Ofcom Strategic review of consumer switching - appraisal of save activity

A report for Sky

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Summary

Sky asked Plum to consider Question 9 of the Ofcom Strategic review of consumer switching, namely "*Do you agree with our analysis of save activity? Please provide any evidence to support your views*". Save activity arises where a consumer contemplating switching to an alternative provider receives an offer from their existing provider (generally characterised by a price discount) in an attempt to retain the customer. The opportunity to engage in save activity is greater where the switching process is Losing Provider Led (LPL) rather than Gaining Provider Led (GPL) since consumers must contact their existing provider.

In its appraisal of the impact of save activity Ofcom consider the economic literature on price discrimination and price guarantees (since save activity is not addressed specifically in the literature) and market evidence. Ofcom concludes "*we are of the view that save activity in a LPL environment is likely to weaken competition and reduce the benefits from competition to consumers overall.*"

To place save activity in context we note that the practice is widespread in markets generally. For example, in the labour market, employers (as buyers) may seek to retain employees considering rival employment offers by offering improved terms and/or pay (potentially saving the employee switching costs/risk). Turning to the Ofcom analysis we make the following observations:

- Ofcom assumes market circumstances in reaching their conclusions that do not accord with actual conduct in the telecommunications market.
  - Cease and re-provide accounts for 24% and 36% of broadband and mobile switching respectively. Analysis of save activity and the costs/benefits of mandating a "single" switching process should take account of this. Further, Ofcom do not identify a difference in outcomes between broadband and mobile markets; yet GPL accounts for 54% of broadband switching with LPL accounting for only 14%, whilst for mobile LPL accounts for 44% of switching (with no GPL switching).
  - Ofcom is concerned that save activity raises barriers to entry, yet the communications market has seen entry and competitive conduct.
  - Ofcom cite survey results showing that the large majority of customers welcome save activity.
- The economic literature does not directly address save activity, however, our review of the literature Ofcom considers does not lead us to the same conclusions as Ofcom.
  - In relation to price discrimination we disagree with the Ofcom conclusion that "*it allows firms to charge a higher price to some customers (termed surplus extraction) which is bad for consumers as a whole.*" First, because some customers may be charged less with price discrimination. Second, even those charged more may benefit if new services – such as next generation broadband – are made available on a timelier basis.
  - In literature on the impact of guarantees, the results are highly dependent on their exact nature and there is only a loose parallel between 'meet or release guarantees' commonly used in selling to businesses and save activity to consumers.
- Ofcom does not count the benefits of save activity in terms of avoided switching costs including time and risk of service disruption.

In conclusion, we consider that actual evidence in relation to market conduct and outcomes and available literature do not support the Ofcom analysis and conclusions in relation to save activity.

1 Introduction and Ofcom conclusions regarding save activity

Sky asked Plum to undertake a review of Section 5 and Annex 6 of the Ofcom consultation "Strategic review of consumer switching" in the communications market focussed on Question 9: "*Do you agree with our analysis of save activity? Please provide any evidence to support your views*".[1]

Save activity arises where a consumer contemplating switching to an alternative provider receives an improved offer from their existing provider (generally characterised by a price discount) in an attempt to retain the customer. The opportunity to engage in save activity is greater where the switching process is Losing Provider Led (LPL) rather than Gaining Provider Led (GPL) since consumers must then contact their existing provider.

Ofcom notes in paragraph 5.51 in relation to save activity that "*The economic literature does not specifically address the issue of save activity in an LPL environment. However, there are two key elements of save activity that bear strong similarity with practices that have received attention in the economic literature, namely price discrimination and price guarantees*".

Ofcom concludes that save activity is likely to materially weaken incentives of firms to offer lower prices and of new firms to enter the market and that a Losing Provider Led (LPL) switching process with save activity will result in higher prices than under an LPL process without save activity or a Gaining Provider Led (GPL) approach. Ofcom concludes that both customers with save offers and those without will be worse off.

Ofcom concludes that the information asymmetry between the incumbent provider and competitors/new entrants will exacerbate the harm. This is because the incumbent firm will have full information on consumer's spending profile and history and be able to tailor their save activity with this information to retain high value customers. Ofcom concludes that this will have a particularly strong impact on entry decisions. Ofcom concludes that save activity will raise customer acquisition costs.

Ofcom's consumer survey found that most customers welcomed save activity, although Ofcom notes this activity may increase the cost of switching. Ofcom also received information from two broadband providers and two mobile providers which indicated that they offered discounts to retain customers.

