geographic market for the purposes of competition analysis. As such, where a very large number of geographic markets are defined, there may be a need to group them for reasons of tractability; TalkTalk therefore agrees with Ofcom's paragraph 7.64. Such grouping can be undertaken where the conditions of competition in different geographic areas are appreciably similar.

1.2 Ofcom's proposals on product market definition

1.11 Ofcom's proposals on product market definition for WLA market(s) are set out at paragraphs 7.30 to 7.57 of the Consultation. This subsection provides TalkTalk's responses to Ofcom's key findings on product market definition.

1.12 At paragraph 7.33, having regard to TalkTalk's submissions in responding to the CFI, Ofcom states that it is important to bear in mind whether the SSNIP test is helpful in identifying

[3] In a symmetric market definition, when product A constrains product B, this implies that product B also constrains product A. In an asymmetric market definition, product A constrains product B, but product B does not constrain product A. The economic market which is defined therefore depends upon the focal market which is the first phase of the SSNIP test.

[4] Niels, G., H. Jenkins and J. Kavanagh (2011), *Economics for Competition Lawyers*, Oxford University Press, at page 27.

SMP, and notes that WLA as a product is likely to exist solely as a result of regulatory intervention. TalkTalk agrees with both of these statements. However, we consider that the SSNIP test is the most economically rational way of defining markets, and that approaches based on product features are fundamentally and irretrievably flawed (see paragraph 1.18 below). As such, we consider that the SSNIP test is helpful in conducting a market definition exercise, including in the context of the Consultation.[5]

1.13 On the other hand, TalkTalk agrees with substantial elements of Ofcom's choice of focal market, as set out at para 7.34, and considers that starting analysis on the basis wholesale local access at a fixed location is the most appropriate focal point for analysis. We also agree with the exclusion of cable-based and mobile-based internet access, and consider that this approach to choosing the focal product is in line with our preferred theoretical methodology, as set out at paragraphs 1.6 to 1.8 above. We consider Ofcom's approach as set out at paragraph 7.36 to be generally appropriate.

1.14 TalkTalk continues to believe that there will be, within the forthcoming review period, a split between the economic markets for retailing SBB and SFBB sufficient that SFBB is no longer constrained by SBB. TalkTalk therefore considers that the starting focal markets considered could be even narrower than all broadband, with one focal market being the provision of SFBB at a fixed location over loop-based infrastructure, and a second focal market as the provision of SBB over loop-based infrastructure. Different economic markets could result from the two different focal markets. However, given the conclusions reached, and consequently proposed remedies, by Ofcom, TalkTalk does not consider that this issue is material in the context of the current review, and therefore that there is no need for Ofcom to draw a firm conclusion in this regard.[6]

1.15 TalkTalk agrees with Ofcom's finding at paragraph 7.38 that under the modified greenfield approach, it is unlikely that either BT Group or Virgin Media would choose to engage in wholesaling of WLA products to third parties, given their vertical integration. We therefore concur with Ofcom that, as there are no direct constraints on upstream pricing, the only viable constraints which can be assessed are those indirect constraints resulting from customer switching at a retail level.

1.16 TalkTalk considers that it is appropriate for Ofcom, as set out in paragraph 7.40, to draw on the outcomes of the WBA Consultation's market definition exercise. However, we note that the approach in that consultation explicitly did not start from a specific focal product, but looked at the market at a general level. As such, it is not well-placed to determine the extent of constraints between SBB and SFBB.

[5] There may, of course, be scope to omit the market definition stage altogether and undertake direct market modelling via econometric techniques of the extent of competitive tension from various parties on BT to determine the level of market power possessed by BT. However, such econometric work would be difficult in the context of a market which is divorced from a counterfactual without regulation, and would in any case require considerable volumes and granularity of data.

[6] TalkTalk's position in this regard is critically dependent upon Ofcom imposing effective remedies in the market which seek to prevent BT operating a margin squeeze on SFBB products. If this remedy were removed, then we consider that the issue of market definition may become material.

1.17 At paragraphs 7.42 to 7.45, Ofcom considers the indirect constraint from cable-based wholesale local access. In TalkTalk's opinion, there is no relevant information regarding elasticities in this section from which to draw conclusions on the extent of indirect constraint, and it would therefore be more appropriate for Ofcom to leave the issue open in its conclusions; the lack of a specific finding in this regard will not lead Ofcom to have to amend its conclusions in a material way.

1.18 In particular, paragraph 7.42 undertakes a characteristic-based assessment of market definition – products are included in the same economic market since they are stated to have similar characteristics.[7] This is an inappropriate and flawed approach to determining economic markets and competitive constraints, which can lead to erroneous conclusions. Paragraph 7.43 then refers to previous Ofcom market reviews, and states that there is no evidence that there has been a change in competitive conditions from those earlier reviews. However, Ofcom also adduces no evidence that there has *not* been a change from the competitive position in earlier reviews, in order to support its pre-existing market definition approach. We therefore disagree with paragraph 7.47 that there is any relevant evidence on market definition contained within paragraphs 7.42 to 7.44 of the Consultation.

1.19 As such, there is no evidence to support Ofcom's proposed market definition of including cable-based internet access within the relevant market for loop-based broadband internet. TalkTalk continues to consider that the preferable approach is to conduct a critical loss analysis, as set out in TalkTalk's response to the CFI, dated 5 April 2013.[8] TalkTalk considers that this analysis is not complex to conduct, and should have been a core element of Ofcom's WLA review. Further, TalkTalk considers that the conclusions of the critical loss analysis presented in TalkTalk's CFI response are sufficiently clear cut that it is unlikely that cable-based internet access imposes a competitive constraint on loop-based internet access. On the other hand, it appears plausible to TalkTalk that loop-based internet access may be a viable competitive constraint on cable-based internet access. The asymmetry in this regard comes from the different geographic spread of the cable-based and loop-based networks, which creates a natural asymmetry of competitive constraints.

1.20 At paragraphs 7.46 to 7.50 of the Consultation, however, Ofcom critiques TalkTalk's submissions regarding undertaking a critical loss analysis for the purposes of market definition. Ofcom's core criticism appears to be that there is insufficient relevant data available to parameterise the critical loss analysis. TalkTalk agrees that the data to undertake the analysis is far from ideal, and is substantially outdated in places. However, TalkTalk does not believe that this affects the desirability of undertaking a critical loss analysis; in the absence of such an analysis, there is a lack of economic underpinnings for Ofcom's market definition.

1.21 Given the lack of any relevant evidence on the extent to which cable-based broadband imposes a competitive constraint on loop-based broadband, TalkTalk does not believe that it is appropriate for Ofcom to reach a firm conclusion on this matter. As such, TalkTalk considers that the most appropriate course of action is for Ofcom to leave open the

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[7] That is, an assessment which is based upon qualitative consideration of product characteristics, rather than an economically based consideration of constraints and incentives.

[8] See paragraphs 2.9 *et seq.* of that response.

question of whether cable-based internet access imposes an effective competitive constraint on loop-based internet access. As Ofcom points out at paragraphs 7.47 and 7.50 of the Consultation, Ofcom's provisional conclusions would not be affected if cable access were excluded. Ofcom can therefore amend its provisional view on market definition to leave the matter open without affecting its conclusions on SMP or remedies.

1.22 TalkTalk agrees with the conclusions reached by Ofcom in paragraph 7.54 of the Consultation: mobile internet is not a competitive constraint on fixed line internet access, as mobile internet access is a complementary product to fixed internet access, rather than a substitute. Similarly, we agree with Ofcom that none of the other forms of internet access set out in paragraph 7.55 of the Consultation are relevant for the purposes of determining competitive constraints.

1.3 TalkTalk's overall position on product market definition

1.23 At a number of points within Ofcom's section on market definition, it is implied or stated that TalkTalk's view on the relevant market definition is unclear.[9] This subsection is therefore intended to clarify TalkTalk's core position in the context of the current Consultation.

1.24 The main elements of TalkTalk's position on product market definition are as follows:

- the appropriate focal products to start from are SFBB over loop-based fixed internet connections and SBB over loop-based internet connections. Cable-based fixed internet access and mobile internet access should not form part of the focal product;
- it is appropriate for Ofcom to use the modified greenfield approach ("**MGA**") for market definition;
- TalkTalk considers that a critical loss analysis or SSNIP test, using up to date and reliable data, is the most appropriate method for undertaking product market definition;
- On the basis of its analysis, TalkTalk does not believe that cable-based internet access acts as a competitive constraint on loop-based internet access, as indirect constraints are insufficiently strong;
- It is unclear whether loop-based internet access acts as a competitive constraint on cable-based internet access;
- Mobile internet access and other non-fixed line forms of internet access are not in the relevant market, and will not be in the foreseeable future;
- Within the period of the next review (i.e, before April 2017), SBB products will probably cease to exercise competitive constraints on SFBB products.[10] Such constraints are weakening over time.

1.25 If any elements of this position, or the reasoning underlying them, are unclear to Ofcom, TalkTalk would be keen to clarify either in writing or in a face-to-face meeting.

[9] See, for example, paragraph 7.36 of the Consultation.
[10] TalkTalk notes that this is a stronger form of Ofcom's tentative finding at paragraph 11.352

1.4 Ofcom's proposals on geographic market definition

1.26 Ofcom's proposals on the relevant geographic market are set out in paragraphs 7.58 to 7.66 of the Consultation. This section sets out TalkTalk's brief responses to these elements of Ofcom's provisional thinking.

1.27 TalkTalk strongly supports the approach outlined by Ofcom at paragraph 7.64 of the Consultation, as it is aligned with TalkTalk's preferred theoretical approach outlined above. Grouping areas on the basis of common pricing constraints is a practical way to address what would otherwise be an unfeasibly large number of markets to assess.

1.28 TalkTalk further agrees with Ofcom's logic, founded in academic research, that it is likely to be profitable to price on a national basis, even where there is some difference in local conditions of competition.[11] Such pricing policies are commonly seen in firms operating nationally in the presence of different levels of competition: for example, grocery retailing and fashion retailing both operate in this way.

1.29 TalkTalk also notes that a conclusion that a single competitor does not materially change the conditions of competition in a potential market is also in line with Ofcom's proposed findings of the ongoing WBA Review, where areas with 1 or 2 competing firms are grouped together.[12]

1.30 Further, TalkTalk believes that although Ofcom has correctly provisionally concluded that there is a national geographic market, even if the relevant market were sub-national, BT would still hold market power due to BT Openreach's very high share of lines even in areas where it is subject to some competition and warrant the same decisive SMP remedies. As such, Ofcom's conclusions would not change in this case.

1.31 Overall, therefore, TalkTalk is in full agreement with Ofcom's findings on the appropriate geographic market definition.

1.5 Ofcom's proposals on SMP analysis

1.32 Ofcom's proposals on its market power assessment are set out at paragraphs 7.68 to 7.75 of the Consultation.

1.33 TalkTalk agrees with Ofcom's finding that BT has a very high market share in the WLA market, well in excess of levels which would lead to a presumption of SMP. TalkTalk further agrees that there are no changes in the marketplace which would imply that BT will cease to hold such a high market share in the foreseeable future.

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[11] Ofcom cites reasons for this in paragraph 7.64, including the impact of BT's USO, the impact of national pricing on the intensity of competition, and the impact of national pricing on brand reputation.

[12] Ofcom (2013), *Review of the wholesale broadband access markets: Consultation on market definition, market power determinations and remedies*, 11 July, at paragraph 1.5.

1.34 Similarly, TalkTalk agrees that there are very high barriers to entry– sufficient that entry should be considered as blockaded, in Bain's terminology– and that there is no countervailing buyer power, given customers' lack of outside options.[13]

1.35 Regarding SFBB, TalkTalk agrees that it is likely that the number of customers on the BT Openreach network will surpass the number of SFBB customers on Virgin Media's network during the course of the next review period. This will be sufficient to provide BT with SMP in a hypothetical stand-alone SFBB market at the time of the 2017 WLA Review.

[13] Bain, J.S. (1956), *Barriers to New Competition: Their Character and Consequences in Manufacturing Industries*, Harvard University Press.

2 BT's incentives to engage in anti-competitive behaviour

2.1 Given BT's market power in the market for fixed-line broadband access, this section sets out BT's incentives to engage in anti-competitive behaviour. We believe that BT will have strong incentives to behave anti-competitively, with particularly strong incentives to margin squeeze in the SFBB market. Such incentives can only be limited through regulatory action.

2.2 This is an important element of the overall WLA Review, as it is BT's incentives to behave anti-competitively which create a need for Ofcom to set regulatory remedies. As such, remedies should be directed at addressing the various incentives and theories of harm which are detailed in this section.

2.3 In general, TalkTalk believes that firms will engage in anti-competitive practices when they both have the ability to do so, and it is a profitable approach. In general, firms will only have the ability to behave anti-competitively when they hold a position of significant market power.[14]As set out in Annex 1, Ofcom has correctly found BT Openreach to hold market power in the WLA market; as such BT has the ability to behave in an anti-competitive manner.

2.4 It is also worth noting that firms may also sometimes behave in an anti-competitive manner even when it is unprofitable to do so – that is, the profitability of anti-competitive behaviour, along with the ability of a firm to behave anti-competitively, is a sufficient condition for anti-competitive behaviour to take place, but is not a necessary condition. Firms may engage in unprofitable anti-competitive behaviour, particularly exclusionary behaviour to win market share, because the incentives of managers are not fully aligned with the profit-based incentives of shareholders. In particular, managers' pay may be partly or wholly based on revenue rather than on long-run profitability, providing incentives to sacrifice profits for market share.

2.5 At a high level, TalkTalk considers that BT Group's incentive to behave anti-competitively differs depending upon the precise product under consideration.

- SBB products are in a mature market segment, where BT Retail's market share is substantially composed of a rump of inert customers with little interest in switching. BT's most likely category of abuses in SBB are exploitative abuses, designed to take advantage of both SBB retail customers, and the customers of other CPs using the BT Openreach network. These exploitative abuses can take the form of excessive wholesale pricing, excessive retail pricing or subpar levels of quality.
- For SFBB products, which are in a developing market segment, and where BT Retail has a very high on-net market share compared to competitors such as Sky and TalkTalk, BT's most likely category of abuses during the forthcoming regulatory period are exclusionary abuses.[15] Such abuses will consist of BT attempting to use its

[14] Of course, this does not apply to cartels, which involve agreements with a range of firms in order to create a conspiracy to increase prices. On the other hand, for a cartel to have a significant effect on pricing in the market, it is likely that the cartel members would *collectively* have to hold significant market power.
[15] On-net market share in this context is the share of BT Retail among all CPs using BT Openreach or BT Wholesale products. It therefore excludes Virgin Media's market share, which is carried on Virgin's own cable network.

upstream market power to reduce the market share held by TalkTalk, Sky and other ISPs that rely on BT's products, and thereby lock in a dominant position in the retail market.

2.6 In this response, TalkTalk focusses on the issue of margin squeeze, which is the main exclusionary abuse which we expect to be problematic during the forthcoming regulatory period in the rapidly developing SFBB market segment. We do not deal further with the well-understood incentives BT faces to set excessive upstream monopoly prices in the SBB market segment, which are effectively dealt with by wholesale price regulation.

2.1 Short-term incentives to margin squeeze

2.7 Similar to predatory pricing, a firm will engage in a margin squeeze when the short-term losses from the exclusionary behaviour are more than offset by the future supernormal profits available during the recoupment phase.[16] However, margin squeeze is universally more profitable than predatory pricing, as the exclusionary effect can in general be obtained without the need for overall margins to be reduced.[17] Rather, margins can be transferred from the downstream to the upstream division of the vertically integrated monopolist. This has no effect on the profits of the vertically integrated firm, which is simply shifting its net profits between different parts of the firm. On the other hand, it has a significant impact on the potential profits of competing downstream firms, for which the wholesale price will be a marginal cost, rather than an (irrelevant) internal transfer payment.[18]

2.8 There are few potential sources of losses for BT from engaging in margin squeeze, which can act as a disciplining factor:

- *Losses of volumes due to other network competitors*: there may be some loss of demand to other networks (particularly Virgin) by engaging in margin squeeze. This occurs since third party resellers (such as TalkTalk) typically pass on over 50% of the excessive wholesale price which they are subjected to, resulting in excessive retail prices.[19] This will reduce customers' demand for these third party retailers' products, and increase demand for those of the abusive monopolist. However, where downstream products are differentiated (which will be the case in all of the markets Ofcom is considering in the FAMR), there will also be some substitution to third

[16] Strictly speaking, this only holds where there is no analog to Article 102 TFEU in place. Where there is legislation which makes predatory pricing illegal, then the potential costs in terms of fines and damages payment if found guilty of abusive behaviour will need to be taken into account in the losses from the predatory period.
[17] That is, the total margin across the vertically integrated firm – in BT's case, the Openreach margin plus the BT Retail margin.
[18] Internal transfer payments have no effect on the pricing incentives of an integrated firm. The management of the firm will solely care about the firm's total profits, which are determined by the total costs incurred within the firm to provide a particular product to consumers, and the revenue obtained from external sources for that product. The internal transfer price affects neither revenue nor costs, and so does not change the behaviour of any part of the firm. There is no difference in the incentives of the firm depending upon whether a company sets an internal transfer price, or simply hands a part-finished product over to another part of the firm without a price being set. This can be easily demonstrated mathematically.
[19] This is a standard result for linear demand in the absence of pricing frictions. A monopolist will pass on 50% of any overcharge, whereas a firm in a fully competitive market will pass on 100% of the overcharge.

party networks. This will cause the abusive monopolist to suffer a loss of profit equal to the upstream net profit per customer lost.

The extent of losses from this source (and, as a result, the extent of the discipline against BT abusing its market power) will depend upon the closeness of competition between the downstream, retail only CPs and BT, compared to the closeness of competition between the CPs and Virgin Media. This is commonly expressed in terms of diversion ratios – in essence, the lower the diversion ratio from the downstream retailers to retailers on competing networks, the less of a constraint there will be on the monopolist increasing its price.

- *Losses of volumes due to decreased market size*: the mechanism for this is similar to the loss of volumes to other integrated networks; it will occur because products offered by BT Retail and resellers are differentiated (otherwise the increased retail prices by resellers would merely result in customers moving to BT Retail). With fully homogeneous products, there would not be a significant loss of market share from engaging in a pure margin squeeze. However, in this case, the customers no longer take SFBB at all, rather than shifting between networks. From BT's perspective the impact is similar.

Decreased market size may be particularly important where downstream retailers engage in costly promotional efforts which grow the market by persuading potential customers to take the product. A margin squeeze reduces the profitability of winning additional customers, therefore lowering the incentive to engage in promotional efforts. This will therefore shrink the market, and reduce profits to BT Openreach.

