Vodafone Response to Ofcom's Consultation:

Narrowband Market Review

PART 2 – WFAEL, WCO AND ISDN

✂ Non-confidential Version ✂

Executive Summary

The markets covered by the Narrowband Market Review are important: they provide a critical means of commerce for UK business, and a link to around 25 million homes, connecting families and communities.

Ofcom is correct to conclude that BT has Significant Market Power (SMP) in Wholesale Fixed Analogue Exchange Lines (WFAEL) and Wholesale Call Origination (WCO). It has underestimated the level of this Market Power:

- In analysing the market for WFAEL, undue prominence has been given to the constraining influence offered by Metallic Path Facilities (MPF) on WLR pricing. The majority of service growth is now in superfast rather than "standard" speed broadband, where the broadband is streamed off at the street cabinet. Operators with deployed MPF-based equipment are sweating this to provide voice, hence deploying MPF + GEA[1]. However, this approach makes no economic sense for new entrants or those without MPF assets, hence their preferred model is a combination of WLR and GEA. The continued availability of MPF therefore does not act as a constraint on WLR pricing, as the operators who rely on WLR cannot make use of MPF and there is no effective wholesale market of services based upon it. Ofcom cannot build the regulatory environment based on a presumption that MPF consumption can been flexed in the face of WLR price increases, the realities of the market make this impossible, hence effective regulation of WFAEL (WLR) is essential.

- In analysing the market for WCO, no account has been taken of the existence of BT's Wholesale end to end calls product which has a significant share of the wholesale market.

SMP is a binary concept: BT's SMP cannot be considered to be "weakened". Given that SMP has been found, it is essential that there is price regulation on both WLR and WCO. ✂As BT itself doesn't consume WCO, it would be unaffected. Equivalence provides no safeguard in the WLR market, because BT would still be free to raise its pricing: it merely allows BT to move revenues around, increasing margins in Openreach at the expense of downstream retail units.

Whilst we welcome Ofcom's proposals for retail regulation where competition hasn't protected customers, that doesn't remove the need for wholesale regulation: indeed, wholesale regulation is all-the-more important to safeguard against BT seeking to make up lost retail margins via other avenues.

We are very clear that the threat of excessive wholesale pricing needs to be tackled at first instance, with BT having a track record of pricing at the charge control ceiling where they exist and of substantial and successive prices rises when no controls are in place. Ofcom needs to act now to retain market confidence, robustly supporting the leading edge of competitive supply in the retail market by making it clear that wholesale price regulation and the requirement not to discriminate are essential remedies that cannot be compromised. Price regulation doesn't need to be onerous; it doesn't require a formal, fully modeled charge control. A simple safeguard cap is all that is required to lock in confidence until 2020.

[1] Generic Ethernet Access, the Openreach FTTC service.

The three steps that Ofcom need to take are straightforward, proportionate and require little additional regulatory effort, as they involve simple modifications to the current proposals by:

I. ensuring that an effective WLR pricing remedy is introduced, either through an indexation to MPF pricing or a CPI-CPI safeguard cap accompanied by a no-undue discrimination obligation. This will help sustain the range of competitive retail offerings available in the wider market place offered to business users and consumers in all parts of the UK (urban and rural).

II. incorporating a simple CPI-CPI safeguard price cap and no-undue discrimination obligation for Wholesale Call Origination to ensure other wholesale operators using CPS can compete head to head with BT's dominant Wholesale Calls product and to support a variety of competition leading business and consumer retail offerings in the market today and in the future.

III. implement the existing proposals for the ISDN2 and ISDN 30 wholesale price regulation, without drawing any distinctions between existing and new services. Ofcom's current proposal to leave new circuits unregulated is overly complicated and fails to protect those businesses that may need to move premise through no fault of their own. ISDN services are in a SMP market and as a consequence all users need the protection of safeguard price caps while BT's market share sits at 100% for ISDN2 and around 65% for ISDN30.

These three simple steps will provide the certainty needed by communication providers to continue to invest in retail narrowband services, deterring excessive pricing practices at the wholesale level and unpinning retail competition for all consumers, regardless of sector or geography. If the wholesale market was competitive you'd expect competition naturally to prevent these backstops ever being breached. These steps represent a zero cost insurance policy for UK consumers and businesses that Ofcom can't overlook.

The consequences of not taking these simple steps are significant, with all consumers likely to suffer because of a failure to support the products at the leading edge of retail competition. Allowing BT to set pricing of SMP services effectively unconstrained, without a formal price cap would be reckless and neglectful of Ofcom's primary duties to consumers and to the market. It would significantly raise the risk of BT stoking up excess profitability in regulated markets in the years ahead. We've already witnessed BT earning £9.7BN of excess returns across regulated markets since 2005[2] and there is almost universal acknowledgement that such outcomes are undesirable from a consumer welfare perspective, especially when there is **no efficiency incentives built into the proposed pricing regulation**.

[2] https://mediacentre.vodafone.co.uk/pressrelease/planned-reforms-openreach-required-new-report-highlights-bt-excess-profits-increased/

CONTENTS

1. Introduction

1.1 Vodafone welcomes this opportunity to respond to Ofcom's proposals for the Narrowband Market. At Ofcom's request we have split our response into two distinct parts. This submission focuses on the future regulation of Wholesale Fixed Analogue Exchange Lines (WFAEL), Wholesale Call Origination (WCO) and ISDN2/30. We have already submitted comments on Ofcom's proposals on the issues of Wholesale Call Termination, interconnection and technology choice.

1.2 Narrowband is a market we know well through acquiring Cable & Wireless Worldwide, a business that was at the vanguard of competitive supply when the market was first liberalised. Today Vodafone has an established base of enterprise customers, serving a number of business channels and resellers with end users ranging from single home workers to large multinational businesses and everything else in between.

1.3 In autumn 2015 Vodafone launched a UK wide consumer fixed line service offering exchange lines, calls and broadband to complement our range of consumer mobile services. As a new entrant challenger in the UK fixed consumer market (and the fastest growing fixed player in Europe) we have already made a disproportionate impact on the market. We have deliberately taken an innovative approach to serving this market. We have sought to deliver a high performance, in-home experience through our feature-rich broadband router, controllable via a mobile app, which offers class leading controllability alongside a highly competitive tariff structure for broadband and voice calls.

1.4 The desire to de-regulate is ambitious. After all, when competition is robust enough to act as a competitive constraint on prices it marks a success milestone, bringing choice and innovation to consumers independent of regulatory intervention. However, when de-regulation is misjudged or premature, the consequences for consumers can be profound. Ofcom's recent proposals to intervene in the standalone voice market underline just how important it is to have robust remedies in place. With 70% market share in a retail market segment that contains many vulnerable consumers, BT has been able to extract significant profits with little commercial challenge. As Ofcom's consultation identifies[3], there are many reasons for this, not least the fact that MPF providers aren't as engaged in this segment (as MPF remains primarily a means of providing standard broadband, rather than narrowband services) and this is also true of rural areas and in the business narrowband market, where MPF based supply is limited. The reality is that WLR and CPS are the only universal means of ensuring competition in all parts of the market, overcoming the collective obstacles of geography and segmented buying behaviours (for consumers and businesses) to support services both in and out of bundles.

1.5 The market is now at a transition point: with FTTC-based access rather than copper handed over at the exchange the norm. We demonstrate within this response that it would be completely wrong to retreat from appropriate pricing regulation at this critical juncture, as WLR and WCO will provide the essential regulated products to underpin retail competition for the narrowband element of superfast broadband bundles. Clear pricing safeguards are still needed for WCO and WLR; if they disappear in 2017, prior to the availability of next generation products, then consumers will suffer due to Ofcom's failure to deal with the clear consequences of market failure that remain. End users are vulnerable to the consequences of excessive pricing in the wholesale market through any weakening in the intensity of competition across the market. Given the historic nature of MPF investment, UK consumers are now

[3] https://www.ofcom.org.uk/consultations-and-statements/category-1/review-of-landline-telephone-services

more vulnerable than they were in the 2013, when the last market review was conducted and MPF was still in a growth cycle.

1.6 Our expectation for this market review is that it must create the right incentives to enable all communication providers to continue to invest in their products and market offerings, allowing them the certainty to bridge the technology transition that lies ahead, regardless of the infrastructure in use today. Certainty around future wholesale pricing is the single most important outcome that Ofcom need to deliver from this review, without it market confidence is lost and consumers, urban or rural, business or residential, will all suffer.

1.7 In this response we will step through Ofcom's market analysis, looking at the key features of BT's dominance and the behaviours it exhibits across the WFAEL, WCO and ISDN markets. We will then turn to focus upon what remedies are necessary to moderate BT's market power, allowing competitive suppliers to be able to trade effectively, invest with certainty in order to build and retain a customer base across the narrowband market. We firmly believe that the key to ensuring a thriving retail market with innovation and price competition is to secure sustainable access to suitably priced wholesale services, creating stability and the continuity of supply necessary to benefit all consumers in the longer term.

The remainder of this response is structured as follows:

- Section Two reviews the current market context in Narrowband, looking at the limitations of MPF in restraining retail pricing both now and in the future. It also discusses the impact of FTTC roll out and the challenges around SOGEA adoption and the ongoing role of BT's Wholesale Calls product on competition, before considering BT's response to past pricing deregulation;
- Section Three considers the issue of WFAEL and WCO market definition, looking at purchasing behaviours both at a retail and wholesale level, examining the correct application of any indirect constraining effects on the respective markets;
- Section Four offers a review of Ofcom's proposed remedies, where it is found to have SMP and the risks of not imposing appropriate pricing remedies on these key products. It also considers the need to impose a non-discrimination remedy in the WCO market, evaluating the risks posed should BT be free to discriminate in a manner that would undermine competition;
- Section Five examines the issues and specific needs of UK Business Consumers, including our views of the proposed remedies for wholesale ISDN markets;
- In the final section we answer the specific questions posed by Ofcom.
- We then conclude the response with four annexes looking in detail at (1) the challenges of bringing SOGEA to the mass market; (2) the difficulties faced today by the few CPS operators left to compete against BT's dominant Wholesale End-to-end Calls product; (3) BT's system control and (4) a rigorous qualitative approach for assessing indirect constraints in market definition.

2 Wholesale Fixed Access Exchange Lines and Wholesale Call Origination Markets

Narrowband Services are here for the foreseeable future

2.1 The Narrowband Communications Market, covering over 60 billion annual call minutes and exchange lines for over 33 million UK premises is the most recognisable and accessible communications market regulated by Ofcom. It represents the genesis of UK market liberalisation, the first market to benefit from competition in the 1980s through innovations like the 'Mercury button' and Indirect Access, giving consumers call choice for the first time. Full market liberalisation occurred in the 1990s, enabling market entry for a range of new providers able to offer services underpinned by effective wholesale remedies like Carrier Pre-Selection (CPS) and Wholesale Line Rental (WLR), tailored to both consumers and businesses, allowing the eventual relaxation of all narrowband retail regulation in 2009. Retail competition has been underpinned by wholesale remedies on BT, bringing consumers real choice, first in calls, then in exchange line provision for all parts of the UK[4] urban and rural, regardless of proximity to cable roll out or alternative networks.

2.2 The market has continued to evolve, most recently taking account of the importance placed upon broadband and the desire amongst suppliers and some consumers to bundle the purchase of this with calls and exchange lines. The continued importance of the Narrowband market to UK consumers can't be underestimated. It is vital that the correct remedies are put in place at this time both to protect consumers and to usher in a successful transition to any new forms of access used for the delivery of narrowband services

2.3 We now see a turning point ahead of us: instead of copper delivered narrowband voice services, we can see broadband based voice provided over a range of technologies, from copper only to mixed copper and fibre lines to fibre only (FTTP) connections. However, this change will not start to happen until at least 2018/19 and it will take many years of network investment and customer choice to complete the switch away from narrowband voice. As a result, wholesale narrowband voice services, which Ofcom is reviewing in this Market Review will remain the primary and the only scale mechanism for delivering voice on fixed lines to consumers and businesses in the UK. The importance of WLR and CPS in delivering these services in the market must not be underestimated.

2.4 So whilst BT's market share of wholesale call origination has fallen from around 58% to around 50%[5], with that decline attributed to competition from MPF based operators, BT still has SMP in the market for wholesale call origination. There is however a considerable and growing body of evidence that points to BT strengthening its dominant position in the market. When this is taken together with evidence around where we are in the lifecycles of the current generation of products such as MPF (which acts as one of the few means of modest competitive restraint on BT's wholesale pricing), and takes into account the expected development timeline for SOGEA, it would appear that BT dominance is in fact a far greater threat to competition than it was in 2013, the time of the last review.

[4] In conjunction with the remedies imposed on KCOM within Hull.
[5] See 6.52 of the Consultation

2.5 This concern is borne out in the retail calls market. BT's share of revenues is rising at an alarming rate. From being below 49% in 2014, Ofcom's last published data now puts it over 55.4% and on a rising trajectory. The picture is more concerning when the more supplier diverse business calls market is excluded, with BT's share of retail fixed residential calls now standing at 61%, demonstrating their continued and increasing dominance in the narrowband market. Ofcom have themselves raised competition concerns about the functioning of the standalone voice market, proposing direct intervention in one part of the market. However, it is clear that the problem is wider than that and if other CPs are to compete with confidence in the retail narrowband market then certainty around pricing in the wholesale market is required.

2.6 The retail calls market is underpinned by the Wholesale end-to-end calls market, where alternative providers either use Carrier Pre-Selection (CPS) to provide their service, rely upon a wholesale provider using CPS, or use BT's Wholesale Calls product. Here, the picture is even more pessimistic, with CPS in long term retreat, out-sold by a considerable margin and struggling to compete with BT's dominant Wholesale calls product. There is no other way of carrying calls provided on a WLR line, without buying either BT's CPS offering or its Wholesale Calls product. **BT has 100% market share in WCO from WLR lines.**

2.7 There are of course alternatives to purchasing WLR: buying MPF and self-supplying voice services, however investment in this market has peaked as exchange based broadband services decline, no further investment in exchange based voice services is taking place.

The market needs new entrants

2.8 In 2009 Ofcom removed retail price regulation from BT's voice services. It was a move evidenced by accelerating retail competition. Sky and TalkTalk were investing in local loop unbundling, connecting to exchanges and competing heavily on price in the retail market to build market share. BT and Virgin were responding and retail competition was comparatively healthy. That competitive intensity was fuelled largely by those MPF users and their desire to grab market share. Even those consumers who didn't choose to switch supplier were benefiting from price competition as they were able to push their existing supplier for a better deal. In the business market, where the supplier base is broader and WLR is the default means of supply, the intensity of competition continued apace.

2.9 New entrants in the market today would not rationally invest in exchange based voice services: technology is evolving such that installing equipment in BT's exchange to provide voice services will become unnecessary, with MPF now regarded as a legacy approach to providing services. As a result, new entrants are using BT's WLR product as it is the only commercially rational wholesale product available to provide voice services.

2.10 In any market it would be a highly unusual occurrence for the largest retail competitor to be in control of a very significant percentage of a retail rival's input costs, with the ability to increase them without further regulatory approval or control. However, that is exactly what Ofcom are proposing in the Narrowband market, through the removal of all direct pricing controls on the WLR and CPS products. BT's SMP is undeniable and if a remedy is required, then an effective remedy is essential. Ofcom's proposals for price control relaxation on WLR and both price control relaxation and the removal of non-discrimination regulation on WCO leaves these key products without effective remedies.

Inconsistency in policy across markets

2.11 There is a policy inconsistency in Ofcom's approach to the threat of price rises on consumers. Ofcom has put in place regulation that allows consumer customers to break from their contract if a price rise leads to 'material detriment'. Ofcom's General Conditions has interpreted "material detriment" at a very low threshold with any price rises above a recognised index such as CPI or RPI within the minimum term of a contract considered potentially likely to trigger such a contract release (indeed the proposed changes to the General Conditions imply that <u>any</u> increase constitutes a material detriment). However, if wholesale prices of services that are used to provide those retail services are unconstrained by any formal regulatory safeguard cap, and as a result any increases in the cost of supply are passed on to end consumers it will breach this threshold, resulting in what Ofcom considers material consumer detriment.

2.12 As a result, we are faced with a regulatory framework that protects consumers but does not protect market players from a dominant, SMP supplier and as a result CPs can be squeezed in the middle with no ability to pass on those price rises and no ability to reject them. This inconsistency in approach towards consumer price rises cannot be right, and should be addressed before it materialises.