In conclusion Ofcom states that:

> "*In light of the academic literature, our analysis and the evidence we have gathered, we are of the view that save activity in a LPL environment is likely to weaken competition and reduce the benefits from competition to consumers overall. While those consumers who experience save activity in a LPL process may retain a positive experience and value such practice, it is unlikely to be in their interest overall. Consumers who receive a retention offer compare such offer with the currently existing prices. However, both these prices and the discounted prices they receive are likely to be lower under a different process that does not include an inbuilt process for retaining consumers. There is little doubt that consumers who are not considering switching are highly likely to pay lower prices if save activity in a LPL environment could be somehow restricted*." Paragraph 5.99.

In this paper we evaluate available evidence, appraise Ofcom's arguments and consider whether Ofcom's conclusion is reasonable.

[1] Ofcom. 10 September 2010. "Strategic review of consumer switching." Hereafter referred to as "Ofcom". http://stakeholders.ofcom.org.uk/binaries/consultations/consumer-switching/summary/switching.pdf

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2 The nature of the communications market does not support Ofcom's conclusions

2.1 Assumptions underlying Ofcom conclusions

Ofcom's analysis of the impact of save activity draws on papers in the literature which model the market as consisting of a number of firms with an incumbent customer base. This literature points to the possibility with switching costs, and in particular the opportunity for save activity in the MAC/PAC process, of providers targeting discounts to customers at risk of switching and charging higher prices to all other customers. This is a classic result from the switching literature, where the cost of switching allows firms to segment customers and charge high prices to locked-in customers and lower prices for new customers.

On the face of it, a mature market with high levels of penetration and low levels of new customer additions would be consistent with Ofcom's concerns. In this scenario, service providers might charge high prices and use discounts to retain customers and in particular high value customers on their networks. There might then be a relatively weak incentive for providers to gain customers from rival networks, as this activity might not be successful due to save activity.

However, this model does not appear applicable in the telecommunications markets for mobile and broadband where Ofcom has concerns in relation to save activity for the following reasons:

- Cease and re-provide plays an important role, would tend to reduce the risk of lock-in due to save activity, and should be taken into account.
- There are pronounced differences in the frequency of use of alternative switching mechanisms in mobile versus broadband markets, yet Ofcom does not identify material differences in outcomes in line with their hypothesis.
- Service characteristics and customer preferences are heterogeneous, rendering save activity unreliable as a mechanism for lock-in.
- Neither market is mature when the transition to next generation access and new device adoption are taken into account.
- Entry and competitive conduct characterise the telecommunications market.
- Most consumers welcome save activity

2.2 Cease and re-provide should be taken into account in any assessment

Cease and re-provide accounts for 36% of mobile switching and 24% of broadband switching. If a provider was to rely on save activity to retain customers and charge high prices to all existing customers, they would be vulnerable to rival providers who used lower prices to attract customers who could switch using the cease and re-provide process. Analysis of the costs and benefits of save activity and alternative switching processes should take account of this fact.

2.3 Differences in market conduct have not been linked to observed differences in switching processes

At present, the majority of broadband switching is by GPL process (54%, with LPL used by 14%), while LPL is the leading form of switching for mobile customers (44%). However, Ofcom does not point to any significant differences in the nature of competition between the broadband and mobile markets which arise from the difference in switching processes, as might be expected based on Ofcom's analysis of the literature. Indeed, Ofcom (paragraph 5.10) points to similarities describing low introductory offers and higher ongoing prices as characterising both broadband and mobile markets. On the face of it this would not appear consistent with differences in switching processes and the hypothesis advanced by Ofcom.

It could be conjectured that providers would "harvest" locked in customers who switch using LPL processes and compete for other customers, however, this would rely on segmentation of customers between their future method of switching. Ofcom has not offered any explanation as to how providers could segment customers between those who switch via a LPL process and those who use other switching processes. It would also be the case that LPL customers could observe the lower prices offered to other customers, potentially undermining any attempt at segmentation

A second issue for providers using the MAC/PAC save processes as a device for customer segmentation is that a majority of customers using the MAC/PAC process did not listen to a save offers from their provider. Ofcom's research finds that only 30% of MAC/PAC broadband and mobile customers listened to a save offer from their provider.[2] This raises questions as to whether providers could in practice rely on save activity to segment customers who are likely to switch and offer these customers lower prices. If the majority of customers do not listen to save offers, then the use of save offers is likely to be ineffective in retaining these customers, forcing competitors to compete for all customers.