2.9 Losses from these sources, however, will be fairly limited. In particular, BT is substantially protected from losses to Virgin Media due to Virgin's low geographic coverage compared to BT's copper or fibre networks. Once roll-out is completed, Virgin will compete with around half of BT's fibre network, and only around 45% of BT's total network.

2.10 Moreover, broadband internet access – both SBB and SFBB – has some utility characteristics, with a high proportion of UK households taking internet access from a single provider, on the basis of a monthly subscription.[20] Internet access is largely now seen as an essential product for a household to take. This will tend imply low market elasticities of demand with respect to both price and promotional effort.

2.11 The desirability of margin squeezing will also be affected by the expected strategic reactions of major competitors in the market (particularly Sky and TalkTalk). In essence, if Sky and TalkTalk adopt a policy of accommodation (for example, by cutting back on promotion of packages which are subject to a margin squeeze) then this will make abusive behaviour more profitable than if Sky and TalkTalk do not change their behaviour.[21]

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[20] For example, in February 2013, DCMS stated that 'fast, reliable broadband access is essential for homes throughout the country to benefit from online services'. See https://www.gov.uk/government/policies/transforming-uk-broadband

[21] However, in this context accommodation is likely to be a dominant strategy for TalkTalk and Sky. Unlike predatory pricing, which naturally cannot continue indefinitely because of the sacrifice of profits which it entails, there is no reason to alleviate a margin squeeze in the absence of regulatory intervention. As such, a

2.12 As such, BT will have very strong incentives to margin squeeze in the absence of some form of regulatory intervention. The short run effects of margin squeezing are for BT to:

- gain market share in the retail market at the expense of its downstream competitors on the same network (i.e, Sky, TalkTalk, EE);
- gain margin in its upstream business on each customer who remains with downstream retail-only providers;
- lose upstream market share to Virgin Media due to substitution away by customers of retail-only providers;
- reduce the overall size of the SFBB market, and so have a smaller upstream business in total.

2.13 The overall impact of these incentives is that the net benefit from squeezing is likely to be large.

2.2 Long-term incentives to margin squeeze

2.14 All of the costs and benefits to BT outlined above are short-term costs and benefits, essentially resulting from static decisions by consumers as to whether they will purchase SFBB, and if so which provider they will purchase SFBB from. The combination of these factors implies that margin squeezing is likely to be a highly profitable path to pursue, even purely in the short run. However, there will also be long-run impacts on the market due to BT margin squeezing on SFBB. These factors will tend to enhance the profitability of BT margin squeezing.

2.15 Amongst the longer term factors which may increase BT's incentives to engage in margin squeeze are the following:

- *the extent of customer lock-in*: there are substantial switching costs in the SFBB segment. These switching costs will increase the profitability of margin squeezing, as market share gains early in a market's evolution will be retained into later periods, ensuring that a high market share persists. Effectively, BT can lock in a dominant position by margin squeezing during the current customer acquisition phase.
- *the probability of other firms exiting the market*: if a margin squeeze has the effect of inducing competitors to exit the market, it will be more profitable to margin squeeze. When firms exit the market, they concede all (rather than just part) of their market share; at the same time, reducing the number of firms active in the market is a major structural change which can have a significant effect on the profitability of the firms remaining in the market. While it is unlikely that TalkTalk or Sky will exit the SFBB market without a very prolonged and deep margin squeeze, other smaller operators may decide that it is not worthwhile to sell SFBB. This would further enhance BT's market power in retail SFBB.

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policy of refusing to amend behaviour– or even attempting to aggressively retain market share– is irrational as there is no prospect of changing BT's incentives to squeeze.

- *barriers to market (re-) entry*: these are particularly important when the impact of the margin squeeze is to induce firms to exit the market. Where there are barriers to entry, exit may be irreversible, permanently reducing the overall level of competition. The substantial barriers to entry in retail broadband will therefore tend to make it more profitable for BT to margin squeeze.
- *reputational effects*. By margin squeezing BT can build a reputation as a firm which does not tolerate entry, and which makes entry unprofitable for competitors which choose to start serving the downstream market. This will tend to make potential entrants more reluctant to start serving the market, increasing barriers to entry.

2.16 These positive longer-term incentives must be seen in the context of very strong short-term incentives to engage in margin squeeze. Between the long- and short-term incentives, there is an overwhelming incentive for BT to margin squeeze, unless deterred or prevented by regulatory action.

2.3 Impact of regulatory intervention on incentives to squeeze

2.17 As set out above, in the absence of regulatory intervention, BT will have very strong incentives to squeeze; indeed, as set out at paragraph 7.72 of the Consultation, in the absence of regulatory intervention it is unlikely that BT would offer WLA products to third parties at all (which can be considered as the equivalent of a permanent squeeze sufficient to eliminate all downstream competition).

2.18 Furthermore, it is only regulation which acts as a restricting factor on the scale of the squeeze which would be undertaken by BT. In terms of BT's pure commercial incentives, without intervention from Ofcom, the OFT, or European Commission, it would almost certainly be profitable for BT Openreach to set a wholesale price in excess of the retail price which is being set by BT Retail. Doing so would not have any impact on the total profits earned by BT Group from BT retail customers, while at the same time eliminating competitors from the downstream market.[22]

2.19 The ability of regulators to provide incentives to compete fairly, rather than abusively, has been much discussed in the context of the cartel enforcement literature. Although some of the issues discussed in that literature– such as cartel stability– are not relevant to considering BT's choice whether or not to engage in a margin squeeze, the potential impact of regulatory action on incentives to enter a cartel is similar to the potential impact of Ofcom actions on BT's incentives to margin squeeze.

2.20 The first, very obvious, point is that there needs to be a punishment for behaving in an abusive manner. If there is no punishment – but merely an order to cease and desist – then there is no reason for BT not to engage in a squeeze. By doing so, it will increase its short-term profitability, and, due to the long-term considerations outlined at paragraphs 2.14 to

[22] Indeed, if such a policy fails to eliminate downstream competition this would be *more profitable* for BT than if they exited. The reason is that the wholesale price being set by BT Openreach is above the retail price; as such, it is more profitable for BT to take profits at the wholesale level which are greater than the sum of its profits at the wholesale and retail levels.

2.16 above, there will be persisting benefits to BT from the anti-competitive actions even after regulatory action has stopped the abuse.

2.21 The second point is that a punishment which merely amounts to a fine equal to the damage caused to downstream competitors will also be insufficient. The longer-term benefits to BT from behaving abusively, in terms of increased market share and a customer offer which is perceived to be more competitive than its downstream rivals, will remain. Furthermore, BT will (correctly) calculate that there is less than a 100% probability of the margin squeeze being detected and effective regulatory action being taken.[23] Such a penalty would be similar to a situation where the punishment for theft was simply to hand back the stolen goods with no further financial or other penalty – this would clearly be insufficient to deter stealing taking place.

2.22 Consequently any regulatory action – *ex post* or *ex ante* – which aims to provide a deterrent to BT margin squeezing would require a penalty greater than the estimated gains to BT. The key difference between *ex ante* and *ex post* regimes is not the need for punishments for non-adherence, but the likelihood of non-compliance and thus the need for such punishments to be applied. Under an *ex ante* regime, BT will have less ability to margin squeeze, and so there are likely to be fewer breaches requiring punishment.

2.4 Conclusions

2.23 Overall, therefore, there are very strong incentives on BT to margin squeeze. The primary positive incentives are that:

- there is little downside from margin squeezing due to low potential losses of traffic from BT's Openreach network;
- the short-term upsides to margin squeezing, in terms of higher margins to BT Openreach and higher on-net market share for BT Retail;
- there are large potential long-term gains from margin squeezing, due to changing the overall market structure in a manner which benefits BT Retail. BT may be able to lock in a dominant retail market position by margin squeezing.

2.24 In order to restrain BT from margin squeezing under any regime where it is permitted to launch or amend the pricing of products without a margin squeeze test being applied in advance, there is likely to have to be a combination of substantial regulatory fines (generally well in excess of the gains to BT from margin squeezing); aggressive margin squeeze enforcement to ensure that most margin squeezes are prosecuted; and restitutory payments to firms which are squeezed.

2.25 TalkTalk considers that it is vital for Ofcom to keep these conclusions in mind when designing a system to prevent margin squeezing in the current FAMR. In the absence of the appropriate regulatory design, BT will retain strong incentives to margin squeeze TalkTalk.

[23] How much less than 100% is not the issue here; from the perspective of this paragraph, even a 99% detection rate will be an ineffective deterrent.

3 Margin squeeze protection or a wholesale price cap?

3.1 TalkTalk broadly agrees with Ofcom that margin squeeze protection (rather than a wholesale price cap) is the appropriate regulatory option at present. This section sets out TalkTalk's reasoning for why decisive margin squeeze is currently a better remedy than a wholesale price cap.

3.2 In principle, BT's strong incentives to margin squeeze could be addressed by either regulatory approach. A wholesale price cap would prevent BT from raising its upstream price. As such, with the wholesale price set close to a competitive level, BT would no longer be able to margin squeeze to exclude downstream rivals without incurring short-term losses itself (due to setting retail prices below the competitive level).[24] As such, BT would have to engage in a short-term profit sacrifice in order to exclude its rivals, reducing its incentives to exclude as it would have to trade off short-term losses for longer-term gains.[25] Wholesale price caps combined with the possibility of *ex post* action to prevent and deter margin squeeze under the Competition Act for a breach of Chapter II, can reduce BT's incentives to engage in exclusionary behaviour in certain circumstances. However, as we explain below they are not fully effective in eliminating these incentives.

3.3 Formal margin squeeze protection would address BT's incentives to margin squeeze more directly and effectively, by setting a cost-driven minimum margin between wholesale price and retail price.[26] It would therefore prevent BT from engaging in margin squeeze or predatory pricing against its downstream competitors, although it would do nothing to prevent any potentially excessive wholesale pricing (unless there were effective indirect constraints via the retail market).

3.4 In summary, at this stage of the market's development, TalkTalk's preference is for margin squeeze protection to be applied, but no direct wholesale price regulation for the time being. This reflects the developing nature of the wholesale SFBB market, and a number of uncertainties at the present time, particularly the difficulty of setting appropriate wholesale prices and the potential to disincentivise investment.

3.5 TalkTalk considers that margin squeeze protection is likely to be a transitional stage between the current unregulated SFBB market and a future market subject to a full wholesale price cap. As the uncertainties set out in this section unwind, wholesale price regulation will become a relatively more attractive option; at some point, wholesale prices, rather than margins, should be regulated.

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[24] This is effectively predatory pricing, rather than a margin squeeze.

[25] In effect, by setting a maximum wholesale price at the competitive level, BT would be prevented from engaging in a classic margin squeeze, although it would still be able to adopt a predatory pricing strategy in the downstream market. It is therefore no longer able to use its upstream pricing power to move downstream market share.

[26] This section does not deal with the issue of whether margin squeeze protection should be applied on an ex ante or an ex post basis, which is considered in annex 5, covering the calibration of margin squeeze protection.

3.1 Need for ex ante protection for downstream competitors

3.6 In principle, margin squeeze protection could be provided solely in an *ex post* manner, under the provisions of the Competition Act 1998. However, there are several problems with attempting to protect downstream competitors in this way:

- margin squeeze protection under the Competition Act can prevent abuse of dominance but cannot promote competition. As such, it can only deal with Potential Concern 1, and has no scope to cover Ofcom's Potential Concern 2.[27] It cannot assist Ofcom in fulfilling its duty to promote competition.
- it takes a considerable length of time from the bringing of a complaint under the Competition Act 1998 to the conclusion of the case. The *Thus/ Gamma* margin squeeze case was opened by Ofcom in August 2008, and closed with a finding that there had not been an infringement in June 2013– that is, just under five years later.[28] Taking so long to conclude a case risks irreversible damage to competitors and therefore to consumers, particularly due to the persisting harmful effects of an abuse even after the abuse has ceased outlined at annex 2 above.
- there are also very considerable resource demands on Ofcom from pursuing Competition Act cases. [✂]
- The Competition Act does not promote certainty for third parties, thereby raising perceived risks to competitors, and deterring the substantial retail-level investment that is required to acquire customers in broadband markets.

3.7 The combination of these factors effectively makes the Competition Act unsuitable for acting as the primary method of preventing margin squeeze or of promoting competition. Given internal resource and timing constraints, it is unlikely that Ofcom would be able to cope with open investigations against large volumes of products at the same time, and once customers are locked in after a considerable period with BT, it will be difficult to return the market to a fully competitive situation. This means that prior harm will not be repaired, and damage will continue for some time after.

3.8 As such, TalkTalk continues to believe that there is a need for additional protection from BT adopting exclusionary strategies against downstream rivals. In principle, this could come in the form of either *ex ante* margin squeeze protection or wholesale price regulation. However, as set out below, TalkTalk considers that in the current circumstances, decisive margin squeeze protection is a more appropriate course of action.

3.2 The advantages of margin squeeze protection

3.9 TalkTalk considers that in the context of the current regulatory review, margin squeeze protection has sufficient advantages over wholesale price regulation that it is the best

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[27] See the Consultation, paragraph 11.288 *et seq.*

[28] See case reference CW/00988/06/08, *Complaint from Thus plc and Gamma Telecom Limited against BT about alleged margin squeeze in wholesale call pricing*. Also see case CW/00613/04/03, *Freeserve.com plc – BT's residential broadband pricing*, which took around seven and a half years to resolve.

choice for Ofcom to adopt in order to prevent BT engaging in exclusionary practices against downstream competitors.

3.10 **No need to make assumptions regarding future fibre network roll-out and costs.** If wholesale price regulation were adopted at present, there would be a need to make assumptions regarding the speed and cost of the remaining roll-out of the SFBB network. These assumptions then become important in determining the appropriate price which BT should be allowed to charge for wholesale access, as they will be central inputs to calculating the average cost of the network to BT Openreach, particularly in terms of the average capital costs per customer.[29] This will tend to ensure that there is less uncertainty over the accuracy of margin squeeze assessment (which does not depend on assumptions regarding fibre roll-out and costs) than over wholesale price regulation.

3.11 However, it should be noted that this form of uncertainty is diminishing rapidly. BT's roll-out of SFBB already covers over 60% of the UK,[30] and is continuing to rise quickly. By April 2014 commercial roll-out should be broadly completed, with only BDUK-supported roll-out remaining. By the middle of the regulatory period even this non-commercial roll-out should be substantially completed.

3.12 **Assumptions on SFBB take-up are rendered less important**. There will be a need to make assumptions regarding take-up of SFBB whether there is wholesale price regulation or margin squeeze protection in place. However, the significance of those assumptions will differ. If wholesale price regulation is adopted, take-up is a crucial component of the regulated price set, due to the substantial economies of scale in offering an FTTC network and wholesaling access to it. This implies that cost estimates are highly sensitive to estimates of take-up. On the other hand, as a scalable customer-centric business, retailing SFBB has considerably lower economies of scale. Cost estimates are therefore much less variable to changes in the number of customers estimated. Again, this will tend to lead to less uncertainty over margin squeeze assessment than over wholesale price regulation while the market is in its growth phase. This uncertainty will diminish as the market comes closer to saturation, and projections of customer volumes can be refined.

3.13 **Margin squeeze protection is able to deal with both elements of a squeeze**. BT can margin squeeze in two different ways. The first way – and the way which generates a 'classic' margin squeeze – is by increasing the wholesale price charged to third parties, while maintaining the retail price at a competitive level. This issue can be dealt with, in principle, by wholesale price regulation or margin squeeze protection, either of which should be able to prevent this form of abusive behaviour.[31]

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[29] The average capital costs per customer are unlikely to be constant across the whole SFBB roll-out area. It is important to note, however, that there may be a relatively low degree of variance in actual cost to BT, given that the non-commercial roll-out (which is the majority of the roll-out not yet completed) is being heavily subsidised by state sources. BT should clearly not be permitted a positive return on capital where that capital has been granted in the form of state aid.

[30] See footnote 27 of Ofcom's interim measures decision in case CW/01106/05/13, dated 31 July 2013. As roll-out is continuing, TalkTalk would now expect coverage to be materially higher.

[31] Although the mechanisms by which they prevent exclusion occurring are somewhat different. In the case of wholesale price regulation it is not possible for BT to set a price above the competitive level in the first place, while with margin squeeze protection BT is forced to choose between setting an excessive wholesale price and

3.14 However, BT could also behave abusively by setting the wholesale price at a broadly competitive level, while setting the retail price below the competitive level. While such a strategy would be less profitable for BT than margin squeezing by increasing the wholesale price, it may still be a viable approach for BT to adopt, as the short-term losses may be more than offset by the long-term gains. This form of abuse would be left unchecked by wholesale price regulation, but would again be prevented by margin squeeze protection. *Ex ante* margin squeeze protection is therefore capable of stopping more types of exclusionary behaviour than a wholesale price cap would be.

3.15 However, it should be noted that BT's incentives to margin squeeze by cutting retail prices to below competitive levels, rather than by increasing wholesale prices to above competitive levels, will be considerably less strong. Predation by lowering retail prices will entail profit sacrifice; increasing wholesale prices is generally profitable for a dominant firm even in the absence of exclusionary effect.

3.16 **Margin squeeze protection will not affect BT Openreach's incentives to invest in fibre networks**. BT Openreach will be free, following the implementation of margin squeeze protection, to set whatever price it chooses for wholesale SFBB. It will be able to choose its wholesale pricing strategy, regardless of whether that is to penetration price (i.e, setting a low price to incentivise take-up) or to set a premium price (enabling supernormal returns to frontload the payback profile of fibre). As such, there will be no impact upon BT Openreach's incentives to invest.[32] Any claims by BT to the contrary – that their incentives to invest will be reduced by margin squeeze protection – defy economic theory and logic. BT Retail will then have to adapt its pricing to the incremental price set by BT Openreach– in the same way as Sky and TalkTalk do – but as it will be permitted to set any margin which results in cost coverage and as its downstream cost base should be no higher than its competitors, this should not affect BT Retail's incentives to participate in the market, either.

3.17 Even if there were any impact of margin squeeze protection on investment (which there will not be), such an impact would largely unwind over the next 12-18 months, as BT completes roll-out of the network. After the network has been rolled out, BT's incentives to invest become considerably less important, and certainly will no longer require the boost provided by allowing BT to earn supernormal profits on its investment.

3.18 **Margin squeeze protection gives Ofcom the option to proactively promote competition**. If Ofcom chooses in favour of wholesale price regulation, then it would be able to level the playing field between BT Retail and downstream competitors. However, to the extent that

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setting a competitive retail price: margin squeeze protection will prevent them from doing both at the same time.