Excess profits in regulated markets indicate that regulation is not fully effective

2.13 The issue of excess regulatory returns earned by BT across its range of regulated services is an emotive one. As a key competitor to BT we have no issue with a regulatory regime that creates genuine efficiency incentives and allows BT to out-perform charge controls. However, we are deeply uncomfortable with creating regulatory charging frameworks that permits a regulated business to earn excessive returns for no sound policy reason. Over the past 11 years BT have earned excess returns of £9.7Bn across SMP products[6]. This outcome is completely undesirable from a consumer welfare perspective and a reflection of past regulatory regimes that have not set pricing close to competitive market outcomes. In 2015/16 in a report for Ofcom, Cartesian identified that £160M per annum in costs had been inappropriately allocated to the WLA market[7], of which WLR makes up a significant part. These costs are currently imbedded in the charges set today and some form of regulatory intervention is necessary to ensure pricing tends towards cost as would be the case in a truly competitive market.

2.14 WFAEL and WCO are SMP products ✂. Given the inability of CPs to reject any price increase due to the one-sided contracts that exist with BT, this affords BT's competitors no protection, ultimately harming competition in the market. In the meantime, BT's excess profits in regulated wholesale market continue to stack up, creating the ability to compete more vigorously in retail markets. We are surprised that Ofcom is willing to consider giving BT more freedoms to over-recover in regulated markets rather than to put in place effective pricing remedies in SMP markets.

---

[6] https://mediacentre.vodafone.co.uk/pressrelease/planned-reforms-openreach-required-new-report-highlights-bt-excess-profits-increased/
[7] https://www.ofcom.org.uk/__data/assets/pdf_file/0016/81412/review-bt-cost-attribution-method.pdf

The need for regulated WLR and CPS remedies

2.15 WFAEL (in the form of WLR) and WCO (in the form of CPS) remain very important products for communication providers. They underpin the retail services offered to consumers and business customers, fueling competition across all retail markets. Unlike MPF, which is only available in a significant but set number of locations, WLR and CPS are universally accessible throughout the UK[8]. As the MPF footprint has been tailored primarily to serve residential broadband customers, other parts of the retail market are not well served by MPF-based supply, including standalone voice customers. In the SME/enterprise sector, WLR/CPS continues to be relied upon as the key means to provide analogue exchange lines and calls, underpinning a diverse range of offerings from a range of specialist suppliers. Ofcom's own analysis suggests that **80%[9] of end users in the SME sector are dependent upon WLR**, with those who do not directly purchase it, benefiting from the wider WLR-based competition in the market.

2.16 Given the scale of past LLU investment it might, at face value, be logical to assume that MPF alone is enough to constrain BT in the retail market and that WLR based competition is somehow less important as a result. However, this is not the case, with MPF failing to act as a constraint or a supply option over a range of sectors in the market –from the rural users who have no MPF choices open to them (such as those in WBA market A), or the business customers who require business grade services that aren't supported by MPF suppliers, through to the standalone voice customers where MPF doesn't compete and where Ofcom are proposing unprecedented retail intervention to protect consumers eight years after withdrawing specific retail regulation. Perhaps the most startling illustration of MPF's inability to serve all is the need by the two largest MPF users to continue to purchase WLR to reach a proportion of their customer base. There are a variety of reasons for this including:

I. Number portability issues – in attempting to serve the customer on MPF, if porting problems are encountered (for instance out of area line previously being used), WLR will instead be used to supply the customer (as this leaves the number terminating on BT network, hence removing the need to port the number).

II. Coverage: the largest MPF CPs cover around ~90-92% of the UK individually, if a customer resides outside of their reach then WLR will be used.

III. When new end users sign up to a higher speed broadband FTTC based offerings – it may in fact be more cost effective for these customers to use WLR in combination with FTTC than make use of MPF.

IV. If a CP is capacity constrained at an exchange, it might be more effective to use WLR rather than MPF based voice.

2.17 The need for WLR does not go away, in future a larger proportion of customers served by MPF based operators will receive services using WLR. In part this will be for the reasons outlined above, namely that an increasing number of their new customers will be on higher speed broadband, but also as existing MPF equipment reaches the end of its working life customers will necessarily be migrated to WLR, as no new investment in the MPF platform is likely to be forthcoming.

[8] With different supply arrangements for Hull
[9] See para 6.10 of the consultation

2.18 WLR and CPS are even more vital to those operators without a legacy MPF estate. At the end of 2015 Vodafone entered the consumer fixed voice and broadband market. The popularity of the service has grown rapidly with competitive market pricing. In August 2016 we abolished separate line rental charges for home broadband customers, being the first in the market to do so. From a standing start we have attracted a material number of customers in a relatively short space of time, with demand continuing to grow. The bold move to scrap retail line rental has resonated with consumers and resulted in an upsurge in demand. This approach was not without considerable commercial risk, and the removal of separate line rental charges means we are unable to pass on any price increases from Openreach on a like-for-like basis while we continue to face charges at the wholesale level. The risk involved only increases as regulatory certainty reduces: ✂.

2.19 Whilst we have sunk investments in exchange based voice and broadband services ✂their capacity is finite and coupled with a significant shift in consumer demand towards FTTC (fibre) based services it means that it is not economically viable to deploy exchange-based MSANs to make use of MPF solely for voice service. We understand the economics faced by providers who have deployed MSANs (and already provide services to customers) and they will rationally sweat these sunken assets for voice when converting their existing standard broadband base to fibre broadband, however this is not a rational strategy for new entrants, with WLR remaining the only available mechanism to serve these customers until a fully fit-for-purpose SOGEA capability is introduced which would allow voice to be economically carried over the broadband signal.

2.20 ✂.

2.21 Continued growth and our ambition for the future can only be realised if there is regulatory certainty around the future pricing of WLR. In a competitive retail market, a new entrant can only gain the critical mass needed to run a sustainable business by building scale and being price competitive. When market challengers do not have the long term[10] confidence to offer price competitive offerings to win market share, all consumers are harmed. Investment in the service, marketing, sales, and customer care all rely on an understanding that we can create and retain a competitive offering. Uncertainty around pricing results in business cases being delayed and investment being curtailed, limiting the scope of competition and the benefit to consumers.

2.22 It cannot be overstated how important WLR/CPS will be to the future dynamism of the market. Higher speed broadband will be the main impetus for continuing competition in the market and as already explained operators (including MPF based operators) will necessarily provide service to their new (and potentially upgrading) customers using WLR and CPS or an alternative wholesale calls product that requires WCO as an essential input. Without effective remedies for wholesale pricing and non-discrimination Ofcom will be putting this at risk.

[10] And by long term we are not thinking decades. Vodafone has been offering 12 and 18 month contracts to consumers since April 2016, without any certainty that the WLR price will not increase during the contract period.

Rural Markets are particularly vulnerable

2.23 In the UK, the MPF investment cycle completed some time ago, with no CPs planning to expand foot print or increase capacity within footprint. No new entrant would deploy any new assets to use MPF. This is a rational move, recognising that technology has evolved and that the only way to deliver the higher speeds demanded by consumers on copper infrastructure is to make use of FTTC, including in the future G. Fast technologies. MPF usage has peaked at around 9.86M MPF lines, with the most recent figures showing a decline in volume for the first time in recent years. In reality the true decline of MPF utlisation is being masked, as the number of MPF lines used to deliver broadband is down significantly (over 2 million lines would not be an unreasonable estimate), with MPF only continuing to be used for the voice path where it is in situ when a customer elects to use FTTC based broadband. Indeed, the decline of MPF is not just a demand side phenomenon, BT exchange closure plans will effectively eliminate the ability of CPs to make use of any MPF assets once exchanges are retired in specific locations.

2.24 The evidence from the market firmly supports Ofcom's conclusion[11] that it is not economically viable to use MPF to serve fixed voice only customers, this being borne out by the near universal usage of WLR for these customers. It is for reasons of convenience and operational simplicity rather than economics, that an existing standard broadband end user supplied via MPF, who then moves to FTTC broadband with the same supplier has their MPF line retained. If the customer churns to another supplier for fibre broadband, in all likelihood they will see WLR used to supply the voice path.

2.25 Rural customers are already worse off in terms of choice and value: In locations with poor broadband speeds, broadband take up unsurprisingly tends to be lower as the benefits of broadband are less clear to the end consumer. As a result, there is a greater reliance on WLR based delivery for voice. Sky recently announcement that they are now refusing to supply premises that can't achieve broadband speeds of at least 2Mbit/s[12], which means they are also not competing to supply voice services to those premises as well. This demonstrates that one regulated product does not and cannot meet all consumer needs.

Reliance on WLR to deliver narrowband voice will reduce - but only in the future

2.26 The demise of MPF as any form of competitive constraint in the retail market is the inevitable consequence of technology transition and shifting customer demand. It is necessary to take account of this when estimating what reliance communication providers and ultimately consumers will have on both WLR and WCO in the future. In the medium term we expect Openreach to launch SOGEA (broadband without the narrowband line), however its availability will not be universal on day one.

2.27 We anticipate SOGEA taking some time to be available across the UK currently we have had no confirmation from Openreach around the future price of the service. Given the technical challenges to overcome we anticipate the earliest the product could be made available would be sometime during 2018, although this date could slip due to the number of technical hurdles ahead.

2.28 The technical issues being addressed by NICC Standards are profound and will take considerable time to resolve. Ofcom has acknowledged this and have formed an industry group with participation extending to stakeholders such as social care telemetry kit manufactures and the alarms industries. Given the number of uncertainties at this point, including pricing and technical standards there is no guarantees that SOGEA will become a direct replacement for WLR.

[11] See para 4.93 of the consultation
[12] https://www.broadband-finder.co.uk/news/no-more-sky-broadband-for-homes-with-slower-speeds#.WIHQp3ncv81

2.29 From a technical and economic perspective future SOGEA deployment appears to make sense, but given BT's control over pricing and development it is too early to tell how widely it will be adopted in the next market review period, and at what point (if any) Ofcom can realistically consider shifting its regulatory focus away from WLR. Assuming a suitably priced and functional product is launched and made available throughout the UK, we would anticipate that its adoption would be gradual.

2.30 Each provider is likely to conduct their own small scale consumer SOGEA trial to test the product and the processes around it in order to iron out any deployment issues. Given the change to customer in-home wiring and the degree of consumer education needed (not least around the reality of plugging in analogue telephone apparatus straight into a port on the broadband router), it is inevitable this will take time - some providers will need to swap out their entire installed base of in-home routers to ones with analogue terminal adaptors. Once a CP has confidence in the process, new supply is likely to switch first, with new orders provisioned via SOGEA, with any migration of the existing base following sometime behind to ensure a smooth transition. Given the work involved, we don't think we'll be at the point of mass SOGEA adoption at the end of the next market review period, although we hope SOGEA will start to feature in new supply orders by this point. Communication providers will therefore continue to remain reliant upon existing products such as WLR and CPS throughout the entirety of the next market review period. In Annex 1 we set out in detail the challenges faced by industry and consumers to migrate on to SOGEA.

There is a lack of alternative supply of MPF and WLR

2.31 Another significant factor which holds back the ability of MPF to act as an effective constraining factor across large parts of the retail market is the lack of any functioning merchant market for MPF resale or indeed a WLR substitute, with Sky and TalkTalk using their co-location assets for self-supply only. ✂ so is not a substitute for Openreach's MPF/WLR products on its own, as it provides an end-to-end packaged service, rather than simple call origination and access.

2.32 This means WLR is the only widely available analogue exchange line service offered in the wholesale merchant market, no other products are available. In 2013 Ofcom recognised this situation, stating it was unaware of any existing LLU operator providing a wholesale service based on MPF to third party resellers. *It seemed unlikely that LLU operators would be willing to start providing such wholesale products*[13] Ofcom also identified that the ability of resellers to substitute from wholesale end-to-end calls to a wholesale end-to-end calls product provided by Virgin Media over its cable network appeared to be significantly limited by both the comparability and availability of any wholesale product. Virgin Media does not offer a wholesale end-to-end calls product to third parties, having not used its cable network to target any wholesale market and it would appear to have little incentive or ambition to do so.

[13] https://www.ofcom.org.uk/__data/assets/pdf_file/0018/79011/final.pdf [Ref: 4.107]

BT's Wholesale Calls product dominates the market

2.33 Ofcom's analysis in the consultation has almost completely omitted a crucial element of the narrowband market, namely that regulated Wholesale Call Origination, in the form of CPS, is the basic enabler for a wholesale end-to-end calls market, and without it there would be no wholesale end-to-end calls other than that provided by BTWholesale.

2.34 This consultation fails to take account of the scale or importance of BT's Wholesale Calls product in the market. BT dominates the merchant market for end-to-end calls which has contributed significantly to the decline in CPS volumes. Other CPs struggle to retain wholesale customers for end-to-end calls and have also moved their own direct consumption from CPS to BT's Wholesale Calls product. Although there are some minor technical differences, from an end-user's perspective wholesale end-to-end calls supplied using BT's Wholesale Calls product and those supplied using WCO (i.e. CPS) are functionally the same. This can readily be seen through BT's success at winning a large number of contracts from CPS Operators in both the residential and SME sectors.

2.35 The omission of the impact of BT Wholesale Calls from Ofcom's market analysis is a serious failing in the overall assessment of the market. Wholesale Calls is likely to remain an important feature of the market for some time to come with BT continuing to price its Wholesale Calls product ultra-competitively (i.e. potentially anti-competitively) and showing no desire to relinquish its almost totally dominant position in this market. The presence of BT Wholesale Calls in the market is not in and of itself an issue – dominance is not a problem if it is not abused – however ex ante regulation needs to take account of the fact that BT supplies – interchangeably – CPS and Wholesale Calls products to the same sets of customers in the same market. Without an effective regulatory framework on either CPS or Wholesale Calls, BT is at liberty to exploit its dominance in this market. An effective retail market can't continue if BT are able to re-monopolise the wholesale market.

2.36 Ofcom has investigated BT's charges for Wholesale Calls on two separate occasions. In 2005 Ofcom carried out an investigation under the Competition Act following a complaint from Gamma that BT was carrying out a margin squeeze[14]. Ofcom concluded on that occasion that BT had not been carrying out a margin squeeze, however it did set out a framework suggesting how BT should price Wholesale Calls to avoid a margin squeeze (given the aggressive low margin prices observed in the market).

2.37 In 2008 THUS and Gamma filed a second Competition Act complaint around BT's pricing in this market following the loss of a number of key reseller customers. In addition, BT had successfully secured two very large contracts, which represented the majority of the entire market (encompassing end-to-end calls for both Sky and Talk Talk). Ofcom estimated in 2013 that BT's share of wholesale end-to-end call minutes in the merchant market was between **61-70%** during the period under investigation[15]. After nearly five years of investigation and after issuing one Statement of Objections[16], Ofcom concluded in 2013 that a margin squeeze had indeed occurred, with BT incurring a negative margin of between -10 % and -20%[17] on one of the large contracts which represented around 40% of the market. Sustaining this

---

[14] http://webarchive.nationalarchives.gov.uk/20140402142426/http:/www.oft.gov.uk/OFTwork/competition-act-and-cartels/ca98/decisions/gamma
[15] https://www.ofcom.org.uk/__data/assets/pdf_file/0018/79011/final.pdf See: 1.11
[16] https://www.ofcom.org.uk/__data/assets/pdf_file/0018/53550/bt_thus_gamma.pdf
[17] https://www.ofcom.org.uk/__data/assets/pdf_file/0018/79011/final.pdf See 6.365

level of losses, BT even failed to cover the interconnection costs associated with providing the Wholesale Calls product.

2.38 Ofcom's analysis of BT's historical margins showed that BT failed to maintain a sufficient margin between its upstream and downstream prices such that it failed to cover downstream costs during the investigation period. However, Ofcom took no action due to a failure to identify ongoing harm (the length of Ofcom's investigation (5 years), industry consolidation and the technology shift to MPF over this period had a significant bearing on that conclusion with the consequences of harm from BT's conduct being obscured by other market factors).