We conclude that Ofcom's view on the competition dampening impact of LPL switching is not grounded in evidence of activity in the broadband and mobile markets. An attempt by a provider to segment customer into loyal customers (who are not price sensitive) and those who notify an intention to switch (price sensitive) is most unlikely to be successful, as customers could (and do) switch via cease and re-provide. Further, most customers do not listen to a save offer, meaning that providers are unlikely to rely on save activity as the main competitive focus.

2.4 Market heterogeneity renders save activity unreliable as a lock-in mechanism

Save activity is more difficult where customers have a variety of reasons for switching and discounts alone may be relatively ineffective as a means to retain customers. Ofcom's consumer survey shows that non-price reasons such as wanting to buy a bundle or dissatisfaction with customer service were key reasons for switching for broadband and mobile customers. Ofcom (Paragraph 5.79) report that 27% of broadband customers switched to buy a bundled service (the second largest category) and a total of 28% were dissatisfied with the service (of which 14% wanted a faster service, 9% were unhappy with customer service and 5% were unhappy with the service). As providers offer a different

[2] Saville Rossiter-Base. September 2010. "Consumer switching and bundling." Page 42. http://stakeholders.ofcom.org.uk/binaries/consultations/consumer-switching/annexes/switching-bundling.pdf

mix of bundles to customers, it will not always be possible for providers to replicate bundles offered by competitors and this means providers are unlike to rely on save activity to retain customers. Similarly, customers switching for quality reasons are not likely to be persuaded to stay by the offer of a discount.

2.5 The market is in transition to next generation access services and smart devices

In paragraph 5.42 Ofcom notes that the adverse impact of higher switching costs is "*especially true in mature market*". At least implicitly an assumption that the markets in question are mature would appear to underpin the Ofcom analysis. Here we argue that the markets in question are not mature but are in a state of dynamic transition.

The market for mobile voice telephony may be mature, but the market for fixed and mobile next generation broadband and mobile devices is not. Operators can be expected to compete vigorously in the emerging next generation broadband market and the emerging market for smart devices. Operators will compete to acquire customers as customers upgrade to these services and devices and any attempt at lock-in is much less likely to be effective in a dynamic context.

Next generation fixed broadband is at an early stage in terms of deployment and take-up and next generation mobile broadband (LTE) is anticipated in the near term and the availability of additional spectrum including UHF spectrum, expected to be auctioned in 2011, will enhance the capability of mobile broadband. In addition, consumer take-up of advanced smart-phones is at an early stage with rapid penetration growth. Decisions over new devices will open up switching possibilities, as occurred with the iPhone introduction and promotion of new devices such as tablets and MiFi (personal routers with both 3G and WiFi which will increase opportunities for mobile fixed substitution).

A dynamic, as opposed to mature market, does not reflect the market conditions one would associate with potential consumer harm identified in the literature which Ofcom draw on.

2.6 Entry and competitive conduct characterise the market

Ofcom is concerned that both switching costs and save activity will raise barriers to entry (see Appendix A for a discussion of the literature on switching costs). In practice, the impact of switching costs and save activity on barriers to entry are likely to be modest. In the retail broadband market, barriers to entry do not appear to be high; Ofcom states that there are over 200 different fixed line broadband service providers, although eight providers account for over 90% of the connections.[3] In the mobile market, there are four MNOs (following the merger of Orange and T-Mobile to create Everything Everywhere) and a growing number of MVNOs.

We consider that the choice between LPL and GPL switching is unlikely to materially impact on entry in the broadband or mobile or other communications markets. The key barrier to entry in the mobile market would appear to be access to spectrum and the sunk costs associated with network deployment. Ofcom's recent review of the mobile market found that the mobile market is serving UK citizens and consumers well and that competition was driving this outcome and that consumer survey

[3] Ofcom. July 2010. "UK broadband speeds, May 2010." http://stakeholders.ofcom.org.uk/binaries/research/telecoms-research/bbspeeds2010/bbspeeds2010.pdf

data indicated that barriers to consumer switching are low.[4] The recent launch of a number of MVNOs is a further indication that barriers to entry at the retail level of the market appear to be relatively low.[5] Whilst the OFT issued a statement of concerns in relation to the Orange/T-Mobile merger, these concerns related to spectrum holdings and network sharing arrangements and did not raise issues with switching in the retail market.

The number of players in the broadband market would indicate that the barriers to entry are relatively low and even the recent consolidation of the larger players in the market still leaves a considerable number of major players.

We do not consider that moving to alternative switching processes would materially impact on the likelihood of entry into the broadband and mobile markets. Ofcom's concerns about the impact of switching on entry appear to be theoretical, based on reading of the academic literature rather than an analysis of the relevant markets.