[32] This is also supported by the 'one monopoly profit' argument. Essentially, this economic principle states that monopoly profits can only be taken once in total: monopoly rents can be taken upstream or downstream (or split in some proportion), but cannot be taken twice without engaging in double marginalisation (which has the effect of *reducing* the total monopoly profits in the overall value chain). As such, BT can simply set the upstream wholesale price at the full monopoly level if it wishes to do so, extracting the full amount of available supernormal profits at this level of the value chain. As such, there can be no possible reduction in the incentives to invest in SFBB infrastructure, as BT Openreach (and therefore BT Group) retains the ability to extract the same amount of supernormal profit as when a particular SFBB product is sold by BT Retail. It is important to note, though, that it is unlikely that BT requires monopoly profits for there to be sufficient incentives to invest in fibre.

BT Retail enjoys slightly lower costs downstream, as it has already built scale, and due to any economies of scope in vertical integration, these would not able to be adjusted for– that is, Ofcom would not be able to deal with its Potential Concern 2.[33] Wholesale price regulation may therefore be less effective in ensuring a competitive downstream market than margin squeeze protection would be.

3.3 Wholesale price regulation as an alternative

3.19 As can be seen from the above, the majority of the benefits of margin squeeze regulation over wholesale price regulation are only relevant in the short-term, in that they are based on uncertainties which are expected to unwind over the course of the next regulatory period.

3.20 As such, whether margin squeeze protection or wholesale price regulation is chosen as the appropriate regulatory option at the current time depends upon the view of the appropriate balance between benefits at the start and end of the regulatory period. In TalkTalk's view, there are sufficient advantages for margin squeeze protection at the start of the regulatory period to offset the advantages of wholesale price regulation at the end of the period.

3.21 The main advantage of wholesale price regulation over margin squeeze protection is that as well as providing a degree of protection against BT engaging in exclusionary margin squeeze, it also prevents BT charging excessive (i.e. supracompetitive) prices to downstream firms, which are then passed on to consumers. These supracompetitive prices will distort markets in the same way as any other exploitation of monopoly power: consumer demand will be reduced, and consumer welfare will therefore be reduced in order to provide increased profits to Openreach.

3.22 As such, although TalkTalk prefers margin squeeze protection at the current time, we consider that wholesale price regulation would be a potentially viable alternative even in the short term. In particular, wholesale price regulation would likely be preferable to margin squeeze protection implemented in a way which has little impact on BT's ability and incentive to exclude downstream rivals. If Ofcom cannot find a satisfactory way of operationalising its proposals for margin squeeze protection, then TalkTalk believes it should consider wholesale price regulation as a preferable alternative to weak regulation.

3.23 In particular, TalkTalk considers that the advantages of margin squeeze protection are considerably reduced if the chosen system is *ex post*, rather than *ex ante* (i.e, BT's retail products are not tested before launch). In our view, the advantages of wholesale price regulation and *ex post* margin squeeze protection are finely balanced.

3.4 Summary and conclusions

3.24 The main issues with adopting *ex ante* margin squeeze protection are not related to the underlying intellectual and economic framework for doing so. Rather, they are practical problems regarding the specific manner in which margin squeeze protection is

[33] See annex 4.3 for full analysis of Potential Concern 2.

implemented, particularly so as to avoid unintended consequences and avoid BT gaming the system so as to thwart its purpose.

3.25 Although there are greater short-term downsides with applying wholesale price regulation than for margin squeeze protection, TalkTalk believes that these problems will unwind rapidly as FTTC roll-out concludes and the market moves closer to maturity.

3.26 Throughout the period, both wholesale price regulation and margin squeeze protection will be superior to no regulation of BT's SFBB prices and margins.

3.27 For the reasons set out in this section, TalkTalk continues to prefer the introduction of margin squeeze protection from April 2014 to a potential alternative based on wholesale price regulation. TalkTalk considers that the impacts of appropriately calibrated margin squeeze protection are entirely benign, as Ofcom has the ability to eliminate BT's ability and/ or incentive to exclude downstream competitors without having any effect on BT Openreach's incentives to invest. At the same time, margin squeeze protection is relatively straightforward for Ofcom to operationalise. Wholesale price protection should be considered as an alternative if Ofcom is unable to set up a margin squeeze protection scheme which will mean that BT no longer has the ability and incentives to engage in margin squeeze.

4 Design of margin squeeze protection regulation

4.1 As set out in annexes 2 and 3, TalkTalk considers that there is an overwhelming case for applying margin squeeze protection in the SFBB market, in order to countervail BT's strong incentives to engage in margin squeeze. In that context, this annex sets out our views on the manner in which margin squeeze protection should be calibrated and applied in order to have the most beneficial impacts on the competitive structure of the downstream retail market for SFBB, while avoiding distorting upstream investment incentives.

4.2 The section is set out as follows:

- annex 4.1 lays out the underlying principles which TalkTalk believes should underpin any system for applying margin squeeze protection;
- annex 4.2 assesses BT's scope to game the different potential systems of margin squeeze protection;
- annex 4.3 comments on Ofcom's current proposed design of a margin squeeze regime;
- annex 4.4 reviews Ofcom's current proposals for calibrating the margin squeeze protection system;
- annex 4.5, drawing on all of the preceding sections, outlines how TalkTalk considers Ofcom should design its system of margin squeeze protection.
- annex 4.6 sets out TalkTalk's proposals for how BT should be penalised if they do not comply with the margin squeeze protection system.

4.1 Core principles for applying a margin squeeze test

4.3 When determining how margin squeeze protection should be applied, it is important to start from a coherent set of principles. Starting from such principles provides enables different options for margin squeeze assessment to be assessed against the one another in a systematic manner.

4.4 TalkTalk believes that any system should primarily be concerned with preventing, rather than detecting and stopping, margin squeezes. Regulatory action after a margin squeeze has occurred will not fully undo the harm to competitive markets caused by BT's anticompetitive actions; consumers will therefore continue to suffer. As such, an effective margin squeeze test should either be undertaken on an *ex ante* basis, making it difficult or impossible to set prices which lead to a margin squeeze, or should include sufficiently strong penalties (which are likely to be considerably greater than the damage caused) that BT will be deterred from launching a product that causes a margin squeeze.

4.1.1 List of core criteria

4.5 The list of core criteria which we believe Ofcom should assess proposals against is as follows.

4.6 **Timeliness**. The margin squeeze protection should be effective as soon after product launch as possible (and preferably before launch occurs) in order that it is able to protect market participants and consumers from being damaged by a margin squeeze.

4.7 **Robustness**. The system should be sufficiently robust that it cannot be gamed by any party.[34] The issue of potential gaming of the system of margin squeeze protection is dealt with in more detail below.

4.8 **Flexibility**. The system should be suitable for all bundles which are currently sold to consumers. It should therefore be able to adjust to elements of bundles including different calls packages, speeds and capacity, sports channels, movie channels, and any other elements which BT puts in SFBB bundles over the next three years.

4.9 **Accuracy**. The system should be accurate, in the sense that it forces BT to change its pricing only if there is in fact a margin squeeze, but in all situations in which there is a margin squeeze. In order to fulfil this condition, the system is likely to have to generate fairly precise results.

4.10 **Adaptability**. The system should be able to adapt to changing market circumstances including new products, changes in cost levels, and bundles which were unforeseen at the time that the regulatory structure was set up.

4.11 **Predictability**. The system should be predictable, in that all industry participants can independently determine the outcome of a margin squeeze test in advance with a reasonable degree of accuracy. This will enable all well-informed industry participants, including BT, to plan their businesses in an effective manner.

4.12 **Innovation**. The system should not deter BT from launching innovative retail products which would not cause a margin squeeze, whether due to disincentivising BT from doing so (as the system causes BT to incur high costs) or because the system merely imposes considerable delays on BT, reducing their ability to bring products to market.

4.13 **Efficiency**. The system should minimise the administrative total costs of the system to society as a whole – that is, taking into account the costs to BT, the costs to Ofcom, and the costs to third party downstream competitors.

4.14 **Penalties**. Where there is scope for non-compliance, the system should have sufficient penalties built in to incentivise compliance by all parties, particularly BT.

4.15 These various factors will, of course, sometimes conflict with one another. The design of a margin squeeze protection system will have to take such conflicts into account, and reflect the overall balance of factors. We consider that the most important criteria from the above list are those of efficiency (particularly for Ofcom), timeliness, robustness, flexibility,

[34] TalkTalk notes in this regard that BT has considerable recent history of engaging in regulatory gaming. See, for example, [2012] CAT 20, *British Sky Broadcasting Limited & ors v Ofcom & ors*, where the CAT states at paragraph 30 that ‘regulatory gaming on the part of some of Sky’s counterparties played a much more important role in the commercial negotiations and their progress (or lack of it) than Ofcom has recognised’. See also the section entitled ‘Further evidence of regulatory gaming by BT’, at paragraph 389 *et seq* in the same judgement.

accuracy and adaptability, all of which are essential for a margin squeeze protection system. The other criteria are desirable, but not essential in creating a well-performing system.

4.16 In this annex, we assess all of the margin squeeze models against this set of criteria. By doing so, we derive clear conclusions about the strengths and weaknesses of various models, and which system is therefore best placed to effectively prevent margin squeeze.

4.17 TalkTalk considers that when determining the margin squeeze system to be adopted, Ofcom should clearly set out the criteria which the system has been assessed against, and provide analysis of how effectively the system meets those criteria. This would greatly assist the transparency of Ofcom's decision-making process.

4.2 Potential for regulatory gaming

4.18 As set out above, one of the criteria for an optimal system of margin squeeze protection is that the chosen system should be robust to BT attempting to game it by making commercial decisions which are primarily aimed at thwarting the system of margin squeeze protection, and which would not be made if there were no system of margin squeeze protection in place.[35]

4.19 [✂]

4.2.1 [✂]

4.20 [✂]

4.21 [✂][36]

4.22 [✂]

4.23 [✂]

4.24 [✂]

4.2.2 [✂]

4.25 [✂]

4.26 [✂]

4.27 [✂]

4.28 [✂]

[35] If a commercial decision would have been made regardless of whether margin squeeze protection is in place, then it cannot be regulatory gaming even if it has the effect of thwarting the intentions of the regulatory regime. In such a case, BT would not have engaged in gaming, but the underlying regime would be flawed.

[36] [✂]

4.2.3 [✂]

4.29 [✂]

4.30 [✂]

4.31 [✂]

4.32 [✂]

4.33 [✂]

4.34 [✂]

4.3 Ofcom's proposals in the Consultation

4.35 The first issue that Ofcom's tackles in its consultation is how the margin squeeze test should be calibrated. It approaches this firstly by examining potential forms of harm, and then considering three different broad approaches to how the test could be calibrated.

4.36 The core concerns of Ofcom about present competition, and competition over the next three years, are set out at paragraphs 11.283-11.316. In summary, the core theories of harm are that:

- "*if BT sets an inappropriately low differential between its upstream price for VULA and its downstream prices for packages that use VULA then this hampers other CPs' ability to viably compete against BT in the supply of packages containing superfast broadband*" (para 11.283)
- "*In the short run, it is possible that consumers may benefit if BT's low margins lead to lower retail prices. However in the longer term consumers may be harmed if competition is weakened... This is particularly likely to be problematic if switching costs make it difficult for those retailers to win back subscribers from BT*" (para 11.284)
- "*the lack of ability 'to offer an upgrade path from CGA to NGA services to their customers... may cast doubt on the long term viability of those retailers which may... discourage owners from making further investments in the business*" (para 11.285)
- "*weaker competition in the longer term is likely to lead to higher prices and may also reduce innovation*" (para 11.286)

4.37 TalkTalk agrees with all of these theories of harm. We consider that there is significant scope for consumers' long term interests to be harmed by the damage to competitive structures caused by BT margin squeezing. As outlined at paragraph 2.15 of these annexes, switching costs in the SFBB market are likely to be high, creating a significant degree of lock-in of anticompetitive actions. As such, it is vital to ensure that retail competition takes place on merits over the next few years, rather than being distorted by anti-competitive actions.

4.38 Ofcom then goes on to identify three potential concerns which could generate adverse effects through a margin squeeze (paragraph 11.288):

- Potential Concern 1: BT abuses a dominant position by engaging in a margin squeeze on SFBB products;
- Potential Concern 2: BT sets an SFBB margin that does not allow an operator with slightly higher costs than BT profitably to match BT's retail SFBB prices;
- Potential Concern 3: BT sets an SFBB margin that does not allow an operator with slightly higher costs than BT profitably to significantly undercut BT's retail SFBB prices.

4.39 As Ofcom correctly notes, the first of these three concerns relates to BT breaching the Competition Act. As such, it can in principle be addressed without recourse to *ex ante* regulation under the Communications Act. However, in practice TalkTalk considers that there are significant concerns regarding solely using the Competition Act to address even this concern, as set out at paragraph 3.6 above.

4.40 TalkTalk further considers that for Ofcom to seek to address Potential Concern 3 in the context of the WLA Review may be excessive given the current state of the market. Potential Concern 3, if addressed fully at the present time, would create a material risk of allowing inefficient firms into the market and unfairly handicapping BT's downstream Retail business, forcing it to set inefficiently high margins. Potential Concern 3 could only justifiably be addressed by regulatory intervention if BT had, by its abusive actions, already succeeded in eliminating a significant majority of competition from the SFBB market, and there was therefore a need to proactively force BT's market share down, and that of downstream competitors up, in order to rebalance the market. Although BT's anti-competitive behaviour in the SFBB market to date has had a significant effect on the market, pushing up BT Retail's market share at the expense of TalkTalk, Sky and EE, it has not yet gone so far as to do irreparable damage to the long-term competitive structure of the market.[37] [✂][38][✂]

4.41 As such, providing Ofcom takes appropriate measures in the current WLA Review against BT's incentives to margin squeeze in the SFBB market, including designing the margin squeeze protection system to be both timely and robust to gaming we do not consider it necessary to address Potential Concern 3 in the context of the current Review.

4.42 Whilst Ofcom may not seek to address Potential Concern 3, we consider that they should 'aim up' when setting the margin to address Potential Concern 2. This is for two reasons. Firstly, such an approach is appropriate to countervail the existing margin squeeze and the excessive share that BT has established. Secondly, there is, we believe, an asymmetry of harm (i.e. more harm from setting a margin too low than form setting a margin too high). This is the case since, for example, an insufficient margin will hamper two of the main ISPs (Sky and TalkTalk), as well as all small ISPs, from competing on the merits, while a too high margin will only hamper one main ISP (BT Retail).

[37] Although, in TalkTalk's view, it is nearing that point. If, for example, the squeeze were to continue into 2015 or 2016 due to either no margin squeeze protection, or flawed margin squeeze protection, being introduced by Ofcom in the context of the current review, then TalkTalk considers that more radical action, including potentially actions intended to address Potential Concern 3, may be merited.

[38] [✂]

4.43 TalkTalk agrees with Ofcom's perspective, as expressed in paragraphs 11.313 and 11.314 of the Consultation, that in the absence of regulation Potential Concern 2 would arise.[39]

4.44 TalkTalk's clear view is therefore that it would be most appropriate for Ofcom to seek in the current review to address Potential Concern 2. This concern balances Ofcom's duty to promote competition (under section 3(1) of the Communications Acts 2003) with the need to avoid unwarranted distortions in markets, potentially leading to inefficiency and harming consumers' reasonable needs. Addressing Potential Concern 2 would allow efficient competition into the market, acting as a discipline on BT Retail's pricing and quality.

4.45 TalkTalk therefore agrees with Ofcom's position set out in paragraphs 11.320 and 11.321, that there would be clear consumer benefits from intervening in the market to address Potential Concern 2. Doing so would foster competition in the SFBB market, to the benefit of customers, who would see lower prices, an increased range of available options, and higher levels of innovation in the market.

4.46 We also strongly agree with paragraph 11.328 of the Consultation, where Ofcom states that '*The period covered by this market review is likely to be important as to whether that effective competition emerges... we expect the number of superfast broadband customers to grow significantly over the period covered by this market review*.' Indeed, we consider that the outcome of the 2014-17 period will be the crucial period in determining the market structure for SFBB. The decisions taken by Ofcom in this WLA Review will therefore be crucial in dictating the extent and effectiveness of competition in the UK communications market for the next decade or more. We therefore consider that the conclusion reached by Ofcom in paragraph 11.331 is too weak: TalkTalk does not believe that 'several years' would be sufficient to return the market to a competitive structure by eroding the substantial base of customers built up by BT from 2014 onwards. Indeed, it may not be possible significantly to erode BT's customer base after 2017 without deliberate actions to handicap BT Retail in competing against other ISPs, permitting third party entry even where it is inefficient in the short term.

4.47 At paragraphs 11.342 to 11.356, Ofcom sets out some of the potential disadvantages with intervening in the market to address either of Potential Concerns 2 or 3. The concerns as outlined by Ofcom are the following.

4.48 *BT may be required to increase its retail prices, doing short term harm to consumers* (paragraph 11.343): given TalkTalk's strong preference for addressing Potential Concern 2, rather than Potential Concern 3, we do not consider that this problem is significant in scale. BT's price level required to address Potential Concern 2 is likely to be only a little in excess of the price which would be set by a firm without market power operating in a competitive market at BT's overall level of efficiency. Moreover, particularly from the current price levels, TalkTalk considers that the vast majority of the required price increase to address Potential Concern 2 would also be required to address Potential Concern 1; as such, it would

[39] Wherever it is stated in this section that Potential Concern 2 would arise, it should also be considered that Potential Concern 3 would arise, as any particular margin that raises issues under Potential Concern 2 would automatically raise issues under Potential Concern 3. However, given TalkTalk's view that Ofcom should seek thoroughly to address Potential Concern 2, rather than being worried by Potential Concern 3, this is not crucial to the argumentation in this section.

already be required on the basis of the provisions of the Competition Act 1998, and should not be attributed to *ex ante* regulatory intervention.[40] Furthermore, we consider that a substantial proportion of the current margin squeeze can be addressed through removing excessive wholesale charges (i.e. on GEA rental and GEA connection). In any case, addressing the margin squeeze will ensure lower retail prices in the medium and long term.

4.49 *Requiring BT to set a VULA margin greater than required under competition law may result in productive inefficiencies* (paragraph 11.344): TalkTalk disagrees with this hypothesis. Considering only static productive efficiency in the short term this may be true, as BT may be able to achieve a higher theoretical level of efficiency in the short term than any other downstream competitor in the SFBB market, due to its vertical links and potential economies of scale. However, in practical terms this is likely to be irrelevant. By addressing Potential Concern 2, Ofcom will be creating a more dynamic and competitive downstream SFBB market. More competitive markets tend to have lower price-cost markups; therefore, by allowing greater competition into the retail SFBB market, consumer prices may be lowered, even if underlying average costs are marginally higher.

