



BT's response to Ofcom's consultation document

“Review of the wholesale broadband access markets

Consultation on market definition, market power determinations and remedies”

1 June 2010

NON-CONFIDENTIAL VERSION

BT welcomes comments on the content of this document, which is available electronically at <http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Consultativeresponses/Ofcom/index.htm>

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1. Executive summary

1.1 Introduction

- Broadband is key to the future. It continues to transform the way we live - at home, at work and increasingly on the move. The UK is among the world leaders in delivering broadband to its citizens. The European Commission's "i2010 Information Society Report 2009" recognised that we are one of the best performing member states against a range of broadband indicators including coverage, competition and consumer choice and prices.
- In our response we focus on the need for Ofcom to create the right regulatory environment to ensure the UK can maintain its leading position. To achieve this, we believe there are three key steps Ofcom should take in this market review:
 - expand the deregulated footprint to reflect the reality of today's competitive market;
 - ensure that the framework for wholesale pricing supports investment in next generation broadband across the UK; and
 - ensure that regulation is applied in a fair and balanced way.

1.2 Regulation and the wholesale broadband access market

- In the last market review, Ofcom took a bold first step in adapting regulation to the fast-moving broadband market. Regulation was withdrawn from the mainly urban areas where competition was already intense or expected to grow within the lifetime of the review. Ofcom took a light touch approach to regulation in the rest of the UK, with no formal price controls on BT in those areas.
- We believe it is crucial that Ofcom continue on this journey and again bring broadband regulation up to date with the dynamic market and the needs of our society and economy. This means creating a framework where regulation is targeted only where it is really needed and which encourages continued investment to deliver next generation broadband to consumers across the country.
- One big change in the broadband market is consolidation. We have seen several players merge or be taken over since the last market review. This is only to be expected in the evolution of a dynamic market such as broadband. The remaining players are bigger and stronger, bringing the benefits of a more competitive market to consumers.
- Our response to Ofcom's proposals in this market review addresses i) market definition and market power and ii) remedies, with a focus on fair application and price regulation.

1.3 Market definition and market power

- We believe the time is now right for Ofcom to deregulate all exchange areas where three major providers are present, rather than four providers as they propose. Our market share in these areas is now below the 50% level at which there is a presumption of market power. This is a strong indicator that competition in areas with three major providers is substantially similar to competition in areas where there are four, which Ofcom consider to be fully competitive.

- In our view, a number of important aspects of Ofcom's approach have led it to underestimate the strength of competition, and making the required adjustments would give a truer reflection of the market:
 - The methodology in the review understates Virgin Media's current and future strength in broadband. Virgin Media is counted as a major provider only where its network covers 65% of homes and businesses. Our analysis indicates this threshold is too high and that Virgin Media is an effective competitor at lower levels of network coverage;
 - The analysis in the document does not take the forward-looking view required by the European regulatory framework, since major providers' significant plans and potential for further extension of their networks are not taken into account. For example, TalkTalk Group has announced it is extending its LLU footprint from around 1750 to 2000 exchanges during 2010, and Virgin Media aim to roll out their network to pass another 500,000 homes by 2012. Currently, Ofcom's analysis assumes there will be no further network roll-out at all by any players;
 - Other major providers' customers who are located within their network footprints but still served via the BT Wholesale network are counted in our market shares. This should be changed: the current situation is likely to be transient since LLU operators have strong incentives to migrate customers to their own networks as soon as possible. This is evidenced by TalkTalk Group's announcement that they will complete this migration for all their 'off-net' customers during 2010.

1.4 Remedies

1.4.1 Fair application:

- We believe Ofcom's proposal for transitional obligations to be maintained for one year in exchange areas where BT no longer has market power is inequitable as well as disproportionate, unnecessary and legally unfounded. The delay in removing regulation contrasts with the approach in previously deregulated exchange areas where Ofcom propose we now have market power: here, re-regulation would apply immediately with no delay.
- In many cases this re-regulation of BT results not from any strengthening of our position, but from TalkTalk Group's 2009 acquisition of Tiscali – which we believe has made competition more intense. The market should not be penalised through unnecessary regulation where competition is working and consolidation has changed a number which was set on an arbitrary basis.

1.4.2 Price regulation:

- Broadband prices in the UK compare favourably with those in other European countries and availability is near universal. We have played a key role in this through our massive investments in broadband and responsible approach to wholesale pricing, including voluntary commitments.
- We are committed to helping the UK sustain its position as a leading digital economy and society. We believe Ofcom's proposals for cost orientation and charge controls are heavy handed and unnecessary: they could put our leading position at risk and act as a disincentive to investment.

Ofcom's rationale for these remedies is ill-founded, backward-looking and based on an inappropriate treatment of costs and risks.

- With the right economic and regulatory environment, we and other providers can continue to invest in broadband across the UK, including the rural areas where the case for investment is most challenging. This would support public policy aims and help Ofcom meet its statutory duty to encourage availability and take-up of high speed services throughout the UK.

1.5 Conclusion

- All the indicators show that the UK performs well in broadband and that competition in the wholesale broadband access market has intensified and widened over the last two years. There are three key steps that Ofcom should now take to ensure the UK can maintain its leading position. These are: to expand the deregulated footprint to reflect the reality of today's competitive market; to ensure that the framework for wholesale pricing supports investment in next generation broadband across the UK; and to ensure that regulation is applied in a fair and balanced way.

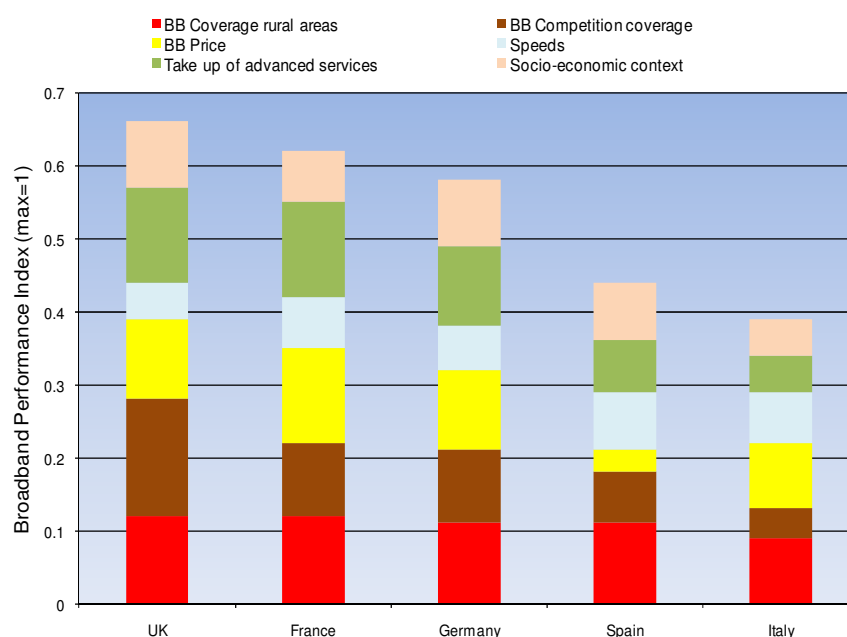
2. Introduction

Broadband continues to transform the way we live our lives, at home, at work and increasingly on the move. The sector has changed rapidly even in the relatively short time since Ofcom's last Market Review ("the 2008 Review") concluded in May 2008.

2.1 The UK experience

The European Commission's recent "i2010 Information Society Report 2009 – Benchmarking i2010: Trends and main achievements"¹ puts the UK in the top quartile of EU Member States for its fixed broadband penetration and growth in both national and rural DSL coverage from 2005 to 2008. This is based on its score in the overall Broadband Performance Index (based on rural coverage, competition, price, speed, take-up of advanced services and "socio-economic context"). As the following chart based on data extracted from the report shows, the UK scored better on the Broadband Performance Index than all the other "big five" Member States by a significant margin.

Fig. 1 UK Broadband market is performing better than EU comparators



The Broadband Performance Index (BPI) ranks the EU-27 countries plus Norway in terms of the supply and demand factors that affect the take-up and use of broadband. The BPI is represented by a value ranging from 0 to 1, higher values implying that a country performs better than others in terms of the various components. The country profile of the UK in the report stated that "The United Kingdom is one of the best performing countries in Europe, with most of the benchmarking indicators above EU average."

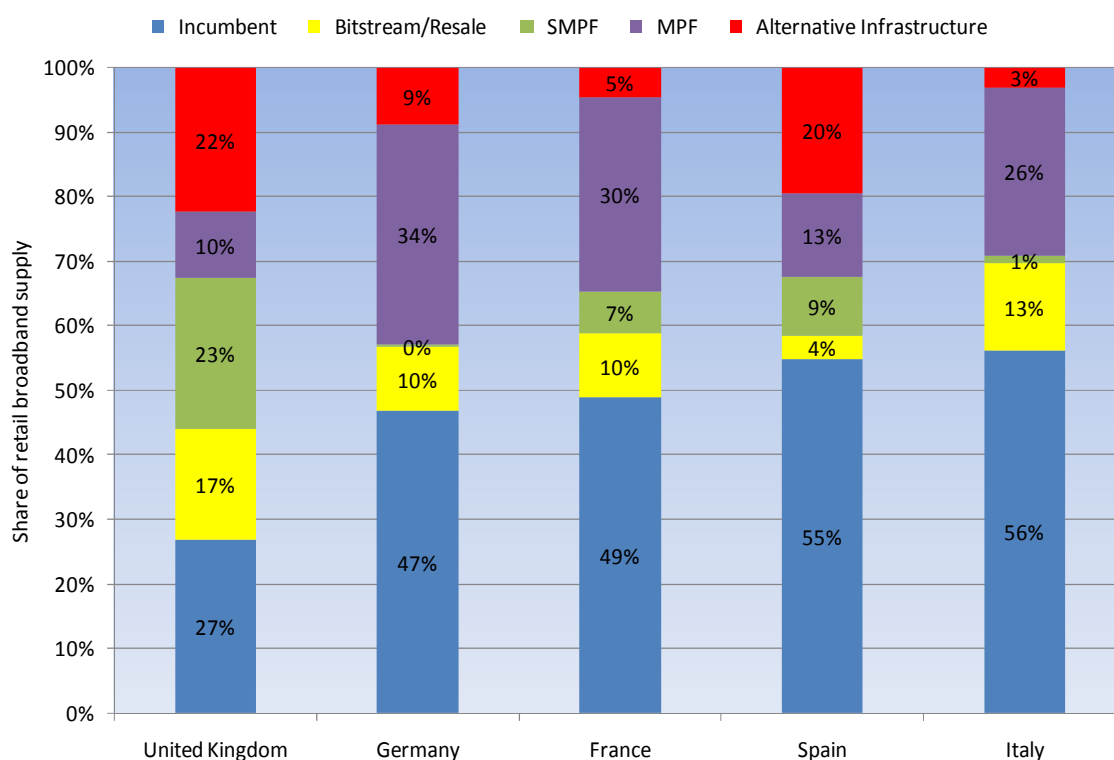
¹ SEC(2009) 1103

The UK's high performance in broadband was also highlighted in a report produced by Analysys Mason for the Department for Communities and Local Government² and published in March 2010. This report concluded that:

“The UK is very well served in terms of current generation broadband coverage, competition, take-up and price....the proportion of households able to get a DSL service from their BT exchange has reached near-universal levels in all four nations, and around 45% of UK households have access to Virgin Media broadband. The UK take-up of broadband was nearly two-thirds of households in the first quarter of 2009.”

Not only is broadband penetration high in the UK, but there is also vibrant competition in broadband at the retail level. This marks the UK out from the other “big five” Members States: the chart below, compiled from information extracted from the European Competitive Telecoms Association's (ECTA) broadband scorecard for September 2009, published in March 2010³, shows that BT has the lowest retail market share in broadband of any former incumbent in these countries. This is a key measure of the strength of competition.

Fig. 2 UK Broadband market is much more competitive than EU comparators



Source: ECTA Broadband Scorecard, March 2010

² HM Government – “An assessment and practical guidance on next generation access (NGA) risk in the UK: Final report”

³ <http://www.ectaportal.com/en/REPORTS/Broadband-Scorecards/Broadband-Scorecard-2009/>

2.2 Competition is even stronger now than it was at the time of the 2008 Review

At the time of the last review, there were around 13 million broadband users in the UK, with around 3 million served via cable, 1.5 million via Openreach unbundled local loops and almost 9 million via BT Wholesale services. Since then, the number of users has grown to over 18 million, and the mix has changed materially: whilst the number of cable broadband customers has increased to 3.9 million and those reached via LLU now number 6.4 million, the number of customers served using BT Wholesale services has fallen to around 8 million.

In 2008, UK consumers already enjoyed a high level of broadband availability, at 99.8% of the population. Now, faster broadband and super-fast broadband are in sight for large swathes of the population: BT's ADSL2+ will cover up to 75% of the UK by March 2011; BT's superfast broadband will pass 40% of homes and businesses during 2012 and up to two thirds by 2015; and Virgin Media are rolling out super fast cable broadband over their own network.

Bundling has become more firmly established since the last review. In its December 2009 Consumer Experience report, Ofcom estimated (in section 3.2.27) that 34% of consumers were taking a triple-play offering of fixed line, broadband and TV services. This had more than doubled from 15% two years earlier. Triple-play is now so attractive that over half of consumer customers who leave BT do so for bundles which include TV.

At the time of the 2008 Review, mobile broadband (which enables users to connect to the internet with their laptop, using a mobile network via a USB modem or 'dongle') was only just emerging as a viable consumer proposition. This came about as the roll-out of HSPA networks enabled mobile operators to offer internet access at headline speeds comparable to those available through basic fixed line broadband services. Since then mobile broadband take-up has grown rapidly. In its December 2009 Statement "Mobile Evolution - Ofcom's mobile sector assessment", Ofcom reported that around 15% of all households had a mobile broadband connection.

In addition, the use of internet services on mobile phones has taken off during the last two years. Smartphones such as the iPhone have driven more sophisticated use of mobile internet to the point where Ofcom has estimated that by Q1 2009, in excess of eight million⁴ people were accessing the internet on their mobile phones.

2.3 The market continues to change rapidly, and regulation must change with it

Regulation is a key element of the broadband environment in the UK. In the 2008 Review Ofcom responded boldly to this rapidly changing market with a ground breaking approach based on the recognition of the wide variations in competitive conditions between different parts of the country. These were defined as Markets 1, 2 and 3 – in effect the rural, suburban and urban parts of the UK.

Since then, there has been further big change. Competition has grown significantly, with LLU roll-out much more extensive than anticipated in the 2008 Review, so that Market 2 is now far more like Market 3 than Market 1. Consolidation has produced a small number of major broadband providers, with strength in adjacent markets, access to finance and powerful consumer brands.

⁴ "The Communications Market 2009", Ofcom, August 2009 (section 4.1.6)

A key factor in creating the vibrant broadband sector which the UK enjoys today has been the pragmatic and responsible approach adopted by Ofcom to ensure that all broadband providers of various types – niche and mass-market, consumer and business-oriented, LLU and bitstream-based – have opportunities to invest and compete in the marketplace.

BT has played a pivotal role in developing this approach through the series of product pricing and development initiatives we have taken and the voluntary commitments we have made. These commitments include the groundbreaking offer of Undertakings which Ofcom accepted in September 2005, and commitments on floors and ceilings for broadband pricing and the continued supply of IPStream and Wholesale Broadband Connect. Taken together, these commitments have served to protect consumers in areas where the feasibility of competing broadband infrastructures was uncertain, allowed BT to remain competitive in the wholesale broadband market and provided a period of stability to allow LLU operators to establish sustainable businesses.

The innovative approaches taken in the UK have delivered considerable benefits to consumers and industry. We believe that a constructive and forward-looking partnership between regulator, incumbent and industry such as that in the UK can contribute to a fair and competitive environment, with open access where economic bottlenecks exist.

2.4 Outline of the rest of this response

The rest of the main body of this response is structured as follows:

- Section 3 details BT's observations on Ofcom's market definition and market power assessments;
- Section 4 gives BT's views on Ofcom's proposed regulatory remedies;
- Section 5 summarises BT's responses to Ofcom's specific questions in the consultation.

This response also includes a number of annexes. The first two, produced by BT, are incorporated within this response:

- Annex 1 sets out BT's observations on Ofcom's market boundary and market power assessments;
- Annex 2 sets out BT's own economic analysis of broadband competition and market boundaries.

The other three have been provided to Ofcom as supporting documents:

- Annex 3 is an independent economic appraisal of Ofcom's geographic analysis by SPC Network;
- Annex 4 is economic modelling of broadband competition by Professor Nankervis of Essex University;
- Annex 5 provides an independent economic assessment of BT's rates of return for wholesale broadband and a critique of Ofcom's justification for a price cap in Market 1 by DotEcon.

3. Market definition and market power

This part of our response gives BT's comments on Ofcom's proposals for market definition and market power assessment, set out in sections 3 and 4 of the consultation document. Our summarised answers to Ofcom's questions on these topics are set out in section 5 of this response.

3.1 Summary

3.1.1 Market Definition

- We broadly agree that Ofcom's proposed product market definitions are satisfactory for the purposes of this market review;
- We accept that our exchange areas are currently the most pragmatic basis for defining geographic markets for both copper- and fibre-based wholesale broadband access services;
- We agree that for fibre-based wholesale broadband access, the exchange to which an end-user premise is connected for Next Generation Access (NGA) services should be considered as the relevant exchange. This may be different to the local exchange from which current generation services are provided;
- We disagree with Ofcom's proposed definitions of Markets 2 and 3. There is clear evidence that competition is effective in areas where three Principal Operators are present;
- We do not think the conditions of competition in Ofcom's proposed Market 2 are homogenous;
- We think Ofcom's analysis underestimates the presence and strength of Virgin Media;
- The analysis in the consultation document is not forward-looking and does not take account of Principal Operators' plans and potential to extend their networks;
- There are some inconsistencies in the analysis: for example, Updata meets Ofcom's criteria to qualify as a Principal Operator but is arbitrarily discounted.

3.1.2 Market Power

- We disagree with the way Ofcom has counted LLU operators' off-net customers within their network footprints in BT Wholesale's market shares. There are strong incentives for operators to migrate these customers on-net as soon as possible, as TalkTalk Group's public announcements demonstrate;
- The significance of increased bundling as a competitive constraint is underestimated;
- The effects of mobile, fixed wireless and satellite internet access are not taken into account.

3.1.3 Illogical consequences of Ofcom's approach

- Ofcom propose that we will be re-regulated in areas where the number of Principal Operators has fallen below four due to TalkTalk Group's acquisition of Tiscali, even though this means we face stronger competition in these areas from the merged entity;
- BT is proposed to have SMP in 26 exchange areas where we are not even present as a provider of wholesale broadband access.

3.2 Market definition

3.2.1 We broadly agree that Ofcom's proposed product market definitions are satisfactory for the purposes of this market review

Ofcom identifies two product markets at the retail level. These are markets for the following services in i) the UK excluding the Hull area and ii) the Hull area.

"asymmetric broadband internet access which as a minimum provides an always on capability, allows both voice and data services to be used simultaneously and provides data at speeds greater than a dial up connection. This market includes both business and residential customers..." [Paragraph 3.178]

At the wholesale level, Ofcom defines a single UK-wide product market as:

"asymmetric broadband access and any backhaul as necessary to allow interconnection with other communications providers which provides an always on capability, allows both voice and data services to be used simultaneously and provides data at speeds greater than a dial up connection. This market includes both business and residential customers." [Paragraph 3.182]

In BT's view, these definitions are generally satisfactory for the purposes of the current market review.

It is also important to recognise that NGA poses challenges in terms of anticipating the future. It may be appropriate to consider NGA services are in the same market as current-generation copper access (CGA) services now, given the difficulty in defining an appropriate break in the chain of substitution and the fact that fibre is generally provided as an overlay to copper. However, this definition may not hold in the future as NGA services develop with higher speeds and new end-user applications emerge which cannot be offered over CGA.

3.2.2 We accept that BT exchange areas are currently the most pragmatic basis for defining geographic markets

Our position in the 2008 Review was that BT exchange area was not an ideal basis for geographic market definition, since it focuses on just one of the two physical fixed access networks with a mass-market presence. However, we accepted that using BT exchange areas was the most pragmatic of the options available. We still believe this is the case, but we think Ofcom needs to adjust its methodology to better reflect Virgin Media's presence. Our views on how Ofcom should address this are set out in section 3.2.6 below.

3.2.3 We agree with Ofcom's approach to geographic markets for fibre-based services

Ofcom proposes using BT exchange areas as the relevant geographic unit in the market definition for NGA products downstream of GEA/VULA (i.e. for fibre-based WBA products)⁵. Notwithstanding our comments on the boundary of the proposed geographic markets in section 3.2.4 of our response, we

⁵ Paragraphs 3.296 to 3.305 of the consultation document

support this approach for fibre-based services. We believe it is underpinned by the economics, and it also leads to a logical outcome in the vast majority of cases.

As Ofcom says, *“It is very likely that the exchanges BT uses to support its NGA deployments will be exchanges that fall in the Market 3 area (although specific rollout plans are not yet confirmed).”*

[Paragraph 3.303]

This is supported by Openreach’s stated intention to locate the Points of Handover (PoH) for GEA/VULA in WBA Market 3. Openreach’s plan means that multiple CPs will be able to provide services to end-users by taking a GEA/VULA-based service on an equal basis to that on which BT itself takes GEA/VULA, irrespective of the market within which the local serving exchange is placed.⁶

This approach meets Ofcom’s key criterion for defining the geographic boundary of WBA markets, the homogeneity of competitive conditions within those markets.⁷ In addition, taking a forward-looking perspective, there is clear equivalence of opportunity for a range of CPs to market and promote GEA/VULA-based services, i.e. other CPs can clearly offer what BT Wholesale offers. The provision of GEA under Functional Separation with handover aligned with WBA Market 3 will:

- *Enhance competition in Market 3.* CPs can employ their existing assets used to serve Market 3 exchanges to handle additional traffic associated with end-users in other geographic areas.⁸
- *Reduce barriers to entry.* The barriers to entry of access to end-users are actually reduced by the Openreach approach of designing GEA/VULA in a pro-competitive way. No single CP is able to acquire first mover advantage – there is a level playing field from the outset. CPs will face similar competitive conditions and, importantly, competition will be independent of geography.
- *Enhance competition outside Market 3.* End-users are likely to have a choice of all CPs present at the PoH for GEA/VULA, as well as those who may be present via cable or LLU. CPs also have the commercial option of unbundling further exchanges via LLU. Combined with the ability to serve end users with GEA based offerings, this represents a ‘real option’ for CPs.

