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Market power and remedies in wholesale fixed call origination:

Report prepared for
BT
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Executive summary

A different way forward for the regulation of fixed call origination

BT has asked Copenhagen Economics to examine Ofcom's narrowband market review (NBMR), in particular the market power assessment and remedies proposed in the wholesale market for fixed call origination. This market is subject to long-standing regulation and is amongst those included in the EC list of relevant product markets, which NRAs have to review regularly.

Not much has varied in the UK regulation of this wholesale market, notwithstanding sweeping changes in consumer attitude and in the supply of mobile and fixed services (e.g. LLU-based broadband). For instance, Ofcom's own technology tracker research shows that only 5% of consumers do not use a mobile phone. Thus for those 95% who do, mobile operators can prima facie strongly constrain BT's conduct in the call origination market (even in the event that mobile services are considered outside the relevant market defined). Each of these changes has reduced BT's ability to behave independently of competitors and consumers and these trends are expected to continue and strengthen due to increased quality of mobile services after the 2013 spectrum award.

In fixed call origination (irrespective of unavoidable challenges in the market definition) BT is subject to substantial direct and indirect constraints from different sources. These strongly influence BT's conduct and are expected to do so even more over the next three years. Most importantly, all of these factors would play out markedly more strongly absent regulation. As per the Modified Greenfield approach (cf. the 2007 EC Recommendation), it is firms' likely conduct absent regulation which must inform the scenario that any NRA must consider as part of its market power assessment. In its market definition and most importantly in its market power assessment, Ofcom has not fully considered the ways in which this market would differ absent regulation – where the competitive constraint on BT would fully play out. For instance, the Consultation repeatedly relies on the LLU operators present purchases of call origination from BT in LLU footprint areas as key evidence of limited constraints on BT (paragraphs 5.81, 5.103). Yet absent regulation this could differ markedly, so Ofcom must reconsider carefully this type of evidence.

We also believe that wholesale fixed call origination has evolved to share many characteristics with the market for wholesale broadband access (WBA). Given the strong supply-side similarities, there is a distinct possibility that competitive conditions are dissimilar in parts of the UK (e.g. Market 3) vis à vis the rest of the country. As a result, depending on how markedly heterogeneous the competitive conditions are (between Market 3 and the rest), Ofcom should either:

1. define a separate geographic market based on WBA Market 3 (as well as Hull) – and then for each geographic market, if SMP is found, impose remedies; or
2. within the single UK geographic market (except Hull), impose geographically differentiated remedies, relying on WBA Market 3 as the boundary

In either case, the disruption and cost of implementing call origination remedies which are specific to a subset of the UK would be minimal, given that operators already work with these boundaries in the WBA market. Therefore introducing this type of geographic-based approach in this market could enable Ofcom to gain in the precision of its decision making by reducing the risk of under or over- enforcement.

A geographic approach to regulation allows Ofcom to convey appropriate incentives to invest in a more granular manner. Within a single national market (UK except Hull), which is what the Consultation proposes, this would only permit a single ladder of investment. Since call origination inputs are replicable via LLU, then the fixed voice needs of the majority of consumers who buy fixed voice and broadband bundled is effectively safeguarded by WLA remedies. However, if Ofcom is particularly concerned with the needs of the minority of consumers who are not at present within reach of LLU / cable operators, then it can preserve call origination regulation specifically within the WBA Markets 1+2 area. Furthermore, even with a single geographic market defined, Ofcom could maintain a price cap, which is an effective safeguard for the interests of minority groups such as solus voice buyers, irrespective of their location.

Simultaneously, by doing so Ofcom would simplify its overall structure of fixed telecoms regulation by aligning the treatment of the call origination and WBA markets. In light of the ongoing EC reappraisal of the list of markets susceptible to ex-ante regulation, this simplification could be beneficial in terms of future-proofing Ofcom's approach in one of the markets with longest-standing regulation.

In summary, this market has been subject to regulation for a long period now, while technology and consumer preferences have evolved dramatically. For this reason, Ofcom's reliance in the main on the present market situation and firms' current strategies as key evidence is at high risk of being inappropriate and likely to lead to regulatory failure. Market outcomes and strategies today are potentially very different from what could quickly emerge absent call origination regulation. Ofcom should consider this circumstance and adjust its market power assessment accordingly.

Ofcom could choose an alternative approach, consistent with both i) the product market definition as per the EC Recommendation (which Ofcom's proposals follow) and ii) the EC SMP and art. 102 enforcement guidelines and case law. Even if maintaining the present market definition, Ofcom could revise its SMP assessment. In fact, the degree of differentiation between products within the relevant market and outside (mobile, VoIP) is limited and the market dynamics is favourable, with expansion by existing competitors a clear possibility (e.g. via bundled offers). For these reasons, we believe that no SMP exists in this market (or very limited SMP). Thus, Ofcom should remove or curtail remedies.

If Ofcom were to conclude that BT has SMP and thus maintain some remedy, we consider that there is some justification for a remedy like a charge control obligation, which is designed to counter concerns of exploitative conduct. However, there is no justification for remedies addressing exclusionary conduct (i.e. refusal to deal and leverage in general), such as the non-discrimination remedy. This is due to the presence of several alternative, infrastructure-based sources of supply, both inside and outside the boundary of the relevant market defined – which constrain BT's ability and incentive to exclude.

Finally, it is challenging to adapt the regulation of those services on a platform with sustained trends of substitution away from it. We have compared Ofcom's approach to the regulation of fixed calls to: i) post, and ii) TI leased lines. We note that: i) vulnerable consumers of fixed voice services would remain safeguarded by the USO even if Ofcom were to remove or reduce obligations at the wholesale level on BT. Moreover, ii) continuity of supply should not be a relevant concern in the case of fixed voice. Thus Ofcom could reduce the scope for regulation of call origination without concerns of regulatory failure, while maintaining consistency to its overarching regulatory strategy and principles.

Box 1 Key benefits of rolling back regulation of call origination

We consider that a revision of the geographic approach to call origination in the Consultation would lead to a number of benefits.

By removing call origination remedies Ofcom would be consistent with both:

- its regulatory principles;[1] and
- its successful history of deregulatory approach in the calls market:
  - in 2006 retail prices were deregulated as wholesale call origination deemed sufficient – a well received approach;
  - in 2013 it may be the turn of call origination regulation to be radically rolled back, with WBA and WLA regulation deemed sufficient;
- thus further increasing its credibility in other areas where intervention is more clearly necessary.

Moreover, by introducing geographic markets or geographic-differentiated remedies modelled on WBA, call origination regulation would become aligned with WBA. This would enable Ofcom to:

- simplify regulation for both access buyers, the regulated firm, consumers and stakeholders in general;
- apply the product market definition as per EC recommendation;
- future-proof call origination regulation wrt evolving technology-market trends;
- champion (where appropriate) such an approach at the relevant EU fora, allowing a proactive stance to influence the revision of the EC Recommendation.

Finally, any changes in retail bundle pricing structures that may follow the deregulation would likely promote greater broadband take-up, as the broadband component would become relatively more convenient compared to calls

- while the existing USO conditions would safeguard vulnerable call users.

Source: Copenhagen Economics

Scope of the report

The scope of this report reflects a set of terms of reference provided by BT, which we reproduce at the end of the report, together with a summary rejoinder. The report includes five sections, which review:

[1] In particular the principles of operating with a bias against intervention and always seeking the least intrusive regulatory mechanisms to achieve its policy objectives.

1. The key regulatory background to this market;
2. BT's September 2012 submission on bundling and geographic markets (Part II of the ToR)
3. Ofcom's SMP assessment and the relevant characteristics of this market (Part I of the ToR)
4. Ofcom's choice of remedies, including an assessment of the proportionality of non-discrimination and transparency obligations (Part III of the ToR)
5. The Terms of Reference of the report and our summary rejoinder

Section 1
Introduction

1.1 EU framework and NRA decisions on call origination

The wholesale market for fixed call origination, which is part of the fixed narrowband services, is amongst those listed as "susceptible to regulation" within the list in the 2007 EC Recommendation on relevant product and service markets (hereafter, the EC Recommendation).[2] A review of nine key EU countries indicates that, in each country, the national regulator agency (NRA) has adopted an approach similar to Ofcom, which is to find mobile voice not to be in the same market as fixed and to designate the incumbent as SMP.[3]

As acknowledged in both the 2009 and 2013 market reviews, Ofcom is aware of the scale of substitution trends affecting fixed voice calls and of their impact at not just the retail but also wholesale level. This is not a factor unique to the UK: substitution trends in fixed voice calls affect all EU markets.

Nonetheless, generally European NRAs have chosen to remain within the boundary of the definition of EC Market 2 as per the EC Recommendation. Under Article 15(3) of the EC Framework Directive, NRAs can define markets other than those specified in the EC Recommendation, but this involves the consideration of a cumulative three-criteria test that the NRA would have to perform ahead of starting the analysis within the market itself.

The EC Framework Directive and Recommendation can (as is their purpose) inform the type of market analysis performed by NRAs. The way in which this occurs evolves as does the EU regulatory framework. In fact, in October 2012 the EC has consulted on the revision and updating of the Recommendation.[4] While this may lead to revised guidelines on wholesale call origination in the future, it has no direct bearing on the current market review process.

1.2 Key novelties in Ofcom's February 2013 Consultation

In the 2009 Review, Ofcom deregulated the retail market for call origination (which had been dropped from the 2007 EC Recommendation), while wholesale regulation was maintained intact. In the February 2013 Consultation on the review of fixed narrowband services market (hereafter, "Consultation"), Ofcom maintains its past approach to market

[2] "Wholesale market: Call origination on the public telephone network provided at a fixed location". See: Commission recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:344:0065:0069:en:PDF

[3] Austria, Belgium, Denmark, France, Germany, The Netherlands, Norway Sweden. See: http://stakeholders.ofcom.org.uk/binaries/consultations/narrowband-market-review-call/annexes/analysys_mason.pdf

[4] http://ec.europa.eu/digital-agenda/en/news/public-consultation-revision-recommendation-relevant-markets

definition for call origination, proposes to find that BT has SMP on this market and to relax to a certain extent the set of wholesale call origination remedies imposed on BT.[5]

Ofcom acknowledges that retail competition in narrowband services is supported not only by remedies in the wholesale narrowband market (such as Caller Pre-Selection) but also in access markets (such as LLU and WLR).[6] Nonetheless, Ofcom proceeds to perform a market review limited to wholesale narrowband, which is aligned with the market boundaries in the EC Recommendation, which Ofcom takes as a starting point.[7]

The Consultation states that its latest market definition departs from that adopted in the Sept 2009 by now including within the candidate market all calls self-supplied by OCPs over LLU.[8] However, this is confusing. In fact, Ofcom's 2009 Review had already included "*alternate fixed narrowband networks such as direct access (via cable or PPC and self-provided fibre for larger sites) and LLU*".[9] So, unlike what may appear, there has been no substantial change in the market definition.

With respect to remedies, the new elements introduced now by Ofcom's latest proposals are the phasing out BT's duty to provide Indirect Access (IA) and (part of) CPS, as well as the removal of the cost orientation obligation (also known as basis of charges). However, BT would still remain bound to provide cost accounting, and to disclose (although only to Ofcom) DLRIC and DSAC. Finally, the price cap obligation is proposed to remain with some changes. In this regard, Ofcom proposes that the common costs that BT cannot recover with fixed termination rates at LRIC will instead be recovered in wholesale call origination prices – by way of a one-off shift of the price cap in 2013/14. This adjustment ought to have, by design, a neutral overall impact on BT, although the actual impact could be affected by traffic flow patterns (namely, whether they are balanced).

1.3 When is something new under the sun?

BT's September 2012 Call for Inputs response, while reviewing evidence of the appropriateness of rolling back regulation in the call origination market, highlighted a series of factors that certainly cannot be considered as new, fickle trends. For the sake of reference, one can look back a decade ago to find out that already in 2003 BT could identify similar evidence as relevant to the regulatory review of the very same market:

"*BT considers that retail mobile access and retail fixed access are increasingly seen in the residential market as direct substitutes for one another. Future assessments of SMP should pay careful attention to this trend. Evidence of convergence is provided by:*
- *Increasing customer switching to mobiles.*
- *Improved mobility of PCs – impacting on internet access market.*

[5] http://stakeholders.ofcom.org.uk/consultations/nmr-13/
[6] Feb 2013 consultation, para 3.24.
[7] Feb 2013 consultation, para 5.14.
[8] Feb 2013 consultation, para 5.15 and its footnote 77.
[9] Mar 2009 consultation, para 6.79. This was then confirmed in the Sept 2009 statement, at para 6.13.

