6 July 2015 | 20 pages

Telecommunications Operators

Western Europe

Letter to Ofcom

Do you Really Want to Encourage Infrastructure Investment?

- **UK Digital Communications Review** — Ofcom's Strategic Review is too good an opportunity to be wasted through lack of ambition. We see it as a chance to prevent the UK falling further behind peers which are proceeding with urban builds of fibre to the home. We also believe that Ofcom can avert the risk of a long term infrastructure monopoly or duopoly by choosing to open up the local network to more diverse competitive investment. In 2005 the UK was falling behind most European countries in consumer broadband, and the last Strategic Review responded with ULL and a functional separation of BT. This time we see the opportunity to apply passive network sharing to deliver fibre broadband services from a much more diverse range of competitors.
- **Future of access regulation most important for investors** — In this report we mainly focus on regulation of the fixed access network – the most capital hungry part of the telecoms infrastructure, with the longest asset lives, but right now also the fastest changing. In its preparation we have spoken with interested parties including CEOs and regulatory directors at listed and unlisted telecoms operators, independent regulatory specialists, former employees of Ofcom, and engineers with extensive experience of local network construction and operation.
- **Scope for Ofcom to incentivise more competitive investment** — The success of access network regulation in promoting broadband take up in the last 10 years should not cloud the issues that are emerging as technology continues to advance. While fixed and mobile networks are converging towards IP/Ethernet for access to customers large and small, regulation has become more complex and burdensome. Duct and pole sharing has been an abject failure in the UK, while the benefits of successful implementation are becoming evident in other European countries.
- **Not just for Ofcom to solve** — Passive network access is not the complete solution to deploying the broadband infrastructure of the future. In the UK key potential partners such as utilities, local government and Network Rail are not yet on board with this priority. The UK has the most restrictive planning regime in Europe, and the highest cell site costs and rents. It is no coincidence that Vodafone's Project Spring is less advanced in the UK than any other country in its footprint or that London's cell density is less than half that of other major European cities.
- **Proposals** — Broadening passive measures and addressing the inadequacies of its duct and pole sharing measure, by removing the self-defeating limitations on competitor use and properly industrialising the product, would provide a better regulatory model, and the country with more competitive infrastructure investment. We believe that wholesale price flexibility for residential fast broadband must be retained, but see full structural separation of BT as unnecessary and disruptive.

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How to Encourage Infrastructure Investment

We think the regulator needs to develop the ground for the next ten years, during which the industry will see technology convergence displacing a lot of familiar legacy products.

Ofcom's Strategic Review is too good an opportunity to be wasted through lack of ambition. We think the regulator needs to develop the ground for the next ten years, during which the industry will see technology convergence displacing a lot of the legacy products that Ofcom regulates today. The Strategic Review provides Ofcom with an opportunity to examine structural network-wide solutions rather than "solving individual connectivity issues as they go along", in the words of one of our interviewees.

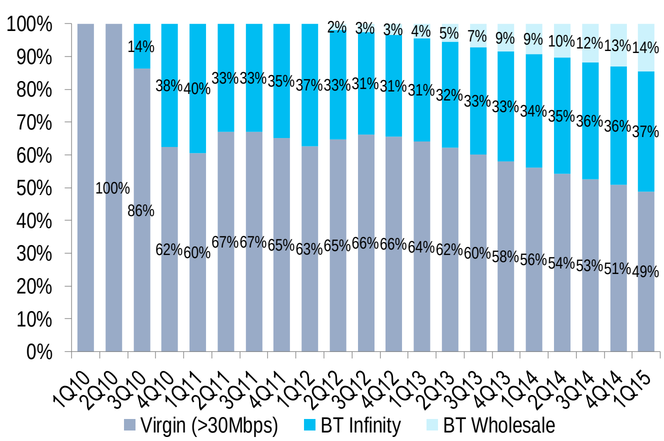
The success of superfast broadband is re-concentrating the market to the extent that Virgin and BT between them now have 86% of superfast broadband connections (Figure 1) but only 34% in broadband at ordinary speeds (Figure 2). We recognise the risk of re-monopolisation in fixed access, which we see as potentially negative long term not just for consumers but also for investors who may, as a result, face an increasingly interventionist regulatory regime over time. We believe the answer is to take much more effective action to open up passive infrastructure such as ducts, poles and cables, so that competitors can deploy fibre local network without incurring the high costs and disruption of repeatedly re-digging the roads. This should have the benefit of lowering barriers to entry, diversifying local network suppliers and encouraging investment and innovation.

We also see the Strategic Review as a chance to head off the danger that the UK falls behind peers which are proceeding with extensive urban builds of fibre to the home. Britain's cities need to compete internationally, and a nationwide one fits all approach is neither necessary nor desirable. Residential fibre to the building, which is still scarce in the UK (Figure 5), is not only future proof but lower cost to operate than current technologies. A number of smaller UK companies including Hyperoptic, Gigaclear, Geo Networks and City Fibre (its York trial a JV with TalkTalk and Sky) are seeking to demonstrate that FTTB can be economic in the UK beyond the preconceived limits of urban business centres and new build estates.