2.39 While MPF self-supply has undoubtedly reduced the size of the end-to-end call market since the time of Ofcom's last investigation, BT's unregulated Wholesale Calls product continues to dominate the merchant market for end-to-end calls, relegating CPS into a minority position. As a result of indefinite contracts signed by BT a number of years ago it would appear margin squeeze pricing remains in the market today[18], with one significant supply contract effectively being open-ended, BT being unable to unilaterally terminate it and Ofcom acknowledging that this contract failed to cover even interconnect costs (let alone the other costs associated with an end-to-end calls product wrap).

2.40 Vodafone wrote to Ofcom in 2016[19] highlighting that the Wholesale Calls pricing currently being offered by BT could well be indicative of margin squeeze. In reply we were assured that the consultation would take these considerations into account however this has not transpired.

2.41 Pricing is not the only concern CPs active in the wholesale end-to-end calls market have, with Communication Providers using CPS to compete against BT's Wholesale Calls product having to overcome a number of other commercial and technical obstacles in order to compete. In Annex 2 we set out these challenges in more detail, illustrating the task facing CPS operators, even before any pricing remedies have been relaxed.

2.42 The prospect of CPS prices rising as a result of ineffective regulation due to insufficient safeguards being placed on BT's CPS product would put Communication Providers in an impossible situation: exacerbating the existing competition concerns in the market today. The remaining 1.8M CPS lines left in the UK could dwindle yet further as CPs struggle further to compete with BT's Wholesale Calls during the next market review period. CPs already face significant commercial headwinds in this challenging market and a failure by Ofcom to put in place backstop pricing restraints at a wholesale level and a non-discrimination obligation is likely to result in CPs exiting the market, leading to wholesale price rises that will eventually filter through to end users. Even those resellers who purchase BT Wholesale calls today would be impacted if CPS users were compromised further through higher input prices leading to a reduction in the intensity of competition and inevitable price rises for the Wholesale Calls product as BT seeks to exploit a weakening of competition in this key wholesale market.

Price Rises are inevitable as BT exploits pricing freedom

2.43 If effective regulation is removed from SMP services such as WLR and CPS, then it is realistic to assume that price rises will occur. Ofcom itself has acknowledged that despite having been given the freedom to price below the regulated price ceiling in the current charge control for CPS and WLR, BT has maintained

---

[18] https://www.ofcom.org.uk/__data/assets/pdf_file/0018/79011/final.pdf See 7.93

[19] ✂

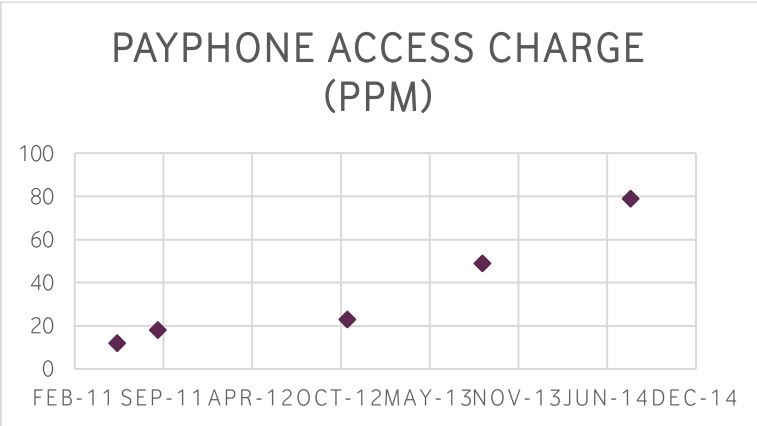
prices at the regulated cap. This does not appear a pattern of behaviour that would point towards BT being constrained on price in any way by competition.

BT's track record when wholesale pricing is deregulated is consistent, and provides no comfort. Upon gaining the freedom to price as they see fit, BT universally appears to push through a series of often substantial price rises. The most concerning aspect of this pattern, is that on each occasion Ofcom has taken a decision to deregulate pricing under the belief that the market is showing signs of being competitive, and as a consequence you would expect that price rises would be constrained by competition in the market.

2.44 There are many examples in the Narrowband Market that clearly demonstrate BT's flexibility in being able to impose often significant price increases without fear of any threat of competitive restraint from any other part of the market. With the BT Standard Interconnect Agreement (SIA) allowing BT to push pricing changes forward unchallenged, BT are now habitual offenders and we firmly believe that both CPS and WLR pricing will suffer a similar fate if no pricing backstops are introduced to constrain their behaviour in these important SMP products. In the table below we set out some examples of profitable price rises that have occurred below.

Figure One

Payphone Access Charge is subject to a voluntary commitment given by BT to charge on the basis of costs. BT has been unable to explain how its costs have increased so much.



BT's SMP designation in Single Transit was removed in March 2013. Since then, charges have increased exponentially with evening and weekend charges for transit over 300% higher than when effective regulation was in place.

Single Transit (ppm)	daytime	evening	weekend
31-Mar-13	0.0394	0.018	0.0142
01-Oct-16	0.0675	0.0675	0.0675
% increase	171%	375%	475%

As recently as 3rd of February 2017, while this consultation was underway, BT issued a series of pricing notifications[20] with an effective date of the 1st April 2017, clearly illustrating their ability to raise prices with impunity, with a number of significant increases planned and with no ability to reject these increases, CPs are forced to pay the increased rates:

- BT 64K Call Termination at Single/Double Tandem: ppm +2.5% and ppc +9.2% [Deregulated Service]
- CPS on BT Retail Lines: ppm +9.2% and new ppc charge: 0.163ppc [Deregulated Service]
- Number Portability Transit: ppm +2.5% and ppc +9.3% [Unregulated Service]

[20] Network Charge Change Notices (NCCNs) Numbers 1320, 1322, 1323, 1324, 1325 and 1326 plus Access Charge Change Notice (ACCN) Number 1321 concerning Call Conveyance Charges – effective 1st April 2017

2.46 These price increases do not appear to be the conduct of a communications provider facing competitive restraint in the market and it is clear that market failure is enabling prices to rise in significant increments. However, without the existence of backstop regulation other Communication Providers are unable to challenge these price rises. In the case study below we illustrate the example of access to Emergency Call handling, setting out how pricing has changed in recent years. The pricing for this service, like many other mandatory or commercially necessary services, sits outside the scope of regulation, with BT able to dictate pricing in the market without fear of regulatory or commercial repercussions.

2.47 Part of the problem is that BT has, in addition to SMP in key markets, a level of control on the overall voice markets that can be classified as 'system control' – as a result its SMP extends across other markets and beyond the markets we review. As such BT has SMP in markets that Ofcom has not reviewed. All CPs have obligations to provide access to Text relay, but there is only one Text relay platform – it is a monopoly. BT has dominance yet its pricing is not controlled by ex-ante regulation. CPs have no ability not to buy services from BT and yet Ofcom has not reviewed this market. Annex 3 sets out a number of wider, voice market concerns in more detail.

Case Study: Access to Emergency Services

In order to provide retail narrowband services, Ofcom mandates via the General Conditions that originating CPs provide uninterrupted access to 112/999 services, including the provision of location information. In other words, there is a captive market.

In the UK[1], all 112/999 calls are routed to BT as the Public Safety Access Provider (PSAP), which answers the calls and directs to the appropriate emergency authority. BT has been the monopoly PSAP since Vodafone withdrew from providing the capability in 2013; this withdrawal from the wholesale market was inevitable in the face of fiercely competitive pricing by BT, and the lack of scale economy meant we then had little choice but to purchase BT's services for our own retail customer base.

Perhaps predictably, once in a monopoly situation BT has significantly increased its pricing. The latest increase, in November 2016, has seen BT's price for handling such calls increase to 95.2ppc for fixed origination, and 73.9ppc for mobile origination – a rise of 45% / 32% respectively in the rates since BT became the monopoly provider. This is not an issue of small consequence – Vodafone is paying some £2.5M to BT per year for these services.

BT has offered a series of justifications for the increase, ranging from the impact of the living wage, through to increased platform support costs, reducing instances of mobile "pocket dialling" and lowering volumes in directory enquiry call-centres which share resources. Whilst each of these could be driving underlying costs up, the unregulated nature of the service means we have no visibility of whether they tell the whole picture, or whether the truth is that BT is exploiting its monopoly position to secure higher profit margins.

The recent proposal to update the General Conditions to require support of e-call presents an even more extreme scenario; e-calls count as "999 telematics", which are charged by BT at £10/call. Auto manufacturers will be compelled to fit equipment that will generate e-calls into their vehicles; the inevitable consequence is that the cost of these calls will be passed through to the manufacturer and result in more expensive vehicles for UK consumers. It is a classic economists' negative externality because a fairly esoteric exploitation of a monopoly telecoms position will have a detrimental effect in a seemingly unrelated car sales market. According to the Association of British Insurers (ABI)[1], there are almost 3 million motor insurance claims per year; if we assume that once e-call is fully deployed each of these instances will result in <u>at least</u> one e-call (for accidents the chances are it will be two), the scale of this burgeoning issue becomes clear.

Vodafone provides narrowband services in a series of European countries, all of which have similar requirements to provide access to 112 services. We have identified only one, Ireland (which coincidentally has BT as the PSAP), where charges are higher than the UK. In Portugal and Spain, no wholesale interconnect charges are levied for provision of the service; in Germany the calls are treated as standard terminating calls and treated as WCT.

Where Ofcom requires that providers of narrowband service are required to provide access to 112/999, if there is a monopoly provider of this access it is only right that Ofcom gives this regulatory scrutiny: Ofcom will have failed in its regulatory duty if it compels providers to consume an SMP service (even if Ofcom hasn't actually designated that the service is SMP), without taking an interest in the pricing of that SMP service. Where the operator of the SMP service just happens to be BT, i.e. the provider that has SMP in a series of other wholesale services and is the largest retail provider of narrowband services, Ofcom should be very concerned that pricing of 112/999 is not excessive. Vodafone urges Ofcom to incorporate access to emergency services within the narrowband markets that it is examining.

3. Market Definition and Assessment of Market Power in WFAEL and WCO

Market Definition: WFAEL and WCO

3.1 Vodafone does not agree with Ofcom's conclusions on market definition for WFAEL and WCO on two accounts:

- Firstly, it is appropriate to consider WLR and WCO together as they are linked products and are provided under very similar competitive conditions: hence Ofcom has carried out two market reviews together.
- Secondly, if it is accepted that WFAEL and WCO should be treated as separate markets (as Ofcom argues), then it is essential that a more rigorous approach to indirect constraints is adopted and if such an approach is taken, it leads to narrower market definitions than those proposed by Ofcom.

Access and calls are linked products

3.2 Market definition is a means to an end and it is essential that the approach taken to defining markets recognises that the objective is to determine if markets are not functioning effectively and if this is the case then to impose appropriate remedies to the problem. Although the SSNIP test, based on identifying substitutable products, is generally very helpful in defining markets it does not always provide the best means to define a market.

3.3 This is clearly the case for defining the geographic extent of a market, an issue well recognised by Ofcom. Rather than strictly considering the possibilities for substitution the main focus is to identify whether areas have the same competitive characteristics. Similarly, a more pragmatic approach is appropriate in the narrowband market.

3.4 Access lines and calls (or WLR and WCO in terms of the regulated wholesale products) are not substitutes and hence cannot be considered to be in the same market for this reason. Nevertheless, the two products are inextricably linked both at the wholesale and at the retail level and hence it is appropriate to consider the two products together for regulatory purposes. As well as being products that are bought and used together they are also products that are delivered in markets that have very similar competitive characteristics.

3.5 This is absolutely clear at the wholesale level. An operator purchasing WLR must also purchase WCO or another wholesale product such as BT's Wholesale Calls product. WLR only makes sense when purchased in conjunction with a calls product (even if in some cases not from the same supplier). In purely practical terms it would be of limited value to an operator purchasing WLR at a regulated price if WCO was not also offered under equivalent regulated terms. The problem is that there would be leakage from the less regulated or unregulated product through to the regulated product (and then in some cases, to the broadband product).

3.6 The position at the retail level is more complex though ultimately similar considerations apply. For the vast majority of customers, it makes no sense or is impossible to purchase line rental without calls and vice versa (albeit in limited circumstances the services are taken from different suppliers). Fixed calls cannot be made unless a customer first has a fixed line and whilst a line rental allows a customer to take broadband service this does not detract from the fact that calls sit naturally alongside the line rental for most customers. Indeed, it is now common practice for operators to provide at least some calls free as a part of the line rental price.

3.7 Ofcom's analysis of indirect constraints explores the extent to which different switching options exist between lines and calls. Although Ofcom argues that customers are more likely to be able to switch calls to mobile (on a call-by-call basis) we believe that there are some significant flaws in this analysis, as discussed in Annex 4. The fundamental issue is that customers will not necessarily be in a position to make a call-by-call choice, as the way operators price services could preclude this from happening. Calls both for mobile and fixed are typically provided within bundles, whereby the effective cost of any particular minute within the bundle is zero. Rather than customers optimising on a call-by-call basis it is more likely (and this is suggested by Ofcom's own research) that customers optimise across call types e.g. mobiles are used to call mobiles and fixed to call fixed and non-geographic numbers. Indeed, Ofcom ultimately concludes the indirect constraints on calls from mobile are insufficient. In practice then the switching options and competitive characteristics at the retail level of access and calls are very similar and hence this is consistent with the view that the two markets should be linked for regulatory purposes.

3.8 We would argue then that Ofcom must take account of the inherent links between the two markets in its market assessment. It could do this by defining a single WFAEL and WCO market or it could recognise these links in its SMP assessment and imposition of remedies. The essential practical issue is that Ofcom must avoid leakage from a lesser set of remedies from one market into the other. Under Ofcom's proposed remedies this could happen with the weaker set of remedies for WCO undermining the linked WFAEL and WCO markets.

Market definition for a separate WFAEL market: assessing the importance of indirect constraints

3.9 Although, as we have outlined above, we believe that WFAEL and WCO are linked markets and as such should be analysed together, nevertheless if Ofcom does consider them separately then it is essential that it takes account of the issues that we raise here and in Annex 4.

3.10 It is now common practice for indirect constraints to be considered in the definition of a relevant economic market. We are concerned, however, that Ofcom has not provided evidence in its consultation document that it has followed a sufficiently rigorous approach in assessing the effectiveness of indirect constraints. We have set out in Annex 4 the type of rigorous qualitative approach that we believe must be adopted when assessing indirect constraints and here we only provide brief conclusions that follow from the adoption of such an approach (and to understand fully the arguments being made here it is necessary to read Annex 4).

3.11 Ofcom appears to rely mainly on assertions that customers would consider any technically similar type of product to be a substitute and on this basis extends the market from the focal product to include cable, MPF and FTTP.

3.12 In addition to this there are two specific points of detail that undermine the conclusions that Ofcom has reached. As discussed in Annex 4, a 10% increase at the wholesale level would translate into a smaller increase at the retail level, even more so when a customer is purchasing a package of services, for example line rental, calls and broadband together. Here, if the customer were considering switching to cable, then they would need to switch the whole package even though only the line rental price had been increased.

3.13 Regardless of the size of the increase at the retail level, Ofcom has indicated in its consultation document that it does not believe that customers are particularly sensitive to price changes for the line rental product[21]. Although the WLR price has generally been falling over the last five years or so at the same time the retail line rental price has increased by around 5% per year and prices from different operators have converged over this period. As operators would generally raise prices of products for which customers have low price sensitivity, this data is certainly consistent with the view that customers are not particularly sensitive to line rental price changes. As Ofcom has also noted almost 40% of customers have either no or limited switching options.

3.14 Given this combination of a lower retail price increase, a lack of price sensitivity and a large group of customers unlikely to be able to switch suppliers it is difficult to understand how Ofcom has extended the definition of the market beyond the focal wholesale product to include any forms of analogue access over alternative network infrastructure. At this stage, therefore, we would argue that Ofcom should define the market only to include the basic focal copper access WFAEL product.

Market definition for a separate WCO market: assessing the importance of indirect constraints

3.15 The same concerns about the lack of application of a rigorous, qualitative approach to indirect constraints apply in the definition of the WCO market. It is challenging to identify the relevant retail price increase that corresponds to an increase in the WCO price, as the discussion in Annex 4 illustrates and as recognised by Ofcom. In practice the considerations could be very similar to those in the case of WLR. As explained in Annex 4 an operator would choose to pass on the price increase in the financially optimal way, so the WCO increase could be passed on to the line rental charge (which typically includes a bundle of free calls).

3.16 So again there would be a lower price increase at the retail level most likely for the least price sensitive product (i.e. line rental) meaning that it is unlikely that switching levels would be sufficient to make the wholesale price increase unprofitable.

