BT's incentive to distort and discriminate due to vertical integration

A REPORT PREPARED FOR TALKTALK GROUP

November 2015

BT's incentive to distort and discriminate due to vertical integration

Contents

BT’s incentive to distort and discriminate due to vertical integration

1 Executive summary

Ofcom is reviewing the current approach to the regulation of BT as part of its strategic review of digital communications (DCR)[1]. Ofcom considers that the current regulatory model, put in place in 2005, has delivered, in general, 'good outcomes'[2], but also recognises that as a vertically integrated operator with market power, BT has the incentive to discriminate in an anti-competitive way against downstream rivals.

One of the issues that Ofcom is considering is the question of whether BT has the ability to discriminate in ways that will undermine effective downstream competition[3], despite the behavioural and pricing remedies put in place by Ofcom to reduce such discrimination. Such discrimination, by allowing BT to favour its downstream arm and/or weaken its downstream rivals, would lead to a dampening of retail competition, to the detriment of consumers. Ofcom has invited views on whether the current model of functional separation, an enhanced model of functional separation, or structural separation (or other options) could address (proportionately and effectively) the concerns identified[4].

In this context, TTG has asked Frontier to consider the question of how the creation of a structurally separate Openreach could improve the effectiveness of downstream competition through:

- the removal of BT's current incentive to discriminate in an anti-competitive manner; and
- the resulting de-regulation, with the removal of some of the behavioural remedies that are currently in place to restrict BT's ability to discriminate, allowing a structurally separate Openreach greater commercial freedom.

We have considered evidence on the degree to which BT has been able to effectively discriminate under the current model of functional separation[5], taking into account that the remedies imposed by Ofcom vary depending on the characteristics of the services being regulated. In summary, we find that:

---

1 Strategic Review of Digital Communications, Discussion Docum ent, July 2015.

2 Ibid. paragraph 11.5

3 Ibid. paragraph 11.28

4 Ibid. paragraph 11.29

5 Our report is focused on this question and does not consider the merits of structural separation in relation to other potential policy objectives, or assesses the issues raised by Ofcom in relation to other impacts/costs from structural separation.

- there is evidence that BT has been able to engage discrimination in favour of its downstream arm in some markets, despite the regulatory framework that Ofcom has implemented to restrict BT's ability to do so;

- despite the existence of regulation in some markets that aims to restrict BT's ability to engage in a margin squeeze, the current regulatory regime allows BT to influence the relative returns of its downstream rivals from different technologies, reducing rivals incentives' to migrate to newer technologies. BT, as a vertically integrated operator, may then have stronger incentives to migrate its customer base to the new technology, taking into account returns on an end to end basis. This can provide BT with an ability to gain a 'first mover advantage' in the transition from a legacy technology (ie DSL) to a new technology (FTTC), by 'compressing' the relative returns of its rivals from the new relative to the legacy technology – thus winning a disproportionately large share of consumers that upgrade from the legacy to the new technology. As Ofcom itself recognises, such an advantage could lead to BT's downstream rivals being in a relatively weaker position in the retail market under the new technology, thus dampening overall competition to the detriment of consumers[6]. This is consistent with BT having increased its retail market share in the transition from DSL to FTTC[7]; and

- even if BT is prevented from discriminating in favour of its retail businesses, there may be a belief among retail customers that they will receive a better quality of service from these retail businesses. This could result in BT having an incentive to degrade the quality of service it offers at a wholesale level, to encourage subscribers to move to BT, where they perceive they will receive a better service.

Structural separation, by removing BT's incentive to engage in anti-competitive discrimination to favour its downstream arm, would be expected to lead to a more level playing field between downstream rivals. The strength of any rival in the retail market would then be unrelated to the 'vertical' link with the operator of the network, and would rather reflect genuine differences in the capabilities of each rival.

We also find that the removal of the incentive to discriminate for a structurally separate Openreach would also lead to the removal of regulation that aims specifically to restrict Openreach's ability to discriminate: this in turn could facilitate the emergence of product developments and price structures that would lead to more economically efficient outcomes.