4.50 Moreover, TalkTalk considers that productive efficiency is likely to be higher, rather than lower, if Potential Concern 2 is addressed rather than left unaddressed. It is commonly noted in the literature that firms holding monopoly power tend to become lazy and inefficient (termed 'X-inefficiency' by Baumol). As such, increasing the level of competition in the retail SFBB market will tend to lead BT to increase its own level of efficiency, generating productive efficiency gains from addressing Potential Concern 2. Indeed, despite diseconomies due to their lack of scale, it is possible that downstream retail competitors in the SFBB market may be more efficient than BT would be absent *ex ante* margin squeeze protection.[41]

4.51 *Even if there is an increase in BT's VULA margin, it is questionable whether smaller retailers will substantially benefit* (paragraph 11.345): Smaller retailers will benefit from any increase in the margin in the same way as larger resellers (such as TalkTalk) will, since they will experience the same wholesale prices and retail prices as larger resellers. If the margin is insufficient for smaller resellers to operate profitably they may be able to find other ways of competing (by for instance operating different business models or bundling with different products). Moreover, with four or five major participants, the market is likely to be competitive enough (absent BT's abusive behaviour) to maintain prices at broadly competitive levels.

4.52 *Requiring BT to set a margin greater than that required by competition law could harm BT's investment incentives* (paragraphs 11.349-11.350): Ofcom sets out some concerns that BT's incentives to invest in SFBB infrastructure may be reduced by the imposition of any margin squeeze protection beyond that which applies under competition law (i.e, Ofcom decides to

[40] In effect, the impact on retail prices from Ofcom setting its regime so as to deal with Potential Concern 2 is only the difference between the price level which satisfies Potential Concern 1, and that which satisfies Potential Concern 2. TalkTalk considers that this price difference is likely to be small in overall scale.

[41] TalkTalk considers that the relevant counterfactual in this case is not a fully efficient BT versus the efficiency of smaller entrant firms, but the relative efficiency of BT facing limited downstream competition and the efficiency of smaller entrant firms. BT may have very different levels of overall efficiency in these two situations.

address Potential Concern 2 or Potential Concern 3). If Ofcom decides to address Potential Concern 2, rather than Potential Concern 3, TalkTalk does not believe that there will be any significant effect on investment incentives:

- BT's current wholesale pricing for VULA is well in excess of competitive levels, as set out in the WIK report (Annex 8).[42] Hence, BT has so far been able to earn supernormal profits on its SFBB investments, whereas over the long-term it should expect to earn only normal returns on investments in SFBB.
- BT may choose to take some or all of the extra required margin in the form of higher retail prices rather than lower wholesale prices, lessening or eliminating the consequent effect on wholesale prices and, therefore, investment incentives.
- the gap between margin squeeze protection which addresses Potential Concern 2, and that which merely ensures that BT does not breach competition law (i.e., addresses Potential Concern 1), is likely to be relatively small. Such a small pricing difference (even if entirely absorbed in lower wholesale prices, rather than higher retail prices) would be unlikely to have a significant effect on investment incentives.
- BT will already have broadly concluded its commercial roll-out by the time the margin squeeze protection comes into force in April 2014. TalkTalk considers, given contract and planning lead times, that there will be no scope for BT to change its planned areas of commercial roll-out, on the basis of the regulatory options pursued by Ofcom in the WLA Review.
- the great majority of BT's non-commercial (BDUK-funded) SFBB roll-out will either be completed or contractually committed by April 2014, so there will also be little or no change in the scope of non-commercial roll-out.

4.53 It is also worth noting in respect of BT's investment incentives that BT is already 'selling' GEA to BT Retail customers at far less than the charge it levies externally. Therefore, it cannot be reasonably said that a lower GEA charge will result in investment disincentives.

4.54 On the basis of all of the above pros and cons, Ofcom provisionally concludes (at paragraph 11.358) that it would be appropriate to intervene in order to promote SFBB competition, by putting in place a form of margin squeeze protection. TalkTalk considers that this is the only reasonable decision which Ofcom could come to, given:

- the overwhelming incentives BT faces to engage in margin squeeze against its downstream rivals;
- the strong and compelling case put forward in the TalkTalk Complaint that BT's margins on SFBB are currently well below competitive levels;

[42] WIK finds that the base model cost is £4.39 per month, which is clearly well below the charges currently being levied by BT for GEA. However, this is based on BT incurring costs of £2.5 billion in rolling out FTTC. TalkTalk's current understanding is that BT's total costs will end up being considerably less than this, and therefore that £4.39 is likely to be an overestimate of the appropriate charge for GEA. It is therefore likely that BT is charging more than double the competitive price level for wholesale GEA; such a high price may even be in excess of the monopoly price for GEA, in order to intensify the margin squeeze on BT's downstream rivals.

- Ofcom's own conclusion that there is reasonable suspicion that BT has engaged in a margin squeeze which breaches the Competition Act;[43] and,
- the high likelihood of harm to consumers, due to damage to long-term market structures, if BT is permitted to continue its abusive conduct unabated.

4.55 TalkTalk also agrees with Ofcom's finding at paragraph 11.363 that it is appropriate to seek to address Potential Concern 2 in the context of the WLA Review. This finding is justified by the information presented in the Consultation, and also accords with TalkTalk's view of the appropriate approach to regulating BT's retail margins.

4.56 TalkTalk strongly disagrees with Ofcom's statement in paragraph 11.402 that the current market situation might be due to the commercial strategy of CPs other than BT, rather than a margin squeeze. Even a brief consideration of the facts of the matter would lead Ofcom ineluctably to the conclusion that the market strategies of firms such as TalkTalk, Sky and EE could not reasonably be to use less than their best efforts to win market share in this vital and developing market. Given that nothing turns on this issue in the present consultation, that no third party appears to have put this theory to Ofcom in the context of the WLA Review, and that Ofcom does not appear to have undertaken any investigation on this issue, TalkTalk does not understand why Ofcom refers to this theory. If Ofcom wishes to continue to include this theory, then TalkTalk considers that it should conduct analysis into the probability that this theory is accurate.

4.57 This high market share could result from much greater efficiency of BT Retail compared to its competitors. However, if that were the case, BT's market share would also be high in copper connections, given the substantial commonality of costs between the two businesses. As such, the most plausible explanation for BT's high market share is the ongoing margin squeeze which it is imposing on its downstream competitors.

4.4 Approaches to applying margin squeeze protection

4.58 Having identified that it provisionally intends to address Potential Concern 2 in the SFBB market, Ofcom then goes on, at paragraphs 11.371 to 11.403, to set out three different options for applying margin squeeze tests. Ofcom sets out the options as follows:

- *Option 1 – an obligation to supply VULA on fair and reasonable terms, conditions and charges supplemented by guidance on how we are likely to undertake our assessment when testing whether the VULA margin complied with that SMP condition;*
- *Option 2 – an obligation to supply VULA on fair and reasonable terms, conditions and charges supplemented by Ofcom systematically testing whether changes to BT's prices comply with this SMP condition;*

[43] See http://stakeholders.ofcom.org.uk/enforcement/competition-bulletins/open-cases/all-open-cases/cw_01103/. The probability that BT has engaged in a margin squeeze on the basis of the provisions of the Communications Act is higher than under the Competition Act, due to the former's less demanding standard.

- *Option 3 – an SMP condition specifying the minimum VULA margin that BT should maintain during the review period*.

4.4.1 Option 1

4.59 Under Option 1, Ofcom sets out that an ISP which considered that BT was charging a VULA price that was not fair and reasonable would submit a dispute to Ofcom under sections 185-191 of the Communications Act (paragraph 11.375). Ofcom would at the same time issue guidance which would clarify the manner in which Ofcom would be likely to go beyond *ex post* competition law when testing whether BT was in compliance with its SMP obligations (paragraph 11.376). As such, Option 1 would be applied on an *ex post* basis, and BT would be charging prices in the market for some time before Ofcom could determine whether they were in accordance with BT's SMP conditions.

4.60 Ofcom assesses that there is a low risk of regulatory failure under Option 1, particularly since Ofcom would be able to use the most recent data when determining whether there had been a margin squeeze. TalkTalk strongly disagrees that this is the case, and considers that regulatory failure (in the sense that BT will engage in margin squeeze, and that Ofcom's regulation will have failed to prevent this outcome) is much more likely under this option than under either Option 2 or TalkTalk's proposed option.

4.61 Ofcom also sets out at paragraph 11.384 that it believes that providing additional guidance would increase the degree of certainty provided to all parties with an interest in the *ex ante* margin squeeze regime. TalkTalk agrees that this option would be preferable to not providing guidance, but considers that such an approach does not go far enough to provide an acceptable degree of certainty to all parties. Rather than guidance, Ofcom should issue a Direction on the manner in which margin squeeze assessment should be undertaken. This would provide significant additional predictability to the regulatory regime.

4.62 This Direction should set out in as precise a way as possible how it would test the products, what assumptions it would use, and how those assumptions would be derived.

4.63 TalkTalk considers that significant detail will be required to provide enough certainty to all parties. Such detail would increase the probability of compliance both through speeding up the resolution of complaints and by providing the greatest compliance incentives to BT – the more precise rules are, the greater the potential for material financial penalties in the case of breach.

4.64 Regardless of such detailed methodological and fining guidelines, TalkTalk considers that Option 1 is inferior to TalkTalk's preferred approach (as set out below at Annex 4.5). There are several reasons for this:

- Option 1 is likely to be ineffective (even [✂]) in its core aim of preventing or deterring margin squeezes. The total time taken from a product being launched to Ofcom reaching a decision whether there has been a margin squeeze is likely to be in the region of five months. This is a considerable period for which to have to endure a margin squeeze in the context of a fast-developing market. This problem is increased because in practice it is very difficult to fully remedy the harmful effects of a margin squeeze *ex post*.

- [✂]
- Ofcom has no forward view over its likely workload under this option. With a relatively inflexible timescale, and the number of disputes dictated by third parties, Ofcom could find itself subject to significant peaks and troughs in the volume of margin squeeze assessment which it has to undertake.
- TalkTalk considers that this system will be much more time-consuming for Ofcom than TalkTalk's preferred system. Ofcom is likely to have to deal with a considerable volume of disputes, particularly in the initial period while the system is getting up and running. In principle, there could be a new dispute from one or more third parties on each occasion where BT launches a new product, or amends the pricing of an existing product. Dealing with such volumes of complaints is likely to impose a significant resource demand on Ofcom.
- Option 1 is likely to lead to customer uncertainty. In order to resolve a margin squeeze, BT will need to decrease its wholesale price, increase its retail price, or reduce the features bundled into a particular product. If BT is found to have engaged in a margin squeeze in a situation where GEA is priced at a competitive level,[44] then reducing the price of GEA is likely to be an unattractive option, especially as there will be a need to cut GEA pricing to all downstream products, rather than on a single infringing product. In such cases, there will need to be price increases or feature cuts to products not just for new customers, but also for existing customers, in some cases who have only recently signed up for products. Clearly, such an option will not be ideal for customers, and will not permit customers to be given meaningful notice of price increases. This will raise short term uncertainty for customers.[45] As such, systems which rely on investigations after product launch are inherently inferior to those which assess margin squeeze prior to the product being sold to consumers.

4.65 It is also important to see this five month delay in the context of the overall product lifecycle. BT already [✂] has a very short lifecycle for SFBB products. This calendar year, BT has:

- amended its SFBB product features to remove free evening calls from all packages;
- added BT Sport as a free option on renewal of all SFBB packages;
- reduced the base price of BT Infinity 1 from £18 per month to £15 per month; and,
- changed from the BT Homehub 3 to the higher specification BT Homehub 4.

4.66 There have also been numerous other changes in introductory discounts and bundled vouchers. All of these changes would have to be taken into account in any margin squeeze assessment.

[44] For the avoidance of doubt, TalkTalk considers that BT's current price is well in excess of a competitive level. See Annex 8 of this response for the analysis underlying this conclusion.
[45] Although in the longer run customers will clearly benefit due to the more competitive markets resulting from the imposition of margin squeeze protection.

4.67 In effect, the sum impact of the above is that margin squeeze assessment under Option 1 would be unlikely to dictate price changes to BT before those prices or product features were in any case changed for commercial reasons. This will have the effect of rendering the margin squeeze assessment a wholly academic exercise, as it will largely refer to product and pricing combinations which no longer exist in the market. With no forward looking effect, the only implication of such a system will be to attempt to deter BT from engaging in margin squeeze due to penalties and compensation payments which may be required.

4.68 TalkTalk also notes that it would be required under this option to enter a dispute with Ofcom for resolution. Under the provisions of the Communications Act 2003, for a dispute to be launched with Ofcom, there has to have been an attempt between BT and the third party to reach a commercial settlement. This poses several problems in the context of margin squeeze:

- it acts to slow the entire process of the margin squeeze being resolved. TalkTalk's interpretation is that there might have to be at least several weeks of discussion between BT and a downstream competitor before it could reasonably be determined that there was a commercial disagreement suitable for resolution by Ofcom. This would reduce the effectiveness of the margin squeeze regime, which by its nature relies on rapid action to resolve problems before they damage the market structure.
- there is a potential problem with such negotiations if they occur in the context of a GEA price which is set at a broadly competitive level.[46] [✂]

4.69 As such, although TalkTalk considers that Option 1 would be preferable to no margin squeeze protection being introduced, it does not appear to be the best available option which could be adopted by Ofcom.

4.4.2 Option 2

4.70 Under Option 2, as set out by Ofcom at paragraphs 11.387-11.388, Ofcom would systematically test whether BT was complying with its SMP obligations not to engage in a margin squeeze. There would therefore be no requirement for third parties to enter into a dispute- or complaint-based process with BT in order for a margin squeeze test to be generated.

4.71 Rather, within three months of the launch or material change in the price of an existing product, Ofcom would start an assessment of whether the product passed a margin squeeze test. This assessment, as under Option 1, would take up to four months.

4.72 As such, TalkTalk considers that such an approach is likely to be even more dilatory, and therefore less effective in achieving its objectives, than Option 1. There will be a longer time period between the launch of a product under this option than under Option 1; again, the

[46] For the avoidance of doubt, TalkTalk considers that BT's current price is well in excess of a competitive level. See the report from WIK Consult at Annex 8. This does not preclude the possibility that it could be set at a competitive level at some point during the next review period.

time period is likely to be sufficiently long that there is no forward-looking effect of this option in preventing BT from engaging in a downstream margin squeeze.

4.73 It is important to note at the outset that this regulatory model has much in common with that for Option 1. In both cases, BT is able to launch products with no prior scrutiny by Ofcom or third parties; in both cases, any regulatory investigation will not be concluded until many months after launch. Although there might initially seem likely to be a greater volume of investigations under Option 2 than under Option 1, the strong incentives of CPs to bring complaints mean that the set of product launches subject to investigation should not be meaningfully different. We also consider that a margin squeeze model would also be needed under both Option 1, and Option 2, and as such there is no practical difference between the two options in this regard.

4.74 Under this option, Ofcom has stated (at paragraph 11.388) that it would need to develop a model of BT's revenues and costs, and that having such a model in place would speed up the assessment. TalkTalk strongly agrees that there will be a need to have such a model under any plausibly effective margin squeeze regime, and that such a model will need to be developed by Ofcom. This is the case regardless of which of Options 1, 2, or 3 is chosen by Ofcom; it is also the case under TalkTalk's preferred margin squeeze regime, as set out at annex 4.5 below. In the absence of such a model, even under Option 1, Ofcom is unlikely to be able to achieve a four month timeline for completing a review.[47]

4.75 However, TalkTalk disagrees that the model should not change during the review period; adopting such an approach would risk the model becoming obsolete or being gamed by BT. Rather, as set out in TalkTalk's preferred approach, an initial model should be designed, which could then be reviewed and updated by Ofcom as required by market developments, with a consultation on proposed changes to the model. TalkTalk believes that this would avoid the risk, referred to in paragraph 11.391, that the model could become outdated over the course of the regulatory period, and fail to reflect market developments.

4.76 Furthermore, TalkTalk believes that it is likely to be practically possible to change the model during the review period. The fundamental economic principles of undertaking a margin squeeze assessment are well understood, which should limit scope for disagreement. Moreover, there will already be a base model, and there will only be a need to change the model within the period to reflect unforeseen developments; within a three year period, there are thus likely to be relatively few (if any) changes required. Using consultation and publishing each updated model as Ofcom settles on it also provides the opportunity for a high degree of transparency and predictability whilst retaining flexibility to market developments.

4.77 TalkTalk disagrees that regulatory failure is likely to be higher under Option 2 than under Option 1. In TalkTalk's view, the most likely form of regulatory failure in both options is that BT continues to engage in margin squeeze unimpeded by margin squeeze regulation. Option

[47] In fact, TalkTalk considers that under Option 1, there is a strong likelihood that a de facto model would develop, due to the high frequency of disputes and Ofcom's need to attempt to resolve cases within a four month deadline. Given this expectation, TalkTalk believes that it would be more appropriate to consult on a formal model, rather than have an unconsulted model emerge as a result of the pressures and factors involved in particular cases.

2 may somewhat lower this risk relative to Option 1, although this is dependent upon the fine details of the manner in which regulation is applied. On the other hand, TalkTalk sees no materially greater risks of overly strong regulation, or misplaced regulation, under this option than under Option 1. TalkTalk does not believe that there will be a margin squeeze model under Option 2, but no model under Option 1, as the volume of disputes under Option 1 will force a model to be generated and used on a consistent basis. Rather, the primary issue is the degree of consultation and transparency around the model which Ofcom is using.

4.78 Similarly, although TalkTalk agrees that updating of the model may be required (in line with the approach envisaged by para 11.393), we disagree that this would be complicated and create delays. Rather, we consider that the task of updating is likely to be more complicated under Option 1 than under Option 2. Option 2 would permit such updating to be undertaken on a regular basis, with an established timeline and the views of all parties being taken into account. On the other hand, under Option 1 updating would need to occur within the scope of a four-month indicative deadline on an ad hoc basis.[48] TalkTalk therefore considers that this is a further advantage of Option 2 over Option 1.

4.79 Similarly, TalkTalk disagrees with paragraph 11.394, where Ofcom opines that Option 2 is likely to lead to BT's prices being tested more regularly than under Option 1. [✂]

4.80 In fact, the total resource cost to all participants is likely to be considerably greater under Option 1 than under Option 2, as [✂] Furthermore, TalkTalk considers that there is a strong probability that multiple downstream competitors may attempt to enter into a dispute with BT at the same time, implying wasteful duplication of both the negotiations with BT, and drafting submissions to go to Ofcom. As such, TalkTalk considers that Option 2 will reduce total resources compared to Option 1, although both are likely to lead to a higher resource cost than for TalkTalk's preferred implementation approach.