3.17 As such we believe that the WCO market definition should correspond to the definition we proposed for the WFAEL market i.e. to include WCO only over the basic focal WFAEL product. Additionally, however, it should be extended for pragmatic reasons to include WCO over wholesale ISDN2 and ISDN30 lines, due to the technical similarities in the product being delivered by the wholesale supplier.

The Importance of Issues at the Wholesale Level

3.18 It is important not to lose sight of the fact that the products subject to regulation and the focus of this consultation are all at the wholesale level. While retail behaviour is an important factor, it is crucial to consider the impact of purchasing behaviour at the wholesale level. For example, the relevant decision point for purchasing decisions for the wholesale market is not in fact on a per call basis at the retail level

21 See paragraph 4.49 of Ofcom's consultation document.

(although this downstream behaviour may drive wholesale demand), but the arrangements available to CPs to route their calls from UK fixed exchange lines.

3.19 Given BT's almost total dominance of the wholesale end-to-end calls market, it will be in a position to manage this market to enhance its own profitability without opening it to more effective competition from other operators. In the absence of a price control and a non-discrimination obligation on WCO, BT will be able to increase the WCO price of its potential competitors thus allowing it to manage upwards the prices for its Wholesale Calls product and improve the profitability of the product. Not only will BT be able to exploit its SMP to improve its financial position at the cost of its competitors, but there is also the risk that there will be a pass through effect at the retail level to the detriment of customers.

3.20 To this end the impact of any proposals in WFAEL and WCO markets needs to take account of ramifications in the wholesale end to end calls market which BT currently dominates and which other CPs using CPS and WLR struggle to compete in. Much of the discussion within the market analysis section of the consultation appears to conflate retail market behaviours with the wholesale market (where the remedies actually apply). A proper consideration of the Wholesale Call Origination needs to consider in detail the impact that BT Wholesale Calls has had on the merchant / reseller market and the need to ensure CPS charges remain underpinned by clear price regulation. Margins in this market continue to be extremely low, with single digit margins not uncommon. Any price rises in the wholesale cost of CPS will therefore have an immediate and damaging impact on competition within the wholesale end to end calls market.

3.21 There is also a failure in the market analysis thus far to take a balanced view on the prospect of both infrastructure withdrawal as well as possible future investment, with emphasis placed upon likely cable investment by Virgin in the period to 2020, but no recognition that there is a strong likelihood that local exchange presence by MPF providers will start to shrink as a result of:

- ADSL connections in the UK, including MPF have fallen below 14M for the first time in several years with FTTC take-up now standing at 25% of all broadband connections or over six million connections and growth is accelerating. Once a provider's voice and broadband over MPF customer base falls below the economic tipping point at a particular exchange it will render a continued presence at that exchange location unviable.
- Long range VDSL implementation results in ADSL not working at an exchange and therefore this will accelerate MPF based service reductions and
- BT's exchange closure program is also likely to result in MPF volumes falling, although the timescales for this are less clear.

3.22 Ofcom has defined wider markets for WFAEL and WCO than we believe is justified at present. Nevertheless, Ofcom's analysis has demonstrated that BT continues to have SMP in both the WFAEL and WCO markets. Ofcom has, however, argued that the level of BT's market power has been declining, particularly in WCO, which we do not believe is supported by a rounded view of the evidence.

Assessment of market power: WFAEL and WCO

Market power under Ofcom's market definitions

3.23 Whilst we support very strongly Ofcom's conclusion that BT has SMP in both markets, we contest Ofcom's view that BT's market power is declining and is in any case well over the threshold where SMP is declared. As we discussed in some detail in Section 2, changes in technology and customer preferences will lead to an increasing reliance on WLR and WCO over the next review period. The combination of the deployment of FTTC, MPF based equipment coming to the end of its life cycle and the increasing desire for superfast broadband will lead to operators having to provide service using WLR and WCO (or a wholesale calls product based on WCO). Contrary to Ofcom's position, we believe that BT's market power will increase over the period of the market review and this is perhaps borne out by the alarming increase in their market share of retail revenues witnessed over the past two years.

Market power under Vodafone's market definitions

3.24 We argued in this section that it is essential for Ofcom to apply a rigorous qualitative approach in assessing the effectiveness of indirect constraints. Using such an approach and employing the data and analysis provided by Ofcom in its consultation document we concluded that the markets should, as this stage, be defined more narrowly than Ofcom has proposed.

3.25 Under such definitions for the WFAEL and WCO markets it is absolutely clear that BT has a dominant position, indeed very close to a monopoly or super dominant position. Under these circumstances it would be very clear that BT would need to be regulated very stringently, with no question of regulation being relaxed.

3.26 We have also argued that Ofcom should recognise that WFAEL and WCO are linked markets. Across a single WFAEL and WCO market (defined in line with the narrow definition outlined above) BT would clearly have SMP. As noted, though, the crucial practical issue that follows from the linking of the two markets is to ensure that remedies are imposed to reflect this linkage.

4 Proposed Remedies: WCO and WFAEL

4.1 We firmly agree that BT has SMP in both the WFAEL and WCO markets. We cannot however agree that Ofcom has proposed appropriate remedies to counter the real threat of excessive wholesale pricing in these markets. ✂[22], ✂.

4.2 BT's historic conduct in the market highlights the very real threat of excessive pricing and its damaging consequences for consumers and wider competition, particularly when targeted at external communication providers over the longer term. Far from BT's SMP retreating, we anticipate BT's market share in both WLR and WCO will increase in the next review period and if there is a relaxation in remedies around wholesale pricing. BT will be able to exploit its SMP to enhance its financial position to the detriment of both competition and customers.

4.3 BT are experts at generating excessive returns from regulated markets and the DCR has considered why this might be the case[23]. Ofcom's proposals to remove direct price control remedies covering WFAEL and WCO represent a significant risk, with no benefit. We do not agree that Ofcom's proposed response to BT's position in these markets is sufficient to counteract the market power that has been set out. There is a very real danger that BT would use any relaxation of pricing remedies to generate excessive profit from regulated services in the future. With £9.7Bn earned in excess profits in regulated markets since 2005, Ofcom's failure at this point to safeguard pricing could have serious ramification for future excess returns.

4.4 As such, pricing remedies should be focused directly on the origin of the problem, excessive pricing, rather than dealing with a downstream effect (such as margin squeeze). Excessive pricing at the wholesale level is the primary problem and as such Ofcom should regulate wholesale prices at source in a proportionate way by introducing a simple safeguard price ceiling in the form of a CPI-CPI control for WCO and a linkage to regulated MPF pricing in the case of WLR.

4.5 In addition, in the WCO market, it is essential that Ofcom continues to impose a non-discrimination obligation in WCO, as without one BT will be able to engage in both non-price and price discrimination that would undermine the effectiveness of competition: leakage of poor regulation will affect competition downstream of both WFAEL and WCO markets, with retail customers ultimately losing out as a result.

The need for clear and expedient remedies

4.6 ✂ This concern has been recognised by the European Commission in its comments on the draft 2013 Narrowband Market Review Statement, where it stated that UK regulation had brought about *de facto* symmetry of Fixed Termination Rates. However, it urged Ofcom to impose an *ex ante* price control on all fixed CPs based on a single hypothetical efficient operator cost model. It said that *Ofcom's dispute resolution procedures might not be sufficient to remedy market failures in a "timely, efficient and*

[22] ✂

[23] See 4.57: https://www.ofcom.org.uk/__data/assets/pdf_file/0021/63444/digital-comms-review.pdf

transparent" way, and that by the time Ofcom had taken action, consumers would already have suffered losses from higher off-net retail call charges. We note that Ofcom has accepted this concern for Fixed Termination Rates in this latest market review and imposed *ex ante* regulation - Ofcom should avoid a repetition of over reliance upon Fair and Reasonable obligations in the WLR and WCO markets.

4.7 We have firsthand experience of this, including the recent example of Average Porting Conveyance Charges dispute and subsequent appeal taking more than 2 years to resolve conclusively[24] (and even now, it is unclear whether Vodafone will be repaid all of the overpayments made to BT[25]). ✂ rather than the immediate clarity offered by a simple price control (or safeguard cap) and no undue discrimination obligation. If the experience of Average Portability Conveyance Charges is to be repeated, operators face the prospect of spending the entirety of the next market review period tied up in regulatory disputes about WFAEL and WCO rather than being able to run their businesses and provide services effectively.

4.8 A business entering or operating in a market needs as much regulatory certainty as possible for it to be able to implement its market strategy. Having knowledge about the likely future trajectory of the prices of essential input costs allows the business to make commitments to customers. It is not just about the absolute level of prices but how they could change over time. A charge control and a margin squeeze test are very different in this respect. Under a charge control the business can project forward its costs and hence be able to set prices to customers to which it can commit. By contrast under a margin squeeze test BT would be able to raise prices to its competitors unilaterally, thus removing the ability to make robust future plans. Given the known deficiencies in the application of margin squeeze tests, the business would simply not have the confidence to invest to meet the needs of its customers

4.9 We understand that Ofcom's own dispute resolution team is seeking to reduce the number of disputes that it addresses: putting in place regulation that creates uncertainty over compliance will see the Ofcom's dispute resolution team face more disputes as price rises are attempted.

The price control lacuna and excessive pricing

4.10 Current WLR charges are subject to a price control lacuna: the charge control runs out on 31st March 2017, with the new charging regime not expected to be introduced until later in the year. BT has committed not to raise prices above CPI-CPI until 31 December 2017[26]. Despite being faced with a Market Review and Ofcom's finding that £160m of annual costs had been inappropriately allocated to products in fixed access markets[27], BT did not feel it necessary to reduce prices. Perhaps BT feels that these costs that are likely to have been historically allocated to WLR products do not need to be removed from prices, perhaps it feels that those prices are fair and reasonable without taking action. What is clear though, is that BT is willing to run the gauntlet on pricing compliance, explaining itself only when caught out. With no charge control proposed this excess return is effectivity included within today's pricing and unless some form of indexation to future MPF pricing is included then any excessive earnings from WLR sales are only likely to increase over the duration of the new market review period. This failure of regulation cannot be allowed to persist.

---

[24] Ofcom's guidance on Fair and Reasonable was issued in September 2014, it took until August 2015 to crystallise BT's position to a regulatory dispute, this was adjudicated in autumn 2015, appealed to the Completion Appeal Tribunal in spring 2016, with Judgement only being handed down in November 2016.

[25] Ofcom has been forced to stay repayment of overpayments prior to the dispute being accepted pending the outcome of an unrelated appeal on Ethernet charges.

[26] https://www.ofcom.org.uk/__data/assets/pdf_file/0023/90275/Final-Letter-to-Openreach-Interim-arrangements-NMR-WLA.PDF

[27] https://www.ofcom.org.uk/__data/assets/pdf_file/0016/81412/review-bt-cost-attribution-method.pdf

SMP is a state not a journey

4.11 We have no reason to believe that BT's market power is reduced and it is our firm view that BT's market power will strengthen in the next control period, particularly so in absence of effective regulatory remedies. However regardless of whether BT's market share might reduce, its SMP cannot reduce. SMP is achieved by reaching or exceeding a threshold and has a very clear definition:

> *An undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.*[28]

4.12 Ofcom's view that BT's SMP has been reduced is somewhat curious – an enterprise either has SMP or it doesn't, and it is abundantly clear, as Ofcom has demonstrated, that BT still has SMP in the provision of WFAEL and WCO: it is able to act independently and hence is not adequately constrained by its competitors. Once over the SMP threshold there is a real problem that must be addressed, and Ofcom has a duty to impose adequate remedies to address the issue.

Margin Squeeze and Excessive Pricing

4.13 Ofcom's designation of SMP means that there should be an expectation that BT could price excessively for WLR and WCO. Indeed, in proposing a margin squeeze test remedy Ofcom implicitly recognises this, as a margin squeeze (assuming retail prices are not at a predatory level) could only be caused by BT pricing excessively for WLR and/or WCO. Also, as Ofcom highlighted, in the past review period BT has priced up to the cap for both WLR and WCO suggesting that it was only the existence of the price cap that prevented it from charging excessive prices. This is further borne out by changes to WCO pricing in the deregulated "WCO without WLR" market, which provide an indication of BT's likely pricing behavior in WFAEL and WCO absent price regulation.

4.14 Should BT increase its wholesale prices above the appropriate cost level (in practical terms this means the last regulated charge minus the 'inappropriately allocated' costs that Ofcom found in 2015), this would result in an immediate direct financial transfer to BT from its competitors, regardless of whether it led to a margin squeeze. In the case of WLR, although BT Retail would also have to bear the price increase, this amounts only to an accounting transfer within BT whereas a real financial transfer takes place between an external purchaser of WLR and/or WCO and BT[29].

4.15 The impact of this would be to strengthen BT's retail position and weaken the position of its competitors with an obvious negative impact on the effectiveness of competition. If we accept Ofcom's position that WLR and WCO based competition is not driving downstream outcomes and hence that an increase in these charges would not lead to an increase in retail prices, it appears that the damage to downstream competition from a margin squeeze can only be caused by the strengthening of BT's position relative to its downstream competitors. On this basis it is clear that any excessive pricing, regardless of whether it led to a margin squeeze, would have the same negative impact on downstream competition[30].

---

[28] Framework Directive, Article 14.2.

[29] As discussed later the situation is complicated in WCO, as BT Retail does not contract for WCO, albeit WCO should be a cost input for BT Retail in setting its retail prices.

[30] An alternative interpretation of Ofcom's view that a margin squeeze would have a detrimental effect on downstream competition is that the effectiveness of downstream competition is still dependent on those operators providing services using WLR and WCO. It is difficult, however,

4.16 Even those operators not dependent on WLR and WCO would see their position relative to BT weakened, by virtue of the excess revenues earned by BT from WLR and/or WCO. Ofcom recognises that a margin squeeze would lead to a negative impact on downstream competition, so it is difficult to understand why Ofcom has decided not to impose remedies that address this problem in order to mitigate against a similarly negative impact on downstream competition.

4.17 Ofcom has explained that its competition concerns in the WFAEL and WCO markets is that charges may be set that amount to a price squeeze between retail and wholesale pricing. In a number of places in the consultation document it states that it is margin squeeze rather than excessive prices that is the potential problem that it needs to address. Ofcom explains this in two main ways:

- as a result of an increase in the level and effectiveness of retail competition BT now has a lower level of SMP and hence wholesale charge controls have become less important in driving retail pricing outcomes. As such an increase in wholesale charges would not necessarily lead to an increase in the retail price of calls, given the indirect constraints that it has found in the retail market;
- its focus is now on protecting rather than promoting competition.

It is on this basis that Ofcom has identified margin squeeze as its competition concern ✂.

4.18 Ofcom's view that the competition concern is margin squeeze rather than excessive pricing is a concern, because:

- it ignores the immediate problem of harm to effective competition that results from excessive pricing (regardless of whether it gives rise to a margin squeeze) and
- also because it obscures the relationship between excessive pricing and margin squeeze: you can't have a margin squeeze without excessive pricing.
- Whilst margin squeeze may be one of Ofcom's concerns that it may want to adequately address, so is excessive pricing.

4.14 It is also puzzling that Ofcom is attempting to separate the incidence of excess pricing and a margin squeeze. Ofcom has argued that the retail market is sufficiently competitive that an increase in wholesale prices would not be passed on at the retail level. Although we note that Ofcom has proposed retail regulation to control excessive pricing in a separate Market Review. If the retail market is competitive then any excess margins at the retail level should have been eliminated, hence excessive wholesale pricing would lead *immediately* to a margin squeeze. In these conditions Ofcom is drawing a false separation between excessive pricing and margin squeeze.

4.15 It is a generally accepted principle that regulation should be focused directly on the cause of the problem, rather than dealing with a downstream effect. Excess pricing is the root cause of margin

---

to reconcile this with Ofcom's view that a wholesale price increase would not be passed on at the retail level, which suggests that competition is sufficiently effective without the WLR/WCO based operators and also Ofcom's statement that wholesale charge controls have become less important in driving retail pricing outcomes. Indeed, a view that competition at the retail level is still dependent on WLR/WCO based competitors would provide support for the view that retail prices would increase in response to an increase in the price of WLR or WCO. Ultimately it is quite difficult to reconcile the approach being suggested by Ofcom with its own analysis and discussion of the evidence.

squeeze and is therefore the primary problem here and as such Ofcom should regulate prices directly, whether that ultimately manifests itself as the attendant problems of margin squeeze or excessive retail pricing.