Over time GEA will tend to ‘bind’ Markets 2 and 3 with the price of the retail service in the former being driven by the competitive dynamics of the latter. Ofcom recognises that the relevant geographic unit may change over time. Ofcom’s approach to remedies does, however, give rise to a number of smaller scale problems. These, along with suggested alternative approaches, are set out in section 4 of this response.

⁶ That is, an end-user premise may be connected to a different local exchange for NGA than it currently is for current generation services.

⁷ Abstracting from the fact that BT disagrees with Ofcom’s assessment of the area over which competitive conditions are homogenous.

⁸ The nature of LLU costs was a key criterion in Ofcom’s 2008 WBA review. In paragraph 3.35 of the 2008 Statement, Ofcom said *“Once an LLU operator has entered a particular exchange area, the nature of LLU costs mean that it will have an incentive to compete for all the customers connected to that exchange.”*

3.2.4 We disagree with Ofcom's proposed boundary for Market 3 – there is clear evidence that competition is effective in areas where three Principal Operators are present

In the 2008 Review, we supported Ofcom's approach to the geographic disaggregation of the market. This was an innovative step, and the first time that the regulatory framework had recognised the wide variations in competitive conditions between different geographies in the UK. We still support the principle of geographic markets as being the right approach for the current market review. However, we do believe Ofcom needs to adapt and update its methodology for defining geographic markets to reflect today's market realities.

To help us better understand the nature of broadband competition in the market today, we commissioned the following two expert reports:

- A review of Ofcom's proposals and economic evidence for geographic boundaries by SPC consultants. This report is attached at Annex 3;
- Economic modelling of broadband competition over the past four years. The report, by Professor John Nankervis of Essex University, is attached at Annex 4.

In this section we summarise the findings in these reports. A more detailed assessment of the economic and econometric analysis of broadband competition including the evidence presented in these reports is provided in Annex 2.

SPC's analysis of the economic evidence on the following

- (a) the strengthened position of competitors
- (b) strengthened reach of competition
- (c) how much competition is enough

confirms our view that competition in the WBA market continues to intensify in both extent and reach.

(a) Strengthened position of competitors

At the retail level, consolidation means there are now four fairly equally sized competitors (BT, Virgin Media, TalkTalk Group and Sky)⁹. SPC call these four firms Tier A operators and all others Tier B operators. All Tier A operators are large and operate in several parts of the market and offer consumers a range of related products.

⁹ The potential position of O2 should not be ignored; it is part of a large undertaking and has the potential in due course to become a major player in the market.

Table 3: Size of Principal Operators

Company	Market Capitalisation (billion) ¹⁰	Unbundled Exchanges ¹¹	Network Coverage (Million premises) ¹²	Broadband Retail Customers (Million) ¹³	Equity Beta ¹⁴
Tier A					
BT	£10.36	n/a	~28.0	5.0	1.08
TalkTalk Group	£0.9	1,797	22.3	4.1	1.04
Sky	£10.47	1,190	18.6	2.4	0.78
Virgin Media	\$5.53	n/a	13.2	4.1	1.75
Tier B					
Cable & Wireless	£1.57	802	14.6	n/a	0.86
Orange (France Telecom)	€42.6	944	15.6	0.84	0.35
O2 (Telefonica)	€71.76	1,236	18.0	0.59	0.59

(b) Strength and reach of competition

A fairly straightforward indicator of the extent of competition in a market is computed using a Herfindahl Index (HHI)¹⁵. This is an economic index used to measure market concentration. The index lies between a value of 1 in the case of a monopoly and zero for an infinite number of competitors. Competition authorities typically look at the change in the Index to show whether markets are becoming more competitive rather than just the absolute value itself.

Table 4 below shows how the growth in competition since 2007 has actually been greater in Market 2 than Market 3. Furthermore, as at March 2010, the distribution of individual exchanges (represented by the standard error) indicates that there are many exchanges in Market 2 which are already as competitive as those in Market 3.

It is important to recognise that this analysis is purely backward looking – taking a forward looking view would reinforce this conclusion markedly

¹⁰ All Market Capitalisation data source: FT.com/markets 14th May 2010.

¹¹ Source: www.samknows.com

¹² Source: www.samknows.com except BT and Virgin Media

¹³ Source: Informa World Broadband Information Service

¹⁴ Source: FT.com/markets 14th May 2010. Beta's are calculated against relevant national Index, e.g. FT All Share.

¹⁵ HHI is a measure of the size of firms in relation to the industry and an indicator of the amount of competition among them. It is defined as the sum of the squares of the market shares of the firms within the industry, where the market shares are expressed as fractions.

Table 4: Development of market concentration (January 2007 – March 2010)

	Market 1		Market 2		Market 3	
	Mean HHI	Standard Error	Mean HHI	Standard Error	Mean HHI	Standard Error
Jan 2007	0.99	0.06	0.82	0.22	0.55	0.22
Jan 2008	0.99	0.06	0.70	0.20	0.35	0.13
Oct 2008	0.99	0.05	0.63	0.17	0.32	0.07
June 2009	0.99	0.06	0.55	0.15	0.30	0.07
March 2010	0.99	0.06	0.53	0.14	0.30	0.06

Source: BT. HHI shown post merger/outsourcing but prior to migration of AOL/Tiscali

The rate of churn is another indicator of the level of competition in a market. We would expect markets with similar competitive conditions to have similar churn rates. Table 5 below shows how in BT Retail's experience, the levels of churn in Market 2 and 3 are closely aligned and roughly twice the level in Market 1.

Table 5: BT Retail Broadband Churn Rates Q3 2008 – Q3 2009 ✕

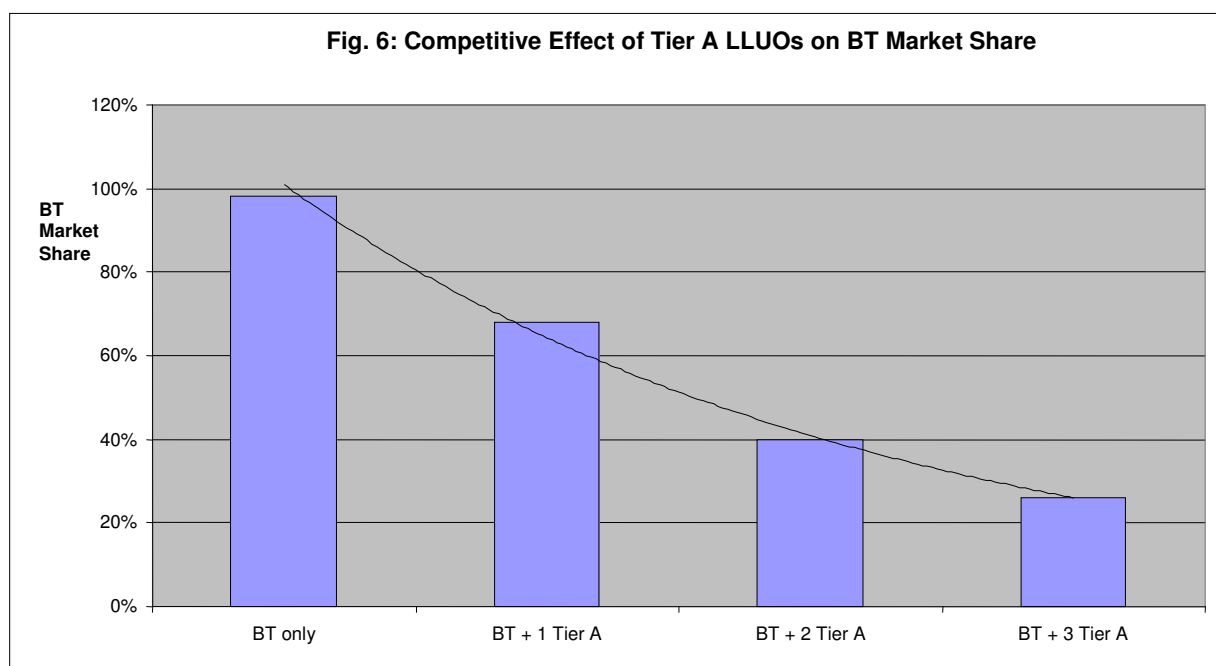
Competition is not just occurring at the retail level, but there is also an active wholesale market developing. Furthermore, BT Wholesale volumes are affected by both the loss in BT's retail volumes and also migration by operators to LLU.

(c) How much competition is enough?

SPC then looked at the question of how many competing firms were necessary for competition to be effective in WBA market. They identified the seminal economic research by Bresnahan and Reiss¹⁶ showing that in many markets the presence of three competing firms is enough to reduce profits to the competitive level. SPC's analysis shows that this is also the case in WBA: where there are three firms in an exchange area, BT's market share is, on average, less than the 50% threshold at which SMP is presumed.

¹⁶ Bresnahan, T and Reiss, P (1991) "Entry and Competition in Concentrated Markets". The Journal of Political Economy, Vol 99 No.5 (Oct 1991) pages 977-1009

Figure 6 below, based on March 2010 data, shows the impact of adding more Tier A operators on BT's market share. This clearly shows that most of the increase in competition comes with the presence of the third firm (i.e. the second entrant) as this reduces BT's market share to around 40%.



Professor Nankervis then carried out a more detailed statistical analysis of the impact of entry by Tier A operators by exchange over the past four years. The results of this study are detailed in Annex 4.

The results of this study support SPC's findings that the presence of two Tier A operators is more than enough to deliver effective competition in an exchange area. More specifically:

- The Principal Operators are competing fiercely with each other in Markets 2 and 3;
- Competition has not lessened over time;
- Market 2 continues to grow whilst Market 3 is closer to saturation so Principal Operators are likely to enter and competition develop in Market 2;
- BT faces such strong competition that the presence of just one Principal Operator in an exchange will reduce BT Wholesale's growth to zero or less;
- Additional Principal Operators after 3 are present in an exchange have a very limited impact on competitive pressure.

3.2.5 We do not think the conditions of competition in Ofcom's proposed Market 2 are homogenous

The European Commission's guidelines on market analysis and the assessment of SMP¹⁷ (SMP guidelines) state that:

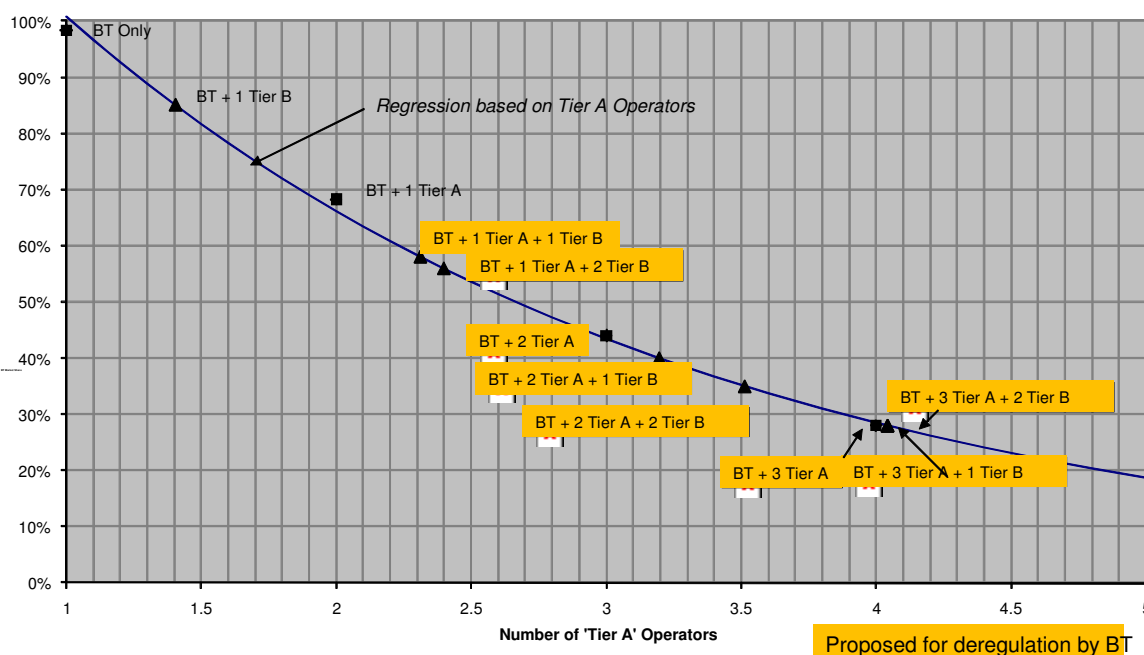
"a geographic market comprises an area in which the conditions of competition are similar or sufficiently homogenous and can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different" [Paragraph 56]

In paragraph 3.217 Ofcom adds:

"Therefore, areas are judged to be part of the same market if the intensity of competition, defined for example by the number of firms, prices and other relevant indicators of competitiveness, is sufficiently similar".

Our own granular analysis shows that Ofcom's proposed Market 2 includes areas with widely differing conditions of competition. BT's market share ranges from 85% in exchanges where BT and 1 Tier B operator are present to 40% in exchanges with BT and 2 Tier A operators.

Fig. 7: Reduction in BT Market Share with Number of Competitors



Taken together we estimate that BT's market share in exchanges with 2 other Principal Operators of any size is approximately 46%. The conditions of competition in these exchanges are sufficiently similar to those in exchanges with 4 operators to justify moving all exchanges with 3 Principal Operators into same market as those with 4 Principal Operators.

¹⁷ Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/ C 165/03)

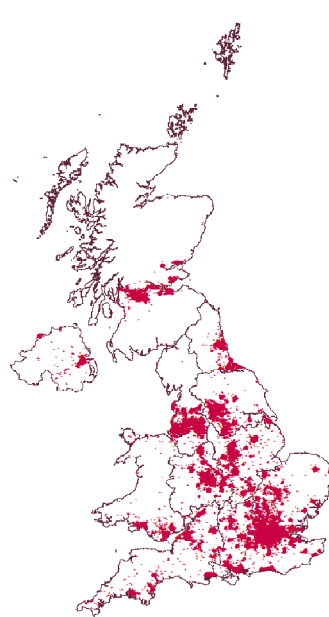
BT's believes these reports and our own analysis are evidence that:

- Consolidation has enhanced competition not reduced it and it would be perverse for regulation on BT to increase as a consequence of a mechanistic approach to defining geographic markets;
- The large Principal Operators in particular are well able to expand into Market 2 and parts of Market 1 and these barriers to entry are sufficiently low to present a current competitive constraint on BT;
- The empirical evidence is that the bulk of the benefits of additional competition arise when three players are present;
- Many exchanges in Market 2 display characteristics akin to those in Market 3 suggesting that this Market is currently not composed of exchanges which are homogenous in terms of competitive conditions; and
- The time is right for Ofcom to de-regulate all exchange areas where three Principal Operators are present.

3.2.6 Ofcom's analysis underestimates the presence and strength of Virgin Media

Ofcom proposes to carry forward the criteria used in the last review for determining where Virgin Media is counted as a Principal Operator: this is that the Virgin Media network can currently serve 65% of the residential and business delivery points in an exchange area. We believe this methodology does not give an accurate reflection of Virgin Media's actual presence and that the comparatively high threshold of 65% is not appropriate for use in setting the geographic market boundaries in wholesale broadband access. The evidence supporting our view and our suggestion as to how Ofcom should adjust its methodology are set out below.

- (a) We believe the two maps reproduced below from Annex 10 of the consultation document illustrate graphically how Ofcom's approach significantly understates Virgin Media's presence and strength in the market. Figure A10.3 shows Virgin Media's network coverage, whilst Figure A10.5 shows the exchange areas where Virgin Media is counted as a Principal Operator. The areas highlighted in the first map are clearly more extensive than those highlighted in the second.



1. Fig A10.3

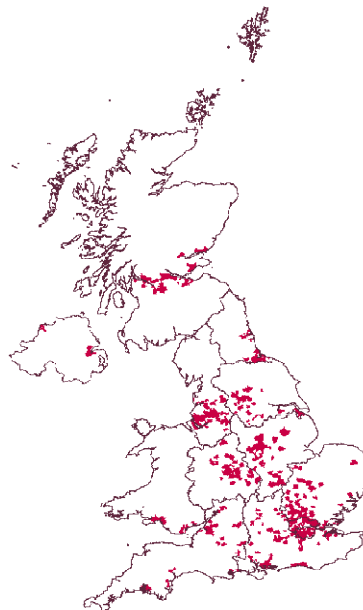


Fig A10.5

- (b) We note that in the 2008 Review, Ofcom originally used an approach which took better account of Virgin Media's presence, but then switched to the current approach during the course of the review. Under the original methodology, Virgin Media gave Ofcom a list of all postcodes – typically each containing 15-30 premises in residential areas – where they had any network presence. Ofcom matched the postcodes to exchange areas and Ofcom then treated Virgin Media as a Principal Operator in any exchange area where at least 65% of delivery points were located in postcodes with a Virgin Media network presence. This resulted in Virgin Media being counted as a Principal Operator in 929 BT exchanges¹⁸. Switching to the current approach, based on 65% actual coverage, had a marked effect so that in the 2008 statement¹⁹ Virgin Media was only being counted as a Principal Operator in 844 exchange areas.
- (c) Although Virgin Media has said it increased its network footprint by 100,000 homes during 2009²⁰, the number of exchange areas where Virgin Media is counted as a Principal Operator has reduced to 842 in the current consultation document.
- (d) The approach produces counter-intuitive results. This is illustrated by the former Bell Cablemedia (Kent) cable franchise area covering Ashford, Dover and Folkestone. In the 1990s the ITC²¹ published coverage details for each franchise. The last figure published in 1999 reported cable TV coverage of 44,000 homes in this area. More recent modelling has estimated coverage is now in excess of 55,000 premises. This is illustrated in figure 8 as the areas in black, and predominantly covers the towns of Folkestone, Dover and Ashford, as would be expected.

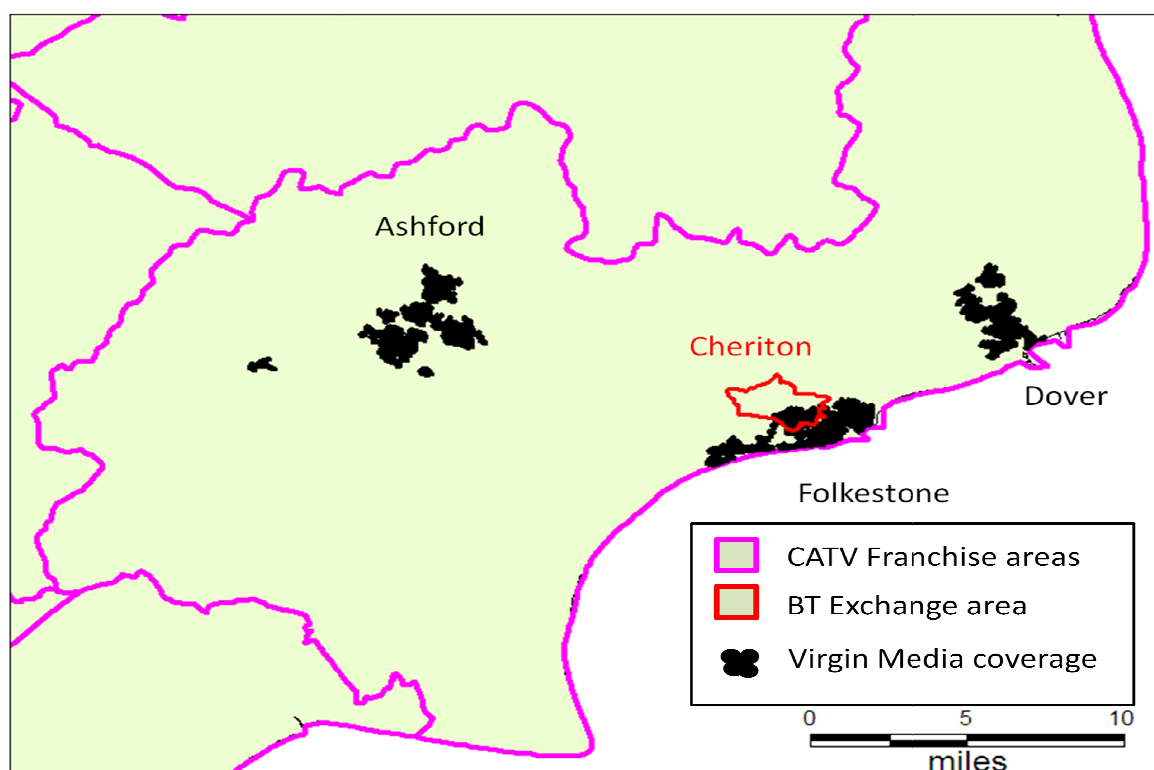
¹⁸ <http://www.ofcom.org.uk/consult/condocs/wbamr07/wbamr07.pdf>

¹⁹ <http://www.ofcom.org.uk/consult/condocs/wbamr07/statement/statement.pdf>

²⁰ http://media.corporate-ir.net/media_files/IROL/13/135485/Virgin_Media_Annual_Report2009.pdf

²¹ Independent Television Commission

Fig. 8 Virgin Media coverage in the Bell Cablemedia (Kent) franchise area



- (e) However, due to the mismatch between BT's exchange areas and Virgin Media coverage, only a single exchange area meets Ofcom's threshold of 65% coverage. This is Cheriton, a smaller exchange covering around 5,000 premises in the northern areas of Folkestone and the surrounding countryside. The result is that in the whole of the former franchise area, Ofcom only counts Virgin Media as being a Principal Operator for about 10% of the homes it can actually serve. The main exchanges in the area covering Folkestone, Dover and Ashford were among those where Virgin Media was no longer counted as a Principal Operator when Ofcom changed the methodology during the 2008 Review.
- (f) Ofcom's methodology does not take account of the potential for Virgin Media to supply service to additional households at the edge of its existing network areas at low incremental cost. Therefore, in order to gain a fair view of Virgin Media coverage, Ofcom should take into account the premises Virgin Media could serve with some additional build, for example by crossing the road from existing Virgin Media plant. As well as establishing a fairer comparison, this would also reflect the commercial reality that Virgin Media would be likely undertake additional build if there was a small increase in BT's prices.
- (g) In contrast, Ofcom's analysis implicitly assumes that BT's network reach extends to any premises within reach of an ADSL-enabled exchange which we could serve at a cost within the Universal Service Obligation limit of £3400.
- (h) Essentially, we believe Ofcom's analysis does not allow for relevant supply-side entry which Virgin Media could make under the conventional 5-10% SSNIP test.