• Improvements in radio technology (squeezing higher bandwidth over limited radio spectrum).
There is also evidence of broadband bundling of internet and voice (i.e. Voice over IP, ADSL and cable modem technology replacing PSTN). All of these developments are likely to reduce customers' use of narrowband networks, increasing the rate of substitution of mobile services and offering greater choice to customers."[10]

The above excerpt already anticipated many of the factors that are before Ofcom today as evidence of competitive constraints on BT's conduct in this market. While the latest Consultation proposes to reduce to some extent the scope of the remedies in this market, this does not fully reflect the strength and the established nature of the trends identified already in 2003.

In the following sections, as we review the key evidence of the competitive constraints faced by BT, we will in essence show that the factors highlighted as emerging in 2003 are in 2013 strong and undisputed to the point of justifying a more radical roll-back of regulation in the call origination market.

[10] BT response to Oftel's 2003 Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets, from section 5.4.3 (p.17) of the response. Available at: http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Consultativeresponses/Oftelmarketreviews/2003/Fixednarrowbandwholesale/response.pdf

Section 2

A review of BT's submission on bundling and geographic markets

This section provides a review of key aspects in BT's submission of 28 September 2012, which was sent in response to Ofcom's Call for Inputs.[11] Ofcom's apparent appraisal of the above submission is in the Consultation paragraphs 5.78 to 5.82.[12] We will also discuss this appraisal in the Consultation.

Key points:

- BT's submission provides estimates that indicate that bundling is widespread
- BT is justified in arguing that this has an impact on market definition yet does not spell out a clear solution to the limitations identified in the market definition
- The evidence in BT's submission supports the definition of a separate geographic market (i.e. geographic Market 3 WBA)
- Ofcom interprets BT's submission as calling for a separate product market based on bundles, which is not consistent with the submission's key arguments
- Ofcom considers the trend in retail bundling of voice and broadband as not "sufficiently advanced", yet two thirds of UK landline users buy bundles of that kind (Ofcom data)
- Ofcom's arguments on this matter are not consistent with the modified Greenfield approach, since they rely exclusively on operators' current strategies, without considering what they would likely do absent regulation
- A strong case can be made, based on the evidence in BT's submission, that the widespread demand for bundling, combined with the supply conditions in broadband markets, supports a call origination geographic market à la WBA Market 3

2.1 The BT response to the Call for Inputs

In response to Ofcom's May 2012 Call for Inputs, BT has submitted three documents:

- The main response, covering each question in the Call for Inputs (in June 2012)
- An addition submission on bundling and geographic markets (September 2012, not yet published on Ofcom's website at the time of writing)
- An additional submission on glide path implementation (October 2012)

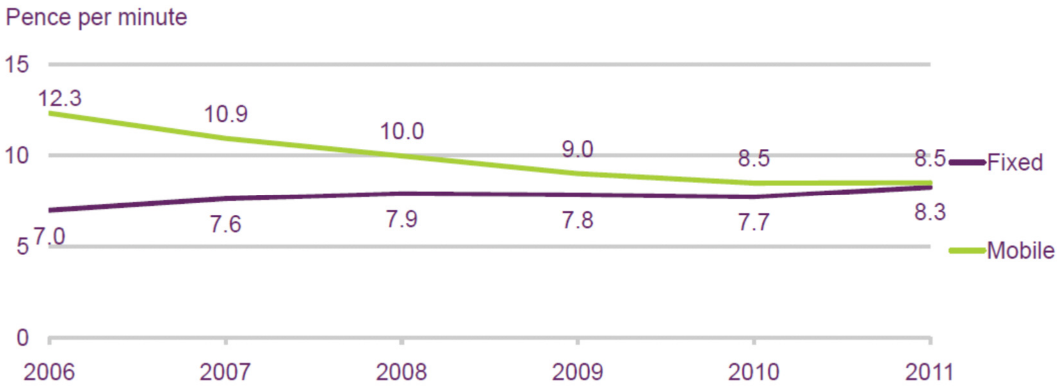
The focus of this review is on the second of the above submissions. In what follows, we will reappraise key evidence included in that submission highlighting why it should be particularly relevant to Ofcom's decision making.

[11] http://stakeholders.ofcom.org.uk/consultations/narrowband-market-review-call/
[12] The identity of the respondent to which the Consultation paragraphs 5.78-5.82 refer has been kept confidential. We follow the ToR (cf. **Error! Reference source not found.**) in assuming in this report that it refers to BT.

Mobile is a substitute for fixed

First, the submission highlights Ofcom's own finding that the average price for fixed and mobile calls has virtually converged as of 2011 (cf. Figure 1). In our view, this is a key consideration that supports the strong competitive constraint on call origination that BT faces from mobile. This is because at the retail level the key pricing factor for consumers to rely on fixed calls has been dramatically reduced.

Figure 1 Convergence in fixed and mobile call prices



Note: As per Ofcom text: Includes estimates where Ofcom does not receive data from operators; fixed calculation excludes non-geographic voice calls.

Source: Ofcom, Communications Market Report 2012, Figure 5.53 available at: http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr12/UK_Telecoms_chart_pack.pdf. Also quoted as Figure 4 in BT's September 2012 submission.

BT further argues that mobile services can provide qualitative advantages over fixed (e.g. due to the handsets functionalities). We will discuss in the next sections how other qualitative factors. This must also be kept in mind. In the further sections we will discuss why quality of coverage and pricing of non-geographic calls are factors that, on a forward looking view, will likely no longer affect consumers. For this reason, Ofcom should not discount the above argument on fixed-mobile substitutability in the BT submission.

No technical barrier to bundling calls with LLU broadband

A second key point in the submission is the observation (p.10) that a key competitor (TalkTalk) is nowadays only offering MPF-based broadband (full LLU), with calls automatically part of the retail bundle. BT highlights that the OCPs' pricing structures in are such that, while consumers can take broadband on a stand-alone basis, they do not have incentives to do so. Thus bundling is an important feature in the marketplace.

We think that the above point is very relevant for the following reasons. If a player has invested in LLU then it has the option available (within its LLU footprint) to offer calls based on LLU. There are no big technical challenges in providing calls based on such a solution compared to providing them using BT's wholesale call origination inputs. Instead, for a player with LLU in a certain local exchange, this specific make or buy decision for call origination will be mainly a simple cost decision. As stated in BT's submission, a key competitor already applies the approach of not purchasing BT's wholesale call origination inputs wherever it has LLU footprint, while still providing calls to its retail customers. This demonstrates that technical feasibility is not a barrier.

The make or buy decision is therefore going to be predominantly cost driven. If the BT price for wholesale calls origination is above the costs of a LLU-based solution: then the operator will self-supply within its LLU footprint. The same rationale applies to cable, which can historically be used to provide voice services and where technologies allowing the resale of wholesale inputs have developed.

Business call users are safeguarded by strong competition

A further important point in the submission is relative to businesses' attitude to fixed calls. The submission relies on IDC data (cf. Figure 2) to present current and forecast estimates on small and medium businesses reliance on fixed vs. mobile or IP-based calls.

We are not aware that Ofcom has produced comparable estimates nor any forward looking estimates, which we consider a potential shortcoming. Thus, we rely as key evidence on figures in the BT submission. While we have not reviewed BT's calculations, we assume them to be correct in the main, noting that small departures from the above figures would not affect the arguments below.

The current distribution of volumes, and especially the forecast changes, indicates that a fixed supplier like BT faces strong constraints from other platforms while serving business users. These are particularly strong for small businesses.

Figure 2 Breakdown of outgoing call types for Small and Medium Businesses

We consider that the above point demonstrates that Ofcom should be (even) less concerned about business users than residential calls consumers. In the next sections, our analysis will focus on the residential aspect. If it can be established (at the wholesale level) that there are no or limited concerns descending from the needs of residential users, then a fortiori business users should not inform additional concerns.

BT's gap analysis – an assessment of commercial outcomes absent regulation

As a final point, the gap analysis in the submission (devised by BT upon Ofcom's informal request) is a useful practical exploration of market outcomes in the modified Greenfield where no call origination regulation is in place. The information in this analysis indicates that competing operators are best placed to maintain their presence in the retail markets they serve (e.g. via bundles), even absent call origination remedies.

Whether the roll-back of regulation were to occur in the whole market or only in WBA Market 3, the submission indicates that BT would have clear incentives not to disrupt its wholesale relationship to competing operators. It highlights a degree of complementarity in the wholesale demand for BT Wholesale products (WLR, call origination), which suggests that BT would continue supplying call origination absent regulation.

Moreover, the submission states that a key change in BT's strategy absent regulation would be to customise wholesale call origination deals focused on large customers (Sky, Talk Talk Group) or white label offerings (Post office or Tesco). This is an important consideration, which we believe Ofcom should engage with in detail, since it could affect its evaluation of competitive concerns and of any proportionate remedies.

Even if by design a gap analysis of this kind can only rely on speculative considerations, we consider the outcome delineated in the gap analysis highly plausible given the market context. Ultimately, as ever with counterfactuals, the proof is in the pudding. The only way to establish market outcomes in the Greenfield scenario is for Ofcom to remove regulation, in all or just part of the UK.

Trends in the shares of supply of fixed voice and market power

BT provides quite granular information on supply shares in fixed calls, which confirm a downward trend in BT's share from 2007 – 2013 (estimates). Based on Figure 3 below, we consider that this is prima facie evidence that BT's market power is also decreasing. Once again, we are not aware that Ofcom has produced comparably granular estimates including a forward look, which we consider would be an important evidence base.[13] Therefore we rely here as key evidence on figures in the BT submission. While we have not reviewed BT's calculations, we assume them to be correct in the main, noting that small departures from these figures would not affect the arguments below.

[13] We understand that Ofcom has based its market share estimates on a S135 information rather than on the quarterly telecommunication market trends publication. This may indicate that there could be discrepancies between the two sources, which would explain Ofcom's restraint in providing a greater degree of disaggregation.

Figure 3 Outturn and Forecast fixed call origination for residential consumers

Moreover, one would expect that regulation (e.g. charge controls) artificially inflates the BT share, for the reasons discussed above when considering the Greenfield scenario. Therefore the downward trend that can be observed for the BT wholesale share is of relevance and signals a decrease in market power, even if the share decrease over the past few years may be moderate.

However, we are not persuaded that this table is sufficient to conclude that the BT position is not consistent with SMP on a forward looking basis (even if focusing only on Market 3). Figures in the above table are not, as of their own, sufficient to dispel concerns of market power. The figures reflect the distribution of shares of supply of fixed voice only (incl. cable-based and LLU-based providers). However, in line with Ofcom's proposed market definition, mobile calls are not included and therefore, as can be expected, the figures paint a picture of high wholesale share for BT. The wholesale share can be estimated as the sum of BT retail and other indirect access (which both rely on either BT Wholesale or BT Retail inputs). The nationwide 2011 share is therefore 39% + 26% = 65% share in 2011 nationwide, with a forecast of 56% for 2013. Operators which do not rely on BT Wholesale (VM and Direct access) sum up to 36% in 2011, forecast to raise to 44% in 2013. When the BT share forecast is focused on the Market 3 area alone, this yields a share of 45%.

The shares presented above, taken at face value, could indicate that BT has market power even with the constraint from cable and LLU. However these shares are not fully informative and potentially misleading for two key reasons.

First, the shares are Brownfield (i.e. actual outcomes instead of the Greenfield market outcome that would occur absent regulation); and absent regulation it is very likely that BT wholesale shares would decrease as competitors would self-supply more. It is thus quite likely that the resulting BT share would be low enough that SMP could not be considered. For instance, in Market 3 the Greenfield share could fall below 25%, which is the threshold below which dominance (and, by reference, SMP) can be excluded.

Moreover, further caution is needed here, since appraising the constraint from mobile and OTT services is fundamental to paint a correct picture of the market. As acknowledged in the BT submission (and to some extent in the Consultation), both are important indirect constraints. A set of results such as those in Figure 3 cannot paint a balanced picture summarising the set of services supplied that affect (within or from without) this market. Even by just including the amount of calls supplied by mobile, the BT nationwide share would more than halve, which again would lead to SMP not being considerable.

Concluding remarks on the BT submission

BT's submission provides much information which we interpret as clear evidence that bundling is widespread. It also provides some forecast estimates, which would suggest that the bundling trends identified in the submission are likely to persist or deepen. BT also documents the increased level of substitution between fixed and mobile. A key point that Ofcom should consider is that average call prices have now converged between fixed and mobile. Thus the impact of mobile on the call origination market must be carefully considered, either as a source of supply within the relevant market defined, or as a significant indirect constraint (if defined outside the market).