Based on our interviews the industry sees Ofcom's current duct and pole sharing measure as expensive and inflexible. No competitor makes any significant use of it.

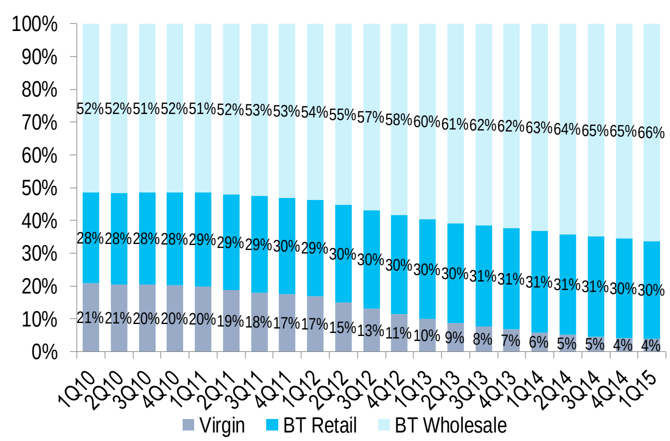
Our industry interviews made clear that competitors see Ofcom's current duct and pole sharing measure as expensive and inflexible, and the limitations on use as unfairly tilting the playing field against competitive players. The feedback is that it is not properly industrialised and that other countries do better, with good surveys and online portals to show duct availability. No competitor makes any significant use of it, and one executive said that the overheads involved in using BT's ducts adds cost of 2-3x the payments due to BT for their use. We see proper industrial implementation as essential to delivering benefits from the symmetric passive access measures envisaged under the European Broadband Directive to reduce the cost of rollout. The government says it will consult on its implementation during 2015.

Figure 1. Superfast broadband market share (>30Mbps)
% of all broadband connections, calendar quarters



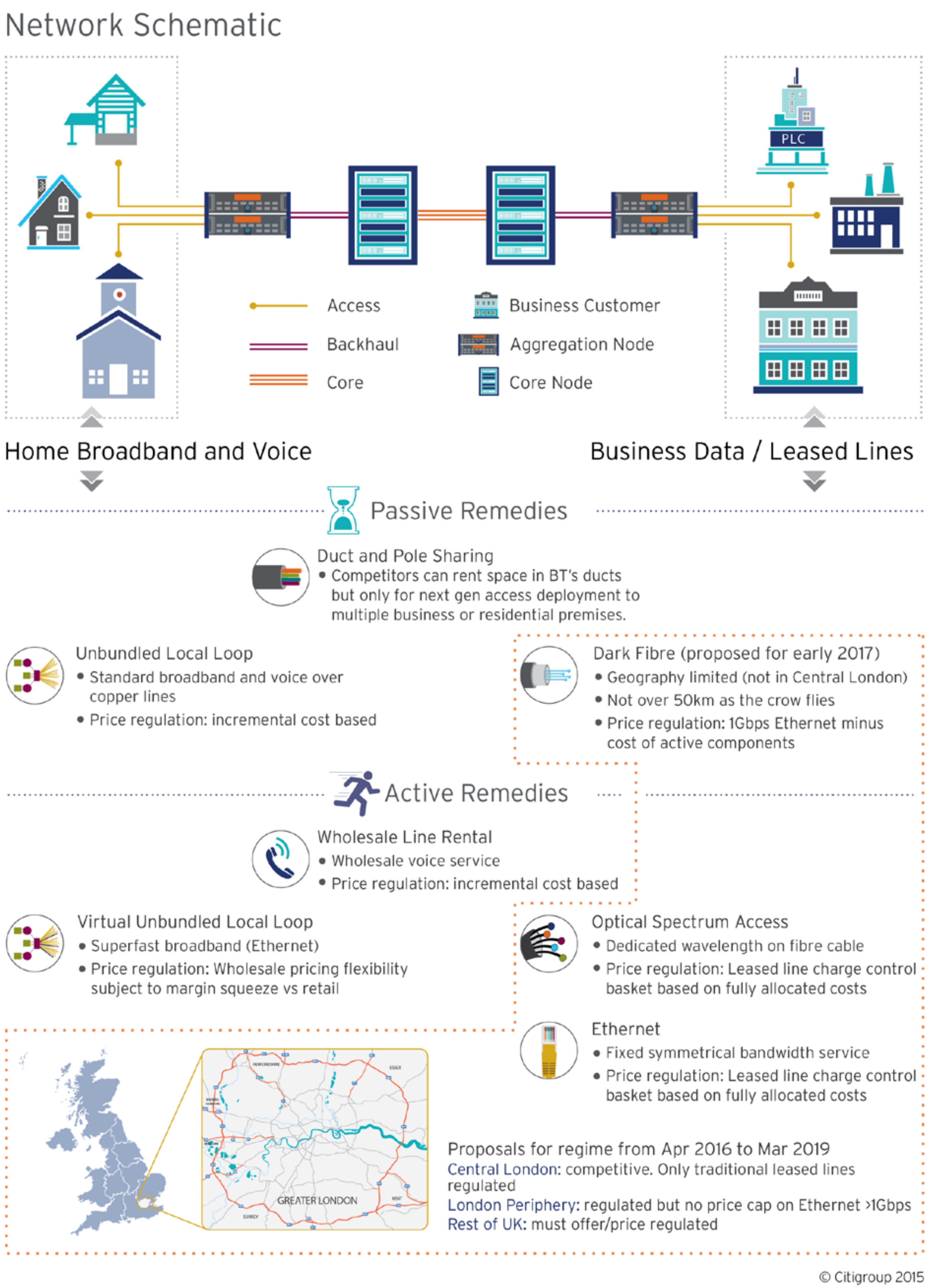
Source: Company Reports and Citi Research Estimates (for Virgin's later periods)