We believe the most pragmatic way to reduce the distortion resulting from Ofcom's current methodology is to reduce the threshold for the inclusion of Virgin Media as a Principal Operator from 65%. The table below shows the effect that different thresholds have on the extent to which Virgin Media is taken into account as a Principal Operator.

Table 9 – Sensitivity to changes in minimum cable delivery points coverage required in an exchange area

Threshold	Number of exchange areas where Virgin Media are counted as a Principal Operator	Percentage of total Virgin Media delivery points in these areas
65%	842	80%
60%	~900	83%
55%	~960	85%
50%	~1000	87%
45%	~1040	89%

There is no "right answer" as to what the threshold should be. However, we think that intuitively 50% would give a fairer match between Virgin Media's network coverage and their inclusion as a Principal Operator in an exchange area.

Finally, as we note in the next section of our response, Virgin Media have reported in their 2009 results that to build out to a further 500,000 premises by the end of 2012²², and it is reasonable to expect that such growth would continue throughout the period to the next market review.

3.2.7 Ofcom's analysis is not forward-looking and does not take account of Principal Operators' plans and potential to extend their networks

One of the essential requirements of the market review process is that it should be forward-looking. This requirement is set out in the European Commission's SMP Guidelines.

The SMP Guidelines state that

"In carrying out the market analysis under the terms Article 16 of the framework Directive, NRAs will conduct a forward looking, structural evaluation of the relevant market, based on existing market conditions. NRAs should determine whether the market is prospectively competitive, and thus whether any lack of effective competition is durable, by taking into account expected or foreseeable market developments over the course of a reasonable period. The actual period used should reflect the specific characteristics of the market and the expected timing for the next review of the relevant market by the NRA."[paragraph 20]

NRAs are required "to take the utmost account of these guidelines".

²² http://media.corporate-ir.net/media_files/IROL/13/135485/Virgin_Media_Annual_Report2009.pdf

In paragraph 3.270 Ofcom state that

“the plans that have been presented to usindicate there may be further [LLU] rollout but this may be limited.”

In fact, it appears from the analysis presented in the consultation that Ofcom assumes no further LLU or cable roll-out is likely beyond June 2010. As a result Ofcom does not consider how the numbers of Principal Operators in exchange areas may change within the three or four year time horizon of the review.

We do not believe that Ofcom’s assumption is realistic. We believe there is a strong likelihood of further rollout for the reasons set out below:

- (a) Principal Operators have made public statements about their intentions to roll-out further. Notably, in his evidence to the Business, Innovation & Skills Committee Select Committee in November 2009, Andrew Heaney stated that “we [TalkTalk Group] will cover by next year about 90% of the country”. Subsequently, in its results for 2009/10, TalkTalk Group reported it was on-track to be present in 2000 exchanges covering 89% of the country by the end of 2010²³. In our view, Ofcom should take a more forward-looking view of LLU build out (even by one player alone), or at the very least maintain the previous lighter regulatory remedy set in Market 1. To do neither will cause damage to the prospects of improved broadband availability and take up in rural areas.
- (b) In their 2009 results, Virgin Media reported “We increased our network footprint by over 100,000 new homes in 2009, and plan to reach a total of 500,000 additional homes by the end of 2012.”²⁴ This would extend their footprint to cover over 13m homes in total. They also state that the costs of expansion are not great (£200 per home passed and £500 per home connected) with a comparatively short payback.
- (c) BT’s analysis of the economics of LLU roll-out, based on publicly available information, indicates that it would be economic for an MPF-based LLU operator with 20% market share to roll out to the 2500 most densely populated exchanges. This is consistent with other sources such as Ovum who indicate a breakeven point for LLU investment where there are at least 300 customers at a given exchange.

3.2.8 There are some inconsistencies in the analysis: for example, Udata meets the criteria to qualify as a Principal Operator but is not counted as one

The criteria for the inclusion of a provider as a Principal Operator are arbitrarily set aside in the case of Udata. Our analysis suggests that if Udata were included as a Principal Operator, ✕ exchanges would move from Market 1 to Market 2, and ✕ exchanges from Market 2 to Market 3. We believe any methodology, even if we do not think it is the best available, should be applied consistently.

²³ <http://www.talktalkgroup.com/pdf/corporate/talktalk-strategy-day-2010-s1.pdf>

²⁴ http://media.corporate-ir.net/media_files/IROL/13/135485/Virgin_Media_Annual_Report2009.pdf

3.3 Market power

3.3.1 We disagree with the way Ofcom has counted LLU operators' off-net customers within their network footprints in BT Wholesale's market shares

In calculating BT's shares within the defined markets, Ofcom has simply looked at the percentage of retail broadband customers served via BT Wholesale products over the BT local access network. In doing so, Ofcom is including in BT's market share LLU Operators' retail broadband customers within their footprints who are still served using BT Wholesale products. In fact, it is rational to expect that the LLU Operators concerned will move these 'off-net' customers 'on-net' to their own networks as soon as possible. This is supported by TalkTalk Group's statement in their 2009/10 results that they have already commenced migrating both Tiscali and AOL customers within their existing footprint onto their MPF and SMPF network²⁵.

In view of this, we believe all such customers should count towards the relevant LLU Operator's market share instead of BT's. This issue is perhaps even starker when we consider exchanges where LLU Operators have firm plans to extend their LLU footprint within the coming months. Clearly, in such cases the LLU Operator expects to migrate all existing lines (and future growth) to its LLU network. It is clear that any fair assessment of wholesale level market shares should count existing lines on BT's network which support the retail business of that LLU Operator, against the LLU player and not BT.

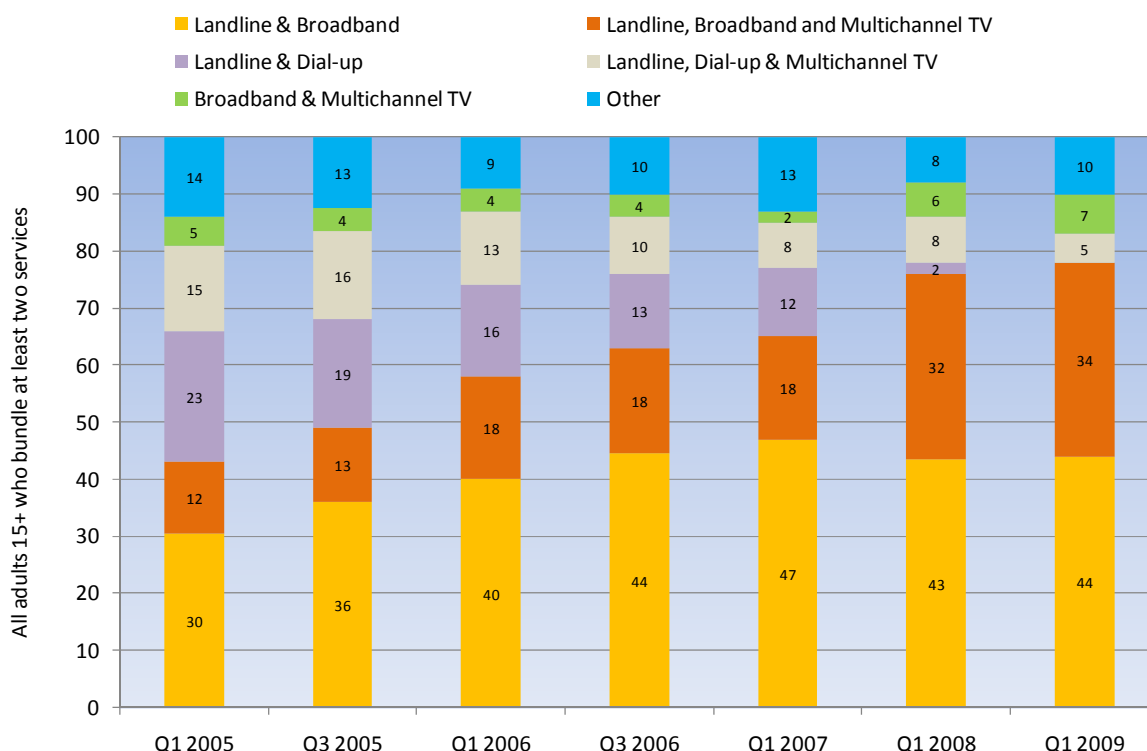
This would make a significant difference. At March 2010, two major LLU Operators had in excess of 400,000 customers served via BT Wholesale but located in exchange areas within their LLU footprints, existing or planned for imminent enablement. Any forward looking approach (even one that looks only a few months ahead) should count these lines as LLU lines and not BT Wholesale lines. If this flaw alone in Ofcom's method were corrected, BT's share in the subset of Market 2 with three Principal Operators present would fall from around 51% to no more than 46% - below the level at which there is a presumption of dominance under competition law.

3.3.2 The significance of increased bundling as a competitive constraint is underestimated

The strong trend towards greater consumer demand for bundles of electronic communications services shows no sign of abating. The trend is illustrated in figure 10 below, which appeared in Ofcom's Consumer Experience report published in December 2009.

²⁵ <http://www.talktalkgroup.com/pdf/corporate/talktalk-strategy-day-2010-s1.pdf>

Fig. 10 The strong trend towards greater bundling continues unabated



This graph shows that 44% of consumers were taking a bundled package of fixed line and broadband in 2009, and 34% were purchasing purchase triple-play bundles of fixed line, broadband and multi-channel TV – up almost threefold from 2005. Triple-play is now so attractive that BT estimates over half of the consumer customers who leave us do so for a triple-play bundle including TV. The rapid growth of Sky's broadband market share from 1.7% at December 2006 to 13.2% at December 2009²⁶ shows the powerful effects such bundling can have on competition and consumer behaviour.

We believe that in future reviews, Ofcom will need to consider in detail whether bundles should be defined as a separate retail market and judge how this affects markets at the wholesale level. In the meantime, we do not think Ofcom takes sufficient account of the constraining effects of retail bundling on the wholesale markets: our view is that it is likely to reduce both the market share at which a provider of wholesale broadband access has market power and the strength of the remedies that are needed where market power is found.

3.3.3 The effects of mobile, fixed wireless and satellite internet access are not taken into account

In our view, the growth of mobile, fixed wireless and satellite internet access services has similar implications for Ofcom's market power assessment and the setting of remedies. Mobile broadband alone is forecast to grow to 12.5 million end-users by 2012 compared to 20.1 million fixed

²⁶ Enders Analysis quarterly reports on UK broadband and telephony trends

broadband²⁷ users. This is part of the wider trend which has seen the number of UK mobile connections exceed the population of the country and grow to more than double the number of fixed lines – around 77 million compared to 33 million. Although we would agree that most mobile broadband usage will continue to be complementary to fixed, there will inevitably and increasingly be a significant component which is substitutional and which acts as a constraining factor for fixed services. We do not believe Ofcom has taken sufficient account of this trend in its assessment of market power or its proposals for remedies in wholesale broadband access.

3.4 Consequences of Ofcom's approach

3.4.1 BT will be re-regulated where the number of Principal Operators has fallen below four as a result of TalkTalk Group's acquisition of Tiscali

Under Ofcom's proposals, there are 24 exchanges which would move from Market 3 to Market 2. In 20 cases, this is because the number of Principal Operators has fallen from four to three as a result of TalkTalk Group's acquisition of Tiscali's UK business. This is a perverse outcome: it is not logical that BT should be re-regulated in a location where competition has been strengthened by this form of industry consolidation. It could also have negative practical consequences and consumer outcomes. BT Wholesale would be obliged to adhere to published prices in these areas, so there may be pressure on its customers to raise charges to consumers served from these exchanges.

We think it would be contrary to Ofcom's duties under the Communications Act which require it to ensure "*regulation by OFCOM does not involve – (a) the imposition of burdens which are unnecessary*"²⁸ and that regulation is "*targeted only at cases in which action is needed*"²⁹. Further it would be counter to Ofcom's own regulatory principles³⁰ that:

- *Ofcom will operate with a bias against intervention, but with a willingness to intervene firmly, promptly and effectively where required.*
- *Ofcom will strive to ensure its interventions will be evidence-based, proportionate, consistent, accountable and transparent in both deliberation and outcome.*
- *Ofcom will always seek the least intrusive regulatory mechanisms to achieve its policy objectives.*

In our view, exchange areas should only be re-regulated where there is clear evidence of a competition problem. We believe Ofcom should not move any exchange area out of Market 3 without specific consideration of the competitive conditions in that particular area and evidence that competition is no longer effective there. We believe there are no grounds or need for Ofcom to re-regulate these 20 exchanges in this review.

²⁷ Analysys Mason, "Mobile broadband in Europe: forecasts and analysis 2009–2014"

²⁸ Section 6(1)(a) Communications Act 2003

²⁹ Section 3(3)(a) Communications Act 2003

³⁰ <http://www.ofcom.org.uk/about/sdrp/>

3.4.2 BT has SMP in the 26 exchange areas where we are not present as a provider of wholesale broadband access

There are 26 exchanges in Market 1 where BT is not present as a broadband operator. In four cases, this is because the exchanges are served by a wireless operator following a South East England Development Agency procurement exercise; in 21 cases, the exchange area was excluded from the 2004 Scottish Rural Broadband initiative as there was already a publicly-subsidised wireless operator present; and in the other area, early unbundling by an LLU Operator made broadband enablement by BT uneconomic. It is not rational for BT to be found to have SMP in these exchange areas, and we urge Ofcom to remove them from the regulated geographic markets.

4. Regulatory Remedies

This section outlines our views on Ofcom's proposed remedies in Markets 1 and 2. Our comments in this section are without prejudice to our views on the appropriateness of Ofcom's market definition and market power assessment explained in section 3.

4.1 Summary

- We broadly agree with Ofcom that for markets where SMP is designated, it is appropriate for general access and non discrimination remedies to be imposed. However we believe it unnecessary to have both a 10 day and 28 day notification requirement on our terms and conditions.
- Ofcom has not demonstrated that BT can price above the competitive level in Markets 1 and 2 to warrant the introduction of additional layers of pricing regulation such as cost orientation and formal charge controls. A more proportionate remedy would be the continuation of a voluntary cap or a retail minus approach.
- We believe it is inappropriate for Ofcom to introduce a cost orientation obligation for individual broadband services in Markets 1 and 2 both in principle and on the grounds of practicality and proportionality with Ofcom, especially in Market 2 where competition clearly exists.
- We disagree with Ofcom's over simplistic interpretation of cost orientation and in particular the use of DSAC as the relevant test. This very question is currently being considered by the Competition Appeals Tribunal.
- Transitional arrangements for exchanges moving from Market 2 to Market 3 are unnecessary, disproportionate and legally unfounded.
- Ofcom's proposals to regulate WBA fibre based services (NGA services) in Markets 1 and 2 are unnecessary and potentially counter-productive. At this point in time, Ofcom should not regulate these nascent services, regardless of the location of the Point of Handover, at least whilst fibre is an overlay to copper based services.

4.2 We broadly agree with Ofcom's proposals for general access and non discrimination remedies

Notwithstanding our views on Ofcom's proposed market definitions as outlined in Section 3, we broadly agree that Ofcom's proposed general access and non discrimination remedies where SMP is determined are appropriate for existing copper based access services.

However we note that in relation to the requirement to publish a reference offer Ofcom proposes to introduce a new requirement within the conditions³¹ to provide "*Ofcom at least ten days prior written notice of any amendment to the Reference Offer coming into effect*".

³¹ Conditions EA3.7 and EA10.7

This requirement is in addition to the obligation to provide 28 days notice of any changes to charges, terms and conditions. BT considers that the introduction of the new ten day notification requirement for changes to the reference offer is superfluous given the separate requirement to provide 28 days notification of changes to charges, terms and conditions.

4.3 We disagree with Ofcom's proposals to introduce pricing regulation in Market 1

Ofcom proposes that it should impose a cost orientation obligation in Markets 1 and 2 and, additionally, a charge control in Market 1. The precise proposals on a charge control will be the subject of a separate consultation. Ofcom's conclusion in Market 1 is based principally on the observation that BT is expected to be the only provider of WBA services and rests on its view that BT *"may have the incentive to set prices above the competitive level. BT's competitors at the retail level would be forced to pay these high prices in order to provide service on a national basis"* [paragraph 5.44].

We do not agree with Ofcom's assessment. In particular, the imposition of cost orientation obligations and a formal charge control does not meet the legal test for proportionality in the Communications Act.³² A more proportionate solution would be an extension of the existing voluntary price ceiling or a retail minus approach. There are two main reasons for our view:

- No causal link has been shown between the profitability analysis and the exercise (or potential exercise) of market power. Greater caution is needed in interpreting the profitability numbers;
- The evidence shows the same level of penetration of broadband in rural as in urban areas, no systematic differences in rural and urban areas in a range of broadband indicators and outcomes, and vibrant competition at the retail layer across the various geographical markets.

In addition, we do not agree with Ofcom's assessment of a step change between the 2008 Review and the current review which would now warrant imposition of a cost orientation obligation or a charge control. Ofcom draws the following distinction *"We did not impose a price control in the previous WBA market review due to uncertainty about future fixed broadband subscriber growth, and to ensure CP's had sufficient incentive to invest in LLU in WBA markets with SMP. However, since our previous review, the rate of growth in fixed broadband subscriber numbers and LLU roll-out has decreased, with LLU roll-out beyond 2010 likely to be more limited. Our expectation that any rollout is not likely to be in Market 1 to any significant extent"* [paragraph 5.45].

Given considerable uncertainty about the future path for broadband we do not agree with Ofcom's distinction with the 2008 Review:

- Household penetration of fixed broadband stands at 65% leaving considerable room for future growth in the number of broadband subscribers.
- The pattern of future demand for bandwidth is very uncertain, and

³² See Legal Tests in paragraphs 5.162 to 5.170 of the consultation

- The current assets used to provide broadband will need refreshing, requiring considerable investment. Ofcom refers a number of times in the consultation to the need to take account of future investment (e.g. paragraph 5.161). Imposition of a charge control risks stifling this.

In turn Ofcom's proposal for greater price regulation will tend to discourage continued growth and take-up of broadband services, especially in rural areas. The following examines our points on profitability and widespread broadband competition across the UK in more detail.

4.3.1 Assessment of profitability

Ofcom says that "A charge control is objectively justifiable based on the evidence outlined in this section that BT's revenue is high based on the underlying costs" [paragraph 5.162]. In its earlier assessment of market power, Ofcom also states that BT "has been able to earn a rate of return significantly in excess of the cost of capital in this market" [paragraph 4.32]. Section 3.3 above and Annex 1 provide a more detailed economic assessment of Ofcom's finding of SMP in Market 1.

However, Ofcom has presented no analysis of how it has derived a cost of capital for this market. Whilst Ofcom's conclusion when it assesses profitability within Market 1 that "these returns may not necessarily be indicative of excessive pricing if they are needed to offset early losses in the market" [paragraph 4.39] is true, its subsequent proposals to impose cost orientation and charge control remedies are not robust with regard to the evidence.

At a minimum the following factors need to be taken into account in any assessment of an appropriate remedy. These points are discussed in further detail in the report by DotEcon in Annex 5.

4.3.2 Disparity between accounting and economic rates of return

As Ofcom acknowledges, a negative ROCE early in the life of a product with large positive ROCEs towards the end is a commonly observed pattern, including in competitive industries. This pattern occurs whenever the book value of assets is written down faster than the true decline in the value-creating potential of those assets – this is an accounting artefact and not a true economic indicator.

As a measure, ROCE is very sensitive to the accounting treatment of assets and the timing of depreciation. Therefore, it would not be correct to conclude that a charge control is warranted simply on the basis that ROCE is high at one point in time. Similarly, Ofcom's profitability analysis from paragraphs 4.34 to 4.40 starts in 2003/04. If the analysis were extended back further to 2001/02 and 2002/03 (hence taking a fuller life cycle view), it would take account of additional expenditure on Research & Development and of early year losses. This would further reduce returns on a lifecycle basis and show a reasonable Internal Rate of Return (IRR).

4.3.3 Risk of 'hindsight bias'

To date, Ofcom has not imposed a formal charge control on wholesale broadband services nor a cost orientation obligation. Regulation is contingent, in that only successful products are regulated. To impose a charge control now, Ofcom would effectively be capping the upside returns from investment, but without having regard to the downside risks: firms may not be compensated for the risks taken at the time of the investment decision. DotEcon's report at Annex 5 sets out how other regulators such

as Ofwat and Ofgem have sought to address such regulatory uncertainty. As their report highlights, this problem of ‘hindsight’ or ‘survivorship’ bias has been acknowledged as important by the Competition Commission.