The submission also presents information on the present and forecast share of supply in the fixed market. By definition, this information fails to reflect the competitive constraints from mobile and also from any other channel of communication (e.g. OTT services). The shares show a forecast downward trend in BT wholesale supply share. However, besides this trend (which is like-for-like), we suggest caution in drawing much inference from the shares presented in Table 11 of the submission, given the indirect constraints in place.

We consider that the gap analysis provides a useful assessment of market outcomes in the modified Greenfield where no call origination regulation is in place. BT has identified a range of reasons why it would have clear incentives not to disrupt its wholesale relationship to competing operators. Moreover, BT has put forward persuasive evidence that, in our view, indicates that the calls markets for businesses are exposed to much competition. Thus, in our view, the decision whether to deregulate call origination should mainly depend on the assessment of its ultimate impact on residential consumers. If no material impact of deregulating is found for residential consumers, then a fortiori business users should be also safeguarded.

While this specific September 2012 BT submission does not spell out a clear solution to the limitations identified in the market definition process, we think that a clear way forward can be established on market definition. In our view, the evidence in BT's submission on bundling aspects supports the definition of a separate geographic market (i.e. geographic Market 3 WBA). We will discuss this in greater detail below.

2.2 The Consultation view of the BT submission

In paragraphs 5.78-5.82, the Consultation briefly summarises and responds to the BT September 2012 submission. Paragraph 5.79 suggests a misunderstanding of the relevance of the BT submission. According to this Consultation paragraph, BT's submission is focused on arguing for a separate (bundles-based) product market definition at the retail level. As we explain below, we consider that there may be a more fitting characterisation of the BT submission.

The Consultation text in these paragraphs dismisses the argument adduced to BT, on the basis that bundling is “not sufficiently advanced” as a trend to justify a separate product market and noting that a share of consumers buy broadband and fixed voice separately (para 5.80).

However, our review of the BT submission leads us to believe that it provides evidence that retail bundling is widespread and affects a very large share of consumer buying decisions. We estimate below in Table 1 that **two thirds of landline owners** buy fixed calls bundled with fixed broadband and that of landline owners UK-wide, more than 51% are those based in Market 3 and who buy fixed calls and broadband bundled. Therefore the Consultation is not founded in dismissing bundling as a growing yet not significant enough trend. Instead, bundling is a defining feature of consumer behaviour for the majority of relevant consumers (landline owners). We expect this to be even more marked within the highly contestable Market 3 area.

Table 1 Share of landline users purchasing fixed broadband

	Solus voice: no fixed broadband	Fixed broadband and calls bundled	Fixed broadband not bundled with calls	Total market (% of UK-wide)
In Markets 1 & 2	4%	15%	4%	22%
In Market 3	12%	51%	14%	78%
UK-wide	**16%**	**66%**	**18%**	**100%**

Note: Totals may appear to differ due to rounding. The share of households living within Market 3 is obtained from the latest Ofcom WBA Statement. Consumers’ preferences to bundling are assumed not to vary with geography.

Source: Copenhagen economics elaboration, based on Ofcom Technology Tracker, Q1 2012, http://stakeholders.ofcom.org.uk/binaries/research/statistics/2012apr/Ofcom_Technology_Tracker_Wa1.pdf

Table 1 displays estimates, based on Ofcom’s own data, of the distribution of UK consumers (landline owners) as a function of i) their consumption of fixed broadband vs. no fixed broadband; ii) whether broadband is bought as part of a bundle; and iii) the location of the consumers. The only assumption informing the figures in Table 1 is that consumers’ preferences to bundling do not vary in Market 3 compared to the rest of the country. This is a conservative assumption since the greater presence of cable and LLU players in Market 3 will increase the supply of attractive bundles in Market 3 compared to the rest. Thus a greater number of consumers in Market 3 is arguably likely to choose to buy fixed calls bundled with broadband than what would occur in Market 1.

The Consultation also states that the adduced bundling argument has no implications on the wholesale market definition, since full LLU is typically only commercially viable when used to provide a bundle of voice and broadband (para 5.81). This indicates according to Ofcom that wholesale call origination remains a key upstream input to supply retail bundles.

However, we find that this type of bundle is demanded by two thirds of UK consumers (owning a landline). Therefore the point on commercial viability, while logically consistent, cannot have much weight given the large extent to which these types of bundles are demanded (cf.Table 1). Moreover, this argument should be even less relevant in the context of the Market 3 area where bundling is even more prevalent.

The Consultation further considers that LLU operators presently buy call origination from BT to supply a fixed voice product to customers, even as part of a bundle with broadband (para 5.81). No consideration however is made of whether LLU operators would continue to do so absent regulation. Because there are no technical barriers for LLU operators (within their LLU footprint) to stop relying on BT, then the LLU operators' current purchasing from BT is not of high evidence value under the modified Greenfield approach.

Finally, the Consultation refers to the role of wholesale call origination in the supply of voice-only retail services. As shown in the above table, only 16% of landline owners do not buy broadband and are therefore an established source of demand for voice-only retail services. The remaining 84% demand both fixed broadband and voice and could thus be served by a bundled offer. Therefore voice-only retail services cannot be seen as a major factor in market definition.

Thus, for this and the previous considerations, the Consultation paragraphs 5.78-5.81 are not justified in concluding that wholesale call origination remains a key upstream input to supply retail bundles.

In the interest of clarity, we do not disagree with paragraph 5.82, where the Consultation states a view that there is not a separate (product) market for wholesale call origination, for the provision of calls in voice and broadband bundles. This is eminently sensible given the evidence from this market.

However, unlike what the Consultation states (paragraph 5.79), we do not consider that the BT submission evidence is to the effect of a different product market definition. We consider that its relevance is first and foremost to geographic aspects of market definition.

Indeed, based on the evidence in BT's submission, we argue below that the widespread demand for bundling, combined with geographic variations in supply in broadband markets, supports a geographic market definition for call origination modelled on WBA Market 3.

2.3 Geographic approach: a risk-free regulatory opportunity?

The BT submission evidence suggests to us that the phenomenon of bundling is a substantial factor today and that it will become even more prominent on a forward looking basis (during the next three years). Thus, an equally careful consideration of the product and geographic definition aspects of the call origination market is necessary. In our view, Ofcom has shown a degree of under- appreciation of the geographic aspect of the market definition, which compromises the robustness of the entire market definition exercise. We consider that, given the market evidence, there would be clear benefits and limited risks in defining a geographic market for call origination based on WBA Market 3.

As explained in the analysis of Table 1 above, a greater share of consumers is likely to buy fixed calls bundled with broadband in Market 3 than in Market 1. For this reason, the share of UK consumers (who own a landline) that are in Market 3 and buy this type of bundle will most likely be greater than 51%. These are all retail consumers whose custom can be strongly contested by multiple fixed operators (and of course mobile players as well). For this part of demand, corresponding to a majority of UK consumers (>51%), this translates at the wholesale level into a strong competitive constraint on BT in the call origination market.

The competitive pressure mediated via bundling offers implies that a degree of variation in competitive conditions exists across the UK as a function of the availability of cable and LLU infrastructure. In the Market 3 area, bundles based on self-supplied broadband are certainly a very strong constraint on BT. Therein competitive conditions are therefore materially heterogeneous compared to the rest of the UK. Ofcom should therefore considering defining a separate relevant geographic market on this basis.[14] This would allow Ofcom to impose no (or much limited) call origination remedies in Market 3, compared to any remedies which may be proportionate in the remaining areas.

By introducing a separate geographic market (in the Market 3 area), this would ultimately enable Ofcom to provide a safeguard for the consumers less safeguarded by competition – namely those outside of urban areas, where LLU entry has not occurred and cable footprint is lacking.

There is a remaining minority group of those in LLU coverage areas (e.g. urban areas) who choose not to have broadband or a mobile. The share of these users is small and expected to decrease. Therefore, even if these consumers are not contestable, all their neighbours are contestable and thus the non-contestable consumers are to a certain extent safeguarded by the choices of others.[15] They will face the same retail offers as others (whether bundles or solus voice offers), rather than an offer customised to their group. In other words, no third degree price discrimination is available in practice that would allow the operators to focus specific offers only on those consumers (other than is the result of the bundling available to all). Thus this remaining minority group does not justify Ofcom in maintaining throughout the entire country a high level of regulation.

As displayed in Table 1, of all UK consumers who have a landline, only 4% are in WBA Markets 1+2 and do not demand a fixed broadband. Similarly, of all UK consumers who

[14] Ofcom may also want to consider whether a geographic market composing not just WBA market 3 but also the WBA market 2 could constitute a separate geographic market for call origination – for reasons much similar to the previous case.

[15] Absent regulation, consumer switching in these areas could resemble, by way of a metaphor to public health, the status of herd immunity. Individuals who choose not to take a vaccine are protected by herd immunity when a large number of those around them have taken the vaccine. For vaccinations the herd immunity level according to contagion models is usually very high: above 90% of population must exercise the virtuous behaviour (e.g. take the vaccine) for all individuals to have high protection. However, in the context of consumers exercising a constraint on suppliers, even relatively fewer virtuous consumers (e.g. those switching in response to price increases) are sufficient to discipline a supplier raising its price.

have a landline, those who are in WBA Markets 1+2 and purchase broadband not bundled with fixed calls is 4%. Even summed to the previous set of consumers this adds up to 8% of all UK landline owners. It is this 8% which effectively the Consultation refers to when it relies on the argument that LLU/cable coverage is limited and that some consumers prefer not to buy voice and broadband as a bundle. However this is a very small share of consumers on which to base policy making.

Separately, we consider that a case could also be made that the area where BT faces stronger competitive constraints is not limited to WBA Market 3, but would be best defined as the sum of Markets 3 and 2. We do not explore in detail this case but consider that the arguments discussed above would also apply under this approach. What would vary is that the strength of competitive constraints on BT would be slightly lower (given the lower presence of cable and LLU players in Market 2). At the same time, the share of the UK landline users in the remaining area (Market 1 alone) which do not purchase broadband would decrease to 2%. Similarly, the share of those landline owners who purchase broadband not bundled with calls would be 2%. So this would make it further less tenable for Ofcom to base its call origination policy with respect to this subset of consumers.

Regulatory decisions, like all enforcement decisions involve a continuous balance of two opposite risks: that of unnecessary, disproportionate over-enforcement (so called Type I decision error) v. the risk of under-enforcement (Type II error). In the context of call origination, varying remedies by geography would clearly reduce the Type I risk of regulatory over-enforcement. At the same time, doing so would virtually not raise the Type II risk of under-enforcement, for the reasons discussed above. In conclusion, geographically differentiated remedies (or a geographic market definition) based on the WBA boundaries provide an opportunity for Ofcom to reduce the risk of regulatory error and thus improve market outcomes

Low risks and business costs from the introduction of a further geographic market

A geographic market definition based on an area boundary from the WBA market is associated with limited risks of regulatory failure. Such an approach would involve low business costs for operators relying on BT inputs, as long as the market boundary is aligned with the geographic approach in WBA. In fact, operators' systems and processes are already designed such to work with the WBA boundaries.

As a consequence, for this market, unlike other regulated markets where the pattern of infrastructure footprint is more complex, Ofcom faces a very favourable trade-off between granularity of its analysis and practicality of its decision. Both objectives can be achieved to a very high degree with a geographic approach that matches the established approach devised for WBA.

Ofcom has made a successful effort in communicating the WBA markets to the final consumers, who over the past few years have been educated as to the variations in infrastructure supply across the country. UK consumers who purchase broadband are now familiar with the concept that certain, more remote areas, have less choice in suppliers.

Therefore, provided that BT's retail USO obligations on calls remain unaltered, consumers would not be materially disrupted by the introduction of a geographic market approach to wholesale regulation of fixed calls – as long as this matches the accepted pattern or structure of the WBA approach.

In conclusion, we recommend Ofcom to align its approach in the call origination market to that which it has successfully implemented in WBA. A very important benefit from doing so is regulatory simplification.

This is not a benefit that is necessarily limited to the UK telecommunications market. In fact, a degree of simplification would also benefit all EU national markets with similar characteristics in terms of WBA performance. Were Ofcom to advocate a similar approach as part of the present EC recommendation review, this could allow a greater degree of simplification in how the ex-ante framework is implemented EU-wide.