4.16 It is noticeable that where Ofcom does not regulate wholesale prices unambiguously, wholesale pricing generally rises. For instance, Frontier Economics latest report on BT profitability (published 2016) found that BT's wholesale prices for broadband in rural areas (WBA Market A) returned a profit of £94 per line in excess of the regulated rate of return. With prices this high, it gives BT both the opportunity to margin squeeze and to price excessively at the retail level. Both are problems for consumers and should be tackled.

A margin squeeze problem is not best addressed with a margin squeeze test

4.17 Assuming that Ofcom is right and the only problem we need to address is that of margin squeeze, then there should be no presumption that a margin squeeze test is the best remedy. For numerous reasons, a margin squeeze test is not an adequate or equivalent remedy to ex-ante price controls:

4.18 A margin squeeze test is an *ex post* assessment of whether a breach of an *ex-ante* remedy has taken place. It is not the same as an *ex-ante* remedy with clear compliance thresholds. It therefore does not provide competitors with the certainty over the prices that it will face in the market, a competitor cannot effectively compete without some certainty over prices, in effect the absence of a price control or other effective remedy to address excessive pricing, reduces a customer's ability to compete with any certainty. It also does not provide a clear assessment to any party that could be used to determine whether compliance has been met - it is relatively easy to determine whether a charge control has been complied with and very simple for Ofcom to assess.

4.19 Applying a margin squeeze test ignores the established principle of addressing the root cause of a problem which is the ability of BT to increase wholesale prices identified through the SMP assessment and designation. Constraining the cause of SMP and not the effect of it, should be Ofcom's ambition and role.

4.20 Margin squeeze tests have proven ineffective remedies, and even where breaches have been found historically, no action has been taken (for example on Wholesale Calls). Far better not to find a breach, but to eliminate a breach from occurring by establishing clear compliance thresholds that are simple for any party to assess.

4.21 So even if Ofcom is right and the only competition concern is margin squeeze, the best way to eliminate a margin squeeze is to limit BT's ability to increase prices, rather than prove a breach has taken place. *Ex ante* regulation should do more than put in place a set of rules to enable a regulator to take enforcement action, but should provide certainty to competitors and customer in the market in order for the market to function. Margin squeeze is not best addressed through a margin squeeze test but by addressing its root cause: excessive pricing.

Margin Squeeze Analysis is extremely complex in bundled markets

4.22 Any Margin squeeze test in this market is likely to be extremely complex and may not deliver useful results. As an integrated business BT has the option to move the margin around from one part to the other either in a coordinated fashion or simply by controlling all the tools to allow it to happen.

4.23 Ofcom has also argued that it wishes to protect consumers rather than promote competition. A margin squeeze test is far less suited to the task of protection than a price control. Ofcom has argued that an *ex ante* obligation will not suffer from the problems of an *ex post* competition law based margin squeeze test. Certainly Ofcom is right to highlight that enforcing an *ex ante* obligation involves a very different process to competition law. However, it fails to recognise the most significant problem with any margin squeeze test, namely that margin squeeze is a highly complex problem to identify and prove, particularly in a multi-product bundled world.

4.24 Past margin squeeze cases have taken many years to resolve, and have not been lengthy due simply to the process involved, but rather that the content of the cases has been inherently difficult and time consuming. It is completely unrealistic for Ofcom to argue that a margin squeeze test would offer any practical form of protection.

4.25 Where, as in the case of WLR and WCO, a price cap could be implemented it is wrong to argue that a margin squeeze test provides a more appropriate and effective means to protect competition. A simple indexed price cap of the CPI-CPI form (or indexation to a regulated MPF price in the case of WLR) would be very simple to administer, would be transparent and would provide predictability and protection for operators using BT's WLR and WCO products.

Excessive pricing could lead to retail price increases

4.26 Ofcom has found BT to have SMP in the WFAEL and WCO markets but has argued that price increases for these products would not necessarily be passed on at the retail level. It is difficult to understand how Ofcom has arrived at this position.

4.27 Ofcom considered the effectiveness of retail constraints in its assessments of SMP as well as in its market definition exercises. The idea behind indirect constraints is that behaviour at the retail level can provide a constraint on wholesale behaviour. For example, if operators attempted to pass on an increase in the price of WLR at the retail level then customers of those operators could switch the services they purchase to other operators not dependent on the WLR product. If enough customers were lost this would make the WLR price increase unprofitable. If BT believed that this would be the case, then it would be prevented from increasing the price of WLR and hence would have an effective indirect constraint on its behaviour in the wholesale market.

4.28 When Ofcom considered retail constraints in the WFAEL market it concluded that a significant proportion of retail customers have limited or no alternatives to services based on BT's WLR. It then went on to conclude that although BT may be facing a stronger competitive constraint than in the past, nevertheless it continues to have SMP. Similarly, in the WCO market it noted that switching at the retail level would be unlikely to be sufficient to constrain BT's position in that market. Again it concluded that BT continues to have SMP.

4.29 We can set out a causal chain for retail constraints. Effective retail constraints make it impossible to increase the retail price, which in turn means it is not possible to increase the wholesale price and be compliant with a market squeeze test. However, if retail constraints are not effective then a retail price increase would be possible, which in turn means that the wholesale price could be increased. In the former case the effective retail constraints would mean that the operator would not have SMP, whereas in the latter the retail constraints are ineffective and hence the operator could have SMP.

4.30 It is very difficult then to rationalise Ofcom's position that the retail constraints are not sufficiently effective and hence that BT has SMP and yet that an increase in wholesale prices would not be passed on at the retail level[31] (seemingly because BT faces retail market constraints). Vodafone agrees with Ofcom's finding of SMP in both the WFAEL and WCO markets, but believes that Ofcom it is completely wrong to then rule out the possibility that removing price controls on WLR and WCO could lead to increases in retail prices to the detriment of customers.

4.31 Ofcom has stated that it does not believe that customers are particularly sensitive to price changes for the line rental product, which is supported by events over the recent past and has resulted in Ofcom's proposed intervention in the retail standalone voice market. This suggests if Ofcom chooses not to impose a price control on WLR then it could result in line rental prices going up further (absent of any retail intervention) to the detriment of customers. It is also important to remember that while any immediate Ofcom intervention in the stand alone voice market will protect a subset of voice only residential consumers, it will not protect small businesses or consumers purchasing bundles. The answer is not to extend retail regulation, but to deal with the problem at first instance and impose wholesale pricing safeguards.

4.32 It is a similar situation for WCO. If the price of WCO were to be increased, it could be passed on at the retail level in a number of ways. An operator could increase the line rental price, the price for an additional bundle of free minutes, the call set-up charge, the per-minute call charge or even the cost of broadband. The point is that an operator would attempt to recover any increase in costs by increasing the charge for the least price sensitive service element.

4.33 Even if the increase in WCO were passed on in the call charge it is not clear that customers would be in a position to switch on a call by call basis to mobile. Comparing the cost of calls outside of free call bundles, mobile call charges are still significantly higher than calls from a fixed line (reflective of the higher underlying cost base associated with mobile access), so would not offer a switching option. If a mobile user had free minutes still available then they could switch a fixed call, but it is not obvious why they would only make that switch in response to a price increase: rationally they should switch any fixed calls that would incur a charge even before a price increase and hence the price increase should provide no extra incentive to switch. It would appear therefore that this type of call-by-call selection might not in practice be an effective constraint on raising prices. Customers may have fairly fixed patterns of usage for their mobiles and landlines, driven by factors other than price.

4.34 As Ofcom suggests the increase in the number of calls made from mobiles is mainly due to a larger number of mobile subscriptions; mobiles are heavily used to call other mobiles whilst for mobile subscribers their fixed lines tend to be used to call other fixed lines, non-geographic and international numbers. There is also the additional complication for this type of call-by-call switching that a mobile user might have to move to a higher tariff with a greater number of free minutes to accommodate switching, meaning that at the margin the cost comparison would not look very favourable to mobile with the need to incur a high fixed cost.

4.35 It is unsurprising then that Ofcom quite correctly concluded that mobile is not a sufficiently strong indirect constraint on BT's position in the WCO market and hence found it to have SMP. Unfortunately, however, it is not obvious why Ofcom also suggested that an increase in the price of WCO could not

31 It is possible that Ofcom could believe that the indirect, retail constraints are sufficient to prevent the pass through to the retail price but that this is insufficient to prevent BT from increasing the wholesale price, hence the finding of SMP. As the discipline that indirect constraints provide is to prevent a pass through to the retail price it would suggest that indirect constraints can never be sufficient to discipline wholesale pricing and hence can never lead to a finding that the market is effective i.e. that there is no SMP. This would not be consistent with the general understanding of how indirect constraints can be employed in market definition and SMP assessment exercises and indeed with how Ofcom appears to have employed indirect constraints.

result in an increase in retail prices to the obvious detriment of customers. From the discussion above it appears quite possible that such a retail price increase would in fact result.

A price control is the only effective remedy to address margin squeeze

4.36 Having concluded that BT has SMP in both the WFAEL and WCO markets, it is incumbent on Ofcom to set out regulatory remedies which prevent exploitation of that SMP ✂. It is clear from the above that a simple price control provides transparency, predictability and protection to competition and hence to customers, enabling competition. It would be a failure of regulation to recognise that BT has the ability to act independently of its competitors and customers and not remedy the problem directly at its source through implementing a simple price control.

SMP and discriminatory behavior in WCO Market

4.37 Ofcom has assessed the effectiveness of competition in the WCO market, including assessing the constraints provided at the retail level, and has determined that BT has SMP. Vodafone supports this position, but is unable to understand how Ofcom has then decided that it is not necessary to implement a non-discrimination remedy. In its consultation document Ofcom explains (in relation to WFAEL, wholesale ISDN2 and ISDN30) that protection against non-discrimination is needed to:

> *... remedy the incentive and ability for BT to engage in discriminatory pricing and/or discriminatory non-pricing practices for those services provided currently that will not be subject to an EOI obligation.*[32]

4.38 As highlighted above, SMP is a threshold concept; having SMP means that BT has the power to behave to an appreciable extent independently of its competitors and customers. BT has both the incentive and the ability to discriminate because it has SMP in the market.

4.39 It is extremely difficult to understand how Ofcom can recognise that BT has the power to act independently of its competitors and customers and yet at the same time also believe that because BT faces competitive pressures (particularly from the retail constraint provided by mobile) it would not choose to act in a discriminatory manner to the detriment of competitors and customers.

4.40 It has to be repeated that Ofcom examined the effectiveness of retail constraints and found them to be insufficient. In relation to mobile it concludes:

> *Overall, we do not consider switching to mobile is a sufficiently strong indirect constraint to undermine BT's position in the WCO market in this review period.*[33]

We explained above why the retail constraints (particularly from mobile) would be ineffective in constraining BT's pricing for WCO, but Ofcom has provided no clear indication of how retail constraints could practically work to prevent BT from both non-price and price discrimination.

A Non-Discrimination Remedy in the WCO Market is essential for effective functioning of the market

4.41 Another important remedy required to safeguard retail competition is the need to ensure BT can't discriminate between internal and external purchasers of its wholesale services. This concept is well enshrined in Ofcom regulatory practice across a number of regulated services and was one of the key

[32] Paragraph 7.105 of Ofcom's consultation document.
[33] Paragraph 6.56 of Ofcom's consultation document.

planks around the creation of Openreach over a decade ago. For reasons of practicalities, these regulated markets are served across Openreach (WLR) and BT Wholesale (CPS), but it remains crucially important to retain effective safeguards against price and non-price discrimination, particularly when you consider that BT itself is a very large user of services for its own end users and it dominates the merchant end-to-end calls market with its Wholesale Calls offering. Despite the lack of transparency[34] over what product BT itself uses, a non-discrimination obligation in the WCO market should be retained. It is not easy to assess compliance, but as a baseline it is clear that the pricing of Wholesale Calls implicitly cannot be lower than the sum of the pricing of CPS and the regulated fixed termination rate. Meanwhile, there should at least be an obligation on BT to be compliant with a non-discrimination obligation.

Regulatory Accounting transparency is necessary

4.41 We currently face a host of non-price discrimination issues. For example, BT's approach to fixing faults on interconnect circuits lacks any SLA or SLG and as a result repair performance is poor. As BT does not use interconnect services itself, it does not face these problems.

4.42 By far the largest consumer of WLR is BT's own downstream retail divisions, with BT's internal consumption being significantly greater than that of external purchasers. The existing accounting separation obligation enables the service to be purchased in a transparent way with WLR cost information published to ensure non-discrimination and charge control compliance. With retail services increasingly being purchased in bundles it is necessary to ensure that the costs of the constituent parts of the bundle are properly understood to deter anti-competitive behaviour, especially where other wholesale services like MPF may be used to deliver bundled services to consumers.

4.43 If BT continues to make use of a service that is not price constrained to compete with other CPs, this greatly increases the risks of predatory pricing, especially where non identical inputs are used (for example unregulated WLR + SMPF competing with MPF based services). As an integrated business BT has the ability to "move" the margin around from one part of the group to another to achieve an optimum outcome (i.e. a higher WLR price may mean BT Retail makes less margin, but it benefits BT Openreach and overall BT Group benefits).

4.44 It is also possible to give some examples of possible forms of price discrimination that could result from removing the non-discrimination obligation (in conjunction with removing the price cap for WCO), through both focused lower and higher charges for WCO.

4.45 ✂.

4.46 ✂.

4.47 ✂.

[34] Which we would welcome being addressed

4.48 While such forms of pricing behaviour might be acceptable in a competitive market and could be considered economically efficient when they produce incremental volumes[35], they are entirely inappropriate in a market in which BT has SMP. Ofcom simply should not be considering pricing flexibility, as it would allow BT to exploit its SMP to damage competition to the detriment of customers.

The continuing need for a both a price cap and non-discrimination obligation

4.49 It is essential that Ofcom continues to impose a non-discrimination obligation; absent this BT will be able to engage in non-price and price discrimination that would undermine the effectiveness of competition, with retail customers ultimately losing out as a result. As the discussion above briefly indicated, price control and non-discrimination obligations work effectively together. Given the lack of transparency in this market it is essential that Ofcom also imposes a price cap of the form discussed earlier alongside a non-discrimination obligation; the latter alone would not be sufficient.

Legal Obligations

4.50 In carrying out its duties, Ofcom is subject to statutory objectives contained in the Communications Act 2003. The following duties are relevant in the current context:

I. Ofcom's principal duty is to further the interests of consumers in relevant markets, where appropriate by promoting competition.

II. Ofcom must have regard to the interest of consumers in respect of choice, price, quality of service and value for money.

4.51 Ofcom must keep the carrying out of its functions under review with a view to securing that regulation does not involve the imposition of burdens which are unnecessary, or maintain those which have become unnecessary.

4.52 Ofcom is also required to have regard to:

"the principles under which regulatory activities should be transparent, accountable, proportionate [and] consistent" (section 3(3)(a));

the desirability of promoting competition in relevant markets (section 3(4)(b));

4.53 Finally, Ofcom has duties – which over-ride its principal duties – known as "community requirements", which are set out in section 4 of the 2003 Act. Key among these are:

a. A requirement to promote competition in relation to electronic communications networks and service (the first community requirement - s4(3))

b. The so-called "technological neutrality requirement" (the fourth requirement – s4(6)) which is worth quoting in full:

[35] This volume stimulation could be achieved without any discrimination by allowing any WCO based operator to pay for WCO at the almost zero price for any new WLR activation. Even if it were available on a non-discriminatory basis it would still have the potential to damage infrastructure-based competitors.

The fourth Community requirement is a requirement to take account of the desirability of OFCOM's carrying out their functions in a manner which, so far as practicable, does not favour—
(a) one form of electronic communications network, electronic communications service or associated facility; or
(b) one means of providing or making available such a network, service or facility, over another.

4.54 Other key legal rules which apply in the current context are:

I. The over-riding EU law requirement for <u>effective remedies</u> (see below); and

II. The over-riding EU law principle of <u>non-discrimination</u>.

4.55 Taken together, we refer to the legal rules outlined in paragraphs 4.50 to 4.54 as the "relevant legal rules".

4.56 Ofcom's proposal to remove price controls on WLR breaches the relevant legal rules in several material respects which are set out further below.