4.3.4 Real options

Ofcom has acknowledged that “real options” should be reflected in regulatory decisions where investment incentives are important, e.g. NGA. That is, given investment is risky and demand uncertain, ‘waiting and seeing’ how the market evolves has a value to the operator. But regulatory requirements, such as price caps, can preclude risk-reducing strategies that the operator might otherwise adopt. DotEcon’s report sets out how Ofcom’s approach to real options demands a high, if not achievable, burden of proof on BT and why a higher cost of capital is one way to reduce resulting negative effects on incentives to invest that might otherwise result.

4.3.5 Averaging returns across a number of projects

In making its assessment on profitability, Ofcom has not assessed the cost of capital that would be relevant *within* Market 1. We assume that Ofcom has used the cost of capital for the rest of BT (non-Openreach rate) in making its proposal to impose a charge control. Typically, some regulated services will make returns greater than the overall average regulated return and other services less than the average regulated return. However, if the average regulated return is forced down sufficiently close to the cost of capital, then it follows that, taking account of capital costs, the regulated company is actually making an incremental *loss* on its more risky services, reducing the incentive to supply risky services, or causing a delay in meeting increase demand for such services.

4.3.6 Specific risks and feedback loops

There are good arguments for taking account of specific risks – risks that do not affect the cost of capital if investors are well diversified – but which can have real effects on what a regulated firm does. It is general business practice in unregulated markets that investment decisions depend not just on diversifiable (systematic) risks (which influence the cost of capital) but also on specific risks (which do not). The important point is that the risks faced by a firm cannot be assessed independently of the regulatory framework within which the firm operates. Regulation itself creates risks by e.g. changing the exposure of the firm to demand and cost risks, thereby creating a feedback loop.

There is also a case for taking greater account of specific risks. As DotEcon points out, *“In the past, regulation has been able to take a much more steady state view of the world, but now there is need to provide sufficient incentive for new investment in a more dynamic environment.”* Such considerations clearly apply to broadband Market 1: applying a formal charge control is not justified and entails substantial risks. If imposed, it needs to take account of the above factors and ensure inappropriate treatment of costs and risks so as not to erode incentives to upgrade service quality.

4.3.7 High broadband penetration and vibrant competition at the retail layer

Imposition of charge controls would not be proportionate in the light of the evidence on broadband penetration across rural and urban areas and the degree of competition at the retail layer. Further, Ofcom does not demonstrate consumer harm, or the likely prospect of consumer harm, in Market 1 in the consultation. Given the evidence below, it is hard to understand precisely what Ofcom's concern is within Market 1 that would justify the imposition of a charge control.

4.3.8 Rural vs. urban penetration

There is no systematic difference between penetration rates of broadband between rural and urban areas. Ofcom's Nations & Regions Communications Market report for 2009 shows the average fixed broadband penetration rate in urban areas stood at 65% compared with 64% in rural areas. Overall broadband take-up was 68% in UK urban areas compared with 67% in UK rural areas.

Indeed, Ofcom has itself underlined this similarity in the press releases that accompanied its earlier 2008 Communications Market Report. It stated that "[r]ural broadband households overtake urban for the first time"³³ Ofcom's press release said:

"Rural areas of the UK are better connected to broadband than their urban neighbours...[F]or the first time, there is a greater proportion of households with broadband in the rural parts of the UK's nations and regions than there are in urban areas. Across the UK as a whole, 59 per cent of households in rural areas now have broadband compared to 57 per cent of urban areas."

There is nothing in international comparisons that suggests that the UK lags behind in terms of broadband rollout. In fact, the latest May 2010 EU implementation report continues to put the UK in the top quartile of EU Member States for broadband penetration.

More specifically in terms of Market 1, in March 2010 the Department for Communities and Local Government published a report by Analysys Mason which looked at gaps in broadband coverage and possible future disparities. The report concluded that *"the UK is very well served in terms of current generation broadband coverage, competition, take-up and price"*.³⁴

Drilling down further into Ofcom's data, neither is there any systematic difference between UK rural and urban areas in the take-up of broadband by socio economic group. Broadband take-up stood at 79% in 2009 for both urban and rural areas for ABC1 groups, and at 55% and 52% respectively for C2DE groups. Similarly, there was no systematic difference between rural and urban areas in end users' reasons for not taking up broadband services.³⁵

³³ See http://www.ofcom.org.uk/media/news/2008/05/nr_20080522

³⁴ H M Government, Communities & Local Government "An assessment and practical guidance on next generation access (NGA) risk in the UK: Final Report"

³⁵ See charts 34 and 42 in Ofcom's data pack accompanying the Nations & Regions Market report for 2009 at <http://www.ofcom.org.uk/research/cm/cmnr09/charts/telecoms.pdf>

4.3.9 Vibrant competition at the retail layer

Not only is penetration high across rural and urban areas, but there is vibrant competition in the retail broadband sector. According to the European Competitive Telecoms Association's (ECTA) broadband scorecard of September 2009, BT has the lowest retail market share in broadband of any former incumbent in the major European economies - one measure of the strength of competition (see figure 2 in section 2 above).

This vibrancy is not limited to competitive areas. Measures such as the broadband performance index published by the European Union, which ranks member states in terms of supply and demand factors that affect the take-up and use of broadband, shows how widespread competition and coverage is across the UK.

The UK is ahead of France, Germany, Spain and Italy by a significant margin. The index covers a composite range of factors including coverage of broadband competition (where the UK scores particularly well), broadband prices (ditto) as well as broadband coverage in rural areas (see figure 1 in section 2 above).

Ofcom presents no evidence of systematically higher consumer complaints or harm in Market 1. In fact, Ofcom's Nations & Regions data for 2009 shows overall satisfaction with fixed broadband services at 90% in urban areas and 89% in rural areas³⁶

4.3.10 Price differentials

Whilst current retail prices in Market 1 tend to be higher than in other markets, this only has implications for market power where it does not reflect cost differences. Yet a comparison of prices and costs by geographic market has not been undertaken. It is worth emphasising that any geographic price differences also need to be understood against a backdrop of sharply falling average prices, albeit concentrated in more competitive areas.

In its Communications Market report for 2009, Ofcom points out that: "*We estimate that the average cost of a residential DSL broadband connection fell by over 40% in the three years to Q4 2008, with around half of this fall being the result of take-up of LLU-based services*".³⁷ This represents a dramatic fall in average prices and probably has been matched in few other industries.

Importantly, Ofcom's data shows satisfaction with the value for money of fixed broadband services is identical between rural and urban parts of the UK at 84% in 2009.³⁸

³⁶ See chart 56, *op cit*. The figures indicate the proportion of people who were 'very' or 'fairly' satisfied with their overall fixed broadband service.

³⁷ page 209, Ofcom Communications Market report, 2009

³⁸ See chart 57, *op cit*. The figures indicate the proportion of people who were 'very' or 'fairly' satisfied with their overall value for money.

In short, there is compelling evidence of strong consumer outcomes at the retail level, with the UK scoring highly on rollout of broadband across the UK, as well as widespread coverage of broadband competition, sharp falls in prices as well as satisfaction with value for money of fixed broadband services at the same level in rural and urban areas. Ofcom has not demonstrated that BT can price above the competitive level in Market 1 to warrant introducing additional layers of pricing regulation such as cost orientation and a formal charge control. A more proportionate remedy would be the continuation of a voluntary commitments or a retail minus approach.

These points apply even more forcefully to any consideration of a charge control in Market 2. This response has set out evidence on the degree of competition within Market 2. In particular, on a forward looking basis, there would be no case to charge control Market 2. Any such control would cut against future investment by BT and other operators.

4.4 We disagree with Ofcom's proposal to impose cost orientation remedies in Market 1 and Market 2.

We believe it is wholly inappropriate for Ofcom to introduce cost orientation obligation for individual broadband services in Markets 1 and 2 both in principle and on the grounds of practicality and proportionality.

Ofcom's proposals to impose basis of charges and cost accounting requirements introduce additional layers of regulation on BT in Markets 1 and 2. The principle reason for this appears to be Ofcom's assertion that *"BT's revenue is high based on the underlying costs"* [Paragraphs 5.158 and 5.286] and that *"once the current voluntary commitment expires, it may ...be in BT's interests to increase this price"*. [Paragraph 5.46].

However, as already outlined in section 4.3 above, Ofcom has presented no analysis of how it has derived a cost of capital for this market. Whilst Ofcom's concludes when it assesses the profitability in Market 2 that *"whilst the pricing and profitability presented ... does not necessarily indicate excessive pricing or returns, it suggests that BT's pricing would not be constrained to the competitive level in Market 2"* [Paragraph 4.68].

For the reasons outlined in section 4.3 and discussed in detail in Dotecon's report on broadband returns, there are a number of reasons why caution is needed in interpreting BT's reported profitability numbers for broadband access services. These include real options and the disparity between accounting and economic rates of return.

Ofcom's analysis is not sufficient to demonstrate that prices are out of line with costs and above the competitive levels in either geographic market and does not justify the introduction of an additional layer of regulation on BT.

Many independent studies have highlighted these concerns including the OECD's study of access pricing in telecommunications³⁹:

³⁹ OECD, *Access pricing in Telecommunications*, Report of the OECD's Competition Committee, 2004, page 197.

In passing, this chapter highlighted why regulators (including competition authorities) should be circumspect about their ability to detect monopoly prices. Regulators usually attempt to detect monopoly pricing through a comparison of current prices and costs in the current period. But where there are sunk investments such cost estimates inevitably involve an allocation of common costs. The way those costs are allocated obviously has an impact on the measured profits. Detecting excess returns requires a comparison not just of prices and costs in one period, but over the entire life of the regulated firm. Furthermore, in a world of uncertainty detecting excess returns requires a consideration of all possible paths of prices starting from the point at which the investment was made. Obviously the information requirements are formidable. (OECD, Access Pricing in Telecommunications).

In practice, the conditions of competition for wholesale broadband access are unlikely to be stable over time since additional LLU entry is occurring even in exchanges which Ofcom currently place in Market 1. As a consequence, average costs will be highly susceptible to unpredictable volume changes. The take-up of NGA fibre based services is also unpredictable, and in some Market 2 areas these will act as a competitor to copper based services. This further clouds the economic assessment of underlying costs.

In summary, broadband access is not a mature service for which modelling can be undertaken with certainty and where there are established trends which are reasonably reliable such as with voice traffic. As such, it is not sensible to impose tighter regulation on BT when competition is increasing rather than decreasing in both of these markets.

Particularly in the case of Market 2, the introduction of cost orientation as a remedy is redundant and unnecessary. This is because, although Ofcom has identified BT as having SMP, there is a degree of competition in Market 2. Under Ofcom's proposed definitions BT faces at least one other Principal Operator in Market 2, with the potential for further competition from others who expand their footprint from adjacent Market 3 exchange areas. Any attempt to raise prices would stimulate market entry, resulting in market share loss to competitors. Consequently the cost orientation condition is effectively redundant.

4.4.1 BT disagrees with Ofcom's interpretation of cost orientation

Notwithstanding BT's views above on the appropriateness of a cost orientation obligation as a remedy for wholesale broadband access services, we disagree with the interpretation of the appropriate floors and ceilings methodology proposed by Ofcom.

The appropriate test for or measure of compliance with a cost orientation obligation should not be fixed or overly formulaic in nature. Specifically, the role played by and importance of Ofcom's DSAC⁴⁰

⁴⁰ Distributed Stand Alone Cost

concept as a test (or indeed DLRIC⁴¹), whether it is used as a ‘first order’ test or otherwise, is highly questionable and currently the subject of review in the Competition Appeal Tribunal.⁴²

For reasons of both principle (including good regulatory and economic principles and practice) and practical application, it is wholly inappropriate to apply a cost orientation obligation:

- to individual service components as opposed to services as a whole or baskets of similar or related services; or
- using a specific floors and ceilings methodology (fixed or formulaic based tests - whether based on DSAC or some other test), including the methodology proposed by Ofcom.

Ofcom is unclear in the consultation as to whether its DSAC test (or indeed DLRIC) acts as a binding constraint or limitation on BT’s charges above which BT would be deemed to have breached its cost orientation obligations or whether it simply acts as a filtering device to consider whether there might be grounds for further investigation as to whether prices are too low or too high. For example, in paragraph 5.146 Ofcom states

“if we were to impose a basis of charges condition on BT, our view would be that the interpretation of the basis of charges obligation would be that BT’s prices must, as a “first order test”, be between DLRIC and DSAC and BT would be required to adjust its prices to comply with the obligation if its current pricing was outside this range. As such, BT’s prices would be constrained based on the costs incurred in Market 1.”

Similarly in paragraph 5.283 on applying a basis of charges obligation in Market 2, Ofcom states:

“As a “first order” test the standard approach would be to interpret the obligation as requiring prices to be no higher than Distributed Stand Alone Costs (DSAC). The cost orientation obligation would apply to each and every charge so that BT would not be able to set charges such as transfers at excessive levels.

A test which requires prices to be no higher than DSAC cannot be a “first order test” at least on the basis of how Ofcom has in the past used that term, and as BT, if its charges exceed DSAC, would be required to “adjust [i.e. reduce] its prices”, DSAC must be intended to be determinative. Ofcom should clarify how it proposes to assess compliance with cost orientation.

That said there is no basis in EU legislation, domestic legislation, or recognised good regulatory practice (in any network industry), for the boundaries of a cost oriented prices to be fixed by Ofcom’s concepts of DSAC and DLRIC. At best the DSAC / DLRIC (ceiling and floor) tests proposed should, only act as a ‘filtering’ device to consider whether there might be concern for which further investigation is warranted, and no more.

Finally, there are a number of reasons why cost orientation with DLRIC/DSAC is impractical for wholesale broadband access services:

⁴¹ Distributed Long Run Incremental Cost

⁴² British Telecommunications Plc v Office of Communications (Partial Private Circuits) Case number: 1146/3/3/09: <http://www.catribunal.co.uk/237-5136/1146-3-3-09-British-Telecommunications-Plc.html>

- the vast bulk of the broadband service is not regulated and the common costs attributed to Markets 1 and 2 will be a minority of the overall costs and the allocation subject to considerable uncertainty given the fluctuations in volumes between the markets;
- cost orientation will also require some assessment ex ante of the relevant cost of capital and Ofcom has given no indication of how this will be done; BT does not accept that broadband services – which have ‘real option’ like characteristics – should be regarded as susceptible to the standard regulated weighted average cost of capital.

On grounds of practicality and proportionality, we believe that many of the points of principle highlighted above will make this obligation expensive, disproportionate and of very limited value in practice.

In the case of NGA/fibre within Ofcom’s accompanying WLA market review, Ofcom is not proposing the imposition of a cost orientation obligation for VULA. For similar reasons, it is not appropriate to impose cost orientation on WBA fibre services outside Market 3. Indeed it would be perverse to impose harsher downstream regulation in the WBA review whilst Ofcom is, rightly in our view, not applying such remedies to the most upstream product, VULA as it wants to allow for pricing flexibility in emerging services. Furthermore, strict cost based prices using techniques as LRIC would not produce a robust framework for investment and could not at this stage respond to market demand.

In conclusion, without international benchmarking evidence that BT’s pricing is out of line with that of other countries, or that consumers are being materially disadvantaged unreasonably in these areas, or that competitors are unable to enter Markets 1 and 2 as a result of BT’s behaviour - the imposition of a cost orientation condition is not justified or appropriate for either Markets 1 or 2.

4.5 Transitional obligations for exchanges moving from Market 2 to Market 3 are unnecessary and disproportionate

We do not think that there should be any transitional arrangements for exchanges moving from Market 2 to Market 3. Ofcom’s proposal is also clearly out of line with its conclusions in the 2008 Review where with the deregulation of almost 70% of UK premises Ofcom felt that the maintenance of the following requirements:

- not to unduly discriminate;
- to notify charges, terms and conditions;
- to notify technical information;

“would be overly restrictive in the light of a no-SMP finding. In particular it could have a significant impact on BT’s ability to compete for new customers whereas the protection during the notice period is intended to maintain supply to existing customers. For example it could prevent BT from

offering bespoke deals even though they are continuing to supply existing customers with existing products.”⁴³

In the 2008 Review deregulation and geographic markets were introduced for the first time to the wholesale broadband access market and hence these changes had a more significant impact on CPs than the more minor changes Ofcom are proposing this time. In spite of this, Ofcom propose to introduce more requirements on BT for the 114 proposed newly deregulated exchanges than when the original 1097 Market 3 exchanges were deregulated.

We also believe the imposition of such arrangements is legally inconsistent with the amendments to the Framework Directive published on 18 December 2009 and required to be imposed in all Member States by 26 May 2011.

The amendments introduced Article 8(5)(f) which states that NRAs should impose “*ex-ante regulatory obligations only where there is no effective and sustainable competition and relaxing or lifting such obligation as soon as the condition is fulfilled*”

This amendment is an important change to the Framework Directive, although Article 16(3) continues to refer to an “*appropriate period of notice shall be given to parties affected by such a withdrawal of [SMP] obligations*”. This should be read in conjunction with the new Article 8(5)(f) and hence there now seems to be greater emphasis on lifting obligations as soon as possible compared to previously.

While BT recognises that the amended directives are unlikely to be transposed into UK law until after Ofcom’s WBA Statement, we would still urge Ofcom to consider the effect of the introduction of the new Article 8(5)(f) when imposing, a transition period, if any.

The requirement under Article 16(3) to give an “appropriate” notice period provides NRAs with the discretion to decide whether any notice period is appropriate. This provides Ofcom with the discretion to impose no notice period at all. BT considers that the current state of the market and circumstances surrounding deregulation at issue here do not support the imposition of a notice period.

Ofcom consider a notice period appropriate on the basis that it “*would ensure CPs relying on BT have the opportunity to maintain supply in the short term*”. However, CPs have already adjusted to the principle of a geographic split where some exchanges are regulated and others are not and under Ofcom’s proposals the deregulation will only affect 114 exchanges. We are not aware of any CP that only operates in the 114 exchanges being deregulated. The majority of CPs in the UK operate across non-regulated and the regulated exchanges and hence already have in place arrangements for exchanges that are not regulated. Therefore there will be little adjustment for these CPs to accommodate the 114 new deregulated exchanges.

Moreover, we have no intention of stopping supply to any CPs in these 114 exchanges. Therefore if any CP wishes to continue to be supplied by BT they could do so or alternatively they can seek a new wholesale provider. In any event this option is already available to them. For these reasons, no transition period is required.

⁴³ Paragraph 5.72, 2008 Wholesale Broadband Market Review statement

If any measures were necessary to manage the transition in the additional Market 3 exchanges following a finding of no SMP, these should be no more onerous than those required in the last market review. Indeed, we would be willing to consider time-limited voluntary assurances to maintain supply in these areas.

4.6 We disagree with Ofcom's proposed regulatory remedies for Next Generation Access (NGA) services – these remedies should be relaxed

The result of Ofcom's market power assessment is that WBA fibre services (i.e. NGA services) downstream of Openreach's GEA/VULA product would not be regulated where the Point of Handover from Openreach is in Market 3, given no SMP has been found in Market 3. However, the full set of regulatory remedies (bar charge controls) would apply where the PoH is in Markets 1 and 2.⁴⁴

BT fully supports this approach and the outcome it provides across virtually all of the planned NGA deployment, where GEA handover points are located in Market 3 exchanges.

However, it is likely that there will be a small number of exceptional cases where the PoH will fall outside Market 3, for various reasons either arising from specific technical or geographic issues, or as the regulatory boundaries are reviewed. This risk arises despite the fact that the Openreach product would be consumed on an equal basis by other principal operators as well as BT. It would be regrettable in such exceptional cases that Ofcom would apply the full set of proposed regulatory remedies (bar charge controls) to a WBC product – in fact this might even tend to discourage BT from progressing the network deployment in specific locations, to avoid the additional costs incurred. This undesirable outcome is especially likely to occur if Ofcom does not revise its general method of counting 4 principal operators to define Market 3 exchange areas. In these cases Ofcom's proposed approach could lead to various unintended consequences.

We therefore propose that Ofcom uses the same type of flexibility adopted elsewhere in the current market review proposals to avoid these potential pitfalls by not applying SMP remedies. Fibre products are new with uncertain demand, and functional separation and supply of the upstream input – VULA – on EoI terms mitigates the need to regulate downstream. BT recently announced that it sees the potential to roll out fibre to around two-thirds of the UK by 2015, but assuming there is an acceptable environment for investment.

4.6.1 Suggested amendments to avoid these pitfalls

There is a strong case not to regulate fibre services downstream of VULA/GEA, at least while NGA fibre is generally deployed as an overlay:

- Fibre-based WBA services are new and have a higher degree of uncertainty attached to their provision.
- The prices charged by BT Wholesale for WBA fibre services are constrained from competition at the retail level by CPs' continuing ability to purchase current generation services from BT Wholesale (e.g. IPStream and WBC), which are regulated in some markets.

⁴⁴ Paragraphs 5.184 and 5.302 in consultation document

- Any attempt by BT Wholesale to set excessively high prices would limit our ability to attract traffic and recoup NGA investment.

These factors are brought out by Ofcom in the accompanying WLA review, where Ofcom has proposed a mix of access remedies and pricing remedies *within* the same market. Ofcom says “[8.40] that it remains appropriate to have a charge control on LLU” but “[8.41]. For VULA, we consider that BT should have the flexibility to set prices.” Ofcom bases this approach on the following factors:

“However, we do not believe that the proposed basis of charges obligation should apply in respect of certain new NGA services, for example we do not consider that the VULA product(s) in the WLA market should be subject to a LRIC+ control. These services differ from existing WLA products and services in that they are new, less established services and therefore have a higher degree of uncertainty attached to their provision. Moreover, we consider that the prices charged by BT for VULA would be largely constrained from competition at the retail level by OCPs’ continuing ability to purchase CGA services from BT on regulated terms and by the services offered by Virgin Media over its cable network. An attempt by BT to set excessively high prices would limit its ability to attract traffic to its NGA network, and thereby to recoup its NGA investment. We do not consider therefore that applying a LRIC+ obligation on VULA products is appropriate.” [paragraph 6.55]

Ofcom’s reasoning in the WLA review is also based on “help[ing] to limit the prospects of a digital divide in the delivery of NGA services” [paragraph 1.30], that pricing flexibility “will help promote investment in NGA” [paragraph 1.33] and that “price regulation of new non-physical NGA products is likely to be disproportionate at this stage” [paragraph 7.250].