Figure 2. Ordinary broadband market share (<30Mbps)
% of all broadband connections, calendar quarters



Source: Company Reports and Citi Research Estimates (for Virgin's later periods)

Figure 3. Network schematic with principle regulated elements in residential and business access



Source: Citi Research

We believe that wholesale price flexibility for residential fast broadband must be retained, and see full structural separation of BT as unnecessary and disruptive.

We recognise that strong consumer demand for fast broadband has been demonstrated and so the period of highest investment risk for superfast broadband has passed. Nonetheless, considerably more investment is needed. The priority from here should be completing rural coverage and a network wide upgrade to G.fast for BT while encouraging greater diversity of supply, particularly in cities where the UK is falling behind other countries. With this in mind we believe that wholesale price flexibility for residential fast broadband must be retained, and see full structural separation of BT as unnecessary and disruptive.

On structural separation our interviewees were predictably split, with BT against and competitors generally in favour, but we see it carrying risks for Ofcom's broader objectives. We examined the arguments in an earlier report Open Breach – The Wrong Medicine. We see the timing as sub-optimal, with the risk that it throws some uncertainty over the fast broadband investment programme. We also anticipate that the point of delineation between Openreach and the rest of BT will move as local copper plant and exchanges are removed over time as the local network migrates fully to IP/Ethernet. This process, which should drive significant efficiency benefits, could be obstructed by splitting BT now.

Ofcom may see a case for legal separation of Openreach within BT's holding company group to improve openness and accountability.

However, Ofcom may see a case for legal separation of Openreach within BT's holding company group. This could address legitimate complaints from competitors about lack of openness, cost allocations, service quality and lack of even handedness while keeping Openreach part of BT's capex envelope and retaining enough flexibility to adapt to structural changes in time.

We see effective passive network sharing as key to accelerating fibre deployment, increasing investment, competitiveness and innovation, improving consumer choice and heading off the risk of re-monopolisation of telecoms access.

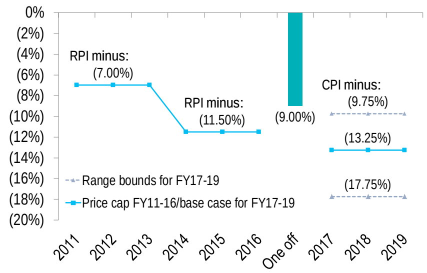
The UK Government says its role in supporting industry is to "remove barriers to investment, to cut the red tape that increases the cost of rollout, and to ensure the continuance of the stable regulatory framework that makes the UK such an attractive place to invest"[1]. In this context we see passive network sharing as key to accelerating fibre deployment to the next stage, increasing investment, competitiveness and innovation, improving consumer choice, and heading off the risk of re-monopolisation of telecoms access in the UK.

Concerns about mobile coverage, not-spots and signal strength show there is still much to be done in this regard. Feedback from the competitive telcos in the UK suggests that key potential partners such as utilities, local government and Network Rail are not aligned with the priority the government wishes to place on building a competitive national broadband infrastructure. Issues remain with practices in planning and other logistical areas that are uniquely obstructive in the UK.

Much of this lies outside Ofcom's remit but should be considered as part of an overall package to improve investment levels and efficiency, as well as better outcomes for consumers. Also important here, in February the Government initiated a consultation into reforming the electronic communication code, which provides the legal framework for the rollout and maintenance of telecoms networks and regulates the relationship between telecom network operators and providers of key sites. Responses were due by the end of April, and are being considered.

[1] DCMS: The digital communications infrastructure strategy, 18 March 2015

Figure 4. Leased lines / Ethernet (<=1Gbps)
Basket price cap, year to March



Source: Ofcom

Ofcom has historically aimed to target regulation at a single level, however, the move to IP/Ethernet for access, both in residential and business, has contributed to multiplying layers of regulation and we believe Ofcom should aim to simplify those again over time. As (Figure 3) illustrates, both residential and particularly business access will be regulated at multiple levels post the current Business Connectivity Market Review if the terms of this May's consultation document are adopted. For business this would include passive network measures of duct and pole access (with service limitations) and dark fibre (with geographic limitations) in addition to the active service measures on leased lines and Ethernet (also with geographic limitations). Figure 4 shows the price caps on Openreach's Ethernet basket which have been tightened over time.