---

6 Add ref to VULA final statement

7 Add ref to VULA final statement

Executive summary

2 The current model of functional separation and Ofcom's concerns

Ofcom recognises that as BT is vertically integrated and has been found to have significant market power in an upstream market, two potential ways that BT could use to leverage this market power into downstream markets are:

- First, through price discrimination, increasing the wholesale prices paid by downstream rivals competitors above the (implicit) cost faced by BT's downstream arm (which Ofcom characterises as 'raising rivals costs'[8]); and
- Non-price discrimination, by, for instance, delivering an inferior quality of service to rivals (with no offsetting reduction in prices).

In an attempt to reduce this type of anti-competitive discrimination, Ofcom has implemented a degree of separation between BT's upstream and downstream businesses, being principally:

- Access price regulation, together with the application of ex post price squeeze tests[9], which attempt to reduce the risk of BT favouring its downstream arm over rivals in terms of the price/profit margins they face in downstream markets[10]; and
- Functional separation (FS) and 'equivalence of inputs'[11] (EofI), which requires BT to provide key wholesale services to downstream rivals and to its own downstream businesses from a separate division and using the same processes and product definitions[12].

An Annex provides more information on these two approaches. Whilst Ofcom considers that the equivalence arrangements limit BT's ability to discriminate, it also states that BT continues to have an incentive to discriminate to the degree it can[13]; and that the level of quality of service of some of the products that has

8 Ibid. Paragraph 11.2

9 Informed by accounting separation

10 The form of access price regulation can differ – for example, ULL prices are subject to a cost oriented price control, whereas VULA prices are subject to a price squeeze test.

11 EofI aims to deliver products/services to the same quality levels to the retail arm of BT (BTR) and other downstream rivals. FS (in addition to EofI) aims to create a form of 'Chinese Wall' between Openreach (OR) and BTR, to reduce ability of or to seek to favour BTR, e.g. by limiting co-ordination between OR and BTR that is not available to others.

12 Not all wholesale services are delivered from BT Openreach and EoI is also not applied to all services. In these cases other behavioural remedies are applied.

13 Ibid. paragraph 11.25

been delivered by BT is poor, which could also raise discrimination concerns if lower quality leads consumers to favour well established brands or creates the perception that BT"s quality of service will be superior[14].

Within the overall framework, the remedies imposed on Ofcom vary between and within markets, and as such the ability of BT to discriminate on a price or non-price basis will vary between services. For example, in terms of price regulation, different services may be:

- charge controlled with a specific cap on the prices for that service, for example analogue wholesale line rental (WLR) prices;
- charge controlled as part of a wider basket of services, allowing BT some freedom to set the structure of prices within an overall cap on the level of prices, for example, the charge controls set on baskets of services in the business connectivity market;
- not charged controlled but with an ex ante margin test applied setting a floor on the margin between wholesale and retail prices, for example VULA services; or
- not subject to any ex ante price regulation.

Clearly, the greater freedom for the latter forms of price regulation provides a greater ability for BT to discriminate.

2.1 Forms of price/non-price discrimination

While Ofcom's current framework attempts to reduce anti-competitive discrimination a degree of 'discrimination'[15] is common in many retail and wholesale markets, allowing providers to better tailor their services to different end users' preferences. Such discrimination, when it occurs in markets that are considered competitive, will not in general raise concerns. A typical example is peak and off-peak calls, where prices can differ significantly unrelated to differences in underlying (incremental) costs, without raising any competition concerns.

Furthermore, such discrimination can be welfare enhancing, if it leads to an increase in overall demand. For example, it is quite common to consider that by

14 Ibid. paragraph 11.27

15 The term 'discrimination' is typically used to reflect the sale of the 'same' service/good at different prices to different consumers (for example an economy airplane ticket). The term 'differentiation' is used to denote the sale of products with different characteristics, typically in the same relevant market, at the same (a red v a black identical car) or different prices (Infinity 1 v Infinity 2 broadband product). We use the term 'discrimination' to denote all of these types of differentiation, unless otherwise stated.

being able to differentiate between the prices for business and economy class travel, it is possible for airlines to increase overall demand, compared to a counterfactual where no discrimination was allowed. This would be the case if the additional demand for economy travel exceeded the reduction in demand for business travel under a discriminatory price structure, compared to a counterfactual of a single price. Such price discrimination is therefore desirable from a policy perspective, as it increases allocative efficiency.