Section 3

Market power assessment

This section provides a review of the SMP assessment in the Consultation, highlighting the key arguments in Ofcom's reasoning and their implications. We conclude that the characteristics of the call origination market are such that BT holds no SMP therein – or at most a very narrow form of SMP (which would justify only limited remedies).

Key points:

- Ofcom faces the same challenges in the SMP assessment as in its market definition, yet it dedicates limited effort to assess their implications on market power
- The constraint from mobile operators on BT is inexplicably missing from the market power assessment
- The Consultation SMP assessment de facto relies significantly on the market share figure established based on the (narrow) relevant market
- It is challenging to predict operators' conduct absent regulation when this has been in place for two decades; however Ofcom relies on operators' present choices as evidence of insufficient constraints on BT - not in line with modified Greenfield

3.1 Assessing SMP after an unavoidably challenging market definition

Ofcom should pay special consideration that an SMP assessment exercise can gain in robustness by acknowledging the characteristics of the previous stage of the analysis – the market definition. Where a less than clear cut judgment has been necessary at the market definition stage, then the decision making process can only benefit if any peculiar characteristics of the market and challenges in the definition of its boundaries lead to a context sensitive market power assessment.

Three factors are particular sources of challenge for the definition of the relevant market in this context:

- The treatment of indirect constraints from mobile calls
- The effect of retail bundling on wholesale competition
- The Greenfield assessment of market conditions, given the long-standing regulation

We will reappraise in greater detail these and other factors throughout this section, since they do not only affect the market definition but equally also the market power assessment. The combined effect of these factors implies that Ofcom has had to make an unavoidably challenging call on market definition, given the limitations in the toolbox available to NRAs – which is not suited to disentangle the above challenges. Thus Ofcom should factor this in its market power assessment.

Limits to the SSNIP test in call origination

As already illustrated by BT to Ofcom, there are conceptual concerns as to the robustness of applying a SSNIP test in the context of a vertical value chain where the contribution of the wholesale input to the retail is limited (i.e. under low pass-through). We consider that a further source of potential bias is driven by the long-term substitution patterns in a market with distinct customer segments such as voice calls. Substitution flows have a cumulative impact over time in this market. A forward looking analysis must acknowledge that, even if the elasticities found in the short term are small, the cumulative effect over time of substitution to products outside the market is large. Once BT loses a fixed voice consumer (or a share of her usage) to OTT services based on a competitor's broadband, or to mobile, then this affects profitability in the future. SSNIP can only consider the short term loss but not the impact on BT of this (predominantly one-way) longer-term substitution trend.

In other words, the SSNIP assessment is surveying (every three years) a moving target of consumers, where the most elastic customer segments are endlessly leaving the market. However, Ofcom's consumer survey takes as a base only a sample of consumers "using landline for outgoing calls from home in the past 6 months".[16]

Thus, the starting point for the SSNIP are the current users of fixed voice and this does not include those who have used fixed voice in the past and have now moved on. These latter consumers who have switched to another platform (as a result of competition for the market) embody the real competitive constraint faced by BT. The survey design means that these consumers are not captured.

Given the substitution trends described above, this approach inexorably leads (every time this market review is performed) to the foregone conclusion of inelastic demand – a regulatory groundhog day. This holds even as consumers migrate to alternative platforms, which is the result of the (indirect) constraints in place on BT. In other words, the long run elasticity of demand is likely much higher than the short-run elasticity measured by a SSNIP.

Therefore, demand conditions over the three-year period of the market review could be substantially different from what a single SSNIP snapshot taken ahead of the review period can capture. This is because in the three-year period of this review market conditions are likely to reflect a (e.g. medium-term) elasticity of demand which is much higher than what the SSNIP exercise can produce – due to the market trends identified.

The retail impact of price increases

Modelling the impact on retail prices of variations in wholesale prices is not straightforward. While in this market it appears that wholesale price variations are not passed

[16] Jigsaw Research, Market research for the narrowband market review. Prepared for ofcom, Januray 2013, Fig.30 at p.30

through in full down to the retail level, the competitive dynamics for all retail services which include calls is such that a simple pass-through rule or model does not exist. Ofcom's 2009 market review considered for instance a pass-through factor of about 30%. A new estimate has not been explicitly sought for 2013. [17] In fact, a fixed pass-through is unlikely given the importance of bundling in the retail competitive dynamics and the asymmetry in the value and characteristics of the different wholesale inputs underlying retail bundles.

It is not within the scope of our work to disentangle the pass-through issue, but we would like to focus briefly on the conditions at the retail level so to understand what it means for wholesale price setting. To understand the retail market characteristics, we rely on Ofcom's survey (performed by Jigsaw Research).

Just like modelling the impact of retail demand to wholesale in this context is challenging, so is the design of a retail survey that can be fully informative for the purpose of the wholesale market definition. For instance, the Jigsaw Research survey commissioned by Ofcom asks consumers whether they use VoIP (or would do so in response to a price increase). In this survey, this can only refer to unmanaged VoIP, where consumers use skype, facetime or similar. This does not capture managed VoIP, which can occur unbeknownst of the consumer itself. So for instance a consumer indicating in the survey that they would respond to a price increase by switching to an alternative operator may be selecting an operator offering a better deal based on managed VoIP. The implication of this is that the interpretation of survey results is not unequivocal, which reduces the robustness of the market definition exercise.

Thus, for both of the reasons explored above, the outcome of the Consultation market definition exercise could at best be accepted as a "necessary evil" (given the limitations of SSNIP approach and survey in its context). Therefore, its unavoidable drawbacks should induce Ofcom to reappraise its SMP assessment, since the latter does not reflect at all the peculiarities of the market definition and its limitations in this market context.

3.2 Mobile as a key missing ingredient of the SMP assessment

Even if the boundaries of the relevant market defined placed mobile outside the market, this does not imply that the market power assessment should focus on competitive constraints on BT only from within the relevant market. In fact, at the start of the substantive analysis in the SMP subsection, Ofcom states that

"*We analyse the constraint on retail services provided using BT's wholesale call origination products exercised by retail alternatives (including services which make use of wholesale call origination products provided by alternative suppliers, such as LLU or cable)*".[18]

[17] Ofcom Feb 2012 consultation, footnote 88.
[18] Consultation, para 5.111.

Indeed, Ofcom believes that an important criterion for market power assessment in the review ought to be the "*degree of substitution of competing services at the wholesale and retail level*".[19]

However, based on the above statements of intent, Ofcom has not completed its market power assessment to the extent it wished at the start. In fact, indirect constraints from mobile are ignored at the market power assessment stage. This is in contrast with the market definition stage, where indirect constraints from mobile had been considered.

A careful examination of competitive constraints on BT from outside the market, especially from mobile, is required to make the market power assessment sufficiently robust. This is especially relevant given how close mobile and fixed services have become at the retail level. Unlike market conditions in previous call origination reviews, it is now ascertained that average call prices in fixed and mobile have converged.

This incompleteness in the SMP assessment remains an important analytical gap even irrespective of the degree of confidence in the market definition.

Furthermore, we note a limited use of the Greenfield approach evident not just at the SMP assessment but also in the analysis that leads to it. For instance, the Consultation states:

"*In relation to the second option (give up the call package and switch calls to mobile but keep the access line for broadband), the existing trend in bundling retail access and calls would likely imply that such an option would either be available at a price which is not significantly different from the status quo price (of the whole bundle), or may not be available at all. This is because the cost of access is such a significant proportion of the price of a bundle of calls and access (whilst call packages are offered for a relatively small incremental price once access has been purchased). Because of this, there is unlikely to be significant benefit in giving up a package that bundles access and calls in favour of an access only service.*" (Consultation, paragraph 5.45)

However, telecommunication providers are always able to adapt their strategy to a certain extent. If call origination were to be deregulated, they may respond and change not only how they procure (or self-provide) inputs but also how they devise retail prices and bundles. This could likely be not fully reflected in the current bundling trends adduced as evidence by Ofcom. Thus in practice, as MNOs (and other OCPs) revise and adapt their strategies and pricing, so would consumers adapt and give up one of the present-day bundles in favour of a product based on access inputs only (with voice provide via managed VoIP or on another platform). Amongst all providers, MNOs in particular may rely increasingly on this strategy to gain business.

It must be kept in mind that, as shown by Ofcom's own technology tracker research, only 5% of consumers do not use a mobile phone, therefore those 95% who do show that the prima facie constraint on BT's conduct from outside the market could be very strong. For

[19] Consultation, para 5.102.

this reason alone, Ofcom should reconsider the market power assessment presented in the Consultation.

Ofcom makes the following point relative to the costs of non-geographic calls to argue that mobile operators are an insufficient constraint of BT:

"*In general, respondents had strong perceptions of when a call was more expensive on a mobile than on their landline, with the majority identifying calls to landlines, international calls and calls to non-geographic numbers (e.g. 0845 calls) as being more expensive from a mobile (with calls to mobile being identified as more expensive from a landline). [...] In some cases the current price differential between fixed and mobile calls (particularly for some call types, such as non-geographic numbers) can be very large*" (Consultation, paragraphs 5.49, 5.51)

We consider that the above point in the Consultation had much more relevance in the past than on a forward-looking basis. In fact, under the modified Greenfield approach, Ofcom must account for the effect of all regulation in markets other than the one under review. Ofcom's regulatory developments on non-geographic numbers over the next 3 years are in fact likely to reduce the very differentials between mobile vs. fixed prices for non-geographic numbers (e.g. 0800, 0870). These are the very differentials the consumers' perception of which is the basis for the above argument in the Consultation. However, while in 2012 56% of consumers quoted price as a driver for using fixed instead of mobile calls, this share will fall quickly once any changes in non-geographic prices (in 2013-2016) are digested by consumers. Thus the point argued by Ofcom is not fully consistent with a forward-look and modified Greenfield principle – with the result that mobile should be considered as an effective constraint on BT in call origination.

Furthermore, the Consultation states that:

"*In our research, quality within the home was raised as a potential concern with mobile"* (Consultation, footnote 105).

Nevertheless, after the recent UK spectrum award, "consumer services [are] expected in spring or early summer 2013".[20] Thus mobile call quality within the home is set to improve with 800MHz spectrum in use. Greater in-building coverage can only increase the substitutability of mobile for fixed. Femtocells will also allow more retail calls to flow over fixed internet. All of these point towards a very strong and increasing constraining role of mobile with respect to BT's conduct, to the point where BT has no SMP in call origination. These are further factors that Ofcom should appraise carefully in order to ensure that its market power assessment for the call origination market is comprehensive and balanced.

As discussed above, the unavoidable limitations of the market definition exercise in this context (and the constraints from the nature of the regulatory framework) should recommend a cautious assessment of market power that takes into account all factors out-

[20] Ofcom press release, "Ofcom announces winners of the 4G mobile auction", of 20 February 2013, available at: http://media.ofcom.org.uk/2013/02/20/ofcom-announces-winners-of-the-4g-mobile-auction

side the market. In the case of wholesale fixed call origination, a key factor is unavoidably the constraint from mobile operators on BT, which should be explicitly taken into account as part of a significantly revised SMP assessment.

3.3 Market power assessment beyond the market share

Market definition is a necessary step under competition law and SSNIP is a key, standard tool to achieve the necessary distinction between products falling within or outside the defined market. However, the application of a SSNIP in this market is severely hampered by the presence of retail bundles at the downstream level and the unclear nature of pass-through from wholesale call origination to the retail services downstream. This makes the SSNIP much less robust than in other contexts.

Thus, it is particularly important that the SMP assessment does not rely predominantly only on the constraints from products within the defined market. Instead, the market power assessment should pay great care to evaluate the constraints from channels of substitution from platforms such as (inter alia) mobile and VoIP (managed but also unmanaged).

In spirit, the Consultation shares the above approach and indicates that market shares alone are not sufficient to find SMP. However, in practice market share is the key factual element in the Consultation, as far as we can see from the reasoning in its market power assessment.

The 2002 SMP Guidelines, referring to case-law, state that market shares above 50% are in themselves, save in exceptional circumstances, evidence of SMP.[21] However, the SMP Guidelines also state contextually that "*large market shares can become accurate measurements only on the assumption that competitors are unable to expand their output by sufficient volume to meet the shifting demand resulting from a rival's price increase*".[22]

In the case of voice calls, several alternative mobile networks, each with no relevant capacity constraints, pose indirect constraints. Moreover, for any consumer located within the large LLU footprint, broadband-based providers apply a similar competitive constraint. Furthermore, consumers have access to a variety of communications channels that are alternative to fixed voice calls, as outlined in the box below. The majority of consumers is able and willing to use a variety of those alternatives to fixed calls, which is an important supplementary source of constraint upstream onto the wholesale market.