We see the delivery of effective passive remedies as enabling a progressive simplification of regulatory measures on active services. The burdensome regulatory approach in telecoms is due for some simplification and adoption of a more holistic, less siloed approach. We note that Ofcom's last 18 months or so of published decisions, consultation documents and research reports come to 5,876 pages, an average of 330 pages per month, on the telecoms sector alone.

We see a strategic review as an opportunity to simplify regulation in a way which may not be practical under the legislation governing Ofcom's powers and the silo structure applied by the EC.

Indeed, we see a strategic review as an opportunity to simplify regulation in a way which may not be practical under the legislation governing Ofcom's powers and the silo structure applied by the EC. The three year cycle of regulatory reviews is too short and a pause to take a more holistic perspective could deliver benefits from, for example, taking a more unified view residential and business access networks.

Recommendations

A strategic review is a rare moment when Ofcom's options go beyond its usual legislative limitations.

A strategic review is a rare moment when Ofcom's options can go beyond the usual legislative limitations placed upon it, such as being quite so tied to findings of significant market power as justification for action, or being constrained by the EC's siloed market by market approach. The 2005 strategic review saw BT come to a settlement in lieu of a referral to the then Competition Commission. It did use an SMP framework and BT's undertakings from that time fall away if SMP findings are withdrawn, however, other models are possible. The settlement in lieu mechanism can result in a less piecemeal outcome than conventional regulation while, by accepting, BT avoids the delay and uncertainty of a full referral.

Our view is that regulation needs to be reformed to broaden incentives for investment, adapt to the new technological playing field and reduce regulatory overhead. We have five main suggestions.

1. Strengthen passive measures and simplify interventions

Ofcom needs to address the shortcomings in its passive network provisions (ducts, poles, potentially dark fibre).

We believe that Ofcom should set a path to a progressive simplification of the complex thicket of regulatory measures that has been building up. In order to scale back its intervention at the services level (such as business Ethernet or residential superfast broadband), Ofcom needs to address the shortcomings in its passive network provisions (ducts, poles, potentially dark fibre). We see passive network sharing as key to accelerating fibre deployment, increasing investment, competitiveness and innovation, improving consumer choice and heading off the risk of re-monopolisation of telecoms access.

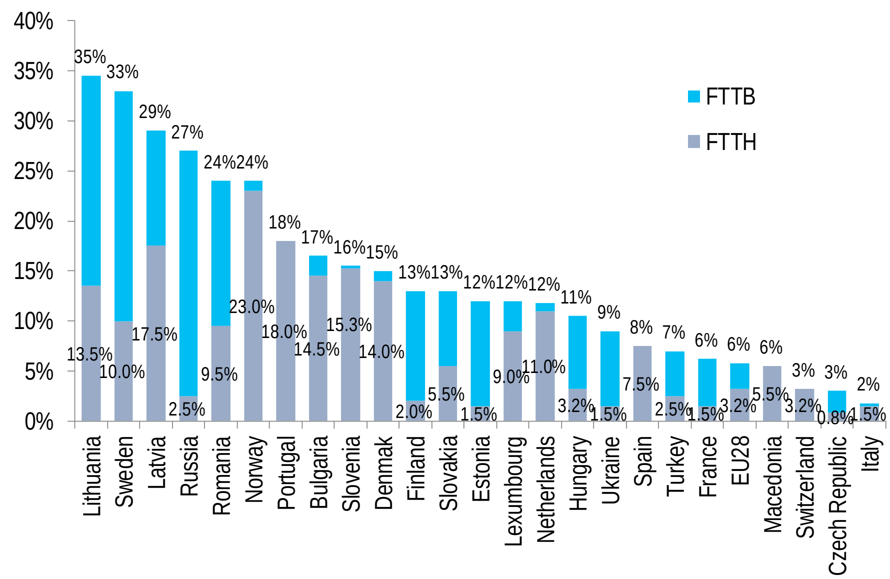
Analysys Mason, in a 2012 study for the European Commission, estimated cost savings in the range of 29-75% from deploying a network using existing passive infrastructure rather than new digging. This has the potential to accelerate fibre deployment, enable new competitive entry and broaden availability of FTTB into previously uneconomic areas. The Analysys report contributed to the harmonisation effort of the EC, and led to the European Broadband Directive to reduce the cost of rollout. The UK Government has said it will bring forward a consultation on its implementation in 2015. EU member states have until 1 January 2016 to transpose the Directive into their national legislation.