However, while Ofcom can attempt through regulation to incentivise welfare enhancing types of discrimination[16], the power of such incentive regulation may be overwhelmed by a greater incentive for BT to engage in price or quality anti-competitive discrimination that will favour its downstream arm[17]. One of the potential benefits identified by Ofcom from structural separation[18] is the removal of BT's incentive to discriminate anti-competitively. A second related benefit could be a degree of de-regulation on a structurally separate upstream business, giving it increased freedom to discriminate in a welfare enhancing manner, without the risk that this additional freedom could result in anti-competitive discrimination.

In the light of this consideration, we first look at the effectiveness of current forms of separation in preventing BT from discriminating, under different potential 'theories of harm'. We then consider how a vertically separated upstream provider could be given increased flexibility to tailor its services to particular groups of customers, while still preventing the exercise of market power.

16 A common example of this is where Ofcom imposes a price cap on a basket of BT's services in a market where BT is found to have significant market power, whilst allowing BT flexibility in the setting of the prices of the individual services within the basket.

17 It is for this reason that Ofcom will typically introduce sub-baskets or sub-caps that apply to individual BT services that are subject to price regulation, to reduce/minimise the risk of BT using price discrimination to distort downstream competition.

18 Discussion Document. Figure 31.

The current model of functional separation and Ofcom's concerns

3 Discrimination and structural separation

3.1 Evidence of distortionary discrimination

The first theory of harm in relation to the ability/incentive for BT to discriminate is to raise rivals costs through 'direct' price and non-price discrimination that favours BT's downstream arm. This would result in rivals facing higher costs (either directly, or indirectly through the need to incur costs to address any non-price discrimination favouring BT's retail arm), thus reducing their ability to compete and dampening downstream competition.

Although EofI requires Openreach to deliver certain products to all downstream operators on an equivalent basis, for a number of key retail services BT does not use the same products as its competitors. In such circumstances, the existence of charge controls to prevent price discrimination and EofI to prevent non-price discrimination may be ineffective. Whilst the existence of ex ante or ex post margin squeeze tests, which aim to prevent price discrimination, may reduce the ability of BT to engage in such behaviour, even where it applies (currently only to one wholesale product on an ex ante basis) discrimination may still not be eliminated. We explain this point further below by providing some examples.

First, in relation to the provision of consumer level voice and broadband services, BT retail and other downstream rivals do not use the same inputs: whilst BT uses SMPF+WLR, the majority of customers served by rivals are served using MPF. BT also does not use co-location products itself, instead using the underlying assets as it wishes, with an allocation of costs to relevant services such as WLR and WBA.

While underlying MPF and WLR+SMPF services is the same copper access network, there are a number of differences in the two services with WLR including an active element (the analogue line card), significant differences in the physical wiring within exchanges ("jumpering"), differences in fault testing and; differences in the 'care level' (target time to repair faults). This provides the ability for BT to seek to engage in a degree of price and non-price discrimination to try and raise rivals costs. For example:

- As BT Wholesale/Consumer does not use MPF services to deliver voice and broadband services, BT has little incentive to minimise the cost of using MPF, including any ancillary charges related to co-location;
- While MPF and SMPF+WLR are regulated based on cost, BT has an incentive to try and attribute relatively more costs to MPF than would be explained by differences in the product definitions; and

- BT has no incentive to maintain the quality of service for MPF, to the degree that this can be differentiated from WLR+SMPF.

While Ofcom has attempted to address these issues within charge controls, in addition to the controls under the initial undertakings, the information asymmetry between BT and Ofcom (and the greater asymmetry between BT and other stakeholders) means that BT will likely have some ability to discriminate by increasing the price of those wholesale services primarily purchased by rivals.