[21] Commission guidelines on market analysis and the assessment of significant market power (2002), para 75; also quoted in Ofcom's Feb 2013 consultation, para 5.100.

[22] Commission guidelines on market analysis and the assessment of significant market power (2002), footnote 78.

Box 2 Digital sources of constraints on BT's supply of fixed calls

Users of communication services have a range of options available to exchange information with one another. Even though many of these sources are not regulated services, the availability of such a range affects the demand for services which fall within the regulatory domain.

When considering whether to communicate, many users may also consider, inter alia, the following options:

- Mobile call
- Mobile SMS
- Mobile Multimedia Service (MMS) message
- Facebook messages
- Facebook chat
- Facebook posts
- Skype call
- Skype instant message
- Skype video message
- Other messages on proprietary mobile manufacturer platforms like Blackberry Messaging or Apple FaceTime
- Other Voice over IP calls or messaging
- Other Instant messaging
- Email

The above channels of communication may be to a different extent substitutes for a fixed call. They may also be complements for fixed calls, as for instance sending (or indeed receiving) an SMS or email may exchange information that ends up inducing demand for a call.

As a result of the complex patterns of information exchange displayed by present-day consumers of communication services, it is likely that the demand for fixed calls is strongly influenced (and also influencing) many of the above services. As a consequence BT's conduct in call markets (both at the retail and wholesale level) is unavoidably influenced by the wide variety of organisations which provide the above channels of communications – and ultimately by consumers themselves and their much enhanced ability to select the means of communication as a function of their information exchange needs.

Source: Copenhagen Economics

The evolution of digital communication services has greatly empowered a vast majority of consumers, which clearly constrains BT in a way which could not be envisaged two decades ago, at the outset of regulation of call origination.

The implications for this market is that, even irrespective of whether BT may or may not have the ability to act to an appreciable extent independently of its competitors or customers, BT today cannot ultimately act independently of consumers. This point alone makes the question of whether BT holds SMP in this market at least a very much open question – even in the presence of a BT market share above 50% (calculated on a narrowly defined call origination market).

SMP in the context of competition law

As mentioned above, the EC SMP Guidelines and competition case law do not prescribe an agency to find SMP where the firm's share of the relevant market defined is above 50%, provided that there are exceptional circumstances. The 63% share figure found for

BT on this basis remains thus a key factor for Ofcom analysis, even though Ofcom states that a share alone is not enough to establish SMP.

Since the 2002 SMP Guidelines, the EC has issued further guidance that is relevant to regulators – specifically the section on market power within the 2009 Guidance on Article 82, which states as follows:

"*Market shares provide a useful first indication for the Commission of the market structure and of the relative importance of the various undertakings active on the market. However, the Commission will interpret market shares in the light of the relevant market conditions, and in particular of the dynamics of the market and of the extent to which products are differentiated*".[23]

We note that the degree of differentiation between products within the relevant market and outside (mobile, VoIP) is limited. Moreover, the market dynamics is relatively favourable, as shown by a decrease in BT's share.

Compared to the previous guidelines on this matter, the 2009 guidance provides a safe harbour for market shares below 40%, yet it does no longer specify a presumption of dominance associated with a market shares above an explicit threshold. Moreover, the 2009 Guidelines stress that, besides the market position of the firm under scrutiny, further factors must be considered such as:

- countervailing buyer power; and
- expansion or entry

Countervailing buyer power is not a factor considered in the Consultation relative to call origination. The evidence in BT's submission (discussed in the previous section) suggests that BT may want to respond to buyer pressure relative to large wholesale deals, such as with large white label suppliers. Therefore the absence of this from the Consultation's appraisal signals a lack of robustness

As to expansion by existing competitors, this is a clear possibility, by way of bundled offers. These factors are not adequately considered in the Consultation. If Ofcom were to do so it could likely find that the outcome of the market power assessment may revert to a finding of no SMP. Ofcom can refer to UK case law to support an approach of this kind, as explained in the box below.

[23] Guidance on the Commission's enforcement priorities in Applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, paragraph 13. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:045:0007:0020:EN:PDF

Box 3 Evidence from UK case law: the Competition Commission clearance of the Zipcar - Streetcar acquisition

In the related context of competition enforcement in mergers, UK case law shows that the enforcement agency can find no competition impact even when mergers lead to a considerably high share of supply. For instance, in its Zipcar - Streetcar decision, the Competition Commission (CC) faced a merged entity with a considerably high share of supply.[24] The CC defined a narrow product market limited to car club services alone (and no car rental or other transport options). It also found that firms outside the relevant market (e.g. traditional car rental companies) were able and planning to repurpose their business so to serve also car club customers – defined as "expansion" by the CC. It also found that entry in the car club market from firms other than the traditional car rental operators was likely. Both factors were expected to lead to safeguard market outcomes even with the merger. Specifically, the CC assessed that entry and expansion would be a) likely, b) sufficient, and c) timely to prevent any competitive concerns (i.e. no significant lessening of competition) and ultimately imposed no remedies.[25]

Notwithstanding the differences in the legal framework for the CC decision, we think it is valuable to draw a parallel onto the market context of call origination. Here, both of the above factors apply, which had persuaded the CC that there were no competition concern that required remedies. First, telecom operators who offer broadband can adapt their business and repurpose this service so to also serve the demand for calls. This is irrespective of whether they currently supply broadband based on own access infrastructure (e.g. cable, mobile), or LLU, or WBA (or a combination of these). Second, there are operators who can supply calls even without any linkages to broadband services – mobile operators have done so for decades and now offer prices and service which are comparable to those charged by fixed operators.

Note that none of these factors depends on the exact boundary of the market definition but more fundamentally on the constraint that the entity under scrutiny is expected to face absent any remedy. We argue that, for very similar reasons for which the CC decided against intervening in the Zipcar - Streetcar case, Ofcom should consider to impose no or limited remedies on BT in call origination.

Source: Copenhagen Economics

As discussed in Box 3, under the relevant merger review framework, the CC, even if starting from a high supply share and narrow relevant market, found evidence against intervention based on the likely, sufficient and timely test.

Turning to the context of regulatory market reviews, a corresponding test is, under the 2009 Guidelines, whether market conditions (not just the share of the relevant market) are evidence of SMP. We argue that the substantial constraints on BT's conduct from different types of operators constitute market conditions consistent with no SMP in call origination. These factors are expected to grow even stronger over the next three years so the forward-look further reinforces this conclusion.

[24] The information in the CC decision points to a 79% share, based on 1675 vehicles over a total estimate of 2117 (para 2.4, 2.9 an 2.14) of the CC report, available at: http://www.competition-commission.org.uk/our-work/directory-of-all-inquiries/zipcar-streetcar. It must be noted that, as per the CC-OFT merger assessment guidelines, the application of the share of supply test is different to the definition of market shares undertaken as part of any analysis of competition within an economic market.

[25] Competition Commission report, pp.50-51.

UK case law experience besides, we also note that other national telecommunications regulators have found themselves in circumstances comparable to Ofcom in call origination. As shown in the box below, the European Commission has intervened in the past to veto a regulatory decision which had found SMP based on a high market share, without a sufficiently comprehensive assessment of other factors.

Box 4 Evidence from telecommunications regulatory cases

In 2004, The European Commission required the Finnish regulator to withdraw a draft regulatory measure. The Commission did not accept the regulator's approach in a finding of SMP in the mobile field, noting that the regulator should go beyond market share to establish SMP. The Commission stated as follows:

"*In its examination Ficora had to ensure on a forward-looking basis whether TeliaSonera is in a position to behave to an appreciable extent independently of its competitors, customers and ultimately consumers in the relevant market. The evidence provided by Ficora does not provide a sufficient basis for concluding that this is so. Despite the fact that the market share of TeliaSonera in the relevant market is in excess of 60%, other factors relevant for the assessment of SMP must also be taken into account. In the circumstances of the given case, in the absence of a full assessment of the dynamics of competition, there is not sufficient evidence as to the existence of SMP*"[26]

Furthermore, in a separate case, when the Swedish regulator conducted its SMP evaluation of market 15 in 2005, it analysed the market position of the incumbent, TeliaSonera, as well as other characteristics of the relevant market. At the time, TeliaSonera held a market share of approximately 50%, which at a first glance did not provide a very favourable view of competition in the relevant market.

However, ultimately the regulator concluded that other market characteristics were significant to the point of supporting the conclusion that the market was sufficiently competitive to make regulatory interventions unnecessary.[27]

Source: Copenhagen Economics

For all of the above reasons, we consider that, even a BT market share above 50% (calculated on a narrowly defined call origination market) ought not to lead to an SMP finding, in light of the characteristics of the call origination market.

3.4 The importance of Greenfield given the long-standing regulation

A fundamental consideration for market power assessment is how much should the current market outcome be considered a direct result of the market regulation itself under review. This is a challenging task for regulators, the more so, the longer has regulation been in place in the specific market.

[26] Commission Decision of 5 October 2004 pursuant to Article 7(4) of Directive 2002/21/EC (" Withdrawal of a notified draft measure") CASE FI/2004/0082: Access and call origination on public mobile telephone networks in Finland.
[27] PTS decision of 15 September 2005. Reference 04-6951 / 23.

"*The continuation of a […] price cap depresses expectations of future revenue flows and acts as a disincentive on investment. In other words, regulatory action has the effect of reducing BT's prices and has short-circuited the action of competition – it has made market entry (and hence competition) uneconomic.*"[28]

The above quote (from the BT response to Oftel's 2003 consultation questions on wholesale call origination) captures this conundrum already a decade ago. Logic dictates that, however significant the regulatory "short-circuit" was in 2003, in 2013 the gap between operators' strategies with vs. without regulation must now be even greater, given the long period of continuous wholesale regulation in place. As a result, the modified Greenfield exercise that Ofcom must necessarily perform is particularly delicate in this market.

Competing operators' reliance on BT's call origination

A key argument upon which Ofcom bases its SMP finding is a consideration that:

"*Despite significant development in LLU, there is still a material reliance on BT's wholesale call origination even by LLU operators in on-net areas*" (Consultation, paragraph 5.103)

However, this consideration is not at all consistent with Ofcom's stated approach that its "*analysis of market power should be conducted on the basis of an absence of regulation in wholesale call origination (the so called 'modified Greenfield' approach)*".[29]

Ofcom cannot exclude that, absent regulation, LLU operators would self-supply more calls to serve customers in their *current* on-net areas. Ofcom merely refers to unspecified non-price barriers to self-supply and speculates that the LLU operators' reliance on BT's wholesale call inputs would continue.

The Consultation justifies the above based on a finding that:

"*There are non-price barriers to the speed and extent of increased self-supply (and to the potential market for the supply of third party wholesale call origination) in the review period, meaning that there will be a continued and material reliance on BT even by LLU operators in on-net areas. This is especially likely given that wholesale call origination prices are not a key driver in LLU roll-out decisions*" (Consultation, paragraph 5.103)

Yet this finding only implies that LLU operators would not extend their footprint for the sake of self-supplying voice. In other words, this key finding from Ofcom is not relevant to the LLU operators' conduct within their current on-net footprint. This Consultation ar-

[28] BT response to Oftel's 2003 Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets; from section 5.4.2 (p.16) of the response. Available at: http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Consultativeresponses/Oftelmarketreviews/2003/Fixednarrowbandwholesale/response.pdf

[29] Consultation, paragraph 5.108.

gument misses the main point, which is that the on-net LLU coverage area is presently large enough for LLU operators to exercise an immediate constraint and discipline BT country-wide – were regulation to be removed. Thus BT could not act independently of its CP customers, or of its fixed CP and MNO competitors. Absent regulation, BT's wholesale share would likely decrease quickly.

Furthermore, the Consultation reappraises this point by stating that:
"*While an increase in wholesale call origination prices may bring forward some investment in increased self-supply, wholesale call origination costs alone are not a major driver in these investment decisions, and so we consider it unlikely that the potential to increase self-supply would provide a sufficiently strong direct constraint on BT's SMP in the period of this review.*" (Consultation, paragraph 5.115)

The above statement is partially ambiguous. This is because it remains unclear whether "investment in increased self-supply" refers to:

1. Further roll-out of LLU; or instead
2. Deployment of solutions using existing LLU to provide voice

We agree that higher call origination prices would not lead to (1). However, we consider that the relevant investment that Ofcom should consider here is (2). It is well possible that variation in wholesale prices would spur further investment by LLU players in the technology and service solutions that allow the retail provision of voice without BT's call origination input.