Our earlier report on this subject - Towards an Open Duct Future, 26 Feb 2013 – observed that by then many countries had imposed open duct type remedies but that both the model and degree of success varied. Most successful at that point were Lithuania and Portugal, both of which have symmetric regulation requiring multiple players to make ducts available. Since then fibre build through infrastructure sharing has pressed on in France and Spain as well.

Lithuania pioneered passive network sharing and still leads the European field with 35% take up of fibre to building for residential customers.

Lithuania is still the most successful, leading the European field with 35% take up of fibre to building for residential customers (Figure 5). It introduced the compulsory sharing of all passive infrastructure in 2004 under a law imposing "Symmetric Obligation to share all available passive infrastructure which is suitable for construction of electronic communications networks". This included the telecoms operators, gas and electricity companies. Terms for a range of countries are shown in Figure 6.

Figure 5. Penetration of broadband via fibre to the home and fibre to the building + LAN
% of homes



Source: FTTH Council

Figure 6. Overview of open duct access obligation and duct access pricing for incumbent operators

	Open duct access obligation	Feature	Typical price/month/m* €	Typical price/survey €	Limitations on use
Belgium	No	n/a	n/a	n/a	n/a
France	Yes	Feeder segment densely pop. Areas: Terminating/distri segment densely pop. Areas: Upstream from access pt. sparsely pop. Areas: Btw access pt./end user sparsely pop. Areas:	0.032 0.043 0.032 0.096	20.0	fixed network facilities
Germany	Yes	Duct access:	0.090	-	n/a
Lithuania	Yes	Duct access:	0.028	141.9	no
Netherlands	No	Duct access:	varies/customer & geo	-	no
Norway	Yes	Duct and pole access:	n/a	n/a	access given based on available space
Portugal	Yes	Duct access Lisbon & Porto: Duct access other municipalities:	0.010 0.008	with analysis: 72.8 without analysis: 63.3 per manhole: 46.1	no
Spain	Yes	Subduct access (40 mm diameter): Duct access: Junction box (handhole): Junction box (manhole):	0.062 0.008 0.320 9.890	installation fee: 154.0 per manhole visited: 44.0 per handhole visited: 19.2 per post visited: 5.5	NGAN cities, industrial zones, residential areas
Sweden	No	n/a	n/a	n/a	n/a
Switzerland	Yes	Duct access:	0.157	availab. & feasibility hourly rate: 123.0 service assurance (price/unit): 110.8	no
UK	Yes	facility in spine duct - single bore:	0.072	-	business or residential NGN access network or sub loop unbundling backhaul

Source: Company data, National Regulators, *Note: wholesale duct price is per m/cm² for France, Portugal, Spain

The UK has a poor record of reuse of existing facilities and many would be suitable as a conduit for fibre optic cables, large numbers of which fit within a 20mm diameter cable, were contractual, cost and practical matters efficiently resolved.

For the most part, use of BT's ducts by competitors is restricted in ways that BT itself, of course, doesn't face.

Currently competitors can only use duct and pole sharing to install next generation access networks for multiple residential or business premises. This excludes point to point connections to single customers, leased lines and connections to industrial facilities like cell sites, local exchanges or Ethernet points of presence. We find these exclusions self-defeating as BT clearly is not operating under such constraints and these services provide a route into a broader offering for some operators.

UK companies, familiar with relatively smoothly working processes for this abroad, have commented about the lack of commitment to making this work here. One of our interviewees said that it currently costs 2-3x more to use the duct sharing in the UK than they are paying to BT for the service. Another described the duct sharing measure as expensive and inflexible, and the limitations on use as unfairly tilting the playing field against competitive players.

We argue the UK should catch up with other countries by moving to an online mapping of relevant Openreach infrastructure and a traffic light system for duct availability.

Ofcom needs to fix the ineffective performance of duct and pole sharing ("Passive Infrastructure Access") by removing these self-defeating limitations on competitor use and ensuring that it is properly industrialised. We argue the UK should catch up with other countries by moving to an online mapping of relevant infrastructure and a traffic light system for duct availability. Reports on the condition of BT's ducts are mixed, however other countries have faced similar issues and overcome them. In any case, to extend the reach of fibre network further in the UK there will need to be passable ducts, whether that fibre is installed by BT or a competitor.

Ofcom's proposal to add wholesale dark fibre to BT's obligations was generally welcomed by the altnet interviewees that we spoke to, although one commented that it would be a disaster if it went the way of the barely used duct sharing. Advantages cited for competitors would be that it would give them end to end network control from their own network management centres, better insight into service delivery to customer, the ability to innovate more quickly, and they would not need to move in line with BT's product roadmap for active services.

2. Retain wholesale price flexibility for residential fast broadband

We believe that wholesale price flexibility for residential fast broadband, with a term commitment, remains important to maintain investment levels and complete the build out of fibre to the cabinet and G.fast (BT says if its trials are successful it will start to deploy G.fast in its 2016/17 financial year). The wholesale and retail prices are currently governed by a margin squeeze test to protect competitors. While we see removal of such regulatory measures on services (active elements) as desirable long term, that looks to be some way off, particularly for less densely populated areas.