Second, in relation to Ethernet products, when these were first launched BT's downstream rivals used a wholesale product (BES) which was not used by BT (who used WES to deliver Ethernet services to end users). During the early period of the introduction of the Ethernet technology, BT was found to have significant market power in the provision of these products, but was subject to a looser "cost orientation" obligation, rather than to a charge control, which allowed BT to freely set prices subject to a ceiling. BT was subsequently found to have overcharged for these products, i.e. set prices above the ceiling, but the level of the overcharge was much more material for BES rental products than for WES ((simple) average of 383% over DSAC for BES rentals compared to 265% for WES rentals[19]). This is consistent with the hypothesis that BT had the ability to price discriminate in favour of its downstream arm despite the existence of both margin squeeze legislation and accounting separation obligations.

The current wholesale Ethernet products are Ethernet Access Direct (EAD) and EAD Local Access (LA). The difference between the two services are that one end of an EAD LA circuit has to terminate at an Access Serving Node (ASN), a set of BT exchanges designated by BT, while EAD can run between any two points. EAD LA circuits have generally had lower prices than equivalent EAD circuits, in part to incentivise aggregation of traffic at the designated ASNs. The two services are currently within a single basket in the charge control applied to these services, allowing BT to raise the prices of one service as long as it is offset by a reduction in the price of the other, However, BT could define ASNs which reflected BT's internal demand and network topology. **Figure 1** shows that BT makes proportionately greater use of EAD LA. BT could then discriminate in favour of itself by reducing the relative price of EAD LA and increase the price of EAD services under the price cap, increasing the cost to rivals.

[19] Disputes between each of Sky, TalkTalk, Virgin Media, Cable & Wireless and Verizon and BT regarding BT's charges for Ethernet services, Determinations and Explanatory Statement, Ofcom, December 2012.

Figure 1. Distribution of usage of 'Contemporary Interface' products for BT internal use and rivals use

Circuit type	Internal circuits	External circuits
EAD Local Access	42%	25%
EAD other (EAD & EAD Extended Reach)	25%	34%
WES	24%	29%
BES	0%	6%
EBD	7%	4%
OSA & OSEA	2%	2%

Source: Ofcom summary of sections 8.7 to 8.9, 2013/2014 BT RFS

Source: Business Connectivity Market Review May 2015 Consultation: Table 10.2

Furthermore, and as recognised by Ofcom[20], the bundling of a wider set of downstream communications services is increasing (e.g. fixed/mobile convergent products). The increasing demand for mobile data in particular is increasing the demand for upstream fixed network inputs from Openreach, such as access and particularly backhaul - so under a merged BT/EE, the incentives that BT has in relation to favouring its downstream arm would also extend to EE.

For example, there has been a tendency for the mobile arms of fixed incumbents to use fixed infrastructure to a much greater extent than standalone mobile operators, who predominantly use wireless technologies for backhaul, as illustrated in **Figure 2**. This difference can be explained by fixed operators externally pricing fixed links suitable for backhaul at a level where wireless technologies have a lower incremental cost, even though the true incremental costs of fixed links is lower.

20 Discussion document paragraph 11.32.

Figure 2. Use of Microwave backhaul by mobile operators in Italy

MNO	BTS	% of BTS linked by wireless technologies
TI Mobile	17 383	12%
Vodafone	14 271	84%
Wind	12 340	85%
H3G	9657	76%

Source: AGCOM, 2009

Source: https://www.vodafone.com/content/dam/group/policy/downloads/Analysys-Mason-presentation.pdf

In summary, there are a number of examples which illustrate that BT has been able to engage in discriminatory behaviour under the current UK regulatory regime, despite the objective of price regulation and functional separation to reduce/minimise such risks. We turn next to how structural separation could remove these incentives and an assessment of the potential other risks of distortion of competition.

3.2 Structural separation and removal of discrimination in relation to raising rivals costs

A structurally separate Openreach (SSO) should not be expected to have an incentive to favour a particular downstream competitor in terms of offering more attractive terms to the detriment of rivals. On the presumption that a SSO would continue to require access price regulation to protect consumers from high prices, it could be given greater freedom to set the structure of prices to reflect the demands of different rivals.