4.81 Overall, therefore, TalkTalk considers that Option 2 as put forward by Ofcom has some advantages over Option 1, notably in being less resource intensive on all parties combined and in proposing a continuously maintained model, but remains some way short of an optimal solution to the problem of preventing margin squeeze.

4.4.3 Option 3

4.82 Under Option 3, Ofcom would specify a minimum VULA margin in the form of an SMP condition: *'this condition could specify that the margin must be at least £X'*. Ofcom would model BT's SFBB products, and determine the required margin to allow an operator with slightly higher costs than BT to profitably match BT's prices.

4.83 Ofcom sets out at paragraphs 11.397 to 11.398 that while Option 3 provides a high degree of certainty to stakeholders, and is able to address Potential Concern 2, it also runs a high risk of regulatory failure, as Ofcom would need to make assumptions regarding costs and

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[48] The alternative would be to construct a model from scratch within a four month dispute resolution timeframe, without basing it on any previous model, which appears completely impractical and a waste of Ofcom's resources.

revenues over the full regulatory period. As such, Ofcom does not propose to adopt Option 3.

4.84 TalkTalk agrees with Ofcom that Option 3 is not the best available option. While Option 3 leads to very high levels of timeliness (as there is no need to undertake product-specific assessments) and predictability (as all market participants should be aware of the required margin) it performs very poorly on other criteria. In particular, it lacks accuracy (risking both false positives and false negatives, both due to product specificities and market evolution); is completely unable to adapt to different and new products; provides significant scope for BT to game the system by designing products to lead to false negatives (e.g. by loading in lots of additional features and costs); and may distort BT Retail's product offering.

4.85 Overall, therefore, we believe that Ofcom should only consider adopting Option 3 if there is no other viable option for protecting competition and consumers in the SFBB market. As TalkTalk considers that other attractive and workable options are available, Ofcom has correctly not chosen to adopt Option 3.

4.5 TalkTalk's preferred process for preventing margin squeeze

4.86 In light of all of the above, TalkTalk has developed its preferred option for preventing margin squeeze. We think that this option has better performance against the assessment criteria than any of Ofcom's Options 1, 2 or 3. In particular, TalkTalk's proposed system would be more effective, more transparent, more difficult to game, and have lower resource requirements than Ofcom's various options.

4.5.1 Core elements of the system

4.87 The core elements of this system are as follows:

Development and maintenance of assessment model

- Ofcom would consult on and then publish a model of how margin squeeze will be tested for. The use of this model in margin squeeze assessment would be built into the relevant SMP condition via a Direction. The model should be flexible to different product bundling choices by BT. The model and associated documentation should include the model which will be used to check compliance, the assumptions that all parties should use to populate and calibrate the model, and associated guidance regarding the manner in which elements not explicitly considered in the model should be dealt with.
- This model may periodically be updated to take account of developments, and the updates consulted on, so that it does not become obsolete. However, TalkTalk considers that for a well-designed model, such updates should be at most infrequent, and may not be required at all during a three-year regulatory period.
- The model would be available to Ofcom, BT and third party ISPs, although no firm would see the commercial data of other firms. All of the parties to the margin squeeze regime would benefit from using the same model to assess whether there

was a margin squeeze, and would easily be able to cross-check each other's assessments.

Pre-launch compliance check by BT

- Every BT product would have to be checked prior to being launched, any price cut or discount beyond a *de minimis* level being introduced, or any product features being added.
- This check will be conducted using the model, adapted to the specific circumstances of the particular new product and/or price. The initial check would be undertaken in-house by BT.

BT file test

- Once the in-house check has been undertaken, BT would send the model, assumptions used and results of the check, along with notes explaining any assumptions made by BT, to Ofcom.
- Ofcom would not do any work to determine whether the figures entered by BT were reasonable or accurate, or that BT had followed the mandated approach in filling out the model.
- Following Ofcom determining that the regulatory requirement to file a completed model (that showed a margin squeeze pass) had been met, BT would be able to launch the product.

Possible complaints

- Following a product launch, downstream competitors would be able to complain to Ofcom if they considered that the product launch did in fact lead to a margin squeeze. The complainant would support such a complaint by providing its own assessment of the product's profitability, based on the published model. If Ofcom received such a complaint, it would conduct an expedited investigation into whether there were any problems not revealed in BT's internal assessment.
- This investigation would start from BT's filed margin squeeze assessment. Having a previous assessment should considerably speed up the initial phases of Ofcom's investigation, as Ofcom would not have to make an initial request to BT to gather data, and would be able to focus immediately on areas of difference between the margin squeeze assessments filed by the complainant and by BT.
- During such an investigation, the populated model would be revealed to the complainant's external advisors (i.e, lawyers and economists) under a strict NDA. It would not be provided to any staff internal to the complainant.

Penalties

- If BT was found to have margin squeezed, due to using the margin squeeze model inappropriately, or using inappropriate assumptions, then Ofcom would apply an appropriate level of fines to BT. The clarity offered by a pre-specified model and approach should allow those fines to be substantial.

4.5.1.1 Basic process for pre-existing products

4.88 The system for products which were already on the market would be similar to the above. As a transitional arrangement, following the introduction of the margin squeeze regime, BT would be required to submit margin squeeze assessments for its existing set of six products which require assessment. These margin squeeze assessments would be identical in form and methodology to those undertaken for newly-launched or repriced products.

4.89 The sole difference from assessments for new products is that BT would be permitted to file margin squeeze assessments which indicated that there was a margin squeeze in effect. This would only be permitted for products which had been introduced more than three months in advance of the new margin squeeze system coming into effect; such an exclusion is needed to avoid the prospect that BT might seek to game the margin squeeze system, introducing new products just prior to the system coming into effect, to prolong the margin squeeze for the maximum possible period.

4.90 Where a pre-existing product was assessed as leading to a margin squeeze, BT would have to amend the pricing of that product, and submit a revised margin squeeze assessment to Ofcom setting out that the product now passed the margin squeeze test, within three months of commencement of the margin squeeze regime. Such an amendment would have to be for both new and existing customers – it would not be sufficient to withdraw the product from sale to new customers, but retain existing customers on the previous (i.e, margin squeezing) arrangements.

4.91 Following the submission of the revised notifications stating that BT's product range passed the margin squeeze test, the pre-existing products would be treated the same way as any other BT SFBB product, and would potentially be subject to complaints as set out in paragraph 4.87 above.

4.5.1.2 Conclusions on core process

4.92 TalkTalk considers that a system of margin squeeze protection based on these elements would be considerably superior to any of Ofcom's Options (1, 2, or 3), and would be able effectively to constrain BT from engaging in margin squeeze against downstream rivals.

4.5.2 Detailed process of assessing whether there could be a margin squeeze

4.93 The first element of assessing whether there has been a margin squeeze would be for Ofcom to produce a draft margin squeeze model, consult on that model, and then publish a final model which it will then use to assess whether there has been a margin squeeze over the course of the regulatory period. Usage of this model should be made mandatory on the basis of a Direction under the relevant SMP Condition.

4.94 By creating, consulting on, and publishing a model, Ofcom will help fulfil two of the underlying aims of the regulatory system–*predictability*, as all market participants, including BT, will be able to test products against the current iteration of the model, and *transparency*, as all market participants will be aware of what the precise model to be used will be.

4.95 In addition, by having a model which has been well thought-through, and subject to consultation, the *accuracy* of the margin squeeze assessments should be improved compared to a situation where the model is created in a more hurried fashion on a case-by-case basis.

4.96 Inevitably, publishing and consulting on such a model will take a certain amount of time. However, TalkTalk does not consider that the negative effects on the *efficiency* of the overall regime will be too great. As a consequence of the Competition Act investigation Ofcom will have developed a model to assess margin squeeze and taken a view on the majority of assumptions that should be used to populate it. Thus, by April 2014 (or soon thereafter), Ofcom should already have a well-tested, off-the-shelf margin squeeze model for SFBB, resulting from TalkTalk's March 2013 Competition Act complaint against BT. This should substantially reduce the resources which Ofcom will need to commit to produce the initial model for consultation.

4.97 Furthermore, as outlined above, TalkTalk considers that a model would need to be produced in any case under each of Ofcom's Options. Compared to Option 1, the only additional resource costs in model construction would be those due to the consultation. There does not appear to be a meaningful difference in required resources for model production compared to Option 2.

4.98 TalkTalk has considered in detail the way in which an initial model could be built, and how the various input parameters could be estimated. Our thoughts on model construction are set out in Annex 5.

4.99 As set out above, this model could be updated if required due to changing product features, although the likelihood of material updating being required during the three year regulatory period is low, particularly as the initial model should be deliberately designed to be as flexible as possible. Where there are updates required this will need a consultation process around updates to the model.[49]

4.100 The final version of the model would be published on Ofcom's website. This would enable all market participants to use the same approach to determining whether BT was engaging in a margin squeeze. Such an approach will greatly assist in the transparency of the regime.

4.101 The margin squeeze model should be designed and populated so that it can accommodate a range of different products (e.g. including bundled calls or TV). This will best reflect the purchasing decisions made by consumers, which will themselves be based on the bundled products on offer on the market from various providers. All elements of the bundle should be taken into account in the model, including but not limited to voice calls, line rental, internet access, television platforms, premium TV channels, and mobile phones. The initial model constructed should be flexible enough to deal with all of these options.

[49] This should be able to be relatively brief, given the narrow nature of the potential issues which may need to be addressed by an in-period model amendment.

4.102 The process by which margin squeeze protection would be ensured in practice can best be demonstrated through exhibiting how it would work for a new product launch. The process would be very similar for a significant change in pricing or product bundle.

4.103 When a new product is proposed as being launched, BT's marketing department would have to notify BT's compliance team of this, and provide all of the information on the revenue side required to complete the model, along with the product features included in the bundle (which will affect the cost elements of the model).

4.104 BT's compliance team would then put in the other required elements to complete the model, including the costs of the product features and the other more generic cost elements. At this point, BT would run the margin squeeze model to ascertain whether the product passes the margin squeeze test. If it does not do so, then the product will have to be remitted back to the commercial elements of BT's business in order to be amended until it meets the test.

4.105 It is worth noting that BT, as a firm with a large compliance team and dominance in the upstream WLA market, should in any case be testing products to ensure that they do not lead to a margin squeeze under the Competition Act before they are launched. As such, this process should involve no additional work to BT compared to a counterfactual where there is no margin squeeze regulation – that is, there is no negative effect on efficiency from this process being undertaken. Indeed, there may actually be a net reduction in the quantum of work BT needs to undertake, as it will not have to construct or update its own model to ascertain whether there has been a margin squeeze, but can rely on the most recent version of Ofcom's margin squeeze model. That is, this process may in fact *increase* efficiency.

4.106 Once BT's compliance team has provided an assessment that, in their view, the product passes the margin squeeze test, it will then draft a brief submission to Ofcom setting out the results of its test, and providing the filled in margin squeeze model for the product. In TalkTalk's view, this submission should be very short and factual in most cases, setting out that the product passes the test. The main importance of this submission will be in cases where BT is launching a new product that may involve new cost elements. In this case, BT will need to set out the manner in which the new product departs from the features which the model is able to deal with, why BT does not believe that they could be dealt with within the existing boundaries of the model, and how BT has determined the cost of the new elements.

4.107 Drafting submissions to Ofcom will of course imply that there will be a resource implication for BT. However, as TalkTalk has outlined, we consider that the likely volume of resource required for these submissions will in most cases be minor.

4.108 Once it has received the regulatory submission from BT, Ofcom will then ascertain that the model has been completed in full, and that the result of BT's assessment is that the product does not create a margin squeeze. Ofcom would not take any decision on the merits of BT's submission, or whether the model had been completed correctly. Ofcom's sole role at this stage is to determine that BT has met its regulatory requirement to file a margin squeeze assessment prior to product launch. As such, Ofcom should not take any actions which could create a legitimate expectation from BT that the product complies with the margin squeeze protection scheme.

4.109 TalkTalk considers that such any minimal delay which may be caused by the need to file with Ofcom in advance of product launch is proportionate in the context of the SFBB market. First, it is long acknowledged and is solidly in the jurisprudence that firms holding a dominant position or significant market power (the two amount to much the same) have a special responsibility, and may therefore have less commercial freedom than a firm which does not hold market power.[50] Secondly, the delay is relatively minimal in the overall context of the SFBB market. Finally, as shown in Annex 6, this regime would be considerably more favourable towards BT than the regimes which have been adopted by a number of other national regulatory authorities around the EU. For example, Eircom can have product launches blocked by Comreg if they are thought likely to lead to a margin squeeze.

4.110 Any negative effect on efficiency from a requirement to file with Ofcom will be more than offset by other positive factors. By filing a margin squeeze assessment with Ofcom, BT will demonstrate that it has indeed conducted internal checks prior to product launch. By undertaking these checks on the basis of an independently produced model, BT's compliance team will better be able to resist internal pressure within BT to come up with the 'right' answer for products which BT sees as commercially desirable.

4.111 Further, the filing of margin squeeze assessments in advance has the potential to considerably expedite any margin squeeze investigation which Ofcom conducts pursuant to a complaint. Ofcom will not need to make initial data requests to BT for an assessment. Rather, a complaint under this regime should also be accompanied by a filled in margin squeeze model from the complainant. On the first day of its investigation, Ofcom will therefore be able to compare the margin squeeze assessments of the complainant and of BT, and rapidly narrow the issues to areas in which there is a difference of opinion. As such, pre-filing has the potential significantly to reduce the time for an investigation.

4.112 [✂][51] [✂]

4.113 [✂] This will enhance CPs' confidence in the regulatory regime.

4.114 When BT has filed a completed margin squeeze assessment, it would be permitted to launch the product in question. However, Ofcom will not at this stage have undertaken any analysis of whether the product in question is compliant. Ofcom would only undertake such assessment in response to a complaint from a downstream competitor (or other third party with a suitable interest in the margin squeeze assessment).

4.115 In response to a complaint, Ofcom would investigate whether the margin squeeze analysis undertaken by BT was appropriate, or if there were errors, omissions, or unjustified assumptions which create a margin squeeze. As set out above, this assessment would start from the margin squeeze assessments filed by BT and the complainant.

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[50] See Judgement of the Court of Justice of 9 November 1983, *NV Nederlandsche Banden Industrie Michelin v Commission of European Communities,* Case 322/ 81, at Recital 10.

[51] [✂]

4.116 TalkTalk considers that by having an *ex post* complaint process in the context of a common model for assessing margin squeeze, the *ex post* process can be considerably accelerated. There will be far fewer issues which can be disputed in such a case, as there will be no elements of model construction to be discussed, and the methodology for determining the input variables will also be clear. This should allow complaints to be settled considerably more swiftly.

4.117 Moreover, there will likely be far fewer complaints brought. There will be fewer grounds on which a complaint could be launched, and the additional transparency due to the *ex ante* system will also mean that potential complainants are likely to have greater confidence in the assessment than when there are no specific *ex ante* filings made by BT.

4.118 TalkTalk does not envisage that there would be a requirement to enter into commercial negotiations with BT prior to complaining to Ofcom. Rather, there would be a simple complaint made that the complainant did not believe BT to be pricing in accordance with its SMP obligations. This complaint would also require the complainant to specify the reasons for its opinion, and set out its own assessment of the profitability of BT's newly-launched product, on the basis of the same underlying margin squeeze model.

4.119 TalkTalk also believes that there should be scope for penalties to be levied on BT under this regime. Such penalties could be levied by Ofcom on various grounds:

- launching or reducing the price of a product (including short-term promotional discounts) without prior filing;
- knowingly providing Ofcom with an inaccurate filing in a margin squeeze assessment prior to product launch;
- failing to supply information in a timely fashion when Ofcom is undertaking an investigation of margins based on an ex post complaint, following product launch.

4.120 All of these breaches should be sufficiently clear-cut that BT could reasonably be fined for undertaking them. Such fines would provide BT with incentives to adhere to both the spirit and the letter of the margin squeeze regulation, and would help ensure the predictability of the regime from the perspective of downstream competitors.

4.6 Incentives – damage / fining

4.121 Ofcom should consider applying two forms of sanction on BT in the case of breach of the margin squeeze protection conditions. These sanctions should be applied regardless of which of Ofcom's options, or indeed TalkTalk's preferred option, is chosen.

4.122 Firstly there should be restitutory payments to ISPs. These payments should be sufficient to compensate TalkTalk and other ISPs for both reduced margin and loss of volumes occurring due to BT’s margin squeeze.

4.123 Second, TalkTalk also considers that fines will be required in order to provide (in combination with any damages) a sufficient incentive on BT not to exploit its SMP to the detriment of competitors and consumers. It is unlikely that damages alone will offset the benefit that BT will enjoy from margin squeezing.

4.124 Ofcom consider should issuing fining guidelines setting out in detail the methodology to be adopted when there is a breach of the SMP conditions at the same time as choosing a method of margin squeeze protection enforcement. These fining guidelines will enable sufficient incentive to be placed on BT Group to avoid margin squeezing its downstream competitors.

4.125 TalkTalk recognises that for such a damages/ fines system to be put in place, BT must be given sufficient certainty of whether it is in compliance with its obligations under the margin squeeze protection scheme. We consider that TalkTalk's preferred option for margin squeeze protection provides such a degree of certainty, and that it is therefore compatible with a fining structure.

4.126 If this option is to be adopted, TalkTalk believes that Ofcom should publicly consult on both the methodological and damages/fining guidelines before they are put into force. This will allow all stakeholders to contribute to ensure that the guidelines are aligned with best practice and the business realities of operating in the SFBB market.

5 Calibration of the model

5.1 As set out in the main section of this paper, TalkTalk believes that regardless of the option chosen to protect against margin squeeze, a model will need to be constructed and maintained in order to permit Ofcom to determine whether there has been a margin squeeze in a sufficiently timely manner.

5.2 This section therefore deals with the manner in which TalkTalk considers that the key elements of the model should be calibrated.

5.1 General principles for calibration

5.3 The proposed approach to calibrating the margin squeeze model set out below is based upon a core set of principles. These principles are derived from TalkTalk's view on how best to reflect market dynamics in the margin squeeze assessment.

5.4 The most important principle is that the margin squeeze assessment should reflect the costs of an efficient scale competitor as accurately as possible, given the constraints of data availability. TalkTalk agrees with Ofcom's view, expressed in paragraph 11.427 of the Consultation, that in this context, an efficient scale would hold around 15% - 20% of residential retail broadband subscribers.