3. Consider a legal rather than structural separation for Openreach

Most competitor managements that we have spoken to are either overtly in favour of the structural separation of Openreach from BT or are positively disposed towards the idea. Not surprisingly BT takes the opposite view, and sees significant disadvantages and costs. We examined the arguments in an earlier report Open Breach – The Wrong Medicine, 23 March 2015.

Ahead of this review Sky has called on Ofcom to make its key focus whether BT should be referred to the Companies and Market's Authority (CMA) under a Market

Investigation Reference (MIR). Its critique covers what it sees as underinvestment and poor service levels from Openreach, among other things.

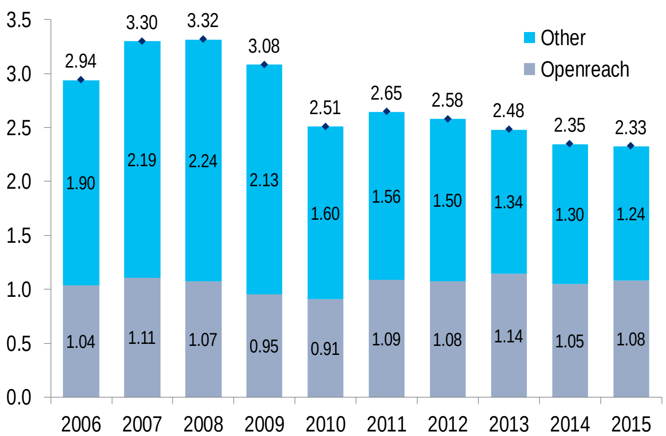
We take the view that a structural separation would be disruptive and would not, of itself, answer the question about how regulation should encourage broadband investment and competition over the next 10 years.

We see a high risk of re-monopolisation with the structural separation route, which in our view is not the step to take when heavy levels of investment will still be required for some time.

It may indeed suit BT to take its time with superfast broadband roll out to perpetuate the investment-friendly fibre regulation as long as possible. As such, the government may see any threat of structural separation as a way to push BT to move more quickly. However, we see a high risk of re-monopolisation with this route, which in our view is not the step to take when heavy levels of investment will still be required for some time. Openreach is the most capital intensive part of BT, representing 69% of its capital employed and 42% of EBITDA.

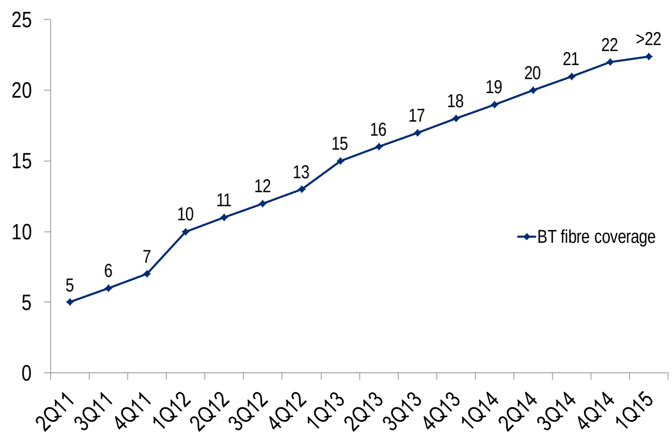
In any case progress with superfast broadband roll out has been pretty consistent (Figure 8) and Openreach's capex has lately stayed roughly flat at over £1bn pa while the BT Group's overall capex has seen a decline (Figure 7).

Figure 7. Openreach capex has been broadly stable since formation
£bn, year to March, excludes spectrum



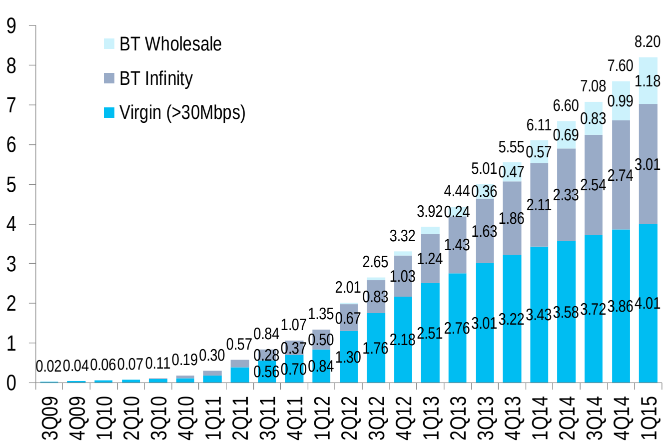
Source: ARCEP. Equates to 44% of premises at >30Mbps, 26% at >100Mbps

Figure 8. BT fibre broadband coverage (mainly FTTC)
Million premises (Virgin at 13m), calendar quarters