Absent obligations on BT, CPs would have greater incentives to make the now long established VOIP technology work seamlessly for consumers to induce switching. The Ofcom survey shows that at present 9% of consumers say they would switch to VoIP in response to a 10% landline bill increase.[30] This figure refers only to unmanaged VoIP (e.g. skype). However, with a seamless managed VoIP solution, consumers could switch provider without realising to be moving to VOIP. In an alternative scenario to the same effect, a CP would migrate its existing customers to a managed VoIP solution which does not rely on BT's call origination input.

In summary, Ofcom underappreciates the extent to which operators can adapt their strategy. Absent call origination regulation, they can alter:
- their decision on whether they procure (or self-provide) inputs; and
- their retail prices and bundle structure

This feeds through potential variations in how consumers evaluate and choose retail offerings – for instance by giving up one of the present-day bundles in favour of a product based on access inputs only (with voice provide via managed VoIP or on another platform). Operators' and consumers' choices are necessarily linked and we discuss below further implications of this.

[30] According to the Ofcom survey design, this result is based on a scenario where the consumer faces an increase in the overall sum paid for both access and all calls usage.

The SMP assessment relies excessively on the market definition

The Consultation displays a limited use of the Greenfield approach; this is evident in parts of the market definition which are then used as references to support arguments at the market power assessment stage. For instance, on the issue of consumer switching, Ofcom states that:

"*This approach [assuming that a call origination cost increase will lead to higher overall bundle costs] implies that for consumer switching to be an effective constraint on the price of wholesale call origination, consumers would need to be prepared to switch their entire fixed voice calls bundle i.e., in some cases, they might need to give up the ability to make fixed voice calls.*" (Consultation, paragraph 5.29)

This statement is somewhat drastic since it is implicitly assuming that, even absent regulation, OCPs would not market calls based on other wholesale inputs (whether broadband or mobile). But if, on the contrary, OCPs were to do so (which is certainly more likely absent regulation than with current obligations), consumers would practically never have to give up the ability to make fixed voice calls. We consider that this is a likely outcome if Ofcom were to roll-back regulation in the call origination market.

A similar line of thinking is evident in the Consultation SMP section where it states that:

"*For dual-play and triple-play customers in LLU/cable-enabled areas who do have a retail alternative, bundling of voice calls with access, broadband, and also other services (like Pay TV) may mean they are less likely to switch their entire bundle following a price increase in fixed calls alone. This reduces the likelihood of retail switching from dual- and triple-play services where the voice element is provided using BT's wholesale call origination to equivalent LLU or cable-provided retail services*" (Consultation paragraph 5.118)

"*As noted at paragraph 5.27 et seq, there has been a large increase in bundling and, for the majority of consumers, the overall cost of bundles has become an increasingly important consideration in purchasing decisions. This makes it less likely that many dual- or triple-play customers will switch their whole bundle of services in response to an increase in the price of the fixed voice component alone, as that would be unlikely to be noticeable in the bundle.*" (Consultation footnote 158, within paragraph 5.118)

Thus the Consultation market power assessment ultimately relies on the market definition view of the retail implications of an increase in wholesale call origination prices:

- Consumers would need to be prepared to switch their entire fixed voice calls bundle
  - in some cases, they might need to give up the ability to make fixed voice calls
- Thus, bundle consumers are less likely to switch their entire bundle following a price increase in fixed calls alone

- In turn, this reduces the likelihood of retail switching

However, even if many bundle buyers will not likely "switch their whole bundle of services in response to an increase in the price of the fixed voice component alone", bundle buyers review the overall value for money of their bundle from time to time. If a competing operator can offer a cheaper bundle with equivalent services by doing away with BT's call origination input then consumers can and will switch to that provider.

The above point is missed in the Consultation since Ofcom analyses separately the effect of retail switching behaviour and that of operators' choice of wholesale inputs. Both are interlinked and jointly imply that BT would face strong competitive constraints absent regulation.

A further, related, point made in the Consultation is that higher wholesale call origination prices are unlikely to visibly affect the cost of making calls at the margin.[31] Once again, by examining the linkages to operators' choices of inputs we can gain further insight. It is certainly plausible that, in response to a wholesale price increase, operators would not change the marginal price charged for a call – but would if anything revise the overall bundle price. However, what is relevant here is whether operators supplying bundles would alter their wholesale strategy. If that is possible then the above point in the Consultation loses relevance.

In conclusion, for all of the above reasons, we believe that BT faces stronger constraints than what has been acknowledged in the Consultation and would urge Ofcom to reappraise all constraints in its market power assessment.

[31] Consultation footnote 159, within paragraph 5.118.

Section 4

Remedies

In the previous section we have identified a set of points that indicate that a market power assessment different to the Consultation is appropriate, concluding that BT holds no or limited SMP in this market. By law, in any market without SMP all remedies have to fall. However, even if the previously raised points are not considered by Ofcom as sufficient evidence that SMP is absent, they could support a finding of narrow SMP. In this case, only limited remedies would be justified, since SMP assessment and remedies are necessarily linked for proportionality reasons.

The Consultation identifies two key theories of harm in this market:
- Exploitative conduct (excessive price), which we think is a limited yet reasonable concern – justifying some degree of intervention in case SMP is found; and
- Exclusionary conduct (such as refusal to deal and discriminatory behaviour), which we consider not justified as a concern in this market context given: i) the competitive constraints on BT; and ii) the transparency remedy imposed on BT

Key points:
- If SMP were found, the only justifiable competitive concern would be exploitative conduct: then of all remedies, only a price cap would remain necessary
- Given the alternative sources of wholesale inputs and the decreasing market trends (retail and wholesale), there are likely no concerns of exclusionary conduct and Ofcom should in any case remove the non-discrimination obligation
- The proposed obligation on BT to disclose to Ofcom DLRIC / DSAC figures is an effective and proportionate remedy, ensuring that Competition Act enforcement is a strong deterrent against exclusionary conduct in any case
- A minority of UK consumers prefers not buy broadband; all others' fixed call needs can be supplied via a broadband input, without call origination; Ofcom's ladder of investment strategy is implicitly informed by this minority's demand
- Regulation of shrinking platforms is a challenge that Ofcom faces in other markets (e.g. TI leased lines or post), a comparison of these indicates that call origination presents limited policy concerns and warrants a roll-back of regulation
- Even if it defines a UK-wide relevant market, Ofcom should consider imposing remedies that are geographically differentiated
- Ultimately, imposing remedies in WLA and WBA markets and *also* simultaneously in call origination is disproportionate: the former make the latter unnecessary

4.1 A price cap addresses any potential exploitative conduct

Exploitative conduct is amongst the key concerns informing regulatory intervention. Excessive prices at the wholesale level lead to higher prices downstream at the retail level, which are detrimental to consumers – whose interests regulators must safeguard.

At the same time, antitrust enforcement, as envisaged in the current guidance, focuses on exclusionary behaviour to pre-empt the pre-conditions for future exploitative conduct.[32] Generally, in regulated sectors the conditions for exploitation have been established (e.g. by past legal monopolies) to the point where the legislator agrees to the need to address preconditions with ex-ante rules.

We observe that the number of retail fixed calls is decreasing and that an equivalent trend affects the wholesale supply of call origination. Given the long-term substitution patterns exhibited in the market, the end consumers and wholesale customers that continue to purchase from BT are likely to be the least elastic ones – while more elastic consumers and customers will likely find an alternative supply platform (amongst the many available to serve communication needs).

It is therefore possible that BT may exploit the user base remaining on its platform. However, as the user base decreases the average costs of the platform increase – but the exact balance depends on how much of investment costs have been recovered. So, which price level would count as exploitation depends ultimately on the allowed recovery of common costs.

For these reasons, in case SMP is found, exploitative conduct (excessive price) would be a limited yet reasonable competitive concern. This would justify some degree of intervention. In this case, only a price cap would be necessary to remedy this type of competitive concern.

Furthermore, even with a single geographic market defined, the price cap obligation would provide an effective safeguard for the interests of minority groups such as solus voice buyers, irrespective of their location.

As is current regulatory practice, prices for individual services (or wholesale customers) should not be individually capped, but only the overall price level. It is welfare enhancing to allow within the basket of services a degree of price flexibility à la Ramsey. Provided that the competitive conditions related to the services within a basket are relatively similar, then no sub-cap (specific to a service) should be needed to reduce the risk of exploitation above and beyond what the general price cap itself can already achieve.

4.2 Exclusionary abuse is unlikely in this market

Exclusionary conduct is seen by competition authorities as the most concerning, inasmuch as it excludes efficient competitors from serving a given market – therefore sowing the seeds for exploitative conduct. The consultation includes refusal to supply as one of the two competitive concerns (i.e. theories of harm) identified to establish SMP in this market.

[32] Guidance on the Commission's enforcement priorities in Applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings. 2009/C 45/02. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:045:0007:0020:EN:PDF

For wholesale markets contexts in general, the incentive and ability of a dominant company to exclude will be stronger the greater the dependence of its competitors on the incumbent's wholesale input. However, in the case of call origination, operators who compete with BT for retail customers have a wealth of strategies available to avoid purchasing from BT (mobile or cable infrastructure; as well as local or broadband access).

Let us consider the retail impact in a scenario where BT were to refuse to supply wholesale call origination. In this case retail consumers would need to either:

1. buy all their services from BT; or
2. have separate suppliers, BT for fixed calls and another supplier for the remainder of the bundle; or
3. not buy fixed calls and only purchase the remainder of the bundle from a provider

Refusal to supply would lead BT to gain from the consumers choosing the first option but lose from those choosing the third. This would only be profitable if any retail gains for BT would outweigh the dismantling of its entire wholesale profits.
Ofcom's technology tracker shows that fixed calls are very frequently sold as part of a bundle.[33] When consumers choose a retail bundle (for instance because they want broadband) the pricing menu is such that they face deals where calls are offered for free on top – or for a relatively minor amount (compared to the bundle overall cost).

Given the above, then it is plausible that a significant number of consumers would choose the third of these options, i.e. stop buying fixed calls. This would lead to losses in the wholesale market. The Consultation does not demonstrate that these losses in the wholesale market will be offset by gains in the retail market. This suggests that this theory of harm is not unambiguous and this type of competition concerns should not necessarily arise.

Moreover, as shown by Ofcom's Communications Market Report, the number of fixed calls has been steadily decreasing for the past years. If BT were to choose today to refuse to supply wholesale call origination it would lose a share of the present-day wholesale revenues pie. It may have an incentive to do so only if it hoped to gain over time a greater share and revenues in the retail market.

However, BT would not gain a greater retail share overnight and, even in the most favourable scenario, would require years to gain an edge downstream (if at all possible). However, by the time necessary for BT to gain a greater retail share, the retail market is expected to be considerably smaller. Thus, the exclusionary conduct considered would involve BT effectively trading off its present wholesale revenues in favour of a greater share of a future shrunk pie of retail revenues. As a result, BT cannot expect likely recoupment of the wholesale revenues sacrificed under the refusal to deal scenario. Therefore, the competitive constraints from mobile (inter alia) and the fast decline in narrowband calls remove

[33] Of all UK consumers who make calls on a landline, we estimate that 66% buy fixed voice bundled with broadband, based on Ofcom Technology Tracker data, as illustrated in Table 1.

the incentive for BT to discriminate in favour of its own downstream business by refusing to supply its competitors..

Furthermore, certain types of exclusionary conduct are also constrained by competition law, e.g. margin squeeze case law and guidance (incl. Ofcom's own activities in the calls markets). Ofcom's proposals on transparency remedies reinforce this constraint, as examined below.

Transparent disclosure of DLRIC and DSAC is an effective deterrent

The Consultation proposes that BT should be obliged to provide cost accounting, and to disclose (only to Ofcom) DLRIC and DSAC for wholesale call origination. This proposal would ensure that Ofcom has relevant and timely information to enable enforcement of the Competition act in this market.[34]

This approach appears to strike a very good balance between proportionality and effective intervention. In this case, this regulatory obligation of transparency allows Ofcom to convey strong deterrence against anti-competitive pricing practices. On this basis, BT will have extremely strong incentives not to price call origination services below DLRIC or above DSAC, since either of these would quickly ring bells within Ofcom.

For this reason, the transparency obligation proposed reduces much the need for further safeguards against exclusionary abuse. The non-discrimination obligation becomes thus less necessary and proportionate, given that BT will have strong incentives to constrain its prices between DLRIC and DSAC.