5.5 In order for BT to be able to conduct internal margin squeeze assessments on an adequate basis, the margin squeeze model should only make use of either public domain data (including Ofcom's own assumptions), or BT's own data. That is, there should be no reliance on commercially sensitive data from BT's downstream competitors, either in BT's initial checks, or any Ofcom investigation pursuant to a complaint. Where an efficient scale entrant is expected to have higher costs than BT, and no public domain data is available from third parties, then estimates within the model should be derived from BT's data, plus an adjustment factor reflecting the extent of higher costs. Forcing BT to undertake margin squeeze tests on the basis of unknown data would clearly be unsatisfactory and does not lead to an appropriate level of predictability for the margin squeeze system.

5.6 As such, prior to finalising the margin squeeze model, Ofcom should determine how much higher (if at all) costs of an efficient scale entrant would be than those of an efficient firm of BT's scale. These scale adjustments should be included in the guidance as to how BT should use the margin squeeze model to conduct its assessment.

5.7 The costs included in the margin squeeze assessment should include both incremental costs, and a reasonable allocation of common costs. Both incremental and common costs should be based upon a combined MPF/ GEA technology to deliver services, reflecting the actual approach used by the two firms in the market (TalkTalk and Sky) which operate at the efficient scale outlined by Ofcom.

5.8 When undertaking a test, the appropriate measure is whether the overall bundle has discounted revenues which are in excess of the appropriate costs. That is, there is no relevance in whether (for example) the revenue from voice calls is in excess of the costs of providing voice call services. As voice calls are only part of the wider bundle, including access and SFBB, they should solely be assessed as part of that bundle.

5.2 Level of aggregation of the test

5.9 A further important issue which needs to be considered when putting margin squeeze protection into effect is the level of aggregation at which the margin squeeze test is conducted – that is, to what extent different consumer bundles are taken together when considering whether they might lead to a margin squeeze. There is a range of different ways in which products could be aggregated for the purposes of assessing margin squeeze.

5.10 The two extreme levels of aggregation would be:

- Only conducting a single test on all BT SFBB products taken together, with no tests undertaken on individual product bundles sold to customers. Such an approach would give BT complete freedom to cross-subsidise between different SFBB products, therefore allowing pricing well below cost on some products, offset by setting supernormal prices on other products.
- conducting the test on each individual bundle purchased by consumers. For example, one bundle might be BT Infinity 1, with TV Essential Extra, BT Sport in HD, Sky Sport, and added evening calls including new line provide. This would lead to a very large number of products being tested by BT, some of which would have very few customers taking them.

5.11 TalkTalk considers that both of these extremes are flawed, and that as such an intermediate option should be preferred by Ofcom when designing an appropriate margin squeeze regime.

5.12 Testing at a very aggregated level, particularly one test across all SFBB products, risks BT being able to continue to exploit its market power in an anti-competitive way. Within SFBB there is likely to be little economic benefit from Ramsey pricing, as (market level) elasticities of demand are likely to be relatively constant across products.[52]

5.13 Rather than enabling economically beneficial Ramsey pricing, aggregation will allow BT pricing flexibility that it will exploit to attack particular competitors and exploit its customers. For example, it could create very low priced and low margin 'fighting products' aimed at attracting the customers of TalkTalk. BT will use pricing flexibility to attack rivals whenever it is more profitable to do so. In general, it will only be more profitable to use pricing flexibility to Ramsey price when there are known and significantly different (market) elasticities of demand for clearly identifiable groups of customers who share a large common cost; whereas it will be more profitable to use aggregation to exclude rivals where clearly identifiable groups of customers are more likely to switch away from BT, or to BT, than other groups.

5.14 Aggregated tests are also likely to require more parameters to be estimated than more disaggregate tests. [✂]

5.15 [✂]

5.16 Where tests are undertaken at a very aggregate level there would need to be continual refiling every time there is a change in the pricing of one product. In addition, the *de minimis* rules would need to be substantially tightened (or removed) to prevent abuse. For example, in theory if the *de minimis* threshold were set at £25 of SACs averaged across all SFBB products, then a single product with a 5% share of BT's total SFBB base could have an 'introductory' discount of up to £500 applied to it while remaining within the threshold. This would make a mockery of the margin squeeze protection system. Therefore, the *de minimis* rules would need to be removed or apply to each individual product rather than at the aggregate level.

5.17 A very disaggregated system, on the other hand, would result in many products needing to be tested and BT having to test products that very few customers buy. As such, it would seriously reduce the overall efficiency of the system, imposing a significant regulatory burden on BT, and potentially leading to third parties complaining about very minor products with a negligible impact on the overall level of competition in the SFBB market.

5.18 Consequently, TalkTalk's preferred approach is to use a system of margin squeeze assessment which is intermediate to these two extremes. Under this system, there would be a few 'core product groups', consisting of the variations in three elements (the SFBB speed, the SFBB download allowance, and the TV product included). At the moment, BT's product

[52] The advantages of Ramsey pricing are most pronounced when there are significantly different elasticities of demand across products. This allows fixed costs to be covered by customers with relatively inelastic demand, while customers with relatively elastic demand face a price close to incremental cost. Where customers all have similar demand patterns, Ramsey pricing will tend to provide few benefits, as fixed cost recovery will need to be similar across all customers. Note that it is market level elasticities of demand which are important for societal benefits, rather than firm-level elasticities; the overall size of the market is important in welfare, rather than the identity of providers.

portfolio is such that it would have six core products which would need to be assessed, which could be considered in a 3 x 2 matrix as follows.[53]

	Infinity 1	Infinity 1 Unlimited	Infinity 2 Unlimited
No TV			
TV			

5.19 This approach means that large numbers of individual product bundles will not have to be assessed, but also somewhat restricts BT's ability to use different products to attack one or more downstream competitors.

5.20 This will particularly be the case since if BT launches new variations in speed, download allowance, and TV product, it would have to add a 'cell' to the above matrix, and test that product separately. For example, if BT chose to launch a new broadband product at a lower cost than any of its current portfolio, but with a download allowance of 20Gb per month (rather than the 40Gb allowance for Infinity 1), that product would not be aggregated with any existing BT product, but would be assessed separately. BT would still be able to launch low priced products to compete at the value end of the SFBB market, but would have to price above cost while doing so.

5.3 Revenue

5.21 All of the prices which are required to determine revenue for margin squeeze assessment are well-known, as they are published. The sole issue to be determined to be able to derive the revenue is the usage weighting applied to each revenue category.

5.22 **Line rental.** BT has two line rental options: value line rental (which is paid upfront 12 months in advance) and pay monthly. These prices of these are available on BT's website. Thus the only assumption required is the proportion of customers taking each option. We think that the best approach to setting this assumption is likely to be to use BT's actual data on the proportion of its customers taking different line rental on products for that particular core broadband package.[54] This is demonstrable and should not be able to be gamed by BT. It should also be readily available data. Where a new package is launched which has no predecessors, BT should use the closest available product as the match (e.g., if BT launched a 120/20 GEA based product, the proportion of customers taking value line rental on 80/20 GEA products would be used).

5.23 Based on our suggested definition of core broadband packages there is only a single broadband product/price. Thus the **broadband charge** will be readily known in advance.

[53] TalkTalk has here taken all of BT's TV products (TV Essential, TV Essential Extra and TV Unlimited Extra together. Depending upon the difficulty of undertaking such an aggregated assessment, it may be necessary for BT/ Ofcom to test each of these TV packages separately, resulting in up to 12 core product groups to be tested.

[54] Throughout this section we refer to a 'core broadband package'. This is a combination of download speeds, data volume and double/ triple play options which defines BT's high level set of products. At the moment, BT has 6 core broadband packages. Three of these are double-play options: BT Infinity 1; Unlimited BT Infinity 1; and Unlimited BT Infinity 2; the other three are triple-play options: BT's TV offer combined with the three double-play SFBB options.

5.24 **Call revenue** is one of the more complex elements to determine, as it widely varies from customer to customer, and there is a declining long-term revenue trend. Call revenue includes per minute revenues as well as revenue for call packages – for example, BT's current Infinity packages all include free weekend calls, while free anytime calls is available for £7 per month extra.

5.25 As with line rental, TalkTalk considers that the most appropriate approach is to use BT's historic average direct call revenues and call package revenue from customers on the core broadband package in question. These historic revenues should be derived over the past twelve months only; using longer time periods may over-estimate revenue.[55]

5.26 BT will derive **call termination revenue** from calls which originate on other networks and terminate on its network. Termination revenues should be included based on the average revenue received per customer on the same core package. This should be adjusted (upwards) to reflect that an efficient competitor would receive proportionally more calls from other networks than BT does.

5.27 For some packages, there may be **data volume payments** incurred when a customer on a bundle with a data limit oversteps their limit.[56] Such payments should be included in the revenue assessment based on the average payment per customer on the appropriate package in the preceding twelve month period.

5.28 For triple-play core broadband packages, there will also be revenue derived from **TV services**. There will be three types of revenue:

- The basic subscription (e.g., TV Essential Extra). As the TV service chosen is an element of the core broadband package, the price of the TV service will be known in advance; the sole issue to be considered is the proportion of customers taking each TV subscription option;
- additional **channel packages** purchased monthly. The revenue should be based on the advertised prices and the proportion of individuals on that core package which take them; and,
- **pay per view movies/ shows**, which can be included on the basis of the average revenue per customer in the preceding twelve month period.

5.29 As such, we believe that it will be relatively simple to determine the appropriate revenues for the purposes of margin squeeze assessment. Moreover, the results are likely to be relatively invariant to any judgements which need to be made, as the major revenue items (broadband cost, TV service cost, line rental) are those where there is the least need to make assumptions.

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[55] Due to the decline in revenues over time. In principle, an even shorter period than one year could be adopted, but this runs into potential issues over seasonality of call revenues, which may bias results in either direction.

[56] As such, this value will be zero when considering any package with uncapped data volumes. It may also be reduced to zero for some capped packages if BT (or its Plusnet subsidiary) chooses to throttle speeds for customers rather than charge them for additional data consumption.

5.30 The revenue elements of the model will, under TalkTalk's preferred approach, be considerably simpler than under an approach which has a greater level of aggregation when undertaking the margin squeeze assessment. This is because there is less need to engage in weightings, and make assumptions regarding the take-up of different elements (e.g., what proportion of customers will take double- and triple-play). Rather, the weightings are of elements either less important to the overall assessment (e.g., number of pay per view movies per customer) or relatively invariant across customer groups.

5.4 Wholesale costs

5.31 **GEA rental** depends on the core broadband package being considered. For each core broadband package there is a single underlying GEA product (GEA 40/2, GEA 40/10 or GEA 80/20). There would therefore be no need to make any assumptions regarding customer mix. The price can be obtained from the Openreach website. This may have to take into account discounts – for instance, the 80/20 GEA product has at times been offered with a volume discount. The extent (if any) of volume discount included in the analysis should be consistent with the scale of an efficient entrant assumed in the assessment. The wholesale costs will need to reflect aspects such as minimum contract periods and, if they were introduced, throughput charges.[57]

5.32 **MPF rental** is constant across all SFBB customers, and there should be no need for any further assumptions.

5.33 **Event charges** are charges paid to Openreach for certain engineering services such as TRC and SFI. These may vary between core broadband packages. However, they are relatively small (for TalkTalk, [✂]). So although some assumption on the cost attributable to event charges will need to be made, the outcome of the margin squeeze assessment is unlikely to be impacted significantly.

5.34 **Interconnection costs** are an area where the cost is both significant (in TalkTalk's latest modelling, [✂]) and where BT will likely be unable to use its own costs, as efficient scale entrants may have meaningfully different costs to BT (since scale entrants will terminate more of their traffic on others' networks, and so pay interconnection for termination, than BT will). The most appropriate approach to estimate interconnection costs may be as a standard percentage of total call revenue (including both per minute and bundled calls).[58] Ofcom could determine this percentage by considering the relationship between interconnection costs and call revenues for ISPs other than BT (for example, [✂]).[59]

5.35 The final wholesale cost is the **cost of GEA equipment, exchange space, power, and cablelinks** (the equipment required to handover GEA traffic onto the competitor's own

[57] For example, where there are minimum GEA contract lengths, then the margin squeeze assessment should take into account that a proportion of customers will leave the service within the time of their initial contract with their ISP, for reasons

[58] This is likely to have to reflect different relationships between call revenue and interconnection costs depending upon

[59] This would have an added benefit of making the model less volatile to assumptions regarding call revenue volumes, as costs would automatically adjust upwards or downwards.

network). This cost category is a mix of variable and fixed costs, and therefore exhibits some economies of scale. However, the costs of these elements are well-known (as they are largely payments to Openreach), and the main required assumption is therefore the scale of the efficient entrant. The relatively small magnitude of this cost category ([✂]) also means that the margin squeeze model will be relatively insensitive to assumptions around this category.

5.36 Consequently, all of the elements of wholesale costs are either well-known, or the model is unlikely to be sensitive to them. As such, it should be relatively straightforward to calibrate the model in these areas.

5.5 Own costs

5.37 There are six main cost categories within the downstream competitor's 'own' opex and capex costs which will need to be determined in order to populate a margin squeeze model.

5.38 The largest cost element within the own operating costs category is **core network costs**, including backhaul costs and peering. The scale of this cost element ([✂]) means that it is likely to be a crucial area in the construction of a margin squeeze model.[60] Costs of bandwidth form the majority of core network costs. There are two key assumptions required – how total bandwidth costs are calculated and how these are allocated between different packages.

5.39 Total network costs should be derived from the costs of an entrant, particularly since it is difficult to reliably identify BT's network costs, as the costs are shared with other non-broadband products. In contrast the costs of an entrant are much more easily identified since they purchase and operate dedicated networks. An efficient entrant may face higher bandwidth costs than BT if there are economies of scale in operating a core network.

5.40 TalkTalk believes that the most appropriate way to allocate bandwidth costs is based on the consumption of bandwidth by individuals taking each core product. Both capital and operating costs would be allocated. This would mean that the allocation of bandwidth costs was in line with LRIC – in the long run, bandwidth costs are closely related to the volume of traffic on an ISP's network (rather than the number of customers).

5.41 **Voice costs** include network and operating costs associated with providing a voice service such as the MSAN capital cost including ports, MSAN maintenance charge, capex and opex costs for tie cables, and voice server capex and maintenance costs. TalkTalk estimates these at around [✂] per customer month. The main assumptions which will need to be adopted for this category are the utilisation rates for ports, and how long they need to be depreciated over (ports represent [✂] of the [✂] cost).

5.42 **Customer service costs**. Since customer service costs are highly variable (in the all but the very short run) there is no need to adjust costs to reflect scale. The costs should therefore be BT's average cost of customer service.

[60] [✂]

5.43 We believe that the most appropriate way to allocate customer service costs is on a per customer basis, so that the cost is the same for customers on different packages. This reflects that customer service costs tend to be related to the number of customers served by an operator, and that SFBB customers are unlikely to cause materially greater customer service costs to be incurred simply because they purchase higher priced products than SBB customers.

5.44 **Customer retention costs** are the costs which are incurred in persuading customers to remain with BT rather than move to a competing operator. These costs may be in the form of incentives / discounts provided to customers considering leaving, as well as the costs of customer retention agents.[61] Also included in this category are the costs or replacing routers and set-top boxes for customers as they break or become obsolete; and costs of bad debt for customers who do not pay incurred charges. The customer retention costs used in the margin squeeze modelling should reflect BT's actual costs of customer retention. For example, if the average router has to be replaced after four years, then the model should reflect this cost based on the probability of any given customer remaining with BT for four years or more.[62]

5.45 **Commercial and overhead costs** will also need to be estimated, and again is related primarily to a mix of customer numbers and revenues (as larger firms tend to have higher commercial and overhead costs). In TalkTalk's view, the most appropriate allocation method is therefore to allocate these costs on a per customer basis, equally across all broadband customers served by BT (i.e, regardless of whether they take SBB or SFBB). This is again a significant cost item for which different views can be taken on the correct allocation approach. It is also a cost element where there may be some economies of scale– while commercial costs will increase with the scale of the company, the increase is likely to be less per customer for larger operators than for smaller ones. As such, there may need to be an uplift applied to BT's commercial and overhead costs per customer to reflect the scale of an efficient entrant.

5.46 Where the bundle under assessment is triple play, there will be a need to assess the cost of **TV channels and other TV content**. This should generally be relatively straightforward, as it can be derived from the payments (i.e. carriage fees) from the retailer to the channel provider. There may be a need to adjust these fees for operators of different scales, due to increased bargaining power of larger operators and a lesser impact from any given minimum payment guarantee. However, where the product is produced internally (as for BT Sport) the way in which the cost needs to be determined is different. TalkTalk's view of the appropriate way to allocate the costs of BT Sport is set out at Annex 10.

5.47 The final own operating cost category, and the most complex one to assess, is that of **other bundled package elements**. At present, for BT products, this includes the costs of Wi-fi access provided free to SFBB subscribers; the cost of bundled antivirus software; and the

[61] Note that customer retention agents will generally be more expensive to employ than standard customer service agents, due to their higher levels of training and experience.
[62] This can be calculated based on BT's churn rate for the product in question. See paragraph 5.61 below.

cost of BT Cloud storage. Where payments are made to external providers (as for antivirus software) the cost can easily be assessed as the per customer charge made to BT.[63]

5.6 Subscriber acquisition costs

5.48 The final cost category which needs to be considered by Ofcom is subscriber acquisition costs (SACs). SACs are incurred at the point of customer acquisition (or immediately afterwards), but then should not recur during the period of a customer's life.[64]

5.49 There are several major categories of SACs which will need to be included in an effective margin squeeze model.

5.50 The most significant SAC is likely to be **marketing and customer acquisition costs**, which TalkTalk currently estimates at around [✂]. This SAC category will include payments to sales agents; commissions to third party distributors; and the relevant marketing costs which can be allocated to the product. Allocation of marketing costs is likely to be the most difficult conceptual issue in calculating this SAC. In our view, the best approach would be to allocate advertising for specific products (e.g., BT Infinity) to the product which is being advertised. This would likely then produce a rump of marketing and sponsorship expenditure which was not related to a specific product, but rather was general marketing of the overall BT brand (e.g., BT's Olympics sponsorship). This remaining pot of marketing spending should then be allocated to consumer and business products according to their overall revenue within BT's business.[65] BT's advertising costs would need to be adjusted upwards to reflect that BT Retail benefits from free advertising on Openreach vans and cabinets that is not available to other ISPs.

5.51 **Vouchers** are provided free with all of BT's double-play SFBB packages at present. These should be included in the margin squeeze assessment at the price which BT pays the other party (currently Sainsburys) for them, potentially with an adjustment in cost upwards reflecting the smaller scale, and therefore more limited bargaining power, of an efficient entrant.