Ofcom proposed to regulate other aspects of Openreach’s VULA product, which will provide the required degree of protection. Given this, BT does not consider it appropriate to additionally regulate downstream fibre services. In short:

- It would not be appropriate to price regulate (via a cost orientation obligation) a service that is downstream of an EoI input that is not price regulated;
- Best practice guidance is that imposition of ex-ante regulation should be light touch in nascent markets; and
- Functional separation and supply of VULA on EoI terms mitigates the need to price regulate or indeed apply any further downstream regulations.

If Ofcom adopted the proposed approach, the fibre regulation would then be, rightly, anchored at the Openreach level, the deepest point within the network, in line with the underlying economics and spirit of the Undertakings.

This approach would also align closely with the European Commission’s SMP Guidelines, which state both that⁴⁵:

⁴⁵ Paragraph 32, “Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services” (2002/C 165/03), 11th July 2002

“As far as emerging markets are concerned, recital 27 of the framework Directive notes that emerging markets, where de facto the market leader is likely to have a substantial market share, should not be subject to inappropriate ex-ante regulation. This is because premature imposition of ex-ante regulation may unduly influence the competitive conditions taking shape within a new and emerging market.”

And also that:

“Without prejudice to the appropriateness of intervention by the competition authorities in individual cases, NRAs should ensure that they can fully justify any form of early, ex-ante intervention in an emerging market, in particular since they retain the ability to intervene at a later stage, in the context of the periodic re-assessment of the relevant markets.”

Elsewhere, the European Commission has said that the presence of Functional Separation could have a material bearing on the regulatory assessment. In its draft NGA recommendation, the Commission says that, specifically for NGA, where functional separation is shown to be effective *“NRAs have more flexibility when designing remedies for wholesale broadband access. In particular the price of the bitstream product could be left to the market.”*⁴⁶

The EC's State Aid Guidelines also play a role. There are likely to be further regional bids for NGA provision in future e.g. of the type seen recently for Northern Ireland, which could increase the number of exceptional cases. Where these involve State Aid, access obligations may in any case apply outside any additional SMP regulation. Amongst other things, the European Commission's State Aid Guidelines require effective wholesale access to the subsidised infrastructure for at least 7 years and a claw-back mechanism of returns to avoid over-compensation where take up is higher than forecast.⁴⁷ Indeed, in the case of BT's contract in Northern Ireland for the provision of next generation broadband services, the Commission's State Aid decision required that *“The selected operator will have to provide access to the subsidised networks to other operators on equal and non-discriminatory terms for at least seven years that will enable the latter to compete on the retail level.”*⁴⁸

Ofcom proposes that any subsequent charge controls will not apply to WBA fibre-based services. BT agrees with this. In short, we propose that Ofcom extends this flexibility further and does not regulate WBA fibre-based services, regardless of the location of the Point of Handover, at least while NGA fibre is an overlay. Ofcom could incorporate the handful of exceptions within the definition of Market 3, though this will not be future proof unless additions can be made to the list of Market 3 exchanges after the Ofcom Statement is published.

⁴⁶ See paragraph 45 of the June 2009 EC Draft Recommendation. We appreciate the text of the Final Recommendation may change.

⁴⁷ See paragraph 51 in the European Commission guidelines on State aid for the rapid deployment of broadband networks at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:235:0007:0025:EN:PDF>

⁴⁸ Paragraph 44(f) European Commission, State aid n° N 418/2009 – United Kingdom (Northern Ireland) Next Generation Broadband, Brussels, 05.11.2009 C(2009)8687

Disapplying remedies would avoid disincentives to invest and negative unintended consequences. It would better align with Ofcom's duties to encourage the availability and use of high speed data transfer services throughout the UK, the EC's SMP Guidelines and its Three Criteria Test, as well as the approach within the accompanying WLA review. There are precedents for Ofcom finding SMP in a market and not applying remedies given the constraining effects of upstream regulation, e.g. Ofcom's approach to ISDN2 in last year's Retail Narrowband Market Review.⁴⁹ Ofcom also has a regulatory principle to "*always seek the least intrusive regulatory methods of achieving our policy objectives.*"⁵⁰

If concerns arise, Ofcom has the option to consider regulating at the next market review in 3 to 4 years' time, depending on how the market has developed during that period, in line with the EC's SMP Guidelines.

To make the proposals in this section of our response effective, BT suggests the addition of such text as Ofcom considers appropriate, along the lines of the words set out below in italics, to paragraph 1 Part 1 of both Schedules 1 and 2 of the Legal Instruments (Annex 5 of the consultation).

"1. These conditions shall apply to the markets for wholesale broadband access in Market 1 ("the Market") *except where the wholesale broadband access service is provided via an NGA Point of Handover.*"

BT would subsequently apply to Ofcom for a small variation to the Undertakings without which Equivalence of Inputs (EoI) undertakings (and hence a "no undue discrimination" type obligation) would still apply.

⁴⁹ Paragraph 1.2, "Fixed Narrowband Retail Services Markets: Ofcom Statement", 15th September 2009"

⁵⁰ Paragraph 3.3 of Ofcom Annual Plan 2010/11, 31st March 2010

5. Answers to Ofcom's questions

Our answers to the questions that Ofcom poses in the consultation document are given below. Where appropriate the answers are explained in the preceding sections of this response which deal with market definition, market power assessment and remedies.

Market definition

Q3.1 Do you agree with Ofcom's proposed product market definitions? If not, please explain why?

We believe Ofcom's product market definitions are generally satisfactory for the purposes of the current market review.

Q3.2 Do you agree with Ofcom's view of the relevant criteria for assessing the geographic market boundaries? If not please explain why?

We think BT exchange area is still the most pragmatic basis for geographic market definition. However, it underestimates the position of Virgin Media. Ofcom should adjust its methodology to mitigate the distortions this causes to the results of Ofcom's analysis. A pragmatic way to achieve this would be to reduce the coverage threshold for the inclusion of Virgin Media as a Principal Operator from 65% to 50%.

Q3.3 Do you agree with Ofcom's geographic market definitions? If not please explain why?

No. The market definitions are basically unchanged since the last review. They do not reflect the impact of consolidation and growth in competition since then, and they are no longer fit-for-purpose. We believe Ofcom should change the threshold for the inclusion of an exchange area in Market 3 from four to three Principal Operators.

Market power assessment

Q4.1. Do you agree with Ofcom's proposal that BT holds SMP in Market 1? If not, please explain why?

There are 26 exchanges in Ofcom's proposed Market 1 where BT is not present. Apart from these exchanges we agree that BT has SMP in Ofcom's proposed Market 1.

Q4.2. Do you agree with Ofcom's proposal that BT holds SMP in Market 2? If not please explain why?

We think Ofcom has used an incorrect methodology to define Market 2. We believe the evidence shows that exchanges where there are 3 Principal Operators present should not be in Market 2 but in Market 3, where BT does not have SMP.

Q4.3. Do you agree with Ofcom's proposal that no operator has SMP in Market 3? If not, please explain why?

We agree that no operator has SMP in Market 3.

Q4.4. Do you agree with Ofcom's proposal that KCOM holds SMP in the Hull area? If not, please explain why?

We agree that KCOM has SMP in the Hull area. KCOM has a 100% market share of the services in this market at both retail and wholesale levels, and there are no known plans for expansion of cable coverage into Hull or LLU roll-out in the area during the period of the review.

Remedies

Q5.1. Do you agree with the general access and non-discrimination remedies Ofcom proposes to impose on BT in relation to the market for wholesale broadband access in Market 1? If not, please explain why?

We agree that these remedies are appropriate for Market 1 for current generation access services. However BT notes that in relation to the requirement to publish a reference offer Ofcom proposes to introduce a new requirement within the conditions⁵¹ to provide "*Ofcom at least ten days prior written notice of any amendment to the Reference Offer coming into effect*".

This requirement is in addition to the obligation to provide 28 days notice of any changes to charges, terms and conditions. BT considers that the introduction of the new ten day notification requirement for changes to the reference offer is superfluous given the separate requirement to provide 28 days notification of charges terms and conditions.

Q5.2. Do you agree with Ofcom's proposal to impose a basis of charges obligation and a charge control on BT in relation to the market for wholesale broadband access in Market 1? If not, please explain why?

BT does not agree with the imposition of these obligations. Our view is explained in detail in section 4 of this response.

Q5.3. Do you agree with the general access and non-discrimination remedies Ofcom proposes to impose on BT in relation to the market for wholesale broadband access in Market 2? If not, please explain why?

Without prejudice to our views on market definition and SMP assessment for Market 2, we broadly agree that these remedies are appropriate for current generation access services. However, our

⁵¹ Conditions EA3.7 and EA10.7

comments in response to question 5.1 above on notice period requirements in the reference offer in Market 1 equally apply to Market 2.

Q5.4. Do you agree with Ofcom's proposal to impose a basis of charges obligation on BT in relation to the market for wholesale broadband access in Market 2? If not, please explain why?

We believe that in a market where all economic evidence shows that competition is increasing, the introduction of a additional layer of regulation such as a basis of charges obligation is neither justified nor proportionate and contrary to Ofcom's principles to operate with a bias against intervention. If the obligation is imposed, we think it essential that the correct interpretation of cost orientation is applied.

Q5.5. Do you agree that Ofcom should allow a period of notice in the exchanges that move from Market 2 to Market 3 in which the above conditions should apply? Do you agree that 12 months is an appropriate period of notice? If not, please explain why?

We do not think the proposed transitional obligations are necessary or justified. In our view they are inconsistent with the revised Framework Directives which member states must implement in 2011. In any event, we believe that if transitional arrangements are imposed they should at least be no more onerous than those imposed when Ofcom first defined geographic markets (i.e. solely retaining the obligation to provide network access on reasonable request).

Q5.6. Do you agree with the general access and non-discrimination remedies Ofcom proposes to impose on KCOM in relation to the market for wholesale broadband access in the Hull area? If not, please explain why?

We have no comments on general access and non-discrimination remedies in the Hull area.

Q5.7. Do you agree with Ofcom's approach to price remedies in the Hull area? If not, please explain why?

We have no comments on price remedies in the Hull area.

Q5.8. Are there other remedies that, if imposed by Ofcom, would promote entry into the market in the Hull area by other providers?

We have no comments on this issue.

ANNEX 1

BT's OBSERVATIONS ON OFCOM'S ECONOMIC MARKET BOUNDARY AND POWER ASSESSMENTS

OVERVIEW OF OFCOM'S PROPOSALS

1. While in the previous 2008 review BT fully supported Ofcom's approach to the geographic disaggregation of the WBA wholesale marketplace, in this review BT expresses significant reservations which arise from differences in economic analysis. In Annex 2 BT presents substantive evidence which indicates that since the last market review, the geographic scope of effective competition has extended very considerably yet Ofcom's analysis does not reflect this reality. This Annex considers some of the underlying methodological issues which underpin Ofcom's conclusions.
2. Ofcom proposes only a very modest increase in the size of the deregulated part of the UK (Market 3) and much tighter regulation is proposed for the remainder of the UK (outside Hull) as if the scope for competition had already been exhausted. BT cannot support this as a plausible or reasonable perspective of what is widely recognised as the most competitive and dynamic marketplace for the provision of broadband and related services anywhere in the entire world.
3. While BT acknowledges that there will always be some theoretical and practical difficulties of delineating market boundaries, Ofcom's analysis simply does not have credibility – competition is neither exhausted nor reducing in intensity. BT believes that Ofcom's analysis is not robust in its assessment of geographic boundaries and to the impact of industry consolidation. Some exit from the market was widely expected in 2008 and a natural evolution of fully competitive markets.
4. Ofcom's methodology presents a scenario which understates competition and unreasonably maximises regulation on BT. This outcome has arisen primarily from the way the geographic market boundary has been assessed and which fails to allow for factors which limit BT's market power. The methodology also fails to take full account of other factors such as bundling and NGA roll-out. These two sets of issues are described in simple terms as the 'methodology' and 'application of methodology'.
5. The first issue concerns the economic principles underpinning the use of POs as a means of providing the preliminary demarcation of market boundaries and which BT no longer considers to be adequate.
6. The second issue concerns the application of Ofcom's (flawed) methodology where BT considers that there are a large number of factors which have been applied in a manner which artificially and improperly increase the assessment of BT having market power when in practice it does not.

7. Both sets of factors show that Ofcom is failing to deregulate taking a reasonable forward look and on the basis of the considerable growth in competition since the previous market review. It is noteworthy that unlike the previous consultation, Ofcom does not appear to have taken any forward assessment of market shares at all and how such shares would be affected by roll-out or how alternative treatments of consolidation should be assessed.
8. The following sections respectively provide commentary on (i) the geographic market boundary (in two sections); (ii) the product market boundary; (iii) the market power assessments for the three Ofcom defined geographic markets.

ECONOMIC PRINCIPLES TO IDENTIFYING THE GEOGRAPHIC MARKET

The impact of alternative approaches

9. Commission guidance on the geographic level of market definition makes clear that the underlying methodology is essentially that of a market power assessment ('homogenous conditions of competition'). Ofcom however continues to stress the role of uniform tariffs in its geographic assessment whereas the Commission suggests that simply showing prices are no longer uniform is not a sufficient condition to make definitive conclusions about geographic boundaries⁵². In BT's view, Ofcom has not examined the full range of factors which are relevant to assessing the combined and linked factors of the market boundaries and market power at the geographic level.
10. Instead, Ofcom applies its current methodology in a mechanistic way which detracts from the underlying market dynamics. Viewed purely at the level of raw statistics, there is an underlying trade-off between the scope of Market 3 and BT's market share in Market 2 – the more exchanges that are deemed to be part of Market 2 which 'come out' of Market 3 will lower BT's share in Market 2 and lead to BT acquiring a share which is below the conventional threshold of dominance (40% market share). A similar situation arises with respect to Market 1 and Market 2 – if exchanges 'move' from the former to the latter pure reliance on share would likely push up BT's apparent market power in the latter.
11. Table 1 below provides some indication of the sensitivity of Ofcom's methodology to alternative specifications of market designation in which market share is the determining factor of market power. This set of numbers is provided for illustrative purposes and not as a specific suggestion for delineation of market boundaries or the assessment of market power.

⁵² Commission Staff Working Paper SEC(2007) 1483 Final November 2007 stated that: (a) the presence of uniform tariffs was not a sufficient condition for a national market; and (b) disaggregated tariffs are a necessary but not sufficient condition for local markets. Note in section 2.4 the Commission argues that 'there should be evidence that the pressure for regional price differences comes from customers and competitors and is not merely reflecting variations in the underlying costs'.

Table 1**Impact on Shares and Coverage of Alternative Methodologies***

Methodology	Market 3		Market 2	
	Coverage	BT Share	Coverage	BT Share
As Ofcom but only 4 POs	41%	25%	43%	41%
Mkt 3 with 3+ POs and Mkt 2 with 2 POs 4 POs in total	73%	29%	11%	62%
Mkt 3 with 3+ POs and Mkt 2 with 2 POs 6 POs in total	76%	31%	8%	67%

*Based on March 2010 volumes

12. The first row shows that if the additional competitive forces of 2 POs (C&W and O2) are ignored in their entirety and only 4 POs are viewed as substantive competitors, the shares of Markets 2 and 3 are roughly equal and BT's share would not indicate market power. The second row shows that if this is combined with a less restrictive condition of 3 POs deemed adequate for delimiting conditions of competition rather than 4 POs - then a higher level of deregulation would be appropriate in Market 3. The third row shows that using Ofcom's assessment of 6 POs (thereby excluding Udata), over three quarters of the UK should be deregulated if a different threshold was adopted for Market 3.
13. What this exercise indicates is that the outcome is highly susceptible to the assumptions of 'how many POs are enough for effective competition'. This is a more critical consideration now compared with the situation in 2007-08. BT believes that the other factors which conventionally are only addressed at the stage of the assessment of SMP should now be taken into account at the market boundary stage as they are also pivotal to the understanding of the historic and likely future shifts in market shares.
14. The market reality is that at the retail level the broadband marketplace is now chiefly characterised by 4 main players (BT, Virgin Media, Sky, CPW) all of roughly similar strength and whose marketing and pricing strategies span across Ofcom's old Markets 2 and 3. In BT's view they make this particular geographic distinction largely redundant⁵³.
15. Beyond this methodological point, there are other aspects which BT believes are inappropriately assessed in the Consultation and which lead to a faulty assessment of the geographic market set out below.

⁵³ The text which follows maintains Ofcom's distinction without prejudice to this position.

The linkage between retail and wholesale markets

16. BT places much more weight on the additional competitive impact of bundling from converged services and how this is accentuated by geographic factors in those geographic areas where intrinsically there are much lower costs of supply. Ofcom understates the extent of competition from these factors. To put into perspective, BT forecasts that the proportion of customers taking a triple play package is increasing sharply and will be 30% next year while such customers are also associated with sharply lower churn rates.
17. What this means is that for any given set of market statistics on shares, competitive pressures are increasing not reducing over time. This indicates that if an exchange has been deregulated it should remain so unless Ofcom has demonstrable evidence that consumers are not satisfied with the range and prices of broadband services.

An inappropriate characterisation of retail broadband pricing

18. Ofcom maintains that ISPs offer national pricing. BT's view is that there is essentially little to no genuinely national pricing at the retail level and even BT's own marketing strategies have strongly localised features. The impact of this error is to understate the amount of competition in Markets 2 and 3 and to understate the price constraints BT faces in Market 1. The issue of price controls in Market 1 is dealt with elsewhere in this response.

The role of upstream uniform input tariffs

19. BT notes that Ofcom has developed its thinking regarding geographic markets in particular in the WLA market review in Section 3 (the interpretation of uniform tariffs in the context of regulation). BT provided Ofcom with extensive comments on this matter in the course of the 2007-08 market review in which we expressed some disagreement regarding the reasoning and interpretation of USD obligations.
20. In parallel, BT does not agree with all of Ofcom's reasoning on the WLA market boundary assessments whereby the upstream inputs into WBA services are deemed to originate from a national market. Specifically, BT would not support the argument that there are no geographic cost variations in copper access and Ofcom's assertion that the (Ofcom determined) national prices can simply transposed into the WBA review absent further consideration.
21. Further, BT does not accept that there is any basis for building in to an SMP assessment for the purposes of geographic market boundaries the implications of a uniform tariff imposed for the aim of ensuring universal service. Ofcom [3.215] suggests that 'this (uniform tariffs) has been the standard basis for arguing that communications are national in scope'. It is more accurate to say that it has been the standard basis of Ofcom but that this is not a consensus and different views have been expressed by many parties in both the 2004 and 2008 broadband market reviews.
22. It appears to BT that at least to some degree, Ofcom's analysis is circular. In the WLA market review, Ofcom [3.166, 3.172] suggests that as BT and Virgin Media set national/network wide uniform prices 'voluntarily' at the retail broadband level, then it is possible to

undertake 'backward deduction' to the WLA market and justify the (regulated) national input prices which then feed into WBA services.

23. Ofcom [3.178] further suggests that it is reasonable to take into account the USO as this is not founded on SMP-

3.178 With BT being a designated universal service provider, as noted above it is accordingly required to provide access to basic telephone services upon reasonable request and at uniform prices and at data rates that are sufficient to permit functional internet access. As the Universal Service Obligation ("USO") and the requirement to set geographically uniform prices do not directly affect BT's market power in the relevant market and is not derived from a SMP finding in the relevant market, it is necessary and consistent with the modified Greenfield approach to factor into our market definition the presence and effect of this obligation.

24. BT has concerns with both strands of Ofcom's approach. Firstly, BT currently does not have uniform tariffs for retail broadband as acquisition and retention activity is geographically based and BT markets geographically-based retail services with other brand names. In any case BT has never had dominance in the downstream market and is only one provider amongst many who manifestly do not offer national tariffs and so it is not appropriate to focus on BT alone. Virgin Media is not a national operator and so it is not informative as such to describe their tariffs as national. Secondly, it cannot possibly be correct to deduce that as the universal service obligation is *not* based on SMP, and then it is reasonable to derive a geographic boundary based on the impact of uniform tariffs extending out of the area where there *is* SMP but arising from the universal service itself.
25. The very fact of the imposition of a universal service at uniform tariffs is strong prima facie evidence that conditions of competition are not homogenous and a national uniform tariff would not apply absent the universal obligation⁵⁴. If the absolute price or the price-cost margin (Commission approach) were similar throughout the territory, then there would be no justification for the imposition of universal service in the first place as the free market would have provided the relevant services. If indeed there are areas of the country where the competitive price would be unaffordable (and the service not provided at all) - and this is a justification for universal service -then this is a good basis for arguing that there must be separate embedded economic markets.

The treatment of consolidation in the industry

26. Ofcom's review essentially describes the impact in terms of numbers of POs and their presence rather than that of their behaviour and consequential market dynamics. As discussed above, since the previous review there has been a material rise in the level of competition from consolidation into a smaller number of much stronger equally-placed competitors each with some element of unique strength.

⁵⁴ In BT's view Ofcom makes undue reliance on the historic legacy of BT's national pricing which arises from both explicit and implicit constraints from Oftel and subsequently Ofcom. It is unsurprising that compared with other operators, BT would not be the first to disaggregate tariffs geographically for those services associated as a national brand.