In conclusion, if Ofcom were to find SMP, it should consider imposing the proposed transparent disclosure obligation but also at the same time remove the non-discrimination obligation as disproportionate. The SMP obligation to supply could also be maintained as a safeguard against extreme exclusionary conduct.

4.3 Ladder of investment: focus on the preferences of the majority of consumers vs. solus voice consumers?

For dynamic efficiency reasons it is important that OCPs receive correct investment signals enabling them to make the socially beneficial choice of make or buy for any inputs needed to provide their services i.e. retail bundles. Regulators have referred for some time now to the ladder of investment concept. The ladder regulatory strategy is to enable gradual investment by competing operators, who over time sink assets as they make more and more upstream inputs, while recovering costs on an established consumer base (i.e. the consumers to which at the start they merely resell the incumbent's products).

[34] However, Ofcom's current charge control mechanism is based on a hypothetical model (rather than directly on BT's costs), which may add complexity to Competition Act enforcement.

Another way to look at a ladder of investment policy is as an anti-exclusionary device. A theoretical starting point is an initial scenario of complete monopoly where all the customer base is captive to the incumbent and all potential entrants are de facto excluded. Now, by imposing access obligations on the incumbent at different layers of the value chain, the regulator allows the "inclusion" of competitors in the marketplace.

For this regulatory strategy to work, the regulator must first assess what is the most upstream input that a competing operator could in due course replicate (i.e. make, instead of buying from the incumbent).[35] After the most upstream replicable asset has been identified, a successful ladder requires the regulator to manage the availability of access rungs so that competitors move up the ladder to the point where they are replicating that input.

If all access remedies (even those downstream) remain available in perpetuity at the same conditions as at the start of the ladder policy than the policy itself will not be ultimately successful. On the contrary, the regulator cannot leave remedies on in perpetuity just to cater for the needs of a niche business. OCPs must face incentives to move the most upstream replicable asset, which depends on stepping away at some stage from lower rungs (the downstream regulated access products). If the regulator leaves an expectation that the lower rungs will remain available this could undermine the overall ladder policy.

When two wholesale inputs can be used to compose a bundle a question arises of whether both inputs are at the same layer or whether one is more upstream than the other. One way to resolve this is to check if one can be used to replicate the other. Now, wholesale calls cannot be used to provide broadband.[36] But wholesale broadband can be used to provide call origination, via (managed) VoIP services. Thus, of those two wholesale inputs, wholesale fixed calls origination ought to be considered more downstream than wholesale broadband, since former can be replicated by using the latter – provided that the end user of the service is interested in fixed broadband.

Where the above holds, then wholesale fixed call origination cannot certainly be considered the most upstream replicable input. This would remove any strategic imperative for Ofcom to maintain as it is in perpetuity the access regulation for this input.

The presence of bundling and the diversity in consumers' attitudes to retail bundles complicates the regulator' s position relative to a ladder policy, since it allows a diversity of business strategies in the market. Different operators will choose to serve customers who prefer not to buy multiple services (i.e. solus voice customers) or customers who want certain double or multiple-play bundles (or a variety of customer types). Two points must be noted. First the demand choices are a function of prices and marketing so dependent on firms' strategies. A change in regulation would also change how many consumers take products individually or as a bundle. Second, the demand heterogeneity with respect to bundles does not change the initial assessment as to the most upstream replicable asset.

[35] Cave (2006), *Encouraging infrastructure competition via the ladder of investment*, Telecommunications Policy

[36] In a way, this may have been the case only when internet connections were predominantly based on dial-up; however this is not the case anymore.

Taken to the extreme, this would imply that each household's preferences would determine what is the best ladder of investment policy that the regulator should apply to cater for the needs of that very household. Now, it is obvious that Ofcom cannot administer 26 million different regulatory policies so it must find a way to aggregate in a practical way, while maintaining the effectiveness of its policy. Thus, if a clear majority of the population buys both call and broadband services, then it is efficient for Ofcom to base its policies on this consideration.[37]

In other words, Ofcom cannot address the needs of households who do not purchase broadband without somewhat undermining the investment signals to operators serving the majority of households who want both those services. The detrimental consequence of this are reduced incentives for operators to invest in the upstream most replicable inputs (e.g. wholesale broadband or LLU depending on areas)

Ultimately, any regulator has limited levers at its disposal: it cannot usually manage a ladder policy which caters for the above two different types of customer demand (those who want broadband vs. those who do not). The regulator can only manage multiple ladders simultaneously if it relies on geographic markets to separate two markedly different supply conditions (heterogeneous competitive conditions). In that case it is clearly possible to have a ladder for Market 3 (ex WBA review) which is different from the ladder applying in Market 1.

Yet relative to fixed call origination Ofcom thus faces an unavoidable trade-off between safeguarding competition for solus voice consumers vs. providing the right incentives for competition for customers who buy both broadband and fixed voice. Since the share of solus voice customers has fast decreased and is now minor, this would suggest that the ladder for voice origination should be based on the majority of consumers who demand not only voice but also broadband.

For this reason, Ofcom should reduce the scope of remedies in call origination, which at present are only justified in relation to this small subset of consumers. Instead, to ensure positive outcomes in fixed voice, Ofcom should focus its regulatory efforts on markets of relevance to broadband (WBA and WLA), since this will be sufficient to ensure that remedies are in place that both: i) allow effective and competitive supply of fixed calls for the large majority of consumers, and ii) provide efficient investment signals to operators in the marketplace.

Alternatively, a geographic approach to regulation allows Ofcom to convey appropriate incentives to invest in a more granular manner. Within a single national market (UK except Hull), which is what the Consultation proposes, this would only permit a single lad-

[37] An exceptional case where different types of customer demand could be served would be if solus voice buyers were concentrated in a specific part of the country. In this case this may generate sufficient heterogeneity in competitive conditions to warrant separate geographic markets (even if the supply side were not to be that different in the two areas). An alternative scenario is the case where consumers purchase markedly different product types requiring different wholesale inputs; the regulator may fine-tune its regulation to reflect these differences via separate product markets. However, both these theoretical scenarios do not reflect the nature of customer demand in the context relevant here. So the best course of action for Ofcom requires devising its regulation as a function of the characteristics of the majority of the consumers.

der of investment. Since call origination inputs are replicable via LLU, then the fixed voice needs of the majority of consumers who buy fixed voice and broadband bundled is effectively safeguarded by WLA remedies.

However, if Ofcom is particularly concerned with the needs of the minority of consumers who are not at present within reach of LLU / cable operators, then it can preserve call origination regulation specifically within the WBA Markets 1+2 area.

Furthermore, even with a single geographic market defined, Ofcom could maintain a price cap, which is an effective safeguard for the interests of minority groups such as solus voice buyers, irrespective of their location.

4.4 Proportionate remedies in fast shrinking platforms

Regulation presents a set of specific challenges in a context where there are sustained substitution trends away from a platform. In what follows we compare the situation in fixed calls to: i) post, and ii) Traditional Interface (TI) leased lines – identifying similarity and differences in the regulatory approach and its rationale. In both cases, we find that the comparator market and its regulation indicate that Ofcom could reduce the scope for regulation of call origination without concerns of regulatory failure.

Stamps and fixed calls: A tale of two markets

It is notable that Ofcom has applied a relaxed approach in the post markets, where it has allowed Royal Mail greater pricing flexibility (with a safeguard on 2nd class mail) in a context of fast decreasing mail volumes and revenues.[38]

Alike Royal Mail in mail markets, BT has experienced for several years now substantial and continuous decreases in fixed voice volumes and revenues, driven by substitution with digital channels of communication. Thus, even if the regulatory context is not fully comparable, BT could focus Ofcom's attention on some of the principles that led Ofcom to roll back regulation in post and apply the same principles in the somewhat similar case of fixed voice calls.

It is possible to draw insights from a comparison between the regulatory approach in these two markets, which present the following similarities and differences:

Similarities:
- Long-term, ongoing, fast decrease in volumes and revenues
- Competition from outside (SMS, MMS and OTT messages, other communication like email and social networking)

[38] Ofcom 27 March 2012 decision on the new regulatory framework for post, available at: http://stakeholders.ofcom.org.uk/binaries/consultations/review-of-regulatory-conditions/statement/statement.pdf

- Some classes of consumers are more vulnerable than others (i.e. low income, elderly) and are protected by an affordable USO product (BT Basic line and calling plan; 2nd class stamp)
- Substitution and elasticity patterns based on consumer segments (e.g. some age groups behave significantly differently)

Differences:

- Post regulation includes a strong focus on universal service and its financeability
- No direct equivalent of EC recommendation on product markets in post

In telecoms, USO obligations on BT oblige it to provide a low price package of access and usage available only to customers certified by the State as welfare benefits recipients (including pensioners). The USO service is only available at a fixed location (registered address) and therefore there is limited possibility of arbitrage, i.e. that non-intended recipients of the USO safeguard may benefit from the low cost service (it cannot be traded easily between consumers). There are also wider obligations on BT to supply lines where it has network coverage, install new lines and similar.

In post, USO is mainly about coverage (frequency of collection, national averaging of retail prices). Affordability concerns are addressed by Ofcom by safeguarding vulnerable groups via a safeguard cap on 2nd class stamps and large letters (up to 2kg).[39] However, given that the mail service is sold via a product like stamps, arbitrage is a distinct possibility since consumers can stock and trade stamps.[40] So it would not be effective to design a USO condition as low price stamps for consumers on benefits or pension. Even if the amount issued was clearly limited still trading could occur which would undermine politically the scheme.

The implication of the above differences is that in fixed voice it is for structural reasons more effective and efficient to ensure the affordability of the USO services. Thus vulnerable consumers of fixed voice services would remain safeguarded by the USO even if Ofcom were to remove or reduce obligations at the wholesale level on BT.

However, a regulator may want to safeguards not just vulnerable categories but also specifically consumers which are not safeguarded by the workings of competitive supply. In fixed telecoms, this could refer to households which are not served by alternative cable or LLU-based operators. In post, this could refer to those households which are not within reach of delivery operators other than Royal Mail and are only within close reach of the Post office network.

In post, the USO safeguards those consumers via the requirement for geographically averaged retail prices, which ensure that those households who face limited competition for

[39] Ofcom commissioned research on the affordability of stamps which found that vulnerable users were not very likely to suffer detriment from 2nd class stamp price increase to the level established in the latest price review – because stamps are a limited part of communications services budgets, compared to mobile, internet, calls themselves and pay-TV. See March 2012 statement on post.

[40] Inter-temporal arbitrage has clearly occurred in the UK, where several consumers have stockpiled 2nd class stamps ahead of the implementation of the latest price increase, which had been notified months in advance. In telecoms, consumers cannot buy more phone lines or make materially more phone calls ahead of a price cap increase.

their custom and limited availability of supply are exposed to the same Royal Mail prices as all other households. In telecoms Ofcom can and indeed does safeguard that type of consumers. In WBA market, Ofcom achieves this by way of its geographic market definition and regulatory approach. For call origination, Ofcom has the opportunity to achieve a result much akin to WBA, if it were to choose to adopt a geographic approach along those lines.

Specifically to wholesale access regulation, The Ofcom March 2012 statement on post clarifies that Ofcom's strategy is to leave a broad margin of freedom to Royal Mail, without the need to impose a price cap. Ofcom has imposed instead an ex-ante margin squeeze test, which therefore mimics the constraint already due to competition law alone – with the added benefit of greater clarity and predictability for all stakeholders involved. To this extent, the Consultation proposals for call origination involve instead a stronger degree of wholesale regulation than in post.

This holds a fortiori given that in post, Ofcom has been setting in place conditions to acquire the necessary financial information from Royal Mail. Instead, in call origination, a set of established cost indicators have been available to Ofcom for a long period. Indeed, Ofcom's call origination Consultation proposals maintain a duty on BT to transparently disclose key cost indicators. On this basis, there is less need for wholesale regulatory intervention (beyond transparent disclosure) in call origination than in post.

In conclusion, while the regulatory frameworks compared above have some differences (notably on financeability), the market conditions in post and voice are remarkably similar: BT and Royal Mail face very similar pressures as consumers continue to substitute away from many postal and fixed voice services to digital media. Moreover, the USO on affordable retail services is for structural reasons much more effective (and efficiently administered) in the context of fixed calls than in post.

For these reasons, the comparison with post indicates that Ofcom's call origination Consultation proposals involve an unnecessary amount of regulatory restrictions. Ofcom has the opportunity to roll-back much regulation in the call origination market, while remaining consistent to its overall regulatory strategy and principles.