In relation to non-price discrimination, a SSO would also be expected not to have any incentive to favour any particular downstream rival in relation to the nature of products it would introduce, their quality, or the speed of their introduction. A SSO should have an enhanced incentive to introduce product differentiation (combined with price) to better meet the needs of different customers (differences in quality being one method for allowing price discrimination between customers) if this could be expected to lead to increases in overall volumes, or profit margin per unit sold. As demand for data in the future also grows, and applications/services OTT proliferate, the benefits from greater ability to differentiate should become more significant.

To the extent that these enhanced incentives led to a higher level of overall demand (or a more rapid development of new services) this should lead to greater investment, both by a SSO and its customers.

Ofcom raises a concern[21]however that some of the price discrimination that a SSO may be able to introduce could raise a barrier to entry in the retail market - for example, large volume discounts. It is not clear why a SSO would have an incentive to introduce discounts in a way that was neither cost-reflective nor revenue enhancing, although this will depend on the form of price control that it is under – as this will affect its incentives. For example, if it is under some form of multi-year price control per 'unit' sold, it would likely wish to maximise overall volumes sold, which in turn would imply that its profits would likely be higher if a more competitive downstream market led to lower prices and higher retail volumes. It is also possible that some form of two-part pricing could also incentivise downstream rivals to compete more intensely for incremental volumes/subscribers.

3.3 Structural separation and improvement in allocative efficiency

The removal of BT's incentive to favour its downstream arm should imply that an SSO's incentives in terms of the structure of prices would not be distorted. This could support a price structure that would be more consistent with maximising allocative efficiency. Depending on the form of price control it is under, for any given overall average unit level of prices, a profit maximising SSO would (a) be more likely to set prices that proxy Ramsey prices as there would no longer be the additional incentive to influence the volumes sold to its downstream ex-rivals, and (b) have an increased incentive to increase volumes to the extent that some of its investment are fixed/sunk as higher volumes would lead to higher revenues (and profits).

3.4 Structural separation and removal of margin compression risks

Another potential mechanism in relation to the ability/incentive for BT to discriminate is to try and engage in some form of price squeeze – this is similar in principle to the theory of harm of raising rivals cost. Ofcom seem to recognise this, for example, it states that distortions could arise from the fact that payments between BT's downstream and upstream divisions (such as wholesale product

21 Discussion Document. Figure 31

costs) are seen as internal transfers for BT, whereas for BT's downstream rivals, such payments are real cash outflows from their business[22].

Ofcom has at its disposal the ability to impose margin squeeze remedies, for the VULA margin test and may also investigate potential margin squeeze on an ex post basis through its Competition Act powers. The aim of such legislation/regulation is, in general, to ensure that downstream rivals' to BT can trade profitably in the retail market where there is a risk of anti-competitive foreclosure.

BT may, however, still have the ability to influence the relative margin that is earned from its downstream and upstream activities, even if the margin squeeze regulation is binding due to information asymmetries. For example, one of the potential determinants of the profit margin in the downstream part of the business[23] is the amount of fixed and common costs that is allocated by BT to the downstream business. Whilst there are high level principles that guide the cost attribution, such as cost causality, there is a potentially significant degree of judgement/discretion about how such costs do get attributed. While Ofcom is proposing to increase the degree of oversight of the cost attributions used in BT's regulatory financial statements (RFS), Ofcom has proposed that it will only modify attributions which are clearly inappropriate. This implies that BT may therefore still be able to engage in what could be called downstream margin 'compression'.

We note also though that the more competitive the upstream market, either currently or prospectively, the more dampened the incentive for BT to discriminate in this way. Hence this concern will be more acute in areas of the country where there is little/no actual or prospective competition to the upstream activities of BT – i.e. areas where there is genuinely an 'enduring bottleneck'.

The creation of a SSO would fully remove the ability of a SSO to engage in such an anti-competitive margin compression strategy.

---

22 Ofcom says at (11.36): '*In addition, where there is pricing flexibility for new wholesale products in markets where BT has SMP but where the long run level of costs is difficult to determine, such as VULA, BT may be able to earn more profit in the uncompetitive regulated business (Openreach) and less profit downstream in the competitive unregulated business (BT Consumer). Therefore BT might have an incentive to rebalance its source of profits towards its upstream business to reduce the degree of competition it faces downstream*'.