27. The impact of applying Ofcom's methodology in a mechanical way is to wrongly transfer exchanges from competitive to non-competitive areas and count some exchanges as non-competitive when prices are already at the competitive level. In BT's view there is no justification for re-regulating exchanges when either the CP has been acquired by another CP or if the CP chooses to supply its retail services via a wholesaling activity of another CP. In both instances the retail service may remain unchanged and the end-user may even be unaware of the impact of the change at the network level.
28. Ofcom has provided no evidence whatsoever that the consolidation in the industry has resulted in any customer dissatisfaction which justifies additional regulation. Nor can Ofcom point to any evidence that outsourcing has led to worse outcomes for consumers. It cannot be correct for the outcome of a competitive bid or a merger to place restrictions on BT for potentially the consequences of the decisions of third parties when BT's own position in the marketplace is essentially unchanged. As such it is wholly disproportionate to place more controls on BT.

The presence and implications of a vibrant wholesale market

29. This has two important features which Ofcom is failing to recognise. Firstly, consumer choice is extended beyond the pure 'numbers count' approach of POs which Ofcom's methodology would indicate. Secondly, outsourcing will most certainly be from a position of strong countervailing buyer power across most if not all geographic areas of the UK and most definitely in Market 2, contrary to what Ofcom claims.

APPLICATION OF THE METHODOLOGY TO THE GEOGRAPHIC MARKET BOUNDARY

30. Turning to the second main issue which is the application of the methodology, BT considers that a number of factors have been incorrectly applied and each and all lead to understatement of the extent of actual and potential competition.

Understatement of actual competition

31. Ofcom's decision to adopt a high minimum threshold for Virgin Media to be counted as a PO and an alternative threshold would likely better reflect competition. BT has identified a number of anomalies in the treatment of Virgin Media where the impact is to regulate BT which is not justified.
32. Ofcom's decision to exclude an entrant CP (Udata) which on the existing methodology should be included as a PO – is a decision which is both arbitrary and unjustified. By excluding Udata Ofcom merely confirms its own disposition that new competition and additional entry is no longer feasible in spite of evidence to the contrary. BT believes that this is not an appropriate stance for a regulator to take and such decisions also have unpredictable impacts on the market boundary designations.
33. Finally in this category, the impact of consolidation of CPs has not recognised that the migration of end-users is already in train and although for some customers this will take a period of time, it is inevitable a matter of 'when' and not 'if'. The market review should take

this fully into account but does not as there are no forward projections of shares. The impact of additional roll-out would also increase the level of migration.

Understatement of potential competition

34. BT's submission has highlighted material differences in assumptions of current and prospective LLU roll-out.

Faulty assessment of costs of entry

35. In parallel, Ofcom's assessment of the cost-price trade-offs is unduly pessimistic and out of line with other independent estimates (such as by Ovum) which show break-even levels at much lower end-user numbers and correspondingly greater roll-out. BT agrees that it may be valuable to model the costs and benefits of entry but such analysis cannot be used as a basis to determine that any entry which does not conform to modelling assumptions should be deemed 'inefficient' and discounted for purposes of deregulation.

NGA impact ignored

36. In BT's view, Ofcom does not factor in to its assessment the impact of NGA which links Market 2 to Market 3 prices. The commercial success of BT's and other CPs NGA investments is far from certain but in regulatory terms, one outcome will be to act as a common 'pricing constraint' which will have the tendency of binding Market 2 to Market 3. It should also be noted that NGA roll-out does not necessarily act to hinder LLU rollout and the net effect could go in either direction.

Overall impact

37. It is difficult for BT to quantify the impact of the factors set out above (migration, additional LLU/Virgin Media roll-out, treatment of Updata, NGA) - as they require information typically only at Ofcom's disposal. It is not in doubt however that their impact is cumulative/multiplicative; some might be regarded as comparatively modest but in BT's view collectively they are material and would lead to some different conclusions on market power and remedy assessments.

THE PRODUCT MARKET BOUNDARY

38. BT agrees with Ofcom that at the current point in time it is reasonable to regard copper based services and fibre based services as likely substitutes in the downstream retail market. BT believes that Ofcom's pricing of copper based access services and the competitive broadband services which are derived on these inputs are likely to act as an indirect constraint on all fibre-based services.
39. BT notes Ofcom's views regarding symmetric and asymmetric services and the distinction between business and residential services. BT suggests that it is appropriate to keep these matters under review.
40. As noted above, BT does not consider that Ofcom has given requisite attention to the impact of bundling at the retail level and Ofcom has not undertaken any economic assessment as to

whether or not the broadband component of the bundle should be treated as a separate market or not. Rather, Ofcom [3.160-3.167] states an opinion which is not supported by evidence.

41. BT's view is that bundling is adding additional competitive pressures irrespective as to whether or not a view is taken of a separate economic market. In practice, this means that certain POs are able to exert additional competitive pressure in particular from Sky, CPH and Virgin Media.
42. BT notes Ofcom's views regarding the impact of wireless broadband solutions. BT believes that it is not possible to forecast with any precision in this matter. Some relevant background facts are as follows:
- Fixed Voice calls are declining at c.7% year on year, with mobile calls are forecast to exceed fixed calls in 2010, suggesting that empirically, c. 50% of voice calls have been substituted by mobile calls.
 - Mobile broadband are forecast to grow to 12.5m users by 2012 compared to 20.1m fixed broadband users, with up to c. 25% of mobile broadband using mobile broadband as a fixed broadband replacement i.e. a substitute. Mobile broadband should clearly be taken into consideration in any broadband market review even to acknowledge its presence as a potential substitute.
 - Mobile connections have grown to 76.8m by the end of 2008 vs. 33.2m for fixed, with O2 now having the largest market share by connections (19.5%) vs. 18.7% for BT. In addition, the number of mobile-only houses has almost doubled from 6% in 2003 to c.12% in 2009, against a European average of 24%, which highlights the potential for mobile substitution for fixed lines.
43. Well within the technical lifetime of fixed networks, wireless networks could well substitute at least in part for fixed networks and BT believes that this is a material issue where remedies of cost orientation and price control are being envisaged.

THE MARKET POWER ASSESSMENTS

Market 3

44. BT agrees that competition is very strong and effective and the impact of competition is clearly spilling out.
45. BT believes that there is no justification for moving exchanges based on PO projections back from Market 3 to Market 2. Ofcom [Footnote 68] acknowledges that there have not been any complaints related to competition. There is no basis that these exchanges should now be regulated as there is no evidence of market failure or consumer harm with the current arrangements. For Ofcom to decide now to regulate means that POs will be incentivised to under-forecast their roll-out plans (as indeed has probably happened already).

Market 2

46. BT considers that Ofcom has seriously understated the extent of current and likely future competition in Market 2 exchanges and Annex 2 provides the detail to our position. A very brief summary of some of the points made follows.
47. *Ofcom's forecast roll-out is unduly pessimistic.* Firstly, and as background, BT cannot see any acknowledgement by Ofcom that roll-out has been greater than forecast in Market 2. BT estimates that comparing Ofcom forecast to February 2009 with outturn at June 2009, of the order of 80 exchanges would have 'moved' from Market 1 to Market 2 and over 120 exchanges from Market 2 to Market 3. BT suggests that Ofcom should have taken these disparities into account in formulating its policy for this market review. LLUOs have a natural incentive to underplay their stated plans to Ofcom and BT is very concerned that share-price sensitive public statements by some of the LLUOs do not align with what Ofcom has assumed. The likely growth of Virgin Media is itself a material issue which merits detailed consideration.
48. *BT's competitors are of considerable size and strength.* BT can see no discussion whatsoever by Ofcom of the size and capability of the key POs for example of CPW, Virgin Media and Sky which would normally feature in any assessment of market power. Ofcom [4.19] suggests that these criteria 'have also been taken into account' but BT can find no evidence to show whether and how this has happened.
49. *Shares, pricing and profitability.* Ofcom is over reliant on crude share analysis ignoring the relevance of other factors cited above. BT does not accept Ofcom's assertions on its own ROCE and pricing constraints. To the extent that there are any pricing 'constraints', then in Market 2 these act not against some notional set of average tariffs which Ofcom has set for WLA services but rather for WBA services in Market 3 by the POs.
50. *Barriers to entry.* BT is of the firm view that potential entry is very much easier than Ofcom suggests and Ofcom has seriously over-estimated the break-even point of entry to the extent that its presentation is positively misleading. BT also believes that whilst the economic profile for LLUO roll out as presented in Annex 2 of the Consultation gives the impression that the economics start to decline significantly as volumes at an exchange fall below 1000 which equates (exchanges ranked in size) to exchange 1200 (or thereabouts) for an operator with 20% market share. However, as described above, if the breakeven volumes are nearer 300, then the incentives are in place to roll out to almost 2500 exchanges. Finally, on this matter, Ofcom only really considers the impact on costs for given prices (revenue). If BT has brand benefits from universal service it seems likely that the LLUOs will acquire equivalent benefits from extending their networks and this is not taken into account at all by Ofcom.
51. *Countervailing buyer power and consolidation.* Ofcom [4.78] acknowledges the possibility of a wholesale market. In BT's experience, there is a vibrant and highly active wholesale market which is much more extensive than Ofcom attributes. In turn, this is exercised under very

strong countervailing buyer power from ISPs and some POs who choose to outsource some of their network operations. Ofcom [4.79] is fundamentally incorrect in this matter.

52. In summary, BT rejects Ofcom's analysis of SMP in Market 2 which is based on a flawed and crude evaluation of market shares when in reality prices and profitability need to be viewed dynamically and in the context of Market 3 exchanges.

Market 1

53. Market shares, pricing and profitability. BT totally rejects Ofcom's assertion [4.32] that it 'has been able to earn a rate of return significantly in excess of the cost of capital in this market'. Ofcom has presented no analysis at all of how it has derived a cost of capital for this market and BT would very strongly dispute any suggestion that it would be close to a regulated 'Rest of BT' calculation which Ofcom estimated in the Openreach Financial Framework Review.
54. There is no substantive assessment in the Consultation of what the competitive level of costs and prices should be in Market 1. Ofcom's analysis of costs merely takes as assumption the WLA inputs should be taken as the national average which, even if appropriate to deliver universal service obligations, are not at all self evidently appropriate here. As noted above, BT does not accept that Ofcom can use universal service averaging obligations as evidence to attribute average costs in Market 1.
55. That being the case, there is no evidence that BT can price above the competitive level in Market 1 in any case and the profitability figures from the regulatory financial statements provide no evidence whatsoever of 'SMP in at least some of the geographic WBA markets' [4.35]. Ofcom's equivocal conclusion [4.40] suggesting that historic returns may not have been excessive but that - 'Absent regulation there is a real risk that prices could be maintained significantly above the level that might be expected in a competitive market' – is wholly without any empirical foundation.
56. Ofcom's economic assessment of relevant markets [Annex 9] is for the product as a whole and does not provide any insight to relevant prices and profit consequences for the competitive prices in Market 1 even if BT is attributed 98.5% market share of that 'market'. In fact, the Ofcom assessments of critical sales loss only provide very limited support for arguing that broadband services are a distinct market at the national level.
57. Barriers to entry. BT suggests that the evidence on minimum scale discussed above are relevant here too and while there may be some exchanges which will not support competitive entry, this is not self-evidently the case for all exchanges in Market 1. On the contrary, price-capping wholesale services in Market 1 will likely disincentivise additional entry by LLUOs.

58. In summary, BT notes that Ofcom has provided no evidence of customer dissatisfaction with broadband services in Market 1 arising from absence of choice of infrastructure provider and indeed it is evident that Ofcom's own surveys show higher penetration in Market 1 than in many other areas of the country. There is no evidence that BT has made excessive profits or that additional regulation will bring benefits to consumers. Rather Ofcom should consider the impact of consumer harm from regulating when it does not need to do so.

ANNEX 2

BT's ECONOMIC ANALYSIS OF BROADBAND COMPETITION AND MARKET BOUNDARIES

I. INDEPENDENT REPORTS AND BT's ASSESSMENT

To provide a robust and objective assessment of the growth of broadband competition, BT commissioned an independent expert to undertake econometric modelling of broadband customers and their suppliers. The Report by Professor John Nankervis is enclosed with BT's submission.

In parallel, BT commissioned SPC Network to review Ofcom's proposals and the economic evidence for the proposed geographic market boundaries and this Report is also enclosed with BT's submission.

In this Annex BT presents some of the findings of these Reports and then provides a detailed breakdown of the current and likely prospective state of competition supporting our position on setting the competitive boundary based on two POs rather than three.

II. ECONOMETRIC MODELLING BY PROFESSOR NANKERVIS

Professor Nankervis originally undertook modelling analysis on behalf of BT in response to the 2004 broadband market review. This work considerably extends that analysis by drawing on the rich data source of all of BT's individual exchanges and the effects of LLU entry on BT and other CPs taking account of the UK experience over the past four years. This work represents a significant advance on what was undertaken some six years ago which was purely at the national aggregate or market level and on a limited time series.

The objectives of this analysis were the following:

- To evaluate the strength of competition amongst the POs and in particular the largest 4 retail players⁵⁵.
- To see how the addition of more POs in an exchange affect the competitive dynamics of competition in that exchange area.
- To determine the possible speed of response to LLU entry on BT's market position at the wholesale and retail levels.

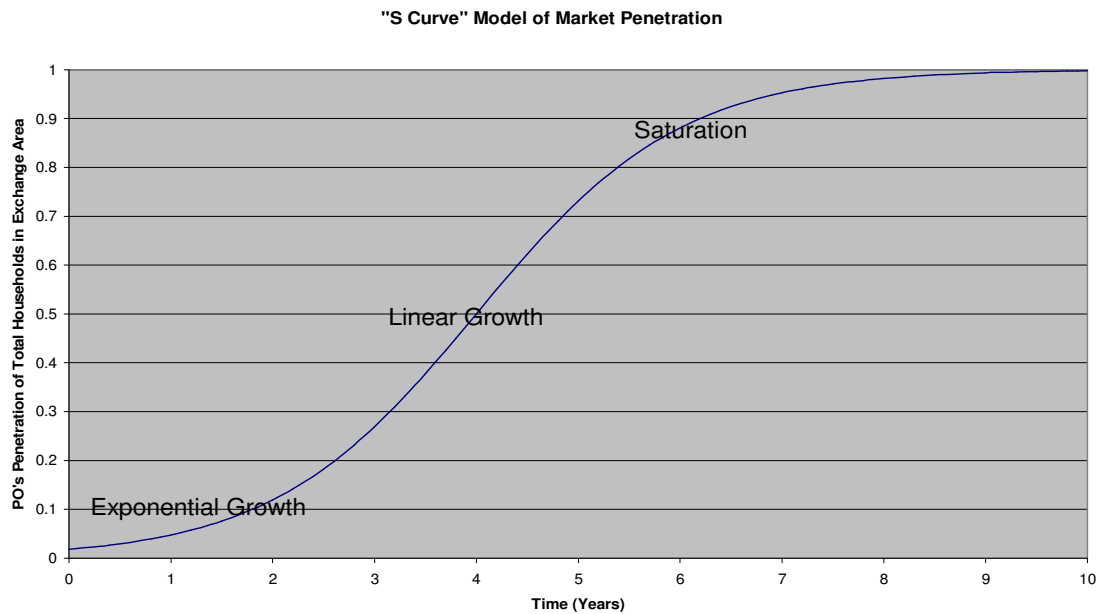
The underlying mathematical formulation of the modelling is a 'diffusion' equation which allows for each PO to acquire end-users on the basis of a typical 'S-shaped' market penetration as shown below in Figure 1⁵⁶.

⁵⁵ The top 4 POs of BT, Virgin Media, Sky and CPW are described as 'Tier A' and the other POs of C&W, Orange, O2 and Updata are Tier B. Updata and Orange are excluded from the analysis in this section.

⁵⁶ The mathematical model is that of a bass-diffusion formulation which allows for diffusion growth effects.

Figure 1

Underlying Model of Broadband Penetration for a PO

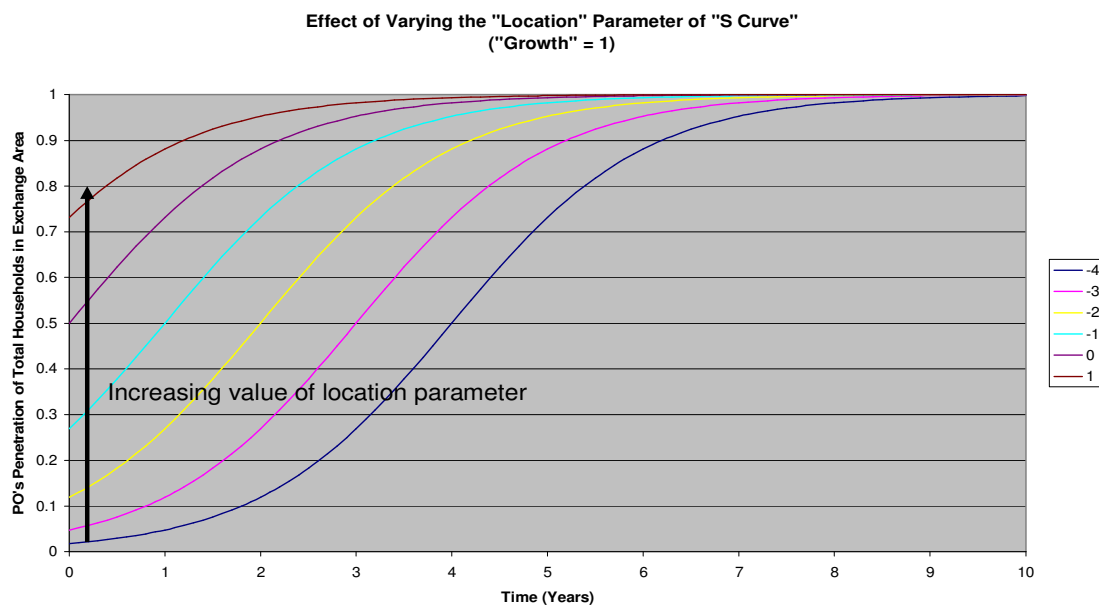


The model gives two key parameters for each LLU based PO and one parameter in the case of Virgin Media. These parameters are estimated with statistical techniques and the estimates are then translated into equivalent estimates of the impact of competitors on underlying penetration and volume growth per annum.

The first parameter is described as a 'level' or 'location' parameter which determines the market share of the LLU based PO at the beginning of the period. The effect of different values of the 'location' parameter is illustrated below in Figure 2.

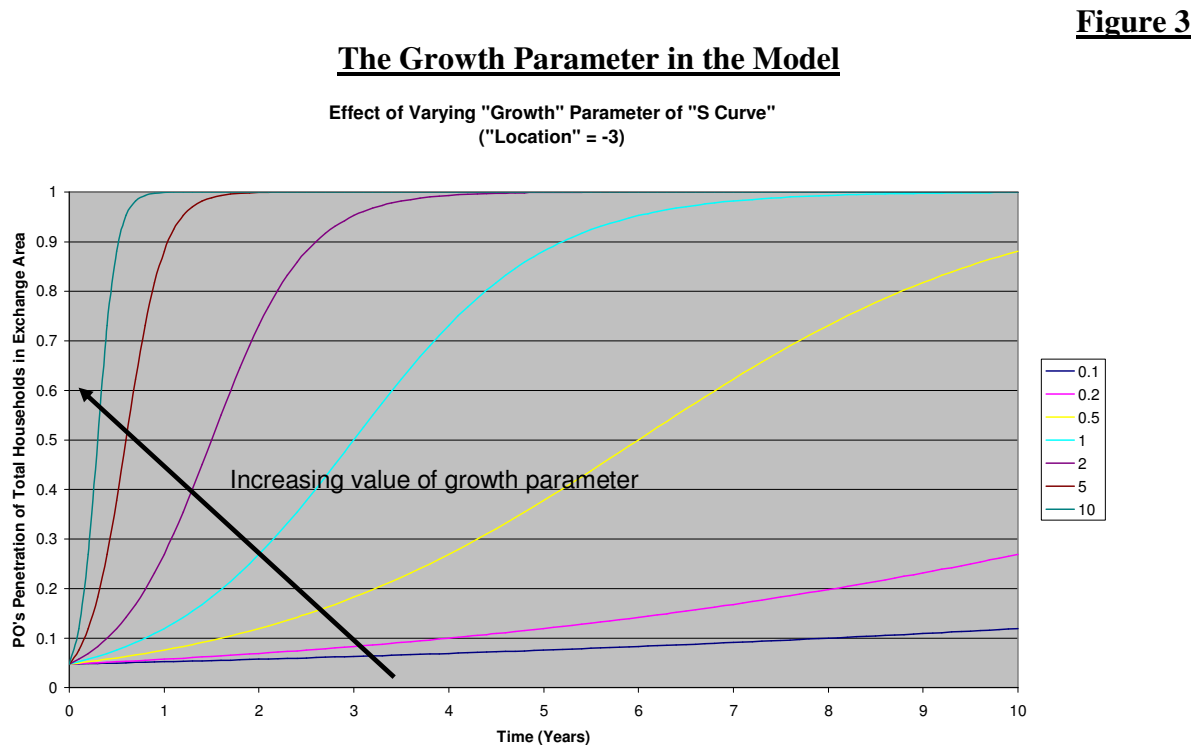
Figure 2

The Location Parameter in the Model



This parameter essentially represents a ‘time-offset’ showing how much any particular factor such as the socio-economic composition of the exchange end-users affects the starting point of growth. A factor such as socio-economic status could help or hinder growth.

The second parameter is the ‘growth’ variable itself and this determines the time scale over which growth takes place and the speed of reaching the saturation level of maximum penetration. This is illustrated in Figure 3 below.



The modelling permits each PO to acquire a different trajectory of customers relative to the total households in the exchange; note that it assesses penetration and not market share as such but all POs are treated equally in this way. The ‘location’ and ‘growth’ parameters are modified in a positive or negative way according to the underlying strength of the PO and the impact of competitors and other factors including socio-economic status of the exchange.