The role of continuity of supply

A parallel may be drawn to a certain extent between Traditional Interface (TI) leased lines markets and fixed voice. Both markets have been experiencing for a while fast declining trends at both the retail and wholesale level - driven by substitution to services with more advanced features (alternative interfaces and WDM replacing TI in leased lines; mobile and OTT services on IP interfaces replacing fixed voice communication).

Under the Communications Act, Ofcom ought to have regard to the desirability of encouraging the availability and use of high speed data transfer services throughout the UK. This may imply that certain remedies could be more justified in the leased lines markets than in other markets. Specifically, remedies to the effect of ensuring continuity of supply in the leased lines markets may be appropriate, given that these services (even the older TI lines) constitute high speed data transfer services.

However this Ofcom duty should not apply in the context of voice calls, which are not by definition "high speed data transfer services". Moreover, the virtually 100% coverage achieved by multiple MNOs implies that continuity of supply to existing voice call users should not be a concern.[41]

Furthermore, differences in the market contexts can make the very same remedy more or less proportionate. For current TI leased lines customers, BT can guarantee continuity of service by providing itself the transition to key substitute products based on the Alternative Interface leased lines platforms which BT also provides. This reduces (to a certain extent) issues with the recovery of common costs.

On the contrary, in the fixed voice context, BT does not manage the platforms for the key substitute products (i.e. mobile voice) and therefore is not able to balance the trade-offs relative to this kind of transition.[42] Thus the suite of remedies currently imposed in call origination (even if apparently similar to some of those applied in the context of TI leased lines) is ultimately much more burdensome on BT in the call origination context. Thus, in the interest of proportionality, Ofcom should consider reducing the scope of regulation in the call origination market, since no continuity of supply concerns ought to inform remedies here – while remaining consistent to its overall regulatory strategy and principles.

4.5 The rationale for geographically differentiated remedies

If Ofcom were to define a single national market (UK excl. Hull) this must reflect a finding that competitive conditions are not so heterogeneous between different parts of the UK that this is evidence of separate geographic markets.

However, as per the ERG guidance on geographic aspects of market analysis, if there is some, even partial, heterogeneity in competitive conditions, this could be grounds for a regulator to impose geographically differentiated remedies – even within a single geographic relevant market defined.[43] This will be the case where the evidence of heterogeneity in competitive conditions is not strong enough to support a separate relevant market but still sufficient to justify regulatory intervention differentiated by geography.

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[41] In any case, BT may conceivably be willing to commit to supply calls (at both retail and wholesale level) even absent SMP regulation.

[42] While a BT-controlled company has recently acquired spectrum as a result of the 2013 spectrum award, BT has announced no plans to replicate the MNOs' radio access network infrastructure which enables MNOs to provide mobile calls.

[43] "However, within a national market it could be the case that there exist geographic variations in competitive conditions, but that any differences in the conditions of competition between geographic areas are not yet sufficiently stable or sustainable to justify the definition of regional or local markets. In such circumstances it may be appropriate to vary remedies within that national market where an operator is found to have SMP." ERG (2008) Common Position on Geographic Aspects of Market Analysis, available at: http://www.irg.eu/streaming/ERG%20(08)%2020%20final%20CP%20Geog%20Aspects%20081016.pdf?contentId=545387&field=ATTACHED_FILE

We know that, throughout the UK, BT faces the following strong constraints from outside the market:

- Infrastructure-based competition: 4 MNOs (providing voice and SMS)
- Service-based:
  - MVNOs;
  - broadband Service Providers which are not -LLU based
- Virtual alternatives to voice: VOIP and any OTT messaging

We consider that, even if BT were to have any market power (notwithstanding the above countrywide constraints), this would certainly be much weaker in the area corresponding to WBA Market 3. As Ofcom concluded in its WBA review, in this area BT faces the following constraints, which are additional to the above:

- LLU operators
- Virgin Media cable

Thus, in this geographic area, BT faces significant additional constraint. This is especially the case on a forward-looking, Greenfield basis. In fact, even if LLUOs at present choose to rely materially on BT call inputs, absent regulation they would rely more on self-supply of calls while retailing bundles.

Even if Ofcom were to conclude that the above does not support a separate geographic market, Ofcom should apply differentiated call origination remedies in the area corresponding to WBA Market 3.

4.6 Proportionality: a holistic view across wholesale markets

Under the current regulatory framework, the focus of proportionality legal tests has been strictly within the individual market being considered. This is correct, yet should not make the regulator lose sight of the bigger picture.

In fact, taking each market review strictly as a "silo" may have severe drawbacks from both an economic and regulatory strategy perspective. This is the case under the following circumstances:

1. Each wholesale market, on a stand-alone basis, would justify a remedy
2. The two wholesale products are input to a retail bundle
3. However, one of the inputs allows competitors to self-supply the other input

Condition (1) could for example hold when we consider call origination (if mobile is seen as ineffective constraint) and WLA; or call origination and WBA. Condition (2) also holds with the above examples. Condition (3) applies to call origination, which operators can self-supply based on either LLU inputs and, to a lesser extent, on WBA inputs (given that at present no technical constraints to managed VoIP remain).

It is clear that, if remedies are in place in both markets, this constitutes a regulatory duplication, which is disproportionate. Once this is established, the practical regulatory challenge to achieve proportionality rests in identifying in which market should the remedies be removed – so to obtain the overall proportionality.

In theory, both market reviews could be a suitable way of adjusting remedies to achieve proportionality. However in practice the market with the input that can be replicated is the natural locus of the deregulation. In the case of the above examples, this would be call origination.

Moreover, the replicable input is expected to be the lower value product. For both reasons, deregulating the supply of the replicable input will involve a lower risk of regulatory failure.

On this basis, we recommend that Ofcom takes into account a holistic view of all the remedies imposed across telecoms markets. We have established that call origination is an area where deregulation can allow Ofcom to achieve proportionality of its overall portfolio of remedies. For this to occur in the call origination market review, the key instrument is the market power assessment.

If Ofcom will revise its SMP assessment so to take fully into account the constraints from the regulation in the other interrelated markets, then it should conclude that no (or more limited) remedies are justified in call origination. By doing so, Ofcom will clearly improve the overall proportionality of its portfolio of remedies across the fixed telecoms sector.

Even irrespective of the benefits of this holistic approach to remedies, ultimately its implications are fully consistent with the spirit of the modified Greenfield approach. In other words, each individual market review should reflect the state of regulation in neighbouring markets. In the case of call origination, other existing regulation makes no (or more limited) remedies necessary.

Section 5

Terms of Reference of the report and a summary rejoinder

Box 5 Terms of reference for the report

SPECIFICATION FOR CONSULTANCY ADVICE: OFCOM NBMR 2013 CONSULTATION

OBJECTIVES OF CONSULTANCY

PART I. ASSESSMENT OF MARKET POWER

1. BT wishes to have an independent assessment of Ofcom's SMP assessment. Ofcom appears to rely completely on a single narrow share value and largely re-iterates previous points which are pertinent to market boundaries such as the groups of customers and CPs allegedly reliant on BT to provide wholesale call origination. Even in the discussion on bundling, Ofcom [5.118 second bullet] appear to conduct only a 'thought experiment' and not an actual market power assessment such has been done in WBA. There is no suggestion that alternatives such as mobile, VoIP etc play any role here. Is this an adequate assessment of market power and if not, what should Ofcom have done as an alternative?

PART II ASSESSMENT OF BT's SUBMISSION ON BUNDLING AND GEOGRAPHIC MARKETS

2. During the Call for Inputs, BT provided Ofcom with a very granular set of statistics on trends in bundling, the growth in competition and a forward-look of market shares.

3. We require the Consultants: (a) to critically review these submissions in the light of what Ofcom [5.78-5.82] has stated that it does not consider that this approach would 'appear to be appropriate' and (b) advise on whether a more compelling case can be made in the light of observations offered in PART I above.

PART III ASSESSMENT OF OFCOM's PROPOSED REMEDIES

4. Ofcom [5.133] in effect raises two arguments about the potential for: (a) refusal to supply and (b) a general increase in prices above competitive levels. Separately, Ofcom [5.119] identifies price discrimination as a potential concern.

5. We require the Consultants: (a) to identify whether the concerns of minority groups could be adequately be addressed if either separate economic markets were defined or if separate remedies could be defined for different customers in the same economic market; (b) whether any account should be taken of experience in related markets associated with long-term decline such as postal services; (c) whether there are specific remedies which might be most relevant to be relaxed or removed altogether such as non-discrimination and transparency [5.146].

Source: BT, 14 March 2013

In light of the analysis presented in this report we provide the following summary response to the point specified within the ToR.

PART I. ASSESSMENT OF MARKET POWER

Ofcom's market power assessment fails to include an appropriate consideration of the following factors:

There are clear (if unavoidable) limitations in the market definition in this context. The SMP assessment should be aware of this context and consider in depth all factors which by necessity cannot be quantified in the market definition. The Consultation shows limited effort to assess the implications of key factors on market power.

Key amongst these factors is the role of mobile supply as a competitive constraint on BT's supply of call origination. No analysis of this is made in the market power assessment, which compromises the robustness of its outcome.

The Consultation SMP assessment ultimately relies considerably on the market share figure. This figure was established based on a narrowly defined relevant market so it is particularly important that constraints from outside the market (e.g. mobile) are appraised in detail in the market power assessment.

It is hard for a regulator to fully identify what would operators' conduct and consumer behaviour be absent regulation. This is particularly hard when regulation has been in place for two decades. That notwithstanding, Ofcom underappreciates the potential gap between present-day market outcomes and the outcomes realised if operators were to quickly adapt to a context absent regulation. For both of these reasons, it is unlikely that the SMP assessment is consistent with the Modified Greenfield regulatory principle.

For all of the above reasons we consider that BT holds no or limited SMP in this market. Further to that, we have also identified in PART II a proposed alternative approach based on a separate geographic market as consistent with the evidence from this market.

PART II ASSESSMENT OF BT's SUBMISSION ON BUNDLING AND GEOGRAPHIC MARKETS

We have identified a set of key pieces of evidence that are within the BT September 2012 submission. We consider that each of these should be relevant to Ofcom's decision making. In particular, Ofcom should consider that:

- Fixed and mobile call prices have converged
- Business users have access to a variety of communications platforms, rely extensively on alternatives to fixed voice (especially small businesses) and are expected to do increasingly so over the three year period of the review
- BT's wholesale share of supply in fixed has declined and is expected to continue to do so (even if alternative fixed supply is not the only source of constraint)

In paragraphs 5.78-5.82, the Consultation briefly summarises and responds to what can be assumed to be the BT September 2012 submission. The Consultation interprets BT's submission as focused on arguing for a separate (bundles-based) product market definition at the retail level. On the contrary, we consider that there may be a more fitting characterisation of the BT submission.

We believe that the evidence in the BT submission is consistent with the definition of a separate geographic market. The submission evidence allows for a strong case to be made that the widespread demand for bundling, combined with the supply conditions in broadband markets, supports a call origination geographic market à la WBA Market 3.

PART III ASSESSMENT OF OFCOM's PROPOSED REMEDIES

In PART I we have identified a set of points that indicate that a market power assessment different to the Consultation is appropriate. We concluded that BT holds no or limited SMP in this market. By law, in any market without SMP all remedies have to fall. However, even if Ofcom concludes that BT has SMP, the considerations on market power could support a finding of narrow SMP. In this case, only limited remedies would be justified, for proportionality reasons.

We consider that the concerns of minority groups could be appropriately addressed via geographic approach: either via separate geographic market (discussed in PART II) or by means of geographically differentiated remedies (within a single geographic market).

Moreover, regulation of shrinking platforms is a challenge that Ofcom faces in other markets (e.g. TI leased lines or post). We conducted a high-level comparison of these markets to call origination. This indicates that call origination presents limited policy concerns and warrants a roll-back of regulation.

Finally, we concluded that, if SMP were found, the only justifiable competitive concern would be exploitative conduct: then of all remedies, only a price cap would remain necessary. Furthermore, given the alternative sources of wholesale inputs and the decreasing market trends (retail and wholesale), there are likely no concerns of exclusionary conduct and Ofcom should in any case remove the non-discrimination obligation. We consider the proposed obligation on BT to disclose to Ofcom DLRIC / DSAC figures as an effective and proportionate remedy. This should ensure that Competition Act enforcement is a strong deterrent against exclusionary conduct in any case. For this reason, we do not consider further regulatory remedies as necessary in this market in the event that BT is found to hold SMP.