Breaches of relevant legal rules – promotion of competition

4.57 First, Ofcom appears to have taken the view that the charge controls imposed in respect of WFAEL since the last Fixed Access Market Review in 2014[36] have now become 'unnecessary'. However, there is no compelling argument as to why this should be. The market position has not materially changed since 2014 apart from one metric being BT's market share, which in any event remains above the SMP threshold. Outcomes for consumers have not changed, resulting in Ofcom weakening regulatory remedies and therefore adversely affecting the interests of consumers it is bound by statute to protect. Ofcom's proposal represents a fundamental misunderstand of the requirement that it remove burdens which are unnecessary as further explained below.

4.58 It is not appropriate that the requirement to make forward-looking assessments should be used by Ofcom to justify removing price control when it is based on a mere reduction of BT's market share that remains well above the presumptive SMP threshold in any event. As we note in paragraph 4.11 of this response, SMP is a state, not a journey. In other words, whether there are degrees of SMP does not change BT's incentives, which remain the same.

4.59 Indeed, Ofcom's own findings do not conclusively suggest that the state of affairs has changed. Although BT's SMP is said to be 'weakened', it does not logically follow that the appropriate remedy imposed to address that very SMP must be removed. BT's share of WFAEL remains above 50% and the other indicators of competitive pressure on BT's SMP share do not suggest that BT is experiencing sufficient constraint to justify weakening the charge control remedy ✂.

4.60 In particular, Ofcom finds in section 6 of the consultation document that retail switching does not represent a significant pressure on BT as 'a significant proportion of retail customers have limited or no alternatives to services based on BT's WLR[37]. Supply side substitution is also found to be 'limited'[38] and the current barriers to entry (LLU) are 'likely to persist over the period of this

36 https://www.ofcom.org.uk/__data/assets/pdf_file/0032/78836/volume2.pdf
37 Section 6.16, Narrowband Market Review 1 December 2016
38 Section 6.19, id.

review'[39]. This market reality directly contradicts with the idea that price controls should have become 'unnecessary' for the purposes of s.6(1) Communications Act 2003.

4.61 Given this, Ofcom's proposal to remove price controls is likely to breach the following obligations:

I. The principal duty – because in the absence of competition BT is likely to price excessively;

II. The requirements to promote competition in (both) its principal duty and in the first community requirement (due to the absence of competitive pressure from switching highlighted above).

4.62 We further note that Ofcom has now proposed a retail price control solely for BT customers who are served by WLR (bought on an EOI basis by BT Retail[40]). Ofcom, then, has taken a view to reduce pro-competitive measure upstream and instead focus its regulatory attention on the relevant retail market. While we do not, here, express a view as to the legitimacy of the proposed retail price control, taken together these proposals represent an astonishing departure from the accepted regulatory practice of the last 30 years. The abandonment of upstream competition in favour of downstream regulation is highly likely to be a breach of Ofcom's principal duty and the first community requirement. In this context we would note that the CRF specifically highlights that retail regulation should only be imposed "as a last resort"; and that regulatory controls in retail voice markets are an exception measure to be pursued only where it can show that upstream competition "would fail"; in the absence of which conclusion, WLR (sic) must be regulated properly (USD Recital 26). It is palpably not the case that upstream regulation "would fail" here. (In fact Ofcom has concluded the opposite[41].) And given that Ofcom is choosing to reduce wholesale regulation, it cannot possibly be said that the retail measures proposed by Ofcom are a "last resort". In short, we consider that Ofcom has not properly considered these matters and that, as things stand, the structure of wholesale/retail regulation proposed by Ofcom is not compatible with the CRF.

4.63 In addition: Ofcom's assessment of competition downstream – i.e. that it is in such poor straits that the exceptional measure of a retail price control is necessary – is entirely at odds with its assessment of competition upstream.

Breach of relevant legal rules – non-discrimination and regulatory consistency

4.64 It is interesting to note that when charge controls were last imposed on WFAEL in the Fixed Access Market review in 2014[42], Ofcom found that not only did BT have SMP, but also an absence of constraints on the WFAEL product market which called for the imposition of a remedy in the first place. In short, a very similar situation to the present one.

4.65 Imposing different remedies in similar market conditions breaches the principles of non-discrimination and regulatory consistency. The principle of non-discrimination requires that Ofcom treat comparable situations in the same way.

Breach of relevant legal rules – effective remedy and regulatory certainty

---

39 Section 6.28, id.

40 https://www.ofcom.org.uk/__data/assets/pdf_file/0030/97806/Consultation-Review-of-the-market-for-standalone-landline-telephone-services.pdf

41 See para 9.38 of the Retail Market Review ("The Review of the market for standalone landline telephone services – Provisional Conclusions – 18 January 2018"): "there is still potential for competition in the SFV market that can deliver good outcomes for consumers".

42 https://www.ofcom.org.uk/__data/assets/pdf_file/0032/78863/volume1.pdf

4.66 The benefits of price control lie in providing regulatory certainty as well as effectiveness in setting a level playing field price. ✂. Considering BT's incentives to squeeze its competitors' margins, ultimately against the interests of consumers, the assumption must be that a weaker remedy will provide weaker protection against further market failure and this cannot be offset by a mere hope that future competition will rectify it. As such it runs the risk of being a premature and ineffective remedy when Ofcom had superior options open to it to address the uncompetitive state of the market it has observed.

4.67 ✂.

4.68 Given this, it seems certain that Ofcom's proposed package of remedies will prove ineffective because:

I. They will not prevent excessive pricing, in market conditions in which BT has every incentive to price excessively; and

II. There is no reason (beyond Ofcom's mere hope) to suppose that they will discourage margin squeeze.

4.69 As Ofcom are aware. it is a fundamental principle of EU law that remedies must be effective. As such, NRAs are bound to impose remedies which give effect to the regulatory objective that is pursued. At the highest level, it is Article 19 TEU which lays down this principle:

'... Member States shall provide remedies sufficient to ensure effective legal protection in the fields covered by Union law.'

4.70 Further, Article 288 TFEU as interpreted in Von Colson and Kamann v. Land Nordrhein-Westfalen, Case 14/83 further clarified that the freedom afforded to Member States in the manner of implementation of Directives is notwithstanding the obligation to adopt

'all the measures necessary to ensure that the directive is fully effective, in accordance with the objective that it pursues.'[43]

4.71 ✂. If anything, the only party likely to benefit from such a pricing obligation is BT itself, given its propensity raise prices in substantial increments, as noted in paragraphs 2.43 to 2.46 of this response.

4.72 There is therefore a gap left in the effectiveness of this remedy as we note in paragraphs 4.78 and 4.79 of this response.

4.73 ✂. If Ofcom means to prevent margin squeeze, it must say so explicitly on the face of the SMP Condition. As noted in paragraphs 4.6 and 4.7 of this response, disputes can potentially take up to two years if they are appealed following Ofcom's determination. In addition to falling short of the requirement of effectiveness, it cannot be Ofcom's intention that an increased litigation caseload should replace the job that is done by effective charge controls; ✂.

4.74 ✂.

[43] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:61983CJ0014&from=en, paragraph 15

Breach of relevant legal rules – technological neutrality

4.75 Ofcom's proposals are not technologically neutral. They will favour technological solutions based on sunk MPF assets. This is a breach of the fourth community requirement.

4.76 Further perverse effects of this obligation are likely to take the form of price disputes being referred to Ofcom under s.185 of the Communications Act, and in the same time consumers and businesses are most likely to suffer, as indeed they already do to some extent as suggested by the inelastic retail prices noted in this response and at paragraph 6.15 of the present Narrowband Market Review.

4.77 In conclusion, Ofcom ought to, having regard to its statutory objectives, not only contained in the Communications Act 2003 but also considering the EU principle of effectiveness, reconsider how a fair and reasonable price obligation could possibly achieve the same, or better outcomes for consumers and competition that those currently obtained by the imposition of charge controls, given that market conditions have not materially changed and given the inherent risk and uncertainty associated with the wide meaning of such an obligation.

✂

4.78 ✂.

4.79 ✂.

5 UK Business: Key users of WLR, CPS and ISDN 2/30

5.1 UK business consumers have a particular set of needs that should be accounted for when the remedies for wholesale WFAEL and WCO are set. As well as buying specialist services like ISDN2 and 30, business customers buy retail analogue calls and lines that share the same base wholesale offerings as residential consumers. UK businesses are more reliant on WLR and CPS than consumers and the supplier rich retail business market needs to be properly underpinned by regulation to ensure retail competition can flourish.

5.2 Ofcom's proposals in the analogue market risk letting down UK business consumers, putting them at risk of excessive pricing from BT at a wholesale level. With a greater reliance on CPS and WLR, business user will be among the first group to experience the resulting harm, reinforcing the need for firm pricing safeguard in the form of a CPI-CPI control on WCO and WLR indexed to regulated MPF pricing.

5.3 BT has SMP in the wholesale ISDN2 and 30 markets and Ofcom's proposed pricing safeguards are needed across the market. However, Ofcom shouldn't complicate matters by drawing a distinction between new and existing lines and all consumers should be afforded the same regulatory pricing protection at the wholesale level regardless of when services were provisioned.

Business Grade Regulation

5.4 Ofcom need to consider the distinct needs of the business market in the UK. As Ofcom rightly highlights[44] MPF and cable have played a more limited role in the competition for business analogue consumers, with a much lower share of this market served by cable or MPF supply and a strong reliance on BT supplied WLR and WCO for business customers. In the business analogue sector Ofcom considers BT to have a wholesale market share of over 80% among SMEs[45], together with 100% of the ISDN2 and 65% of the ISDN30 market.

Business Customers use of WLR and CPS

5.5 Specialist suppliers to the business market have thrived using WLR because they understand business priorities. Placing more emphasis on fault resolution times, installation date certainty and the need to offer innovate tariffs and features to suit a range of business needs. Exchange lines in this market serve a wide range of purposes, from simple office connections to payment terminals and alarm monitoring, making it quite distinct from the residential market at the retail level.

5.6 Access to adequate broadband speeds is also a particular concern for smaller businesses, with many stuck in locations that aren't able to receive reliable speeds, but unable to support the cost of more expensive Ethernet delivery. This means businesses often place more importance on WFAEL/WCO and ISDN services as a means of connecting with the customers.

5.7 Although the number of WFAEL has fallen in the business market by around 10% since 2012 (from 4.5M to 4.1M[46]) due to adoption of VoIP and other forms for connectivity, the business market for WFAEL remains substantial, being vital for the functioning of the wider economy particularly for small

[44] See 4.40 in the consultation document
[45] See 6.10
[46] See 4.54 in the consultation document

businesses. Businesses often pay extra for premium services and WFAEL is no exception, with consumption of WLR Premium routine in this market. This demonstrates the importance that businesses attach to their consumption of the service and their willingness to pay more, meaning they are perhaps an easier target for excessive pricing at a wholesale level. With greater usage of CPS and WLR, they would be the first to experience the adverse consequences of this conduct, reinforcing the need for appropriate pricing and non-discrimination safeguards to be introduced across the WCO and WFAEL markets. Whilst Ofcom proposes to control the wholesale price of ISDN2 and ISDN30 with a safeguard cap, it does not propose to do the same for business customers who use analogue lines. The disparity in proposed remedies has no logic.

ISDN

5.8 ISDN services are valued by customers, having a reputation for reliability and as such remain a very well understood product set, maintaining their reputation for reliability and ease of use. While ISDN continues to be well received, the products are gradually being replaced by new services which take advantage of IP-based technologies. A significant volume of customers will continue to use ISDN2/30 for some time to come and while alternative options are available in many cases, adoption rates will vary across the market depending on the particular needs and priorities of each business user.

5.9 However, any decision to migrate would be unique to each customer, and dependent upon how they use the service and what alternative options are open to them as well as wider business considerations: For some customers it is an easy decision to make and usually coincides with a wider IT upgrade, or a change of premises. For others it is far less straightforward and has cost and IT compatibility issues that stretch beyond any access circuits considerations.

5.10 There is likely to remain a significant base of business customers using ISDN services throughout the next review period. ISDN2 remains a sizable market and not one that we are seeing go into terminal decline. Vodafone has a substantial number of lines provided using the WLR ISDN2 product from Openreach. Customer usage is varied, but the service supports a wide range of enterprise uses, supporting retail outlets, branch networks and telematics and while customers may choose to migrate at some stage, we continue to see strong demand at a retail level.

5.11 ISDN30 usage also remains strong, with a considerable number of users who remain happy with the services they receive, having no desire to shift away from the service. While BT has 100% market share in ISDN2 at a wholesale level, this drops to around 65% for ISDN30, with a small number of other infrastructure providers also serving the market.

5.12 In the case of alternative suppliers, sometimes these services are supplied on-net using the competing provider's own local access network, in other cases PPC circuits are purchased from BT Wholesale as a means of direct delivery. This can often mean that alternative suppliers have a higher cost than BT to serve in the ISDN30 market and Ofcom have been rightly mindful of introducing too aggressive a charge control in this market in the past due to the unintended consequences that may result, with alternative infrastructure players squeezed by the control first due to their higher cost base and subsequently, BT's wholesale market share actually increasing as a result. It would not be in the long term interests of UK consumers if an unintended consequence of regulation resulted in the wholesale supply arrangements for ISDN30 becoming concentrated in the hands of just one regulated supplier.

5.13 Whilst we agree with pricing remedies on ISDN 30 at the wholesale level, we remain concerned that an overly stringent control would undermine alternative ISDN30 supply, ultimately remove choice from customers. It would also place an unfair burden on alternative infrastructure providers who are faced with the prospect of managing a product in gradual decline, having rising unit costs over the years ahead.

5.14 However, with this in mind it is also important to ensure that business users are protected from wholesale prices rises in markets where BT has 100% and 65% market share. Ofcom are therefore right to propose pricing safeguards at the wholesale level and the remedies proposed strike the correct balance, ensuring that competing ISDN30 infrastructure isn't compromised and consumers continue to benefit from it going forward while also having safeguards in place to prevent prices rising.

5.15 We recognise that Ofcom is proposing that ISDN prices are capped at a level above their cost: this provides certainty to end users and to wholesale customers, but at the same time recognises the network based competition in this market. However, this should mean that Ofcom doesn't ignore this excess but take account of this elsewhere, for example by reducing the prices of other regulated products without BT's overall cost recovery being threatened. This could be done through an adjustment to the allocation of common costs, so that excess prices would allow for the slightly higher recovery of common costs from this product and hence this should be reflected in the recovery of common costs from other regulated products that share the same pool of common costs.

5.16 We would however urge Ofcom to make its proposals simpler, by not drawing any distinction between current and new circuits. As well as being potentially complex to administer, this two tiered approach (where new ISDN2/30 circuits ordered are effectively unregulated) discriminates against businesses that have to move premises, often due to circumstances beyond their control (re-development of sites by landlords, leases expiring etc.) – it would represent a tax on business moves. In most cases new ISDN orders typically come about as a result of businesses moving premises with new orders replacing ceases elsewhere on the network. Moving premises is costly to businesses, without the further worry of Ofcom removing regulated pricing safeguards as well. It would be absurd if a business moving across the road is unable to take their ISDN service with them solely due to the fact that it turns the existing service into new supply. A simpler approach that classes all circuits the same, regardless of when they were ordered, doesn't discriminate against businesses moving premises, is less complex to administer and entirely proportionate.

6 Answers to consultation questions

Question 4.1: Do you agree with our provisional conclusion regarding market definition for WFAEL? Please provide reasons and evidence in support of your views.

Please see Vodafone's analysis in Sections Three and Four of this response.

We generally support the conclusions arrived at by Ofcom. We firmly believe that currently available voice over broadband services are not within the same market and Ofcom are right to exclude them. Although bundling does occur in many parts of the market, the core product remains WFAEL and any attempts to bundle other combination purchases would not reflect this.

Vodafone believes that the WLR and WCO products are inextricably linked and hence the WFAEL and WCO markets should be considered together either at the market definition stage or when assessing SMP and particularly when imposing remedies to ensure that there is no leakage from a less regulated product that would undermine the effectiveness of the overall regulation.

Vodafone advocates a tighter market definition that excludes cable and MPF self-supply, believing that the lack of effective indirect constraints and the lack of any supply-to-merchant market at the wholesale level from these two technologies indicates that market is narrower than that defined by Ofcom.