The modelling of data allows for different scenarios such as for:

- For the (retail/wholesale) shares of the different LLU based POs.
- For different (Ofcom defined) geographic Markets.
- For different combinations of competitor presence in an exchange.

The focus of the modelling is the penetration and trend in penetration of broadband end-users for the LLU based POs (a) at the pure retail level and for BT and CPW (b) it may include both retail and wholesale customers.

BT does not have access to the precise distribution of the customers of Virgin Media and has apportioned these for all time periods on the basis of publically available information of the footprint of Virgin Media and the households which are not served by BT for Q2 of 2009⁵⁷.

⁵⁷ A flat take-up rate of broadband has been assumed across Virgin Media customer base based on the variation in the proportion of “mobile only” homes, published by Ofcom.

The impact of changes in Virgin Media customers over time are therefore not captured in this analysis but this is not considered to have a material impact on the broad conclusions being drawn regarding the impact of additional POs in an exchange which is taken into account in the modelling. The Virgin Media footprint has not altered materially in the time period of the modelling.

Given the complexity and multiplicity of retail tariffs and bundling, the modelling does not purport to demonstrate the exact economic relationship between the POs such as price elasticities the results are nevertheless directly relevant to the extent and nature of competition between the POs showing the net impact on their relative growth⁵⁸.

While the main data sets run from July 2006 to March 2010, the way in which the data was recorded changed just prior to October 2008 and so these periods are modelled separately and together. The variation in data recording has in any case been adjusted using a reliable technique.

Using the data sets which are definitely fully internally consistent for the period of October 2008 to March 2010, the key equations include the following:

- (i) Analysis of the impact on the growth rates of BTW and BT Retail throughout the UK according to the presence of an increasing number of LLU based POs from zero (Market 1) up to 6 POs (in Market 3).
- (ii) Analysis of the impact on the growth rates BT Retail throughout the UK according to the presence of an increasing number of LLU based POs from zero (Market 1) up to 6 POs (in Market 3) but restricted to those exchanges where Virgin Media has some presence.

[Remainder of this section redacted ✂]

⁵⁸ The precise interpretation of the results requires some interpretation for the position of each PO in the marketplace (position in and shape of its 'S' curve) which varies for each PO.

III. ECONOMIC ASSESSMENT OF OFCOM'S PROPOSALS BY SPC NETWORK

The Report by SPC draws on general economic principles of the assessment of market power and on specific characteristics of broadband competition.

The Conclusions of SPC are reproduced below:

Figure 6

Conclusions of SPC Network Report

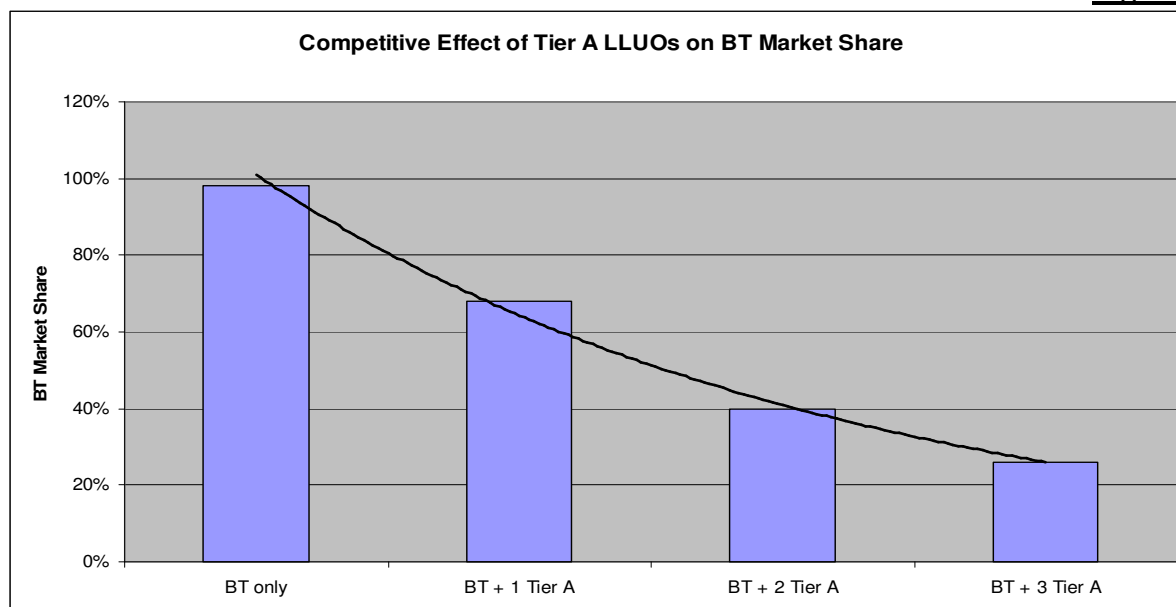
65. Our brief analysis above indicates that competition in the WBA market continues to intensify in both breadth and depth. At the retail level, there has been some consolidation, but there are now four fairly equal competitors²¹. These four firms are all large and operate in several parts of the market and offer consumers a range of related products. BT's analysis of HHI by postal delivery point suggests that competition is becoming both more pervasive through the population and deeper. Principal Operators, other than BT, have extended their network reach since the Statement and they price their retail offering according to whether they have unbundled an exchange or not. This disaggregated pricing places a constraint on all other firms' prices which is set by pricing in the competitive Market 3. Taking the CPW and Virgin Media statements about future build at face value, we would expect the LLU and cable footprint to expand yet further.
66. Economic literature shows that in many markets the presence of three competing firms is enough to reduce profits to the competitive level. Our analysis shows that where there are three firms in an exchange area, BT's market share is, on average, less than the 40% threshold at which SMP may be presumed. Pricing and consumer switching behaviour also indicate that a three supplier market is as competitive as a four or more supplier market.
67. In our view, therefore, a more realistic dividing line between geographic markets in the UK, outside the Hull area, would be the presence of BT only or BT plus one of the "Tier A" companies and BT plus two or more Tier A operators. The potential for entry into the first market by LLU operators and Virgin Media may result in some of these exchange areas migrating to the second market.
68. We are also concerned that the current and proposed geographic market definitions may lead to unintended consequences, with exchange areas moving from the proposed Market 3 to Market 2 and thus regulation being imposed where once it was not, as a result of merger and acquisition activity. The proper way for any remedies to be applied would be by using the principles of a merger review to determine whether there was likely to be a substantial lessening of competition rather than through an ex ante market review.

BT agrees with the findings of SPC regarding the state of competition and makes the following observations but which represent BT's own view:

- Individually and certainly collectively, the POs in competition with BT are growing in size and ability to compete both at the wholesale level through their own networks (LLU and cable) and at the retail level.
- Consolidation has augmented competition and not reduced it. It would be perverse for regulation on BT to increase as a consequence of a mechanistic approach to market boundary determination as opposed to an analysis which showed that there was genuinely a substantial lessening of competition from consolidation.
- Many exchanges in Market 2 display features of competitive strength akin to those in Market 3 suggesting that this Market is currently not composed of exchanges which are homogenous in terms of competitive conditions.
- The spill-over effects of on-net pricing link much of Market 2 with Market 3 such that retail pricing in the former is constrained by the level of prices in the latter.
- The empirical evidence is that the bulk of the benefits of additional competition arise when three players are present.
- POs and the large ones in particular are well able to expand into Market 2 and parts of Market 1 and these barriers to entry are sufficiently low to present a (current) competitive constraint on BT.

While in no way as rigorous as the econometric modelling prepared by Professor Nankervis, the simple chart presented by SPC based on March 2010 data shows the impact of adding more large POs on BT's wholesale market share as in Figure 7 (figures are shown post-migration).

It is self evident and in line with all the corroborative evidence presented above, that BT is strongly constrained wherever Tier A POs are present and where there are two Tier A POs, BT is at the 40% threshold of dominance which would in fact be somewhere between one and two Tier A POs taking a forward look and from an assessment of other factors such as entry barriers.

Figure 7

The SPC Report notes that both economic theory and empirical evidence provide support for the effective competition to be perfectly feasible with less than 4 players in a market (Ofcom's definition) and that this is accepted in other sectors of the economy.

BT's sets out its economic reasoning for why Ofcom's analysis is untenable drawing on these independent Reports and our own analysis in addition.

IV. BT'S OWN ASSESSMENT OF COMPETITION AND BOUNDARIES

(i) Issues of principle

Annex 1 provides some detailed technical observations on Ofcom's economic analysis underpinning the market boundary and market power approach.

The first issue which is highlighted is that given that the market boundary and market power exercises are not distinct at the geographic level, it is not appropriate to undertake the geographic dimension by focussing on the number of POs alone and then to assess market power essentially just by reference to market shares.

BT therefore does not accept the validity of Ofcom's market power assessment. Quite apart from the limitations of shares as an indicator of market power, in this instance there is an inherent trade-off between the filtering device of the number of POs and the consequential share of broadband end-users acquired by BT. Additional factors which customarily play a key role in a market power assessment such as competitor strength or other sources of competitive advantage are assumed to have no real role to play in this exercise when in reality they are very important.

The second issue concerns the strength of indirect pricing constraints on BT from the evolving nature of retail competition amongst the POs. This is much more geographically focussed than Ofcom supposes and the net impact is to bind geographic Markets 2 and 3 together⁵⁹.

⁵⁹ In this context Ofcom mischaracterises BT's own retail pricing as national which is very far from the case; a critical part of BT's retail broadband portfolio is in fact priced against LLU operators and their on-net charges.

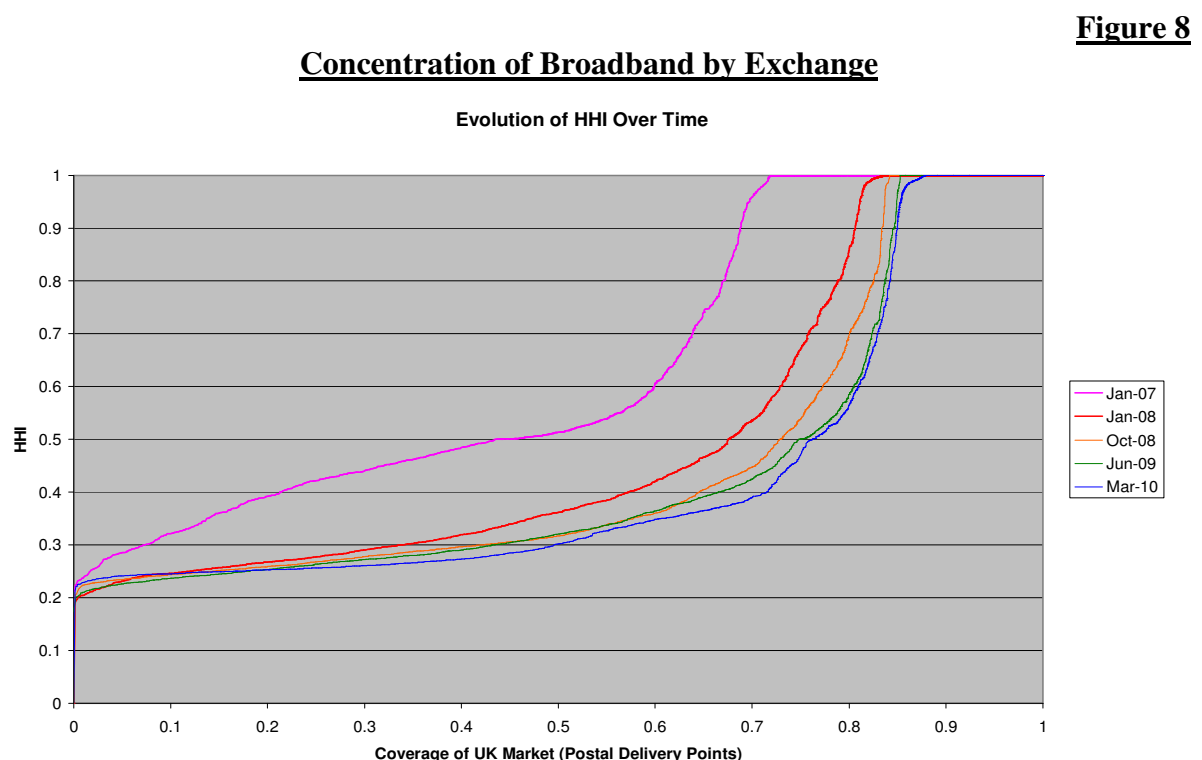
The implications of Ofcom’s methodology are twofold. Firstly the geographic boundaries are not correct and secondly, rather than relaxing regulation, Ofcom actually proposes significant tightening of regulation. The latter follows from the former which in turn in BT’s view arises from a fundamentally incorrect economic assessment of the state of competition.

The following text sets out BT’s position in the following order: (a) an overview of the historic development of competition; (b) some observations on barriers to entry including LLU roll-out and consolidation; (c) an assessment of the classification of exchanges with homogenous competition; and (d) conclusions on geographic boundaries.

(ii) The broad trends of competition

There is a general consensus that over the past 4 years, competition has intensified. The issues at dispute concern: (a) the impact of consolidation and (b) the interpretation of Market 2 exchanges.

The SPC Report included some work undertaken by BT on the trends in concentration using the Herfindahl index (HHI) by exchange including the example shown in Figure 8. This shows the cumulative distribution of delivery points according to the HHI of the exchange starting from the most competitive on the left to where BT has a *de facto* monopoly on the right in the Market 1 exchanges⁶⁰. ✂



The mean and standard deviations are provided in Table 3 below.

⁶⁰ Which does not imply that BT has market power in Market 1 and able to raise prices above the competitive level.

Table 3**Concentration Indices**

	Market 1		Market 2		Market 3	
	Mean HHI	Standard Error	Mean HHI	Standard Error	Mean HHI	Standard Error
Jan 2007	0.99	0.06	0.82	0.22	0.55	0.22
Jan 2008	0.99	0.06	0.70	0.20	0.35	0.13
Oct 2008	0.99	0.05	0.63	0.17	0.32	0.07
June 2009	0.99	0.06	0.55	0.15	0.30	0.07
March 2010	0.99	0.06	0.53	0.14	0.30	0.06

Source: BT. HHI shown post merger/outsourcing but prior to migration of AOL/Tiscali

The trends in means and standard deviations are clear; Market 1 remains highly concentrated (BT has less than 100% share because of some presence of Virgin Media); Market 2 is declining in concentration but with a dispersion much higher than the other Markets; Market 3 shows decline having stabilised to a low value of the HHI and with a standard error also as low as in Market 1⁶¹.

The extent of competition particularly in Market 3 and amongst the Tier A POs can be judged from comparing the actual HHI values with the minimum lower bounds which they could achieve as shown in Table 4⁶²:

Table 4**HHI By Tier A Operators***

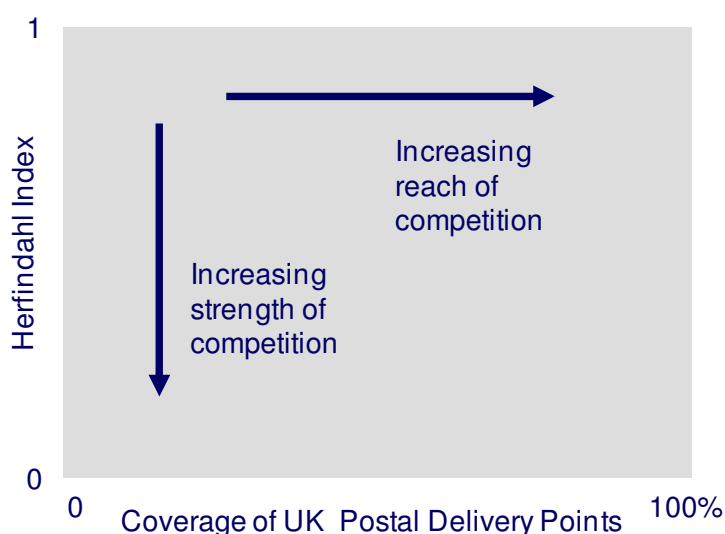
No. Tier A POs	Actual HHI	Minimum Possible HHI
2	0.68	0.50
3	0.39	0.33
4	0.29	0.25

*. Exchanges where only Tier A POs present as at March 2010.

Where BT fundamentally disagrees with Ofcom's analysis is the assessment of competition in Market 2. To illustrate the sources of differences, it is helpful to refer once more to the HHI charts noting that they can be interpreted both horizontally and vertically:

⁶¹ Note that the HHI values for March 2010 would be lower in both Markets 2 and 3 by 0.015 if Orange was included as a PO.

⁶² This is equal to $1/n$ where n is the number of POs. So for BT plus 3 POs, the HHI cannot be smaller than 0.25 or 25%.

Figure 9**Interpretation of the HHI Charts*****Explanatory HHI Chart***

At a given number of households/delivery points, the (vertical) fall in the HHI reflects lower concentration. For a given HHI value, the higher the (horizontal) cumulative distribution of households/delivery points shows how widely that given level of competition has reached.

Figure 8 above shows that while the principal shift in the curves occurred in 2007-2008, they continue to move ‘horizontally’ and flatten out into something akin to an ‘L’ shape with a much more gentle incline up to about 70% of delivery points after which the curve is sharper vertically. The point of inflection is clearly increasing over time and over the period as a whole, been roughly in the range of 50% in early 2007 up to roughly 75% in 2010.

In fact, the proportion of the population (delivery points) in this intermediate zone between the ‘flat’ areas of Market 3 exchanges and the ‘cliff edge’ of Market 1 exchanges – has been steadily declining over time as shown in the Table below:

Table 5

	Proportion of Market Between HHI Values				
	Jan-07	Jan-08	Oct-08	Jun-09	Mar-10
HHI Between 0.4 and 0.95	48%	24%	19%	18%	14%
HHI Between 0.5 and 0.95	26%	14%	11%	10%	9%
HHI Between 0.6 and 0.95	10%	8%	6%	4%	4%

It was recognised in the previous market review that by setting Market 2 as an intermediate zone between Markets 1 and 3 these exchanges could develop faster or slower towards effective competition and that this would be a purely empirical issue.

BT maintains that the high level evidence from the HHIs is strongly supportive of Market 2 exchanges becoming more similar to Market 3 to a degree which is not recognised by Ofcom. Figure 10 shows the movement of the HHI for Market 2 exchanges alone over this period and Figure 11 for just March 2010.

Figure 10

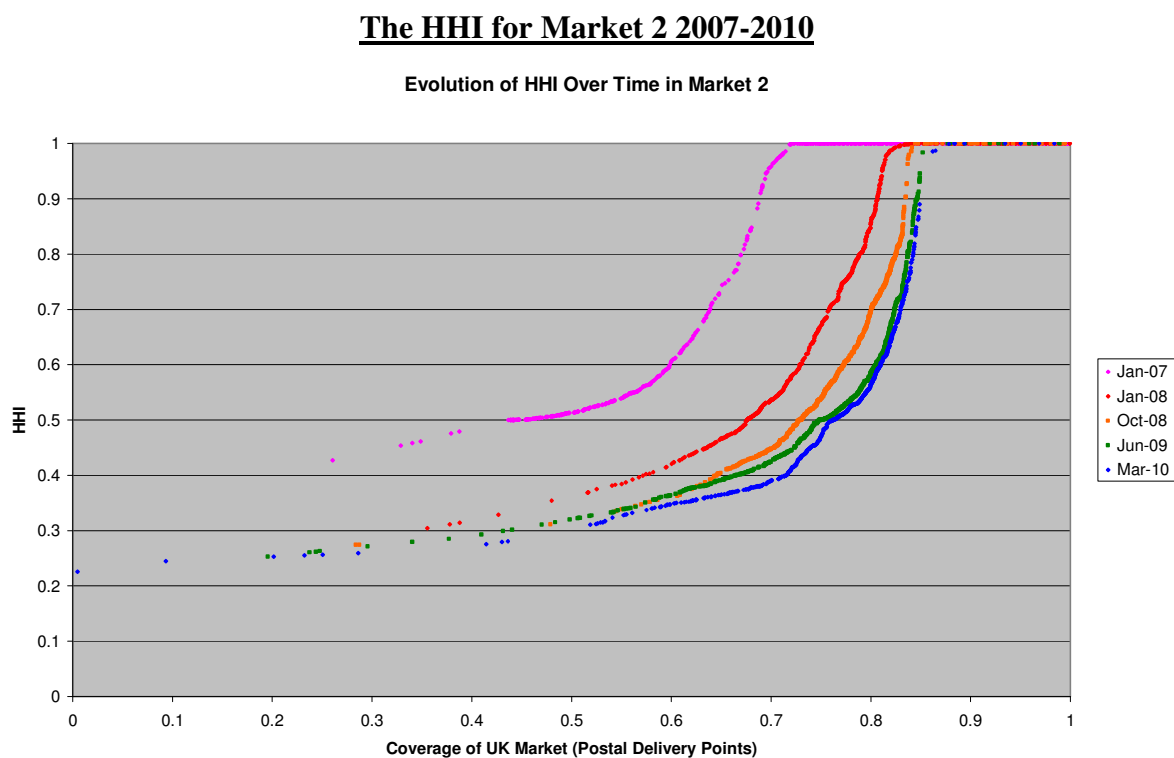


Figure 11

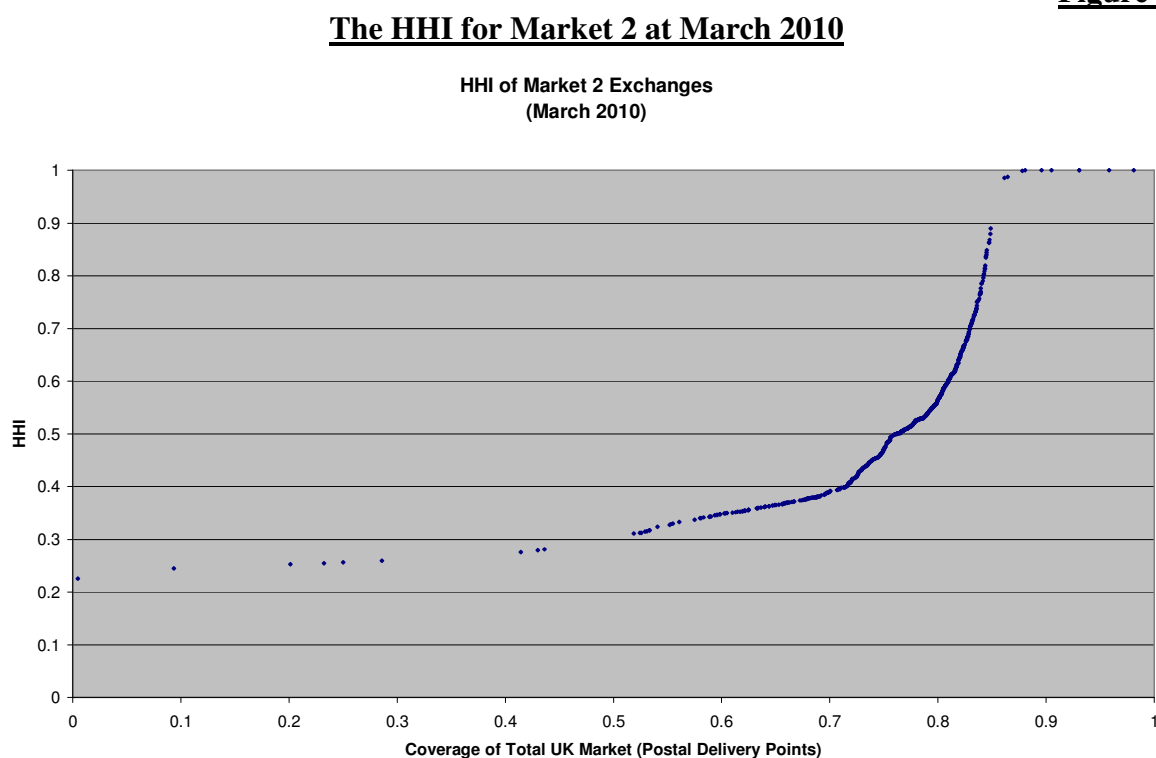


Figure 10 shows that Market 2 has evolved according to the generic description of 'downward/rightward movements' and these shifts have been significant in size. The modest upward 'hump' where the blue curve moves up to the green curve in the range of 0.7-0.8 cumulative coverage and 0.4-0.5 HHI - arises from BT providing services to Orange

customers. Otherwise, the HHI curve would be smoother in this region and the HHI lower in value with a bigger gap between the blue and green curves.