5.52 BT generally offers **introductory discounts** on its SFBB products. These should be taken into account in the assessment, but as these discounts are in the public domain and pose no allocation issues, they should be easy to calculate.

5.53 The **MPF connection cost** can be included on a blended basis, reflecting BT's different charges for migrations and new provides. The key assumption to be made in this regard will therefore be the proportion of customers who are upsold, the proportion who are migrated,

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[63] Where necessary, adjusted for smaller scale of an efficient entrant.

[64] Note that some of these costs may need to be replicated – for example, when YouView boxes or routers reach the end of their lifetimes. However, the cost of replacing boxes or routers would be characterised as a customer retention cost rather than a subscriber acquisition cost.

[65] Note that we do not think that there should be any allocation of marketing spending to BT Openreach. As a monopolist, BT Openreach's customers have no choice but to deal with it, and demand will therefore be insensitive to marketing. The lack of specific advertising for BT Openreach (rather than BT Group generally) supports the position that it is not appropriate to allocate non-specific marketing to this part of BT's business.

and the proportion who are new provides. The weighted average connection cost can then be included in the margin squeeze assessment.

5.54 Similarly, the **GEA connection cost** has to be paid to BT Openreach for all customers. The same charge (£92) is paid irrespective of speed and whether the GEA connection is provided at the same time as the new provide and/or MPF connection (i.e. a sim provide). However, there is a different cost incurred for GEA-GEA connection (Ofcom proposes to reduce this to £10-£15). Ofcom will therefore need to estimate the proportion of new GEA connections that are GEA to GEA.

5.55 The **GEA managed install** fee is payable for all customers, although different charges can be levied depending upon the number of devices which are being installed.

5.56 All SFBB products offered by BT at present come with a free BT HomeHub. As such, there will be a cost incurred by BT in providing **routers** to its customers. This cost should be the cost which BT pays to its supplier for its HomeHubs, potentially adjusted upwards to reflect the smaller scale of an efficient scale entrant, and therefore purchasing economies.

5.57 Triple-play products from BT also include a **set-top box** (which can be either BT Vision+ or YouView, depending upon the product being taken by the customer). A box should therefore be included in the SAC for every triple-play customer. The mix of Vision+ and YouView boxes should be taken from BT's mix of new customers in the period prior to the margin squeeze assessment being undertaken, on the most similar product offered by BT. The per box cost should be the price paid by BT, potentially adjusted upwards to reflect the smaller scale of an efficient entrant, and the consequent loss of purchasing power.

5.58 As can be seen from this section, although there are several different SACs, most of them are relatively simple to determine for the purposes of margin squeeze modelling. The main area of difficulty is likely to be the allocation of marketing costs between different products.

5.7 Other model elements

5.59 There are two further elements which will need to be included in an effective margin squeeze model: an appropriate customer lifetime, and an appropriate discount rate.

5.60 The **customer lifetime** is a further vital input into the margin squeeze assessment; indeed, depending upon the relationship between SACs and annual profits per customer, for some products it may be the single most important element of the model. It is also one which is likely to be somewhat contentious, as it is unlikely to be able to be directly observed in the context of a margin squeeze.

5.61 The most direct way to derive the customer lifetime is based on the observed churn rate for the product in question. The appropriate formula for deriving customer lifetime from churn is that:[66]

Customer lifetime = -1/ LN (1-churn)

[66] Ofcom (2013), footnote 590.

5.62 However, Ofcom should not use BT's SFBB churn as the basis to derive the customer lifetime, for two reasons:

- Customer lifetime will itself be distorted in situations where BT is margin squeezing. When BT is engaging in a margin squeeze, its products will be perceived by customers to be more attractive, due to a better combination of price and features, than if BT were setting competitive prices. This will tend to lower BT's rate of churn to below competitive levels. As such, BT's churn rate should be increased to be consistent with the level of relative retail prices if BT were not margin squeezing.
- Scale entrants may in any case have a slightly higher level of customer churn than BT due to lower levels of brand recognition. This is particularly the case for SFBB, given that fibre-enabled cabinets across the UK now have stickers on that saying that fibre has been installed, alongside a BT logo. This will give BT a marketing advantage over rivals, and is an advantage that entrants could not match as they are not vertically integrated with Openreach. BT's churn rate should be increased to remove the effects of this advantage (and/ or the marketing spend adjusted upwards).

5.63 The appropriate **discount rate** for margin squeeze assessment can be taken from Ofcom's LLU charge control determination, as the non-Openreach cost of capital.

5.8 Determining whether a core product passes the margin squeeze test

5.64 Given all of the data set out above, it can then be determined whether a core product passes the margin squeeze test. It will do so when the present discounted value of revenue is positive, and greater than the SACs incurred in obtaining a customer, based on the average customer lifetime.[67]

5.9 Conclusion on cost modelling

5.65 Based on all of the above, TalkTalk considers that Ofcom will be able to develop a reliable model. Ofcom should focus relatively more resources on the most material assumptions and issues. We believe that these are:

- core network costs, including the cost of bandwidth;
- customer service costs;
- commercial and overhead costs;
- the cost of BT Sport; and,
- customer lifetime.

[67] In principle, a 'customer attrition' approach could be used, rather than a 'representative customer' approach. The former would involve acquiring a customer at year 0, and then in each year calculating the probability that the customer would still be with BT, based on a constant churn rate. Future revenues would then be multiplied by the probability that the customer was still with BT (i.e, to obtain expected revenue in each year) before being discounted and included in the calculation. This method should lead to identical results to the representative customer approach advocated in this section; the representative customer approach is favoured by TalkTalk as it is simpler to operationalise.

5.66 The appropriate approach for some of these may be determined in the course of the ongoing investigation under the Competition Act into BT’s abusive margin squeeze in SFBB. As such, we do not believe that it will be overly onerous for Ofcom to reach appropriate determinations on each of these issues, particularly since there is a range of appropriate approaches for various of them, and Ofcom will have a degree of regulatory discretion in making a determination on them.

6 Margin squeeze protection in other EU Member States

6.1 In assessing the practicality of the margin squeeze options Ofcom is considering, it is instructive to consider approaches used in other EU Member States to ensure adequate margins for NGA-based wholesale products. By ensuring that the system adopted by Ofcom is within the range of solutions chosen in other Member States, there can be increased confidence that the margin squeeze protection approach adopted will prove to be workable in practice.

6.2 In this context, it is worth noting that many regulators have adopted approaches considerably more interventionist than either of Ofcom's Options 1 or 2. There are often strict *ex ante* tests which are undertaken by the regulator before any new product can be launched, or product pricing changed. That is, other regulators have tended to emphasise timeliness and robustness of the margin squeeze protection system over innovation and efficiency. In our view, this reflects that the potential consumer harm from uncompetitive retail markets which are monopolised by the incumbent is greater than consumer harm from the incumbent facing some minor handicaps in the retail market.

6.3 As such, we also believe that this section demonstrates that TalkTalk's preferred margin squeeze protection system is highly workable in practice, as it is less interventionist than the systems adopted in many Member States, trading off slightly decreased timeliness and robustness for considerable gains in efficiency and innovation. It is clear that other Member States have found it appropriate to intervene to a considerably greater extent than proposed by TalkTalk.

6.4 Common practices to verify compliance by European regulators on an *ex ante* basis include:

- the requirement to test all or key offers prior to launch, rather than only after launch;
- the use of a public margin squeeze testing tool, which is made available to operators to test offers before and after launch, ensuring a good degree of predictability;
- the practice of performing an annual *ex post* margin squeeze test across the full portfolio of products, on the basis of actual data, thereby verifying the forecasts used for *ex ante* tests.

6.5 TalkTalk's preferred approach allows for all of these elements in a flexible manner, requiring BT to test all products before they are launched, and provide the results of those tests to Ofcom; providing a public margin squeeze test for all parties to use; and permitting *ex post* margin squeeze tests to be undertaken across any product on the basis of a complaint. We do not currently propose annual re-tests, as it is not clear that the burden on BT and Ofcom would be proportionate.

6.6 The parameters used for margin squeeze tests by European NRAs are typically adjusted to reflect the need to "promote" competition rather than maintaining existing market structures, lending support to Ofcom's proposals to make adjustments to the EEO parameters in this context by addressing Potential Concern 2 rather than Potential Concern 1.

6.7 The remainder of this section summarises the approach taken to protect downstream competitors against margin squeeze on SFBB products in four Member States. It is notable that ex ante margin squeeze tests applied in an ex ante manner are also used for SFBB products in Italy, Spain and Greece. If Ofcom chooses an *ex post* approach to margin squeeze testing (i.e., either of Options 1 or 2), this is likely to put Ofcom in a minority amongst those Western European countries which regulate access to SFBB, despite the relatively advanced status of fibre deployment in the UK and weak competition in the product.

6.8 Overall, the system proposed by TalkTalk is closest to that which has been adopted in the Republic of Ireland, but with some amendments to lessen the regulatory burden on BT and Ofcom. We consider that the experience in Ireland, and the analysis which was undertaken before the system was introduced, demonstrates that our proposed system is likely to have low execution risk, and little risk of regulatory failure.

Table 6.1: summary of approaches to margin squeeze testing

	Which BB products?	When are tests conducted?	Who applies?	Which standard?	Cost-base	Period
Austria	Retail residential and business BB vs LLU and VULA Retail business BB vs business wholesale broadband access	Ex ante: prior to launch of new retail tariffs Ex post: annual cross-check and forward evaluation	NRA applies SMP operator can pre-test based on software tool	EEO for LLU SEO (for VULA)	For single tariffs: AAC For annual ex post portfolio test:: FAC	Steady state 12 months
Denmark	Retail broadband vs. L2-L3 WBA (including NGA)/ LLU; Bundles of retail broadband and VoIP vs. L2-L2 WBA (including NGA)/LLU	Ex ante: prior to launch of new retail tariffs Ex post: annual cross-check	NRA applies SMP operator can pre-test based on software tool	REO	For single tariffs: AAC Ex post portfolio test: LRIC for network, FAC for retailing	Steady state 48 months
Ireland	Across the value chain from retail high-speed BB through wholesale broadband access through VULA through SLU Bundles systematically tested	Ex ante: prior to launch of new retail tariffs and bundles Ex post: annual cross-check	NRA applies SMP operator can pre-test based on software tool	SEO (25% share)	LRIC for individual bundles ATC for portfolios	DCF 42 months
Netherlands	Retail residential BB vs LLU/SLU and ODF FTTH access (fibre unbundling) Also business retail BB vs business WBA	Single products (including bundles) before launch Quarterly data review	SMP operator NRA can review and request	EEO	EDC (close to FAC) LRIC for NGA-based services	DCF at least 3 years or the minimum contract period

6.1 Austria

6.9 The Austrian regulatory authority, RTR, mandates Telekom Austria to supply VDSL-VULA and FTTH-VULA as a wholesale local access market access obligation.[68] To ensure that retail offers relying on VULA are economically replicable, RTR conducts two types of *ex ante* margin squeeze test.

6.10 On an annual basis, RTR conducts a margin squeeze test assessing the margin between the wholesale costs of the mandatory wholesale VULA products and the corresponding portfolio of retail services. This test is conducted both prospectively with forecast data and retrospectively with observed subscriber and usage data; it is therefore a dual approach.

6.11 To provide predictability for the incumbent, a software tool is provided to Telekom Austria to enable it to conduct its own margin squeeze assessments. The calculations use fully allocated costs (FAC) based on actual (historic) costs. All relevant downstream and retail costs are taken into account.

6.12 In addition to these annual portfolio tests, new promotional tariffs and retail offers with a low profit margin are subject to product-specific *ex ante* margin squeeze tests. For these single tariffs RTR assesses whether the respective revenues cover the avoidable (downstream) costs. If the tests reveal a margin squeeze Telecom Austria, has the option either to increase the retail tariff, to decrease the wholesale tariff, or a mix of both, so as to prevent the margin squeeze from taking place.

6.13 The tariff for VULA is based on the minimum of a retail-minus or a cost-oriented charge calculation ensuring that the tariffs are both not excessive from a consumer perspective and are margin-squeeze free.

6.14 For SFBB VULA margin squeeze assessment, RTR has adopted an SEO (similarly efficient operator) approach, as it does not believe that downstream competitors can achieve the same economies of scale as the incumbent supplier. The main adjustment for the SEO test, compared to an alternative REO test, is to the market share assumption used. That is, the approach adopted by the Austrian regulator is in line with Ofcom's Potential Concern 2.

6.15 Data from Point Topic reported by the European Commission shows that at the end of 2012, Austria had achieved NGA coverage levels of nearly 70%,[69] broadly in line with those achieved in the UK at that time, up from 64% the previous year.[70] Even prior to the introduction of specific rules for VULA (see the directive as of

[68] https://circabc.europa.eu/sd/d/9c3e2f49-2cdc-4f74-aca0-585cf22b97e8/AT_2013_06_24_%20M4_phys._access_draft%20mktanalysis&remedies.zip

[69] Digital Agenda Scoreboard report 2013 figure 21 https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/DAE%20SCOREBOARD%202013%20-%202-BROADBAND%20MARKETS%20.pdf

[70] Point Topic for the European Commission 2012 data as of end 2011

06.09.2010, M 3/09, Telekom Control Kommission) Austria has had a long-standing history of setting charges on the basis of systematic ex ante margin squeeze testing.[71] Since 2007, charges for local loop unbundling were based on a retail minus approach based on a margin squeeze test because RTR assessed that strictly cost-oriented charges on the basis of replacement cost would have led to a margin squeeze[72]. This approach and the expectation, that it would be applied to NGA does not therefore seem to have had a chilling effect on investment in SFBB in Austria.

6.2 Denmark

6.16 The Danish Business Authority (DBA) conducts *ex ante* margin squeeze tests between retail broadband services based on VDSL and the corresponding wholesale products.

6.17 All retail speeds are tested – it is assumed that broadband services which provide a transmission download rate higher than 20 Mbps are based on VDSL. As in Austria, DBA conducts both an annual test based on a portfolio of products and individual tests.

6.18 Individual tests are applied each time a new or modified retail service is launched on the market. The test compares the average revenues of a subscriber with the unit costs of providing the service for a reasonably efficient operator (REO). LRAIC is used as the cost standard (that is, the sum of the avoidable cost and product specific fixed costs, divided by the number of units).

6.19 A reflection of the scale assumption used by the DBA is that some of the unit costs are derived by assuming the REO has approximately 100,000 customers (out of 1.8 million broadband connections in Denmark, ie, a market share of just over 5%).

6.20 If a margin squeeze is found by a test, the SMP operator must adjust the wholesale or retail charge or a combination such that the squeeze is removed. In removing the margin squeeze, the wholesale charge may be reduced below the cost oriented (LRAIC-based) cost.

6.21 A so-called ‘total’ test is performed once per year for the complete retail product family of broadband and voice products. The margin squeeze test is applied by the regulator on a retrospective basis based on actual data. A public software tool is available to the SMP operator to aid with both the individual and total tests.

6.22 A particular innovation of the Danish approach lies in the enforcement of the total test. If the regulator finds a margin squeeze for a complete product family, the SMP operator must lower the wholesale tariffs for the coming year to a level that is lower than the cost oriented (LRAIC-based) cost by an amount equal to the calculated

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[71] See https://www.rtr.at/de/pr/PI26012011TK

[72] See Table 4-3 WIK report “Wholesale pricing, NGA take-up and competition” http://www.ectaportal.com/en/upload/WIK/WIK%202011%20-%20Wholesale%20pricing%20NGA%20take-up%20and%20competition%20-%20Final_Report_2011_04_07.pdf

squeeze. This strategy ensures that the SMP operator cannot benefit financially from a margin squeeze which is later rectified, helping to provide effective incentives for the incumbent not to margin squeeze.

6.23 An REO standard was chosen for the total test in order to allow efficient operators smaller than the incumbent to enter and succeed in the market. In implementing the REO parameters, the regulator collects data regarding the downstream costs from all alternative operators and the incumbent TDC and fine-tuned the downstream costs for an 'average' alternative operator following further discussions with the industry. The market share of the REO reflects the size of the second and third largest broadband operators in Denmark.[73] LRIC+ (Long run incremental costs including common costs) is used to determine the downstream costs for the alternative operator's network, whilst FACs are used for commercial costs.

6.24 Deployment of NGA in Denmark has been proceeding rapidly. Total coverage was reported at around 72% at the end of 2012, similar to the UK, an increase from 62% one year earlier.[74] As such, margin squeeze testing does not appear to have meaningfully deterred investment in SFBB.

6.3 Ireland

6.25 In its decision on Remedies for NGA published in January 2013 Irish regulator Comreg set out detailed specifications for the application of an *ex ante* margin squeeze test on NGA-based products.[75] In its Jan 2013 decision, Comreg imposed a "retail margin squeeze" approach towards setting charges for wholesale fibre-based products. This approach calculates consistent charges for wholesale services based on fibre at each level of the value chain – and creates a link between these charges and those for copper inputs such as LLU (see Figure 6.1).[76]

6.26 The margin squeeze test is conducted on the basis of a portfolio of products by comparing the weighted average revenues of retail SFBB offers against the weighted average retail and wholesale costs.[77] Comreg uses an adjusted EEO (so-called similarly equivalent operator) approach in which the operator is assumed to have 25% market share, in line with Ofcom's current proposed scale for margin squeeze assessment. The calculation is based on a DCF approach.