The wholesale service is used to supply both business and residential consumers and therefore one wholesale market is probably the right conclusion; however, the remedies should seek to address the needs of all consumers, including business customers who have different purchasing patterns and a different consideration of the products within the market.

Question 4.2: Do you agree with our provisional conclusion regarding the three criteria test for WFAEL? Please provide reasons and evidence in support of your views.

Please see Vodafone's analysis in Sections Three, Four and Five of this response.

The infrastructure barriers to serve this market have <u>increased</u> since the last market review, with MPF investment now stranded and broadband via MPF lines now considered a previous generation technology that is gradually being left behind as bandwidth expectations continue to grow. Whilst operators with sunk MPF assets may be able to sweat them to provide solely voice, those investing in new networks would certainly not take such an approach. Therefore, a great number of consumers rely directly or indirectly on a regulated wholesale input and if access to, and the pricing of, this wholesale service was not regulated there would be considerable consumer harm that would not be adequately addressed in a timely way by Competition Law.

Question 4.3: Do you agree with our provisional conclusion regarding market definition for WCO? Please provide reasons and evidence in support of your views.

See our response to Q4.1 above and also Vodafone's analysis in Section Four of this response.

Ofcom has failed to adequately consider the impact of BT's Wholesale end-to-end calls product on this market. We believe a narrower market definition is more appropriate than one suggested by Ofcom. For reasons of consistency WCO should be defined as WCO from WLR lines (including ISDN2/30), as there is no evidence of a merchant market from either cable or MPF based suppliers.

Question 4.4: Do you agree with our provisional conclusion regarding the three criteria test for WCO? Please provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Sections Three, Four and Five of this response.

BT's dominance of this market is overwhelming, 49% in Q4 2015/16 and control over much of the alternative wholesale input necessary to compete. BT's aggressive pricing in the wholesale end-to-end calls market via their Wholesale Calls product has had a very detrimental impact on Carrier Pre-Selection. We've seen that Ofcom took five years to investigate the last Competition Act case related to this market and found a margin squeeze, demonstrating that Competition remedies alone are completely inadequate to protect consumer welfare.

Question 5.1: Do you agree with our provisional conclusion regarding market definition for wholesale ISDN30? Please provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Five of this response.

We believe ISDN30 is a distinct market and customers consuming the product demand its particular characteristics. This supports a separate wholesale market for ISDN30.

Question 5.2: Do you agree with our provisional conclusion regarding the three criteria test for wholesale ISDN30? Please provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Five of this response.

BT's latest returns in this market speak for themselves and we would agree that *ex ante* regulation is necessary with the market passing the three criteria test (BT having 65% market share, high sunk costs to participate, the inadequacy of Competition Law to deliver a swift response to any market concerns).

Question 5.3: Do you agree with our provisional conclusion regarding market definition for wholesale ISDN2? Please provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Five of this response

Vodafone agrees with Ofcom's position. We believe the market is a distinct one that serves a great number of UK business consumers.

Question 5.4: Do you agree with our provisional conclusion regarding the three criteria test for wholesale ISDN2? Please provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Five of this response

Vodafone agrees with Ofcom's position. High sunk costs to participate, BT's extraordinarily high market share (near 100%) and the inability of Competition Law to deal with any harm in a timely fashion ensure that the three criteria test is comfortably met.

Question 6.1: Do you agree with our provisional conclusion that, during the period covered by this market review, BT and KCOM will have SMP in the WFAEL markets? Please provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Four of this response.

Vodafone firmly supports an SMP finding in this market. Taken together with over-all system control of the Narrowband Market there is compelling case for an SMP finding.

Question 6.2: Do you agree with our provisional conclusion that, during the period covered by this market review, BT and KCOM will have SMP in the WCO markets? Please provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Four of this response.

Vodafone agrees that BT and KCOM retain SMP in WCO markets. Significant groups of consumers remain directly reliant on WCO (Carrier Pre-Selection) and all UK consumers benefit indirectly from the competitive pressure it brings to the market. Business customers in particular, those who live in rural areas with no LLU and those wishing to purchase superfast broadband require particular protection.

Question 6.3: Do you agree with our provisional conclusion that, during the period covered by this market review, BT and KCOM will have SMP in the wholesale ISDN30 markets? Pleased provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Five of this response. With 65% market share and high returns, BT has SMP in the supply of wholesale ISDN30.

Question 6.4: Do you agree with our provisional conclusion that, during the period covered by this market review, BT and KCOM will have SMP in the wholesale ISDN2 markets? Pleased provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Five of this response. With 100% market share BT retains SMP in this important business market.

Question 7.1: Do you agree with the remedies that we propose for BT in the WFAEL, WCO, wholesale ISDN30 and wholesale ISDN2 markets? Please provide reasons and evidence in support of your views.

Please see the main body of our response. We firmly believe that WFAEL and WCO require back stop pricing safeguards in the form of CPI-CPI cap (or indexation to MPF in the case of WLR). Anything less than this will risk consumer harm. A non-discrimination obligation is also needed to ensure what competition is left in WCO is preserved and the remaining market that can't self-supply isn't over-whelmed by BT's Wholesale Call end-to-end product.

While Vodafone would not support a formal charge control in the retail market (because it is likely to have unintended consequences, harming competitive infrastructure supply in the first instance, reinforcing BT's dominance), we do support Ofcom's SMP finding and the need for back stop price protection in the form of price cap.

Question 8.1: Do you agree with our charge control proposals for BT in the wholesale ISDN30 and ISDN2 markets? Please provide reasons and evidence in support of your views.

Please refer to Vodafone's analysis in Section Five of this response. Vodafone is broadly supportive of Ofcom's proposed remedies; however, we do not support the distinction between existing and new lines, believing this is unduly complicated and fails to take account of business consumers changing premises due to maters beyond their control.

Question 9.1: Do you agree with our quality of service proposals for BT in the WFAEL, wholesale ISDN30 and wholesale ISDN2 markets? Please provide reasons and evidence in support of your views.

We agree that SMP QoS conditions and the 2008 SLG Direction remain relevant to the services as proposed by Ofcom. As this is the second round of quality measures for these services it is our expectation that more challenging measures will be imposed. Ofcom's new (separate consultation proposals) for automatic compensation will have direct linkages between the payments Openreach passes to CPs in the form of SLGs and the requirement for payments to consumers under the new proposals. We agree that the QoS regime for Narrowband should be consistent with WLA services and therefore be set via the WLA market review consultation process.

Notwithstanding this, Vodafone considers that Ofcom needs to give wider consideration to the issue of QoS. Ofcom is inevitably engaged in a regulatory game of "whack-a-mole", where service failings in one area are addressed, but the diversion of resources causes issues elsewhere. There are no formal SLAs on the management of voice interconnect faults, and Vodafone's experience has been that as BT has (rightly) given attention to service failings covered by the SLGs, service quality at a network-network level has suffered. All too often we are left in the position of having to beg senior management intervention, or the pulling in of favours, in order to get interconnect faults resolved. This has both a financial impact, and consequences for critical national infrastructure as resilience is reduced during these faults, which can last for days and weeks. Vodafone would be happy to provide illustrative examples to Ofcom.

Question 10.1: Do you agree with the remedies that we propose for KCOM in the WFAEL, WCO, wholesale ISDN30 and wholesale ISDN2 markets? Please provide reasons and evidence in support of your views.

Yes.

- END -

Annex 1: SOGEA

A1.1 Ofcom raises the prospect in the consultation that a migration to voice provided over the broadband service, particularly in the context of SOGEA, will be an enabler of future voice deregulation[47]. Subject to a fit-for-purpose SOGEA, including appropriate pricing, Vodafone agrees that a model of an Analogue Telephony Adapter (ATA) embedded within broadband routers to provide the voice service could be a solution. However, Ofcom is perhaps overly optimistic about the timeframes in which this will be possible.

A1.2 Certain issues need to be resolved before any customer can be practicably migrated to a SOGEA-based approach for voice, for example:

I. Availability of the SOGEA product, and pricing that is commensurate with a cost-stack that only includes copper as far as the street cabinet. Even on BT's own timescales, we do not expect this before spring 2018.

II. Availability of a suitable migration product that ensures no loss of service when migrating from GEA to SOGEA, and minimal loss of service when migrating from MPF/SMPF to SOGEA.

III. Resolution of a series of technical issues that NICC Standards has been tasked with addressing, backed by a stakeholder group established by Ofcom. These include:

- Reliable support of DTMF and voiceband modem tones. This is to ensure that card terminals, burglar alarms, fire alarms and social care alarms (e.g. OAP pendants) continue to function. The suppliers of relevant customer equipment have "pushed the envelope" on what the current PSTN network can support, and in some cases it isn't feasible to support these over a VoIP access. It is no exaggeration to highlight this as a safety-of-life issue. A sensible approach would be to migrate these services to a native data service rather than seeking to run data-services-over-voice-over-a-data-network, but it is not within the gift of individual communications providers to make this happen.
- Apportionment of Quality of Service metrics (delay, jitter, etc.) between networks in the call path.
- Agreement of security standards to ensure that the routers are not subject to hacking, with the potential of being used as Trojan horses to compromise core network operation.
- Agreement as to whether communications providers will be able to specify that only their own-supplied broadband routers be used for this application. Such an approach would simplify the security issues, but it is a very moot point whether this is legally allowed[48]. Assuming that such a restriction isn't possible, and the regulatory Network Termination Point (NTP) isn't moved to become the voice output socket on the back of the router, then this implies that there needs to be a standardised signalling interface between routers and communication provider networks.
- Agreement of a test procedure for routers providing voice services.

---

[47] Para 4.62.

[48] COMMISSION DIRECTIVE 2008/63/EC on competition in the markets in telecommunications terminal equipment, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:162:0020:0026:EN:PDF , article 3, *"Member States shall ensure that economic operators have the right to import, market, connect, bring into service and maintain terminal equipment."*

NICC Standards has agreed a project plan with an aspiration to develop solutions to these issues during 2017; ✂.

IV. Agreement of an approach to battery backup for cases of mains power failure. Ofcom's current approach is to discuss this bilaterally with individual providers, a strategy that Vodafone has criticised[49]. Notwithstanding this, we are supportive of the approach put forward by BT Retail, whereby battery backup will be available free-of-charge only to vulnerable customers, but as a chargeable capability for everyone else. However, without a firm regulatory steer on this issue it is impossible to foresee any rollout of SOGEA-based voice services.

V. Availability of a fit-for-purpose home wiring solution. Customers are used to the convenience of telephone sockets throughout their home, centrally distributed from the household master socket. A SOGEA-based voice solution will, in contrast, have the voice socket on the back of the broadband router. Whilst this may be acceptable for those households reliant on DECT cordless handsets, many customers will require the ability to "loop" the voice service back onto their home wiring served from behind the master socket. We understand that Openreach is developing a solution, but this will need to be ready to face industrial scale volumes before communications providers can consider any kind of deployment. At this stage, we are unclear as to whether the solution will require an Openreach van-roll in some or all cases (certainly it will where the customer doesn't have a modern faceplate on their master socket).

A1.4 Once these precursors have been fulfilled, communications providers using WLR will be faced with migrating their customers to the SOGEA-based solution. This is non-trivial. Under WLR, the dialtone is provided by BT's network, and the number is hosted on BT's network. Under the SOGEA-based solution, the dialtone will be provided by the alternative communications provider, and the number is hosted on their network. It is therefore necessary to port each individual number away from BT onto the communication provider network, an exercise which will need to be repeated for at least hundreds of thousands of customers, if not millions. This porting of the number will need to be synchronized with the customer disconnecting their fixed phones from the master socket, and instead using the socket on the back of the router (or, if extension wiring is used, changing their home wiring).

A1.5 There is nothing in the above considerations which is totally insurmountable, but it should be clear that the migration – which is required before Ofcom even considers deregulating WFAEL – is something that realistically cannot start for one-two years and will take multiple years to achieve.

[49] https://www.ofcom.org.uk/__data/assets/pdf_file/0017/94103/Vodafone.pdf page 9

Annex 2: CPS Vs. BT Wholesale Calls

The table below contrasts the commercial and technical issues between BT Wholesale Calls product and that of a CPS provider competing in the wholesale end-to-end calls market.

Commercial differences

BT Wholesale Calls	*Carrier Pre-Select*
No charge per transaction set up	£1.69 per transaction CPS set up. Errors are also chargeable.
No published rates allowing product bundling and bespoke pricing, therefore allowing aggressive rates.	Published rates for BT CPS call origination, but CP end-to-end pricing not subject to disclosure. Additional £24,820.00 Annual CPS On-Going Per Operator activity charge
BTW marketing incentives – ✂	Switching and setting up costs restrict CPS operators' ability to offer incentives. CPs and Resellers need to resource CPS operational issues around adding and removing CLIs.
Reseller has to give a 12 month forecast - but has a 3-month grace period. If 55% of forecast not achieved after 12 months, reseller gets 28 days' notice and rates revert back to previous rate card.	CPSO has to provide 1 month forecast, with penalties associated if they do not meet 90% of forecast. Forecasting remains a big issue even though the BTW CPS gateway is running well below full capacity. CPs still need to forecast and there are still penalties payable.

Technical differences

Wholesale Calls	*Carrier Pre-Select*
Provisioning by BT Wholesale Gateway made available 24x7x365. Service will commence at 00:01 on the Customer Requested Date. BT Wholesale Customer Service Team are able to inform the customer the exact time and date, which will be earlier than CPS, when the line will switch. VP's are therefore provided with the exact start time and date for billing purposes.	Provisioning by BT Wholesale CPS Gateway made available 8.00 – 8.00pm Monday to Friday. Saturday working available on request but Saturday orders treated as if they had been sent on the following working day. Also no CPS Customer Service available for queries, this has to wait until following Monday at 8.00am. No specified Service Commence time on the Customer Requested Date, CPSO's only learn it has switched when the notification is provided.
Order provisioned on a Sunday would switch a week the following Saturday	Same order cannot be provisioned on a Sunday so would have to wait until the Monday and therefore would not switch until 2 weeks on Tuesday, 3+ days later.
If a customer has WLR then Wholesale Calls will switch instantly following provisioning.	New CPS will switch on a WLR line 'as soon as the Access Operator can process the order and this may be any point in the day'. 97% of retained CPS will switch on a WLR transfer within 30 mins of transfer completion.
Simple Web based provisioning system with a bulk upload facility for multiple lines. Also an xml based system compatible with other BTW provisioning systems. For significant transfers, BTW can offer to process 100,000 over a weekend.	Complex, batch processing system that is unique to CPS. Bulk transfers limited to 10,000 a weekday and 25,000 a weekend day.

Annex 3: System Control and Other SMP Products

BT's wider control of the voice telephony market

A3.1 There are other mechanisms that reinforce market power that span multiple products and markets that can often be overlooked when undertaking a market review exercise which focus on specific products, markets or sub-markets. As these mechanisms reside across a number of places and impact multiple markets there is perhaps an understandable reluctance to take account of them or remedy them, due in part to potential conflicts that might arise in other market reviews, and the work involved in fully understanding and remedying the issues identified. There is however no doubt that the mechanisms, processes and contracts function together as a system of control and shape consumer outcomes across various regulated markets.

A3.2 Understanding these mechanisms of control is an evolving piece of work that is being recognised in other regulated industries. We will return to this issue in future submissions to Ofcom, as we believe the issues involved are by their nature far bigger than one market review and require both effort to understand fully how they shape outcomes and thought is needed on how to remedy them to ensure competition can flourish and consumer welfare is not adversely impacted.

A3.3 We will however set out below clear examples around the system control mechanisms that BT uses in the narrowband market, demonstrating how this leads to certain behaviours and actions that discourage competition, or prevent markets from functioning as they should:

I. The drafting of the Standard Interconnect Agreement (SIA) is one of the most blatant examples of system control. This is a document that was drafted when BT's actions were largely locked down by *ex-ante* regulation, is substantially unaltered in the last two decades and is as a result not fit for the purposes of the market today, where very few services are subject to regulation. Despite all this the SIA remains an essential contract: without signing up to this agreement other communication providers cannot function independently in the narrowband market and even resellers who are not signatories to it directly are constrained indirectly by it, as they have to make use of a communication provider who has entered into the agreement.