The current situation with Market 2 is that there is a group of exchanges which are equivalent to those in Market 3 with HHI essentially which are in the flat area of value up to about 0.4. There is a second group (which is the majority) which are at the point of inflection in the region of 0.4-0.6 HHI and there is a rump which is on the 'cliff face' moving upward.

In principle, the lower bound to the HHI here is 0.33 (maximum three operators present) so many exchanges are close to this level indicating that competition is not concentrated.

With respect to the exchanges on the 'cliff face' where the HHI is above 0.6, the conditions of competition may not be fully developed but for the many reasons elaborated on below, it is not self-evident that BT has market power in the provision of wholesale services.

A final observation is that it is evident that conditions of competition are not homogenous across these exchanges taking Market 2 a whole.

(v) Barriers to (additional) entry and consolidation

In the last market review Ofcom's overall forward look and projection of markets shares was reasonably accurate at the national level. However, according to BT's calculations, Ofcom materially under forecast competitive LLU entry in Market 2 such that many exchanges shifted from Market 2 to Market 3 (BT estimates well over 100 exchanges) and BT's share in Market 2 was significantly lower than predicted. This is shown in the Table below.

Table 6

BT Estimates of Market 2 Shares* ✂

BT is concerned that Ofcom appears to be using a model of LLU entry which is seriously out of line with benchmarks used by industry

As noted above, Ofcom materially under forecast entry into Market 2 in the last market review and that this consultation has used LLU numbers which BT believes to be less than the already committed LLU base.

BT's own assessment of LLU is that there is ample opportunity for additional entry into Market 2 exchanges and certainly those where only 1 PO is currently present⁶³. For many

⁶³ BT has provided Ofcom with the detailed assumptions conclusions of this analysis which are in line with industry standards.

exchanges there are sufficient households and current broadband users to accommodate further entry.

Further, there is now on public record clear evidence that Virgin Media intends to expand its network⁶⁴. Virgin Media has stated that it anticipates up to 500 thousand new connections and the costs of expansion are not great (£200 per home passed and £500 per home connected) with a comparatively short payback. These figures are in alignment with BT's assumptions on the profitability of Virgin Media to expand its network and that Virgin Media represents a much greater competitive constraint than Ofcom has assumed.

Figure 12 below shows that LLU continues apace and is growing. The chart also shows rapidly growing and significant presence of Updata which Ofcom is incorrectly excluding altogether as a 'niche' operator yet with a combined business and residential customer market. This does not appear to be consistent.

Figure 12 ✕

The current consultation in any case appears to BT to be founded on an understated LLU base of committed volumes and combined with pessimistic assumptions about entry – both these factors have affected Ofcom's assessment of potential competition in Market 2.

Furthermore, BT is also concerned that Ofcom seems to consider that any entry beyond that which their own model predicts is 'optimal' must by definition be 'inefficient' and actively discouraged by placing downward pressure on prices through regulating BT. BT supports the view provided by SPC namely that it is not for a regulator to deem investment efficient or inefficient in this manner.

Regarding consolidation, BT also supports the view expressed by SPC that the consolidation which has been observed to date has not in any way implied any lessening of competition but rather been a spur for intensification of competition. BT considers that Ofcom should not regulate any exchanges due to the consolidation in the previous two years and in the absence

⁶⁴ <http://www.digitalspy.co.uk/digitaltv/news/a155648/virgin-to-reach-50000-more-homes.html>

of evidence to the contrary indicating consumer harm, has a duty not to regulate such exchanges.

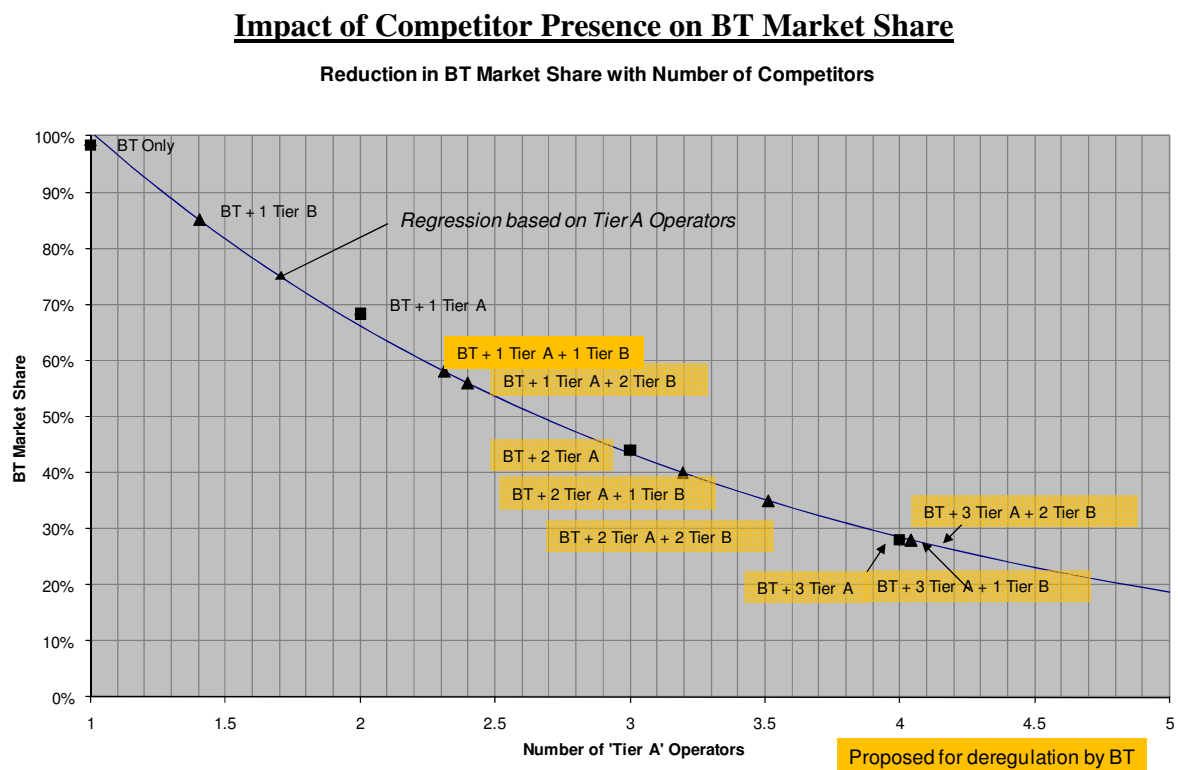
(vi) BT's assessment of conditions of homogenous competition

To undertake this BT draws on the work of Professor Nankervis and SPC with additional more granular analysis of exchanges classified by the presence of Tier A and Tier B POs. Initially BT considers the relationship of shares to PO presence as a key indicator used by Ofcom; the other factors which are used in the market power assessment including barriers to entry and competitor strength are also very relevant as set out in the SPC Report and as discussed as a matter of principle in Annex 1.

The SPC Report included a simple graphic showing how the presence of the Tier A POs have the major limiting impact on BT's share; once two Tier A POs are present BT's share falls to 40%. Taking other factors into account such as cross-Market price constraints and before taking a forward look about future entry, in BT's view the presumption of no dominance is somewhere between one and two Tier A POs just based on current evidence. This broad finding is also confirmed by the econometric modelling work which shows that any two operators present effectively nullify all of the growth of BTW.

Figure 13 below elaborates on this analysis by showing the impact of adding one or two Tier B POs to where one, two or three Tier A POs are present in addition to BT. This is done by superimposing the March 2010 share values (post migration of AOL and Tiscali to CPW) onto the line of best fit based calibrated just on the Tier A operators⁶⁵.

Figure 13



For example, BT + 1 Tier B is associated with a BT share of 85% and this is associated with

⁶⁵ The exact equation is $y = 1.5366 * \exp(-0.4210 * n)$. It should be noted that these figures are all pre-migration and are therefore fully robust and are a matter of fact.

a value on the 'X' axis of 1.4 – it is thus 40% of the value of moving between 1 and 2 Tier A POs. Similarly, moving between 2 and 3 Tier A POs, the values for BT +1 to B +2 when a Tier BT is added is about 2.3 to 2.4, so the 40% impact is also found. When 2 Tier B POs are added, the value only rises to 2.5 showing a small increment. Between 3 and 4 Tier A POs in total, the Tier B POs again add similar competitive impacts but when 4 Tier A POs are present, the Tier B POs virtually nothing.

What the chart shows is that not only do the Tier B POs exhibit less impact than Tier A POs (which of course is by definition likely to be the case) but more importantly, their marginal impact declines the more Tier A POs are present. However, as the curve is downward sloping, it also means that the Tier B PO will have a greater *absolute* impact on BT's share the fewer the total number of POs are present in the exchange.

With this analysis as background, BT suggests that a suitable reference point for a more granular assessment of competitive conditions in 2010 is provided in Table 7.

Table 7 ✂

✂

The principal messages which come out of this Table are the following.

First, for all combinations in the Market 3 categories, the HHI values are low and in fact fairly close to their lower bounds. BT's market share is way below any standard of presumption of dominance. ✂ This finding of effective competition is common ground between BT and Ofcom.

Second, for Market 1, the HHI and BT shares are self-defining giving a presumption of market power all assuming that there is willingness of end-users to pay above prices at the competitive level. Again this finding of monopoly provision is common ground between BT and Ofcom but there is disagreement as to whether or not it confers market power⁶⁶.

Third, within Market 2, there is a very strong basis for arguing that the combination of BT plus two of the Tier A POs has features which indicate fully effective competition. Not only is BT's market share only a little above the dominance threshold prior to migration transfer, it is even reduced to that 40% threshold post migration⁶⁷. Further, the HHI of this grouping is very close to its lower bound. In fact, the impact of migration of ✂ has a disproportionate effect on all of the key Market 2 categories and especially category 'e' which is of BT plus one Tier A and one Tier B.

Turning to this category, not only is the current BT market share only fractionally above an automatic presumption of dominance (53%) where effective competition would normally be considered exceptional, there are very good grounds beyond static shares for arguing that BT should not be regarded as dominant in these exchanges⁶⁸.

Detailed examination of these ✂ exchanges indicates the following:

- ✂
- ✂

The econometric modelling work and the analysis set out above (Figure 13) shows that a Tier B PO has the greatest impact on BT's share for where a limited number of Tier A POs are present. O2 is an extremely active PO and will be especially important in these exchanges.

The press release reproduced in Figure 14 is taken direct from the O2 website in May 2010 and gives some indication of the competitive offering from O2 based on full LLU⁶⁹. O2 has just launched a new home service which is very competitively priced; in fact the line rental at

⁶⁶ In this context it is relevant to note that Ofcom have not established what the competitive price levels are and impute average input costs from WLA services.

⁶⁷ Case T-30/89 [1991] ECR II-1439, [1992] 4 CMLR 16.

⁶⁸ BT also draws Ofcom's attention to the Commission Decisions: Ciba-Geigy/Sandoz - M.737, 17/7/1996 (pharmaceuticals - 'very high market shares' but not dominance because of many factors e.g. high market share fluctuation, much entry/exit: para.176) and Vesuvius/Wulfrath - M.472, 5/9/1994 (combined share 40-45% - existence of strong competitors and also alternative potential supply from outside EEA: paras 27-29). Also to the following judgments: Case T-282 Sun Chemical and others v Commission (Commission Decision finding non-dominance at 40-50% upheld from credible alternative suppliers, excess capacity: para.135); Case T-290/94, Kayserberg SA v Commission with Commission Decision finding non-dominance at 43.2% upheld (two main competitors with strong market shares: para.181).

⁶⁹ <http://mediacentre.o2.co.uk/Press-Releases/O2-Phones-Home-290.aspx>

£9.50 per month including unlimited evening and weekend calls it is the cheapest offering in the consumer market. To have this price, it is mandatory to be a broadband customer, so this offering clearly positions broadband as a key growth area for O2. The press release also states that the launch of this service will further boost their share of the broadband market.

This new offering is associated with huge advertising to re-position O2 as a 'Tier A' equivalent and Figure 15 reproduces a recent front page advertisement in the London Metro.

There is also evidence that O2 has experienced very strong growth of broadband customers in the recent past and the influence of O2 as a strong 'Market 2' competitor is also confirmed from the econometric analysis^{70,71}.

For the many reasons set out in the SPC Report - the unequivocal results of the econometric modelling and BT's assessment on additional LLU potential - BT maintains that these exchanges should be regarded as fully competitive and justifying complete deregulation. The prices in these exchanges are inextricably linked to those of Market 3 and consumer choice is enhanced by the wholesaling activities of both BT and CPW as discussed in Annex 1 of this submission.

In Annex 1 to this submission BT shows that the precise manner in which exchanges are segmented can lead to different conclusions on market power when market share is the only factor considered. These considerations are especially relevant for these exchanges where BT faces two competitors.

The remaining key category within Market 2 is of BT plus 1 Tier A PO (row 'c'). Of the \mathbb{X} exchanges, \mathbb{X} are represented by \mathbb{X} and \mathbb{X} where \mathbb{X} is the PO. BT's view which is corroborated by the econometric modelling is that competition is still strong in these exchanges and BT does not have a position of SMP for the reasons the other categories in Market 2 are also not associated with market power⁷².

(v) Conclusions on market power and market boundaries

BT and its advisors have undertaken extensive and detailed objective analysis underpinning our proposals. BT considers there are material deficiencies in many areas of Ofcom's analysis including: the treatment of competition at the retail level incorporating services from linked sectors outside broadband; the impact of consolidation which has enhanced competition; the economics of LLU roll-out; and the dynamic and real impact on BT of its competitors which is continuing and powerful even where there are only a few players present; the evidence of new entrants emerging such as Updata; and evidence that smaller but strong existing players such as O2 are putting serious resource into expanding their customer base.

⁷⁰ <http://www.marketingweek.co.uk/news/o2-unveils-%C2%A35m-ad-push-for-home-broadband-and-home-phone/3013554.article>

⁷¹ [O2 UK adds 56,000 subs in Q1, service revenues up 3.1% Telecompaper Europe, Thursday May 13th, 2010.](#)

⁷² To extent that some doubt on these, it would be more logical then to collapse the three Markets into only 2 including BT plus 1 PO with BT alone (original Market 1) based on homogeneity of conditions and the HHI values. It would then be possible to retain existing regulation of Market 1 and avoid need for any price control or cost orientation requirements as BT would face direct competition for at least third of the new customer base along with a requirement for no undue discrimination. This would tend to bind all customers in the (new) Market 1 with those in the most competitive Market 3 area. If however such a combination was not considered appropriate, then it would be necessary to retain the remaining Market 2 exchanges separate.

BT is of the firm view that the empirical evidence for additional deregulation is substantial and well researched. It cannot be correct that increasing competition (in spite of some consolidation) can justify additional regulation compared to the previous market review.

BT is also firmly of the view that the econometric and economic analysis fully supports changing the threshold to BT presence plus 2 additional POs into a unified deregulated market. Because of spillover effects from on-net pricing, there is no justification for any additional remedies required in the remaining exchanges. In the case of Market 1 exchanges, Ofcom has not derived either the competitive level of prices nor provided any evidence that consumers would be willing to pay above that level.

BT sees a strong case for moving to two markets alone. However if a residual intermediate market is retained, this cannot be regulated to stronger levels than at present. Broadband is an uncertain and dynamic sector and the state of competition between fixed and wireless solutions cannot be assured over the technical lifetime of these infrastructures; it is not appropriate to apply traditional cost-orientation regulation or price caps to these services in any part of the UK.

Recent Press Release from O2 and Advertising in London Metro

O2 Phones Home!

05 May 2010 10:17  Services - Consumer

O2 Home Phone service launched to new and existing broadband customers

O2 today launched its new Home Phone service which is now available to all new and existing O2 broadband customers across the UK. O2's Home Phone offers great value for money with packages starting at just £9.50 per month for unlimited evening and weekend calls.

The packages offer customers easy and simple pricing all with the convenience of having both O2 Home Phone and O2 Home Broadband consolidated into one simple bill.

Key benefits of O2 Home Phone include:

- Great value - £9.50 per month for unlimited evening & weekend UK calls or £12.50 per month for unlimited anytime calls to UK homes as well as landlines in over 20 international countries
- Easy and simple pricing with no hidden charges
- Convenience of having both O2 Home Phone and O2 Broadband consolidated into one simple bill
- Customers will be able to get home phone, broadband and line rental from just £17 per month, the best value in the market
- Additional features such as call divert, caller display, call waiting and call barring can easily be added as bolt-ons

Customers signing up to Home Phone will benefit from O2's award winning Home Broadband which recently came top in 10 of 11 categories in the uSwitch Broadband Customer Satisfaction Awards. O2 Home Broadband offers great connection speeds and a line check before set-up as well as unlimited downloads, free 24/7 UK-based technical customer care and a simple set-up process.

Sally Cowdry, O2 Marketing Director, said: "At O2, we've been listening to our customers and we've realised that many of them want great value, an end to hidden costs and the convenience of being able to pay their home phone and broadband bills together. That is exactly what they will get from us now we have launched Home Phone - truly transparent and flexible pricing plans and convenient consolidated billing. O2 is committed to providing the same quality of service with Home Phone that we have established with our broadband over the years."

The launch of O2 Home Phone aims to further boost O2's share of the UK Broadband market and marks a significant step in O2's strategy aimed at placing the company at the heart of the UK's households. The launch follows the huge success of O2's venture into the Broadband market in 2007.

O2 Home Phone is only available with O2's Home Broadband service and customers will need a working BT landline. Customers can text their home phone number to 61202, call 0800 954 1427 or visit <http://broadband.o2.co.uk/> to check if they can get O2 Home Broadband and Home Phone. O2 Home Phone will be available through the same channels as O2 Home Broadband, including O2 stores, o2.co.uk, telesales as well as independent retailers such as Carphone Warehouse. For more information, visit www.o2.co.uk/homephone.

Figure 15

O₂ HOME BROADBAND AND HOME PHONE
That's broadband, line rental with evening & weekend calls in
ONE LOWER-COST BILL
£9.50
A MONTH FOR 3 MONTHS
and £17 after that for O₂ customers



Call 0800 954 1402
Visit o2.co.uk/niggles
or any O₂ shop

FREE METRO **INSIDE**
Your regular Metro packed with news, sport and features

TIME'S UP FOR BROADBAND NIGGLES AND NARKS




Home Broadband & Home Phone
We're better, connected **O₂**

Home Broadband & Home Phone

WE'RE NOBBLING BROADBAND NIGGLES AND NARKS

The niggles and narks of broadband are all the things that interfere with your internet enjoyment. They've had things their own way for too long, so here's where we draw the line. O₂ is going to nobble the niggles...

AND BRING THE MAGIC BACK TO BROADBAND




Call 0800 954 1402
Visit o2.co.uk/niggles
or any O₂ shop

Home Broadband & Home Phone

Crafty-Cost Nark
If you're tired of his sneaky and unexpected line rental charges...
You can now add O₂ Home Phone to Home Broadband. That's broadband and line rental, with evening & weekend calls for only £9.50 a month for the first 3 months, and £17 after that for O₂ customers.

Mystery-Speed Mook
If you don't like being left in the dark about your broadband speed...
Get helpful line speed advice before you join O₂ and a line check once you're set up.

No Support-a-Saurus
If you've had it with listening to gibberish...
We provide free UK-based technical support 24/7 (in plain English).



Call 0800 954 1402
Visit o2.co.uk/niggles
or any O₂ shop