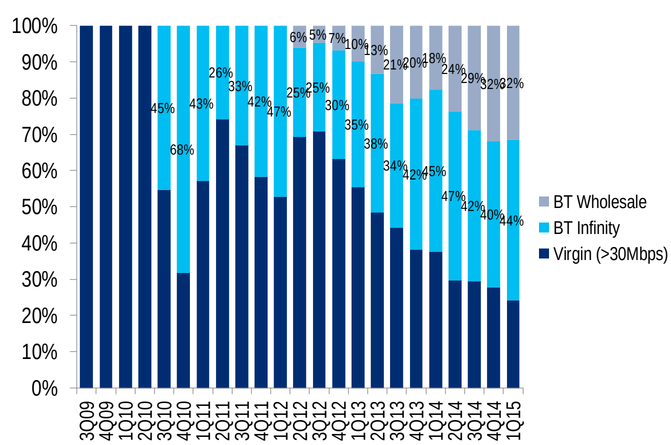
Source: Company Reports and Citi Research Estimates

Figure 9. Take-up of superfast broadband in the UK
Million connections >30Mbps, calendar quarters



Source: Company Reports and Citi Research Estimates

Figure 10. Share of superfast broadband net additions
% broadband net adds above 30Mbps, calendar quarters



Source: Company Reports and Citi Research Estimates

Pressing down prematurely on the pricing of active services would risk squeezing out competitive investment.

We believe the competitive risks would be better addressed with more effective passive network remedies and without pressing down prematurely on the pricing of active services, which would risk squeezing out competitive investment. Over time, this should allow a new model of competition to emerge, with competitors less dependent upon BT, and set an independent challenge to BT over its technology choices.

Given there are no unambiguously successful international precedents for structural separation, we find the proposal risky for the authorities. We also believe that any desire to defer the end to supportive regulation would remain unchanged at an independent Openreach anyway.

We dispute the suggestion that Openreach is being used to fund BT's bidding for sports rights.

In particular we dispute the suggestion that Openreach is being used to fund BT's bidding for sports rights. We do not believe that BT has any more need of Openreach to fund its sport TV ambitions than Sky does. BT Consumer generated over £1bn of EBITDA and over £0.8bn of operating FCF (EBITDA minus capex) in 2014/15, while funding its current sports rights portfolio. We expect both to dip in 2015/16 as the costs of UEFA rights are absorbed but that OpFCF for the Consumer division will not go below £645m pa in each of the next three years.

Instead we believe Ofcom could consider putting Openreach into a legally separate entity, within the BT holding company group. This might improve visibility in general and make it possible in a more open way to address complaints from competitors about cost allocations, quality of service and even handedness.

While Openreach is functionally separate from the rest of BT it is a division rather than having legal status of its own (e.g. as a limited company or Plc). Ofcom may also consider its governance. While Openreach is supervised by the Office of the Telecoms Adjudicator on behalf of Ofcom, its Equality of Access Board is a sub-committee of the main BT board.

Should things not work out to Ofcom's satisfaction legal separation would, in principle, reduce the preparation time needed for full structural separation later.

4. Better focus of the umpire's resources

Ofcom's last 18 months or so of decisions, consultation documents and research reports on the telecoms sector comes to 5,876 pages, an average of 330 pages per month.

Figure 11 shows Ofcom's last 18 months or so of decisions, consultation documents and research reports related only to the telecoms sector. This comes to 5,876 pages, an average of 330 pages per month, omitting many of the accompanying documents such as consultants' reports. This mighty page count is dominated by the Fixed Access Market Review (FAMR – residential access) and the Business Connectivity Market Review (BCMR – business access), which are among the market reviews that must occur every three years under EC rules.

This heavy resource intensity is partly a function of the overly frequent and siloed nature of the EC's market reviews and partly Ofcom's seeking to avoid legal challenge (not all European regulators go into such extensive detail).

Grouping markets that rely on a degree of common infrastructure and extending the review period, could meet EC requirements, extend visibility and free up resource to look more closely at execution of the measures, rather than merely their design.

We believe that this approach can exacerbate short termism and obscure the bigger picture when, for instance, two or more of the EC's "markets" share a common underlying infrastructure. We note though that the strict framework that Ofcom must follow does, of itself, provide a predictability for the investment environment. Nonetheless, grouping markets that rely on a degree of common infrastructure and extending the review period to six years with a progress check against nominated objectives at year three, could meet EC requirements, extend visibility and free up resource to look more closely at execution of the measures, rather than merely their design.