23 Under a LRIC+ type cost benchmark.

Discrimination and structural separation

4 Structural separation and transition to a new technology

Another potential theory of harm is related to the ability (and related incentive) for BT to influence the relative returns of its downstream rivals from different technologies. First, Ofcom itself recognises that under the current regime, BT's superfast broadband customers may provide lower margins than current generation broadband customers at the retail level, without the margin for SFBB being so low as to fail the margin test. Because the VULA service is not currently charge controlled, BT can set freely set prices for VULA – for a given level of retail prices (and hence end to end margins) BT has an incentive to set the retail margin as low as possible by increasing the wholesale price until the margin test is a binding constraint. Rivals' margins on a mature business such as standard broadband services may be relatively high reflecting sunk costs, such as roll out of network and subscriber acquisition costs. From BT's perspective, the two services could still be equally profitable when considering upstream and downstream profits on an end to end marginal basis.

BT may have relatively strong incentives to migrate customers to SFBB, both in terms of overall profitability and in terms of the impact on competition. However, BT's downstream rivals may face the dilemma of receiving lower overall returns if they want to migrate customers towards superfast broadband in such a case[24] . Effectively, rivals face an opportunity cost in migrating customers to SFBB, resulting from foregone returns on the existing products.

Under the current regime therefore, by influencing the relative margins, BT could seek to take advantage of periods when there is a move to a new technology to delay the transition of its downstream rivals to the new technology[25]. As Ofcom recognises, by potentially weakening their competitors' position in the forward looking technology, this could reduce the level of competition in the downstream market in the future, leading to poorer customer outcomes. TTG and Sky have both indicated in the context of the VULA consultation that they consider that the head start that BT has obtained in SFBB is related to the relative profitability of SBB and SFBB (although we note that BT contests this). The creation of a SSO would, by construction, remove the ability and incentive to distort competition in the downstream market in favour of one provider.

Introduction of charge controls on the VULA service would reduce the ability of BT to reduce the margin for a given level of retail prices by increasing the

24 Discussion document paragraph 11.37

25 We note that the earlier evidence on the relative overcharges in relation to Ethernet backhaul services is also consistent with this.

wholesale price above cost. This additional constraint may reduce BT's ability to influence the margins on SFBB services relative to SBB services, as once VULA prices were set at cost (i.e. the charge control is a binding constraint) BT could only reduce rival margins by reducing retail prices and hence its own end to end margins. The introduction of a new technology is often associated with higher levels of uncertainty, and therefore Ofcom would, in general, be expected to be cautious in imposing cost based charge controls at an early stage of the introduction of a new technology. When there is a transition to a new and more uncertain technology, BT could be expected to continue to have the ability to delay the migration of its downstream rivals to the next technology, if it has the incentive to do so.

Under SSO, there would still remain a significant challenge in incentivising the efficient rate of migration from copper to fibre (or from FTTC to FTTH). However incentive regulation, such as charge controls of the type applied in other regulated sectors, taking into account both revenue maximisation (i.e. better tailoring the structure of prices to customers' willingness to pay) and cost minimisation (limiting the time for dual running of networks) could be implemented. In the absence of a vertically integrated operator's incentive to manage both the structure of prices and the rate of migration in a way which distorts competition (and is not efficient) designing an effective incentive based regime for a SSO should be more straightforward.

Structural separation and transition to a new technology

5 Structural separation removing the incentive of BT to reduce overall quality

A final potential theory of harm relates to the incentive that BT may have to reduce the overall quality of its wholesale offering, as in such circumstances, consumers tend to trust more in the well established brands, or simply believe that an integrated BT will deliver better quality. This is an interesting discrimination distortion as it does not derive from BT favouring directly its downstream arm, but rather by taking advantage of consumer perceptions and beliefs, to indirectly discriminate against its downstream rivals. The incentive to discriminate in this way against rivals using wholesale access services would also depend on the closeness of competition between BT, its downstream access based rivals and alternative VI operators. If reducing quality at a wholesale level results in significant diversion from BT or wholesale customers to VI rivals, this could offset any benefits from increased diversion from wholesale customers to BT retail[26].