II. The SIA provides the only contractual means of accessing BT's SMP narrowband network directly in order to serve end customers. It was drafted by BT as a 'one to many contract', with BT able to impose price changes upon other Communication Providers, but requires BT to agree to any pricing changes proposed in the opposite direction (SIA Para 12 and 13). Even its contract review terms are restrictive, with BT able to block substantial contractual reform, resulting in the contract continuing to reflect circumstances largely appropriate to 1997, a time when regulation on BT was far more widespread, hence such one sided contract terms were appropriately countered by BT's regulatory obligations.

III. The asymmetric terms of the agreement would not be replicated in a competitive market and the contract bears no resemblance to one commercially negotiated between two non-SMP CPs. With hindsight, Ofcom should have ensured that regulatory liberalisation was contingent upon making the SIA reciprocal, as there is no incentive on BT to negotiate such changes in good faith. However, it is not too late for Ofcom to address the issue.

A3.4 The SIA is not the only mechanism used by BT to ensure system control. **The Carrier Price List (linked to the SIA) is an enabling document that allows many parts of the wholesale market to function.** It would be a mistake to assume that it is merely a list of BT's charges. It provides a comprehensive list of number ranges in the UK, therefore providing the trigger for CPs to open up ranges (in conjunction with the industry email number range activation distribution list). It is critical therefore in respect of number range management and in the provision on transit service to the full A-Z list of destinations, adding significantly to the ability of the market to function effectively (to the best of our knowledge no other transit provider offers a full A-Z transit service).

A3.5 Other contracts and pricing schedules are linked to the BT CPL as there is no alternative industry schedule available (and no other party could perform this function, save Ofcom or an appointed independent third party). If for example a CP wishes to adjust the price of its own service, it can do so unilaterally in its own direct interconnect agreements with other carriers, but not so with BT due to the provisions of the SIA. The price change for direct agreements would be meaningless without parallel BT agreement, as BT would retain transit access to the service at the previous price (+ BT's transit fee by paid the originator or in some cases terminating operator) and traffic would flow via this route until agreement with BT was reached. By way of example, when Vodafone wished to make changes to its termination rates for 03 services – entirely in line with changes that BT had made to its own 03 rates – BT held the process up by 10 months resulting in an approximate £1.8M loss of revenue (in a competitive market where our largest competitor is BT's downstream retail units).

A3.6 Other billing and control measures are also retained by BT. The Element Base Charging (EBC) matrix is updated monthly and effectively sets out the tariff table for traffic traversing the BT network (either transiting, originating or terminating). ✂

Necessity to purchase of BT services

A3.7 Regulatory requirements on retail communication providers to enable end-user access to a range of key services require the purchase of a variety of BT provided services. In other cases, the services, although not required by regulation formally are considered commercially necessary, as a CP would not be able to trade or compete in the market if access was absent. BT is the only provider of these types of services, which tend to be low volume, but high cost. Examples include Emergency Call Handling (as featured in the case study above), Text Relay and Payphone Access. Other unavoidable services that can't be sourced elsewhere include porting conveyance (with BT involved in a very significant volume of number porting). BT's significant presence in the transit market, where BT is the only operator to offer a full list of A-Z services to the market gives them unique market leverage unmatched and unmatchable by other CPs.

A3.8 BT has *de facto* SMP across a number of unregulated products and when this fact is combined with the ability to unilaterally raise prices without approval, it constitutes unrestrained market power and dominance as system controller. While Ofcom's standard answer is that disputes can be referred to them at any time, there is a significant reluctance on Ofcom's part to accept discretionary disputes (that don't involve SMP services), effectively leaving CPs without an effective remedy against unilateral abusive conduct by BT. To be clear, Vodafone believe that launching abuse-of-dominance complaints is not an effective alternative to regulation, it is time consuming and costly for all parties involved, with the costs involved prohibitively high. Repeated refusal to open disputes creates regulatory uncertainty and any weak constraining effect on BT conduct resulting from the possibility of a potential investigation is lost with BT acting with apparent impunity when they feel the Regulator doesn't have the stomach for such investigations.

A3.9 When taken together these features render BT as having a level of control over the narrowband market which extends beyond the control of key network elements and services. Even when CPs have extended their networks to avoid BT, there remains a series of crucial BT controlled commercial bottlenecks / contractual restraints that are a requirement for market participation that give BT system control and prevent CPs from acting independently, or at least with partners of their own choosing. BT, for example, do not purchase transit from any other CPs and while many very small operators only connect with BT in the UK, they could choose to connect to another UK CP instead, however BT's refusal to pay transit fees discourages this.

A3.10 Ofcom's market analysis in the consultation takes no account of BT's wider role in the market as a system controller failing to take account of the significant cumulative impact of it on market power. When it is considered, it strengthens the severity of any SMP findings. System control is something we believe Ofcom should take a detailed look into, if not in this market review, elsewhere within its work plan. What is clear is that any future deregulation needs to be accompanied by the removal of legacy systems control, starting with the introduction of genuinely reciprocal contracts to replace the SIA.

Annex 4:

A Rigorous, Qualitative Approach to Assessing Indirect Constraints in Market Definition

A4.1 Indirect constraints have been crucially important in Ofcom's market definition exercise and yet Ofcom has arguably not been sufficiently rigorous in the manner in which it has considered indirect constraints. It is by no means straightforward to establish the effectiveness of indirect constraints. In an ideal world a regulator would be able to use a formal model to assess indirect constraints, but in practice the empirical data needed for such an exercise is unavailable and hence a more pragmatic approach has to be taken.

A4.2 We set out below a possible qualitative approach to assessing indirect constraints, discussing its application particularly in the wholesale fixed access exchange line (WFAEL) and wholesale call origination (WCO) markets[50]. This proposed approach then informs the answers we provide to Ofcom's questions on market definition.

A4.3 In the context of indirect constraints, the hypothetical monopolist test involves considering the impact of a Small but Significant Non-transitory Increase in Price (SSNIP) of a wholesale product on retail customers. Although it is a hypothetical monopolist test, nevertheless to understand the significance for market definition of customer switching it is necessary to consider the actual circumstances that pertain in the markets under investigation. In that sense it is not an entirely hypothetical test. There is no choice but to take account of the actual circumstances in the market to at least some degree or there would be a danger that the effectiveness of indirect constraints would be misunderstood. We set out a number of analytical steps to attempt to determine how a SSNIP at the wholesale level could be translated in to switching behaviour at the retail level and what this could mean for the profitability of the SSNIP[51].

Level of cost pass through from the wholesale level

A4.4 For a price increase at the wholesale level to result in switching at the retail level, first it must be passed on into retail prices. Ofcom does not discuss this issue directly and as such it would appear that Ofcom implicitly assumes that there will be 100% pass through. From an economics perspective it would be reasonable to assume 100% pass through in a competitive market, on the basis that competition would have removed any excess retail margins and hence an operator facing the wholesale price increase would have no choice but to pass through the increase.

A4.5 An alternative, more commercially informed perspective is that markets are generally not perfectly competitive and where a bundle of products are offered to customers, some elements of the bundle will be more the focus of price competition than others. An operator would know that a retail price increase could result in lost customers and hence there would be a desire to pass through the costs

50 This approach is designed to address the types of issues recognized by Ofcom as presenting challenges for the applications of the SSNIP test for WFAEL and WCO (see paragraph 4.18 of Ofcom's consultation document).

51 The I/ERG Input to the Draft Recommendation on relevant markets provides guidance on how to consider indirect constraints in market definition. BEREC also provides an interesting discussion of the application of indirect constraints in its Report on self-supply, BoR (10) 09, March 2010.

at a level and in a manner that minimizes the financial loss. In less price-competitive retail product markets there could be excess retail margins, which could also allow an operator to absorb some of the price increase, although at the extreme it could mean the operator having to accept a below normal profit margin at least for a given period of time.

A4.6 These two views can be reconciled to some extent by recognizing that the level and form of pass through would be determined by its impact on overall profitability and a key factor in this would be the elasticity of demand at the retail level. To complicate matters further a cost increase could potentially be passed through in more than one way. For example, an increase in the wholesale call origination charge could pass through to the charge made for the line rental and free bundled calls or the charge made for additional free call bundles or it could be passed through on to the call set-up charge or the per minute call charge, as Ofcom highlights in its consultation document. How it would be passed through would be determined by the relative elasticities and hence the relative impacts on profitability. Even in a market that has a number of seemingly effective competitors it is possible that some aspects of a product bundle would be the focus of more competitive activity than others.

A4.7 The assumption that Ofcom makes about how a wholesale price increase would be passed on could be as important as the assumption about the level of actual pass through

Wholesale to retail price relationship

A4.8 As a wholesale product is just one of the cost inputs to a retail price a 10% increase in the price of the wholesale product would result in a less than 10% increase in the corresponding retail product, the precise amount of the increase being determined by the wholesale to retail price ratio. Again Ofcom has not considered this issue directly in this review, although as the market research it commissioned questioned customers about a 10% retail price increase this is the same as assuming a ratio of 1:1 (although obviously that is not the case in reality).

A4.9 In practice the situation is slightly more complicated than simply applying a wholesale to retail price ratio to calculate the corresponding retail price increase. Firstly, as highlighted above it is not certain how a price increase at the wholesale level would be passed on at the retail level. Secondly, if customers typically buy bundles of products and they would need to switch the entire bundle then this would result in a further dilution of the impact of the wholesale price increase at the retail level. We discuss each of these in turn immediately below.

A4.10 An increase in the WCO price could be passed through onto a number of different product charges (or indeed a combination of them). Many retail calls are already charged for in fixed price bundles rather than on a stand-alone basis with some types of calls offered free with the line rental charge. The wholesale to retail price ratio is used to understand how the percentage increase at the wholesale level translates into a percentage increase at the retail level. If the WCO price increase were to be passed through onto another product charge, for example the retail line rental price, then you would get to this end point via a slightly different analytical route. The requirement would be to increase the fixed line rental charge by enough to cover the estimated cost increase in the variable WCO charge. By doing this you would then be able to estimate the required corresponding increase in the line rental charge that would result from an increase in the price of WCO.

A4.11 The second issue to be addressed is that of customer bundles and what they imply for the impact of the wholesale price rise at the retail level. For example, if a customer were to purchase a line rental, calls and broadband together then an increase in the WCO price would translate into a smaller increase at the retail level as it would be diluted across the three services, assuming that the customer would need to switch all of the services in response to the price increase (as would be the case in moving to cable).

A4.12 The general point here is that Ofcom would need to identify how and by what amount retail prices would change as a result of the hypothesized increase in the wholesale price.

Estimated level of switching

A4.13 It is essential to have a robust estimate of how many customers would switch in response to the retail price increase, as this is a crucial factor in determining whether the wholesale price increase would be unprofitable. In an ideal world empirical data on price elasticities would be used in the analysis but, as noted earlier, in practice relevant elasticities are not available. As such Ofcom has to make a qualitative judgement on the level of switching.

A4.14 Ofcom commissioned research on customer responsiveness to retail price increases, but unfortunately there are very serious deficiencies in this data. The most obvious problem is that Ofcom's research focused on 10% price increases, when the actual retail price increase, as discussed earlier is likely to be lower than this. Also, as Ofcom highlighted in its consultation document, respondents' stated responses to a hypothetical 10% increase in overall bills and in call prices were very similar, even though the financial impact of the former would be much greater than the latter, suggesting the results must be treated with serious caution. A general failing of this type of customer research is that it at best identifies possible intentions. In practice there would be a chain of action between facing a price increase and deciding to switch to avoid it. The customer would have to be aware of the price increase, analyse its impact, identify switching options and then in some cases go through a switching process. In the face of a relatively small price increase even modest search and switch costs could be sufficient to prevent a customer making a switch.

A4.15 So, for example, to estimate the level of switching to cable from the hypothetical monopolist's focal WFAEL product Ofcom would need: i) an accurate estimate of the size of the retail product price increase, considering in particular the set of products the customer would need to switch to cable; ii) an accurate assessment of the search and switching costs involved in changing supplier, and then iii) on the basis of its view of the price responsiveness of customers, arrive at an estimate of the number of customers that would be likely to switch. As Ofcom recognises, line rental is typically bought in a bundle, which means that the customer would be required to switch the entire bundle of products, even though it would face an increase in the price of only one part of the bundle.

Impact of capacity constraints on switching

A4.16 It could be that Ofcom's estimate of expected switching would need to be revised down, due to capacity constraints of operators in the product markets being assessed. For example, in determining if the WFAEL market should include cable, it would be necessary to determine that the operator in the cable market could actually accommodate the number of customers estimated to switch. For cable networks generally, an important factor would be the geographical network footprint. If customer switching were randomly distributed across the country, but the cable network only available in 50% of the country then that would need to be reflected in the level of switching that would actually be viable.

A4.17 Similarly, to determine whether MPF-delivered services were in the same market it would be important to assess whether operators providing services over an MPF platform have any capacity constraints. As MPF is not a future proof technology, where operators are near to capacity in specific exchanges they may choose not to invest in new equipment and instead choose to deliver service for new customers via an alternative route (i.e. WLR and WCO). This could again require estimated switching to be adjusted downwards.

Potential cost savings of the hypothetical monopolist

A4.18 The preceding discussion has focused on assessing the loss of revenue caused by switching, but it is possible that the hypothetical monopolist could avoid some costs by not having to supply the customers that would switch. Any such savings would need to be identified so that they could be included in the final assessment of the profitability of the wholesale price increase.

Final assessment

A4.19 In following this or a similar form of analysis Ofcom would be able to arrive at a balanced, qualitative assessment, informed by empirical data wherever possible, on the overall financial impact of the 10% wholesale price increase, with which to determine the effectiveness of an indirect constraint on the wholesale market. It would need to arrive at a reasoned view of whether the wholesale price rise would be profitable or not. The same assessment would need to be performed for each possible indirect constraint in each market to determine whether to extend the market from the focal starting product.

Market definition: WFAEL

A4.20 We believe that a rigorous approach, such as the one we outline above, must be adopted if indirect constraints are to inform the market definition exercise. Ofcom did not provide evidence in its consultation document that it had followed a sufficiently rigorous approach. It appears to rely mainly on assertions that customers would consider any technically similar type of product to be a substitute and on this basis extends the market from the focal product to include cable, MPF and FTTP.

A4.21 In addition to this there are two specific points of detail that undermine the conclusions that Ofcom has reached. As discussed above, a 10% increase at the wholesale level would translate into a smaller increase at the retail level, even more so when a customer is purchasing a package of services, for example line rental, calls and broadband together. Here, if the customer were considering switching to cable, then they would need to switch the whole package even though only the line rental price had been increased.

A4.22 Regardless of the size of the increase at the retail level, Ofcom has indicated in its consultation document that it does not believe that customers are particularly sensitive to price changes for the line rental product[52]. Although the WLR price has generally been falling over the last five years or so at the same time the retail line rental price has increased by around 5% per year and prices from different operators have converged over this period. As operators would generally raise prices of products for which customers have low price sensitivity, this data is certainly consistent with the view that customers are not particularly sensitive to line rental price changes. As Ofcom has also noted almost 40% of customers have either no or limited switching options.

A4.23 Given this combination of a lower retail price increase, a lack of price sensitivity and a large group of customers unlikely to be able to switch suppliers it is difficult to understand how Ofcom has extended the definition of the market beyond the focal wholesale product to include any forms of analogue access over alternative network infrastructure. At this stage, therefore, we would argue that Ofcom should define the market only to include the basic focal copper access WFAEL product.

Market definition: WCO

A4.24 The same concerns about the lack of application of a rigorous, qualitative approach to indirect constraints apply in the definition of the WCO market. It is challenging to identify the relevant retail price increase that corresponds to an increase in the WCO price, as our earlier discussion highlighted and as recognised by Ofcom. In practice the considerations could be very similar to those in the case of WLR. As already explained an operator would choose to pass on the price increase in the financially optimal way, so the WCO increase could be passed on to the line rental charge (which typically includes a bundle of free calls).

A4.25 So again there would be a lower price increase at the retail level most likely for the least price sensitive product (i.e. line rental) meaning that it is unlikely that switching levels would be sufficient to make the wholesale price increase unprofitable.

52 See paragraph 4.49 of Ofcom's consultation document.

A4.26 As such we believe that the WCO market definition should correspond to the definition we proposed for the WFAEL market i.e. to include WCO only over the basic focal WFAEL product. Additionally, however, it should be extended for pragmatic reasons to include WCO over wholesale ISDN2 and ISDN30 lines, due to the technical similarities in the product being delivered by the wholesale supplier.