Figure 11. Ofcom telecoms sector publications since Dec 2013 – 5,876 pages (averaging 330 pages per month)

Date	Sector	Type/Title	Related Documents	Pages
12 Jun 15	Fix	Consultation: Leased Lines Charge Control	Press release; May 15 BCMR consultation; Previous Statement Mar 13	196 Annx 316
12 Jun 15	Fix	Consultation: Review of BT's cost attribution methodologies	Press release	152
11 Jun 15	Fix	Consultation: Supplementary guidance on assessment of the VULA margin	Mar 14 VULA margin statement; Jun 14 consultation	15
26 May 15	Mob	Consultation: Public Sector Spectrum Release: Award of the 2.3 and 3.4 GHz spectrum bands	Press release; Nov 14 consultation	155
15 May 15	Fix	Consultation: BCMR: Review of competition in the provision of leased lines	Press release; Previous Statement Mar 13	339
19 Mar 15	Fix	Statement: FAMR: Approach to the VULA margin final statement	Press release; Jan 15 draft decisions; Jun 14 consultation; Jun 14 FAMR statement	292
17 Mar 15	Mob	Statement: Final statement on the mobile call termination market	Feb 15 draft statement; Jun 14 consultation	173
12 Mar 15		Update: Strategic review of digital communications	Press release; Sep 05 Strategic Review Statement; Sep 05 press release/Dec 03	24
19 Feb 15	Mob	Consultation: Annual licence fees for 900 MHz and 1800 MHz spectrum	Press release; Aug 14 consultation; Oct 13 consultation; Apr 14 consultation	119
6 Feb 15	Mob	Statement: Draft statement on the mobile call termination market	Jun 14 consultation	171
15 Jan 15	Fix	Statement: FAMR: Approach to the VULA margin draft decisions	Press release; Jun 14 consultation; Jun 14 FAMR statement	278
11 Dec 14	Rsch	Research: ICMR: Importance of the UK's internet economy revealed	Press release; Data for download; ICMR 13	382
8 Dec 14	Rsch	Research: Infrastructure Report 2014	Press release; 2013 report; 2012 report	188
19 Nov 14	Mob	Statement: Decision to make the 700 MHz band available for mobile data	Press release May 14 consultation	80
13 Nov 14	Mob	Research: Measuring mobile broadband performance in the UK (4G & 3G)	Press release	65
21 Oct 14	Fix	Update: Complaint from TalkTalk	Decision Document	280
1 Aug 14	Mob	Consultation: Annual licence fees for 900 MHz and 1800 MHz spectrum	Press release; Oct 13 consultation; Apr 14 consultation	74
26 Jun 14	Fix	Statement: Fixed Access Market Reviews - final statement	Press release; WBA final statement; All other related documents	595 (Vol-1) 155 (Vol-2)
19 Jun 14	Fix	Consultation: FAMR: Approach to the VULA margin	Press release; FAMR 14 draft decisions; Jan 14 consultation, July 13 consultation	220
19 Jun 14	Fix	Update: Complaint from TalkTalk		
4 Jun 14	Mob	Consultation: Mobile Call Termination Market Review 2015-2018	Updates to rates following Mar 11 statement; Oct 13 industry workshop; Mar 11 statement	173
20 May 14	Fix	Statement: Fixed Access Market Reviews draft decisions	Press release; WBA draft decision; Others	583 (Vol-1) 155 (Vol-2)
21 Feb 14	Fix	Consultation: Fixed access market reviews - update	Main related documents	292
27 Jan 14	Fix	Consultation: WBA - further consultation	Main related documents; July 13 consultation	88
16 Jan 14	Fix	Consultation: Fixed access market reviews - further consultation	Main related documents; Dec 13 consultation	112
19 Dec 13	Fix	Consultation: Fixed access market reviews: Openreach QoS and approach to setting LLU and WLR Charge …	Press release; All related documents	204

Source: Ofcom Main publications

5. Harder to reach: mobile and pay TV

We believe Ofcom should lend its support to addressing the numerous obstacles to improving the UK's substandard mobile infrastructure. The government's reform of the Electronic Communications Code will be important in reducing barriers to investment. Government support may be needed more generally here to ensure that significant participants like the planning regime, local councils and Network Rail align their priorities to support the industry in deploying higher cell densities for effective 4G networks.

Vodafone's Project Spring is less advanced in the UK than any other country in its extensive footprint. London's cell density is less than half of other major European cities.

In mobile, Vodafone's Project Spring is less advanced in the UK than any other country in its extensive footprint. London's cell density (3G sites per sq km) is less than half of other major European cities, and mast heights are up to one third less. These shortcomings lead to poorer signal availability and depth and (ironically) having to operate the cells at higher power levels.

The UK has the most restrictive planning regime of any in Europe, the highest site costs and rents, and the most restricted access to sites than anywhere in Europe. While planning matters are not directly within Ofcom's remit, its recognition as an important part of the whole could prompt constructive moves from the government, which could go beyond its reform of the electronic communication code.

We believe a Strategic Review would be incomplete without consideration the broader implications of pay TV in the market.

The market has developed since the Competition Commission's comment of 2 Aug 2012 upon rejecting Ofcom's referral of Sky Movies: "In our view, competition in the pay-TV retail market overall remains ineffective but we were asked by Ofcom to look specifically at the role of first pay movie content and Sky's position with regard to these rights".

Nonetheless, the growing importance of Pay TV as, in many cases, the principle driver of the purchase decision in triple play, and potentially quad play, packages makes the role of cross selling and market power in this adjacent sector increasingly important for telecoms.

Notes

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Appendix A-1

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