[73] A similar assumption in the UK market as a whole would result in a market share assumption around 20%, while a similar assumption in the SFBB market would result in a market share assumption of around 5%

[74] Digital Agenda Scoreboard report 2013 figure 21 https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/DAE%20SCOREBOARD%202013%20-%202-BROADBAND%20MARKETS%20.pdf Point Topic for the European Commission 2012 data as of end 2011

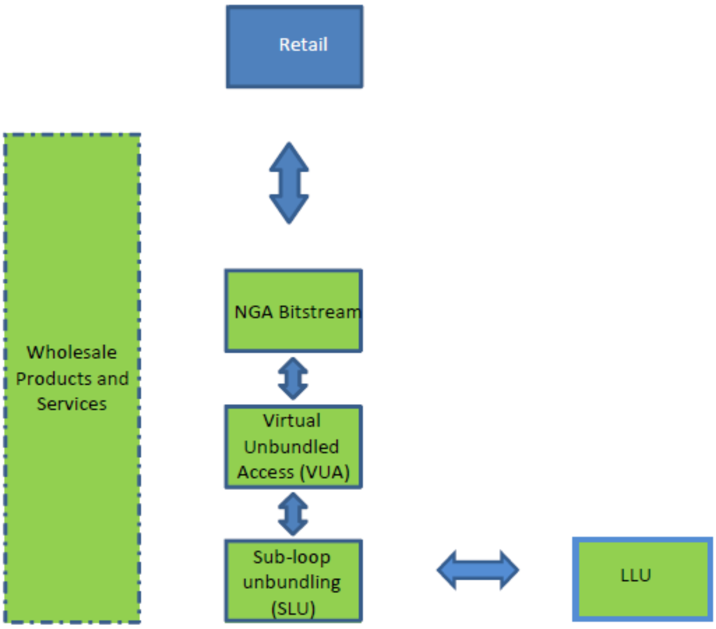
[75] Comreg adopted measures on markets 4/5 relating to NGA https://circabc.europa.eu/sd/d/45cf681f-1bdd-4ab3-b17f-63a39076d010/ComReg%201311.pdf

[76] Comreg suggests that it may consider directly testing retail VULA margins in future, but prefers a stacked approach whilst network investments are being made by competitors

[77] Paragraph 10.7, Comreg NGA remedies decision Jan 2013

6.27 The cost base used by Comreg in its margin squeeze assessment was determined as being average total costs (ATC).[78] Comreg therefore adopted a slightly more demanding cost standard when making margin squeeze determinations than the LRAIC+ standard proposed by its consultants, Oxera, which had noted that 'employing ATC can be warranted if entry assistance has relevance... this approach can implicitly take into account that [a downstream competitor] has to incur certain costs that the incumbent does not'.[79]

Comreg retail margin squeeze test[80]



6.28 Eircom must notify Comreg of all new and amended NGA retail prices at least 5 working days before the prices are expected to come into effect together with a statement of compliance including relevant supporting documentation.[81] If the new retail prices also give rise to adjusted wholesale charges, a longer notification period of 3 months is required, or 4 in the case of wholesale price increases. Wholesale price changes made in other contexts are also subject to this notice period together with a requirement to submit a statement and evidence of compliance. Compliance is checked by Eircom using an excel tool supplied by the regulator. A non-confidential version of this tool is also available to other licensed operators.

6.29 Comreg commits to assessing the statement of compliance within 5 working days, and following that period it may either give an indication that the product is likely to be compliant (without fettering its future discretion), request further information, give signals that the product is unlikely to be compliant or prohibit its launch.

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78 Paragraph 10.364 Comreg NGA remedies decision Jan 2013

79 Oxera (2013), *eircom's next generation access products: pricing principles and methodologies*, January.

80 Figure 10.1 Comreg NGA remedies decision Jan 2013

81 Except in cases where it is likely that the NGA retail BB product will not be purchased by more than 5,000 Eircom retail subscribers

6.30 In addition to *ex ante* checking against the margin squeeze model, Eircom is required to provide an annual statement of compliance based on actual costs and volumes.

6.31 Comreg notes that its approach as regards margin testing is consistent with requirements over the past number of years for legacy products under Comreg decision D01/06 and that “this regime has not given rise to any issues to date”.[82]

6.32 Comreg clarifies that if Eircom is requested to supply a product for which there is no Eircom retail equivalent, Eircom should supply it on a fair and reasonable basis “taking into account the price of comparable wholesale products and any additional incremental costs associated with the specific NGA product at hand”.

6.33 In addition, where retail SFBB is part of a bundle also involving line rental, Eircom must additionally ensure through a “net revenue test” that the bundled product does not result in cross-subsidisation or leverage of market power.[83]

6.34 For bundles sold in larger exchange areas, tests are applied both on an individual product basis (within which retail call costs and unregulated services such as mobile are assessed on the basis of LRIC) and on a portfolio basis based on ATC. Outside larger exchange areas, only the individual tests apply.

6.35 The wholesale cost components within the net revenue test are intended to reflect the costs faced by a competitors replicating Eircom’s bundles, which are a mix of products in larger exchange areas and WLR and WBA outside these areas. In larger exchange areas where it is assumed that LLU and VULA are viable, average wholesale costs are based on the prices for network inputs weighted for the usage of each input by competitors in the area. Comreg decided to set separate cost calculations for wholesale inputs based on legacy products and on fibre-based products such as VULA – and these are separately assessed for the individual bundle “net revenue tests”. Because no real data was available for usage weightings of NGA-based wholesale products, Comreg assumed these weightings would be fixed for a transitional period using an assumption that operators would migrate all existing LLU customers to NGA equivalents.

6.36 As can be seen, this system has many similarities with that which we have set out as our preferred scheme:

- both involve the SMP operator undertaking an in-house margin squeeze test and providing the results of that test to the regulator before launch;
- both involve the creation and publication of a spreadsheet margin squeeze assessment model, which is provided both to the incumbent and to third parties;
- both tests are undertaken on an SEO/ REO basis, with an adjustment for the scale of the non-incumbent retailers;
- both tests involve a DCF based assessment of profitability.

[82] Paragraph 10.296 Comreg NGA remedies decision Jan 2013
[83] Comreg price regulation of bundled offers Decision D04/13 Feb 2013

6.37 The core difference between the Irish model and TalkTalk's preferred model is that in the Irish model, Comreg can block Eircom from launching products on the basis of its assessment of margin squeeze. Although this appears workable to us, we currently propose to minimise the resource burden on Ofcom by Ofcom not undertaking any assessment which involves using judgement before products are launched by BT, instead relying on complaints to bring potential margin squeezes to Ofcom's attention.

6.4 Netherlands

6.38 The Netherlands is one of the EU countries with almost 100% superfast broadband coverage, predominantly VDSL and cable connections complemented with FTTP in selected areas.

6.39 Margin squeeze tests are not the primary mechanism used in the Netherlands to ensure the economic replicability of high-speed broadband. Rather, cost-orientation is applied to the main residential SFBB local access product.

6.40 However, in addition to the cost orientation obligation, the Authority for Consumers and Markets (ACM) requires the incumbent KPN, on markets where SMP is found, to ensure that for all active services a margin squeeze test is passed at all times and in all geographic locations.

6.41 The margin squeeze test is directly applied by the SMP operator based on a methodology imposed by the regulator. KPN is responsible for managing the margin squeeze tool and must implement the test for all associated offers at the latest 3 to 4 months following market analysis decisions of the ACM. The results of the tests need to be available at the request of the ACM at any moment and in addition KPN must report on all performed tests per quarter to the ACM.

6.42 If a margin squeeze is found, KPN must remove it either by reducing the wholesale price, increasing the retail price or a combination, although the regulator has a preference for lowering the wholesale price.

6.43 ACM uses an EEO approach as a reference when determining whether there has been a margin squeeze. Altnet-specific access costs not incurred by the access provider (colocation, backhaul to the point of interconnection) are not included in the margin squeeze test. The test is undertaken on a DCF basis, using forecast data derived from KPN's own business case for the relevant product. Customer lifetime is at least 3 years or equal to the contract period.

7 GEA-GEA migration and contract length

7.1 Annexes 4, 5 and 6 above have set out TalkTalk's position regarding the imposition of margin squeeze protection (or wholesale price regulation if there is found to be no workable and effective system of margin squeeze protection available). This section deals briefly with our view on charges levied for GEA migrations and minimum wholesale contract length/ early termination charges. It should be read in conjunction with AlixPartners' report on GEA migration which is also submitted to Ofcom in the context of this consultation.

7.2 TalkTalk strongly supports Ofcom's position that there should be regulation of GEA migration charges and contract length in the case of GEA migrations. The current migration charge of £50 levied by BT is clearly grossly excessive, and is approximately 5-10 times TalkTalk's broad estimate of BT's incurred cost.[84] We consider that there are no effective constraints on GEA migration charges and contract length, and that BT has strong incentives to set high prices and long contract periods, partly for exploitative reasons, but primarily in order to exclude competitors from the downstream retail market by making it more difficult to compete for BT Retail's disproportionately large installed customer base.[85]

7.3 We therefore support Ofcom's proposal at paragraph 11.184 that there should be a charge control on GEA migration in line with the LRIC of that migration. Overall, we consider that Ofcom should 'aim down' on the migration charge where there is any doubt of what that charge should be. The most efficiency enhancing approach for Ofcom to adopt would be to set a migration charge of zero, and allow any incurred costs of GEA migrations to be covered from monthly rental charges. We consider that the bottom end of the range set out by Ofcom (i.e., £10) is the very highest figure which could plausibly be adopted as an outcome of this regulatory review and somewhere below £5 is more appropriate.

7.4 Moreover, we believe that Ofcom should also reconsider whether to eliminate minimum contract periods for GEA new provide. These have similar economic characteristics to minimum contract periods for GEA migrations, and act to lower incentives for third party ISPs to acquire SFBB customers, while reducing likely rates of switching and sign-up for SFBB. We believe that any revenue benefit to Openreach from minimum contract lengths could be covered from increased GEA rental charges without harming Openreach's return on investment.

7.1 Impact of migration charges and minimum contracts on various parties

7.1.0 Impact on Openreach

7.5 It is important to emphasise that, purely from the perspective of Openreach (i.e, the incentives that Openreach would face if it were not vertically integrated with Retail), there are no meaningful incentives to set migration charges above LRIC, or to set any minimum contract periods at all. Different sources of revenue are fungible from Openreach's perspective: a given quantum of revenue can be obtained from any of

[84] See para 7.22 below

[85] The exploitative reasons are not crucial to the rationale for migration charges and contract length. This can easily be seen via the 'one monopoly profit' argument – monopoly rents should in general be able to be extracted via a high GEA rental price.

connection charges, migration charges, and monthly GEA rental (the 'one monopoly profit' argument). Moreover, so long as connection/ migration charges are set at LRIC, Openreach is effectively incurring zero net investment when a new customer joins the network, or a customer switches provider.

7.6 The sole reason for Openreach to set a minimum contract period for GEA (whether new connection or provision) greater than one month is therefore that it will obtain increased revenues from imposing a long minimum contract, and those revenues could not be obtained from a higher GEA rental charge. For the migration charge, the effect on Openreach's profits is probably close to neutral: higher migration charges will be offset by lower rental charges, as Openreach will price at least to extract all monopoly rents.[86]

7.7 However, in TalkTalk's view setting a long minimum contract period is actually likely to *reduce* revenues to BT Openreach, rather than increase them. This is the case regardless of whether the minimum contract is for migration or new provide.

7.8 The various impacts that a minimum contract period will have on BT Openreach's revenue are as follows:

- Any additional revenues which BT Openreach obtains from BT Retail as a result of early termination are irrelevant, as they are internal transfers from within BT Group.
- BT Openreach will obtain additional revenues from customers of other ISPs who terminate their contracts early. This will increase Openreach's revenue;
- If fewer innovative products are launched due to the minimum contract period, BT Openreach will get lower revenue because some customers will not be able to obtain a sufficiently desirable product to convince them to take SFBB;
- BT Openreach will lose revenue due to customers who do not take SFBB because of the higher charges resulting from minimum contract periods.
- BT Openreach will lose revenue due to reduced promotional activity by third party ISPs which have lower profitability as a result of minimum contract periods.

7.9 In a formal sense, therefore, the overall outcome of the migration charges and minimum contract periods is ambiguous. However, on a practical basis TalkTalk considers that it is likely that the overall impact of minimum contract length on Openreach's total revenue will be negative. BT Openreach is therefore primarily imposing a minimum contract period to benefit BT Retail, rather than due to its own unilateral incentives.

[86] Openreach is in fact likely currently setting a price *above* the full monopoly level. By doing so, it can both extract full monopoly rents from BT Retail customers (by setting the end consumer price which would maximise profits for an integrated monopolist) and at the same time engineer a margin squeeze against downstream rivals. Annex 8 provides evidence for Openreach pricing well in excess of the level which leads to efficient cost recovery for SFBB.

7.1.1 Impact on BT Retail

7.10 As has been repeatedly emphasised in TalkTalk's submissions to Ofcom, the internal transfer price from BT Openreach to BT Retail has no impact on BT Retail's pricing incentives. As Openreach and Retail are part of the same company, a supracompetitive transfer price merely transfers profit from Retail to Openreach: the net effect on BT Group's profits is zero. This means that vertical integration does not reduce BT's incentives to set a supracompetitive wholesale price.

7.11 A long minimum contract period also has no (negative) effect on BT Retail. Where a customer leaves within the minimum contract period, the ISP must continue paying the GEA charge even though there is no offsetting revenue from an end consumer.[87] For BT Retail, this is of no importance. Although Retail will make a loss as a result of such an early termination payment, this will be exactly offset by additional profits to Openreach. As such, the length of the minimum contract, for either GEA migrations or GEA new provide, has no impact on BT Retail's incentives on pricing or minimum contract length.

7.12 On the other hand, BT Retail will benefit from a minimum contract period. Imposing a minimum contract term at the BT Openreach level effectively forces all downstream retailers of GEA-based products to also set long minimum contract terms or risk making payments to BT Openreach which are not covered by revenues. While BT does not incur any additional costs as a result of the minimum contract period (payments from Retail being exactly counterbalanced by revenue in Openreach), it can itself impose a long contract period, and so have greater confidence in covering its subscriber acquisition costs as switching away is deterred. To the extent that consumers make early contract termination payments to BT Retail, this represents pure profit at the BT Group level.

7.13 To the extent that payments due to customers leaving within their minimum contract period are passed on by ISPs in their charges, BT Retail will obtain a price advantage over other retailers.[88] This will result in BT Retail gaining a higher market share than its competitors, or being able to set higher margins than the counterfactual situation without minimum contract periods. Either will increase BT Retail's overall profitability.

7.14 Furthermore, BT Retail will benefit from the softening of competition due to both migration charges and long minimum GEA contracts increasing switching costs. This is particularly the case given that BT Retail has already locked in a much higher market share than ISPs such as Sky and TalkTalk, and therefore benefits more from low levels of consumer switching.

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[87] On a monthly basis, and not considering any early termination charge which may be imposed by the ISP as a lump sum to cover the recurring wholesale charges.

[88] BT Retail obviously has no need to pass on internal transfer payments as there is no net cost to BT Group.

7.1.2 Impact on third party ISPs

7.15 The impact of GEA migration charges and minimum contract periods on the incentives faced by other downstream ISPs, such as Sky and TalkTalk, is likely to be significant. For third party ISPs, migration charges and contract periods are real costs, which affect pricing incentives.

7.16 **Migration charges** will impose additional costs on third party ISPs, increasing the cost of acquiring customers from other providers. In principle these costs can either themselves be passed on to end consumers, in the form of higher monthly recurring charges, or higher one-off fees when switching from another provider; and/ or will reduce other providers' profits from serving SFBB customers, therefore reducing incentives to attract those customers. In practice, pass-through is likely to be above 50%, but below 100%, and the remaining profit impact on customers will reduce the extent of advertising and promotional activity undertaken by downstream ISPs to other ISPs' customers.

7.17 Migration charges will therefore have several distortionary effects on the SFBB market:

- *They will reduce competitive tension between downstream providers* – lower levels of active promotion to customers of other SFBB providers will tend to lower the competitive pressure that downstream firms place on each other, thereby increasing the margins which are set by downstream firms.[89]
- *Consumers will experience increased switching costs* – when migration charges are passed through to consumers in the form of connection fees for SFBB products, these will increase pecuniary switching costs, lowering rates of switching. Lowered rates of switching will both further diminish competitive tension, and will help to lock in existing market shares. Such lock-in will be a substantial benefit to BT Retail, which is the largest ISP operating on BT Openreach's network.
- *They will create an asymmetry between BT Retail and other providers when set in excess of LRIC* – the cost of migration to BT is the BT Openreach LRIC of migrating a customer. When BT sets a wholesale charge to external customers in excess of LRIC, this will create a cost asymmetry between BT's vertically integrated operation and the downstream-only provision offered by firms such as Sky and TalkTalk. This cost asymmetry will give BT a competitive advantage in the retail market for SFBB which is not merited by its level of efficiency.

7.18 TalkTalk notes that significant efforts have been made by regulators in many other utility industries (and other markets, such as banking, with similar characteristics) to reduce migration charges and switching costs as far as possible. These efforts have focussed on reducing the length of time which it takes to switch, while eliminating

[89] It is a standard result that, where there are no coordinated effects, greater substitutability between firms implies higher margins.

contractual exit charges. The aim of all of this regulatory activity around migrations is to enhance consumers' willingness to switch provider, and so sharpen competition.

7.19 **Minimum contract periods**, which are unrelated to the need to recover customer-specific investments made by Openreach, will also impose real costs on third-party ISPs. These costs fall into two categories:

- *Pecuniary costs*– even when ISPs impose minimum contract lengths on consumers, they will still incur some additional payments to Openreach as a result of a long minimum contract length. Some customers will fail to complete their minimum contract length and have to pay early termination charges; whereas other customers will not be able to be charged by their ISP, terminating their contract early through (for instance) death, moving house, or bankruptcy.
- *Reductions in innovation*– long minimum contracts restrict ISPs' ability to offer certain innovative products based around shorter-term deals. This will both reduce these ISPs' competitive strength in retail markets, and harm consumers who might prefer these shorter-term, more innovative products.[90]

7.20 Overall, therefore, minimum contract periods will tend to make downstream ISPs higher cost, less profitable, and therefore have a lower market share than would otherwise be the case.

7.2 TalkTalk's recommendations regarding switching

7.21 Overall, therefore, TalkTalk considers that there is a strong case for Ofcom to impose effective regulatory measures on BT Openreach, restricting its ability to impose switching charges and minimum contract periods. Doing so will benefit both the profits of BT Openreach, and consumer welfare, by creating a more competitive and efficient downstream market structure.

7.22 We believe that the highest GEA migration charge which could reasonably be argued for is one based on LRIC. Even a £10 charge, which Ofcom has argued may be in line with LRIC, appears likely to be too high on this basis, however, given that the DLRIC of WLR transfer, which includes some common costs, is £8-£9. We believe that the LRIC of GEA migration is therefore likely to be below £8.

7.23 In order to enhance the intensity of competition for switchers in the retail SFBB market, we consider that the most appropriate regulatory approach for Ofcom to adopt would be to set the GEA migration charge at £0, and allow recovery of Openreach's efficiently incurred costs through GEA rental charges. Given the low LRIC of GEA migration (one month's GEA rental revenue or less), recovery should be simple, even without a minimum contract period.

[90] For the avoidance of doubt, TalkTalk has no current intention to offer such products if GEA contract length is reduced.

7.24 We strongly support Ofcom's proposed approach of eliminating minimum contract periods for GEA migrations. There is no good rationale for why these minimum periods exist which does not rely upon BT leveraging its vertical market power to anticompetitively exclude downstream rivals.

7.25 We also believe that Ofcom should eliminate minimum contract periods for GEA new provide. The effects of minimum contract periods for new provide are similar to those for migrations, albeit slightly less harmful to consumers due to a lower impact on switching. They again cannot be justified by a positive impact on BT's profits.