The 'remedy' under this theory of harm would be to improve the quality of service of BT to the extent that all operators clearly offering a good quality of service would reduce the perceived advantage of BT. As mentioned earlier, to the extent that the regulatory regime imposed on a SSO would incentivise it to maximise the volume of services sold, then it could provide a SSO also with an incentive to differentiate and improve its quality of service where it can also charge a higher price.

We note also, however, that as with any other regulated monopolist, a SSO would also have an incentive to minimise actual costs for any given level of prices – hence some determination of the desired level of quality by the regulator will likely be required. Unlike the other theories of harm therefore, where structural separation would minimise/remove the risk of distortions by removing the incentive/ability of BT to engage in discriminatory behaviour in favour of its downstream arm, under this theory of harm, a SSO would be expected to require some additional regulatory oversight to improve quality of service relative to the current regime.

26 However, the geographic scope of VI competitors is limited.

Annex - Summary of Ofcom's approach to wholesale price and non-price regulation

Access price regulation

Access price regulation of SMP operators typically has dual objectives:

- To prevent BT exercising market power in upstream markets by setting prices above a level required to provide investors with a reasonable return; and
- To prevent BT leveraging market power into downstream markets.

The most common form of price regulation applied by Ofcom to BT is a charge control ,where the price of individual services or groups ('baskets') of BT services in relevant markets is subject to a price cap which attempts to align prices with costs, including a reasonable return on capital. This should both prevent the exercise of market power in the upstream market[27], and reduce the ability of BT to discriminate against downstream competitors by increasing wholesale prices.

As BT is also subject to legislation that aims to prevent price squeeze (ex post), it is expected that the difference between the wholesale price set by regulation and BT's retail price will be sufficient to allow BT's downstream rivals to compete profitably in the downstream market. As such BT's ability to raise downstream rivals' costs or price discriminate in favour of its downstream business is expected to be constrained.

However certain markets where BT has SMP are not charge controlled. In this case, as BT sets both retail and wholesale prices endogenously (compared to a charge control where wholesale prices are set exogenously), there is a greater risk of discrimination as BT can raise rivals costs by increasing wholesale prices (for any given level of retail prices). Due to the greater risk of a margin squeeze where BT is free to set wholesale prices, in the case of VULA services, Ofcom has applied a separate ex ante margin test. This test sets a floor on the differential between wholesale and retail services, but BT has the freedom to set the level of retail and wholesale prices.

Non-price regulation

Ofcom recognises that there are a number of ways that BT, as a vertically integrated (VI) operator with significant market power in the upstream market,

---

27 Although this is dependent on the effectiveness of the charge control in the face of information asymmetries between BT and Ofcom.

could seek to discriminate in favour of its downstream arm at the expense of downstream rivals. At the simplest level, this could include delivering services at a better quality of service to downstream divisions. However, there are a number of other potential ways that a VI BT could define products in ways which seek to discriminate in favour of its own downstream business including:

- Defining access interfaces and processes which increase the cost for competitors compared to BT's internal use;
- Introducing new network capabilities when they are required by BT's downstream divisions but not introducing comparable capabilities when requested by rivals; and
- Sharing information about developments between upstream and downstream divisions in order to allow rapid and efficient roll out of new network capabilities.

Prior to 2005, these issues were addressed through non-discrimination requirements. However, the breadth and scope of the potential forms of anti-competitive discrimination meant that Ofcom came to the view that prohibitions on 'undue' discrimination had limited effectiveness[28].

In view of this, following the Ofcom TSR in 2005, BT provided a package of undertakings which provide greater control over BT's ability to discriminate between its own downstream business and rivals. The package included:

- Equivalence of Inputs for some services;
- The creation of a functionally separated access services division (BT Openreach); and
- The creation of an Equality of Access Board (EAB).

28 Discussion Document, paragraphs 11.8 to 11.9

Annex - Summary of Ofcom's approach to wholesale price and non-price regulation

FRONTIER ECONOMICS EUROPE
BRUSSELS | COLOGNE | LONDON | MADRID

Frontier Economics Ltd 71 High Holborn London WC1V 6DA
Tel. +44 (0)20 7031 7000 Fax. +44 (0)20 7031 7001 www.frontier-economics.com