2.7 Most consumers welcome save activity

Although save activity is unwelcome in some cases, Ofcom (paragraph 5.94) found that "*the large majority of consumers who were subject to save activity reported a positive experience with the practice*".

[4] Ofcom. 17 December 2009. "Mobile Evolution – Ofcom's mobile sector assessment". http://stakeholders.ofcom.org.uk/binaries/consultations/msa/statement/MSA_statement.pdf

[5] "Orange UK gets three new MVNO partners", 15 March 2010, http://www.telecoms.com/18919/orange-uk-gets-three-new-mvno-partners/

"TalkTalk to launch MVNO in UK", 2 August 2010, http://www.telecoms.com/21796/talktalk-to-launch-mvno-in-uk/

3 The literature does not support Ofcom's conclusions

We discuss the dynamic implications of save activity for consumers and firms and the likely impact on entry and consider the potential benefits of price discrimination for consumers.

3.1 Save activity differs from a price guarantee

Ofcom considers that save activity is similar in effect to a price guarantee and in particular a "meet the competition" guarantee. The Ofcom commissioned summary of the price guarantee literature[6] states that guarantees may have either positive or negative impacts on consumers. Guarantees may benefit consumers by enabling them to identify low price firms or enabling price discrimination. Guarantees may harm consumers through reducing incentives of firms to compete by making better offers and reducing the incentives for consumers to search for a better offer.

The literature shows that the impact of the guarantee depends on a number of details such as:

- Whether guarantee is to match or beat a price
- Whether the guarantee applies to advertised or actual prices
- Whether the model allows for costs of implementing the guarantee
- The extent to which rival firms are similar
- Whether all other firms adopt the guarantee
- Whether the firm offering the guarantee is the lowest price firm
- Restrictions on the exercise of the price guarantee.

Ofcom considers a meet or release guarantee as similar to save activity in an LPL environment. However, meet or release guarantees usually relate to contracts where there is a penalty involved in switching contractual partners and the current supplier waives its penalty if it is unwilling or unable to match the better offer. Ofcom does not take proper account of differences between meet or release guarantees and save activity. This is important given the evidence in the literature that small differences in the nature of price guarantees can have a significant impact on their implications for consumer welfare. In contrast to meet or release guarantee, save activity:

- Save activity does not involve a prior arrangement with customers. A meet or release guarantee is a contractual arrangement - often with business consumers - and hence the supplier has significant comfort that the right will be exercised. Save activity is different. For example, Ofcom's research indicates that 70% of LPL customers do not listen to save offers.
- Transparency of save activity to rivals. Price guarantees undermine competition when they are communicated to rival firms such as via nationwide advertising campaigns. Whilst the existence of save activity and the nature of some individual offers may be observable to competitors the policies underlying such activity are not transparent to competitors.
- A meet or release guarantee (and more generally price matching guarantees) are an explicit commitment to match a rival's price. It is unlikely that save activity works in the same way.

[6] Morten Hviid. July 2010. "Summary of the literature on price guarantees." http://www.uea.ac.uk/polopoly_fs/1.170059!Summary%20of%20LPG%20literature%20Final.pdf

Ofcom discusses the limited evidence on broadband and mobile service provider save activity. It appears that save teams are authorised to offer approved levels of discounts to customers. It is not clear whether these discounts match or beat competitors' offers. Given the diversity of price plans, service levels and heterogeneity of customers it appears unlikely that discounts could be precisely calibrated to match (or beat) competitor service levels and prices.[7] Further, Ofcom does not appear to allow for consumers to "game" providers by threatening switching.

We conclude that the price guarantee literature does not provide a sound basis for conclusions regarding save activity.

3.2 Price discrimination may benefit consumers

In relation to price discrimination in competitive environments Ofcom states (paragraph 5.54) that it serves two roles:

> *"First, it allows firms to charge a higher price to some customers (termed 'surplus extraction') which is bad for consumers as a whole. Second, it also allows firms to 'steal' each other's customers as price discrimination implies firms can tailor prices to their rivals' consumers (e.g. by setting lower prices for new consumers). This second effect, terms 'business stealing effect' is good for consumers."*

We focus on the first element above. The overall economic welfare impacts of price discrimination are in principle ambiguous.[8] However, there are a wide range of circumstances (particularly where price discrimination expands the total market) in which price discrimination may be beneficial to economic welfare.[9] Further, price discrimination is widespread in practice in markets including competitive markets such as the airline market where it has facilitated entry and expanded supply (in terms of frequency and locations served). A major survey of price discrimination and competition concludes:

> "*This chapter documents many theories where (under imperfect competition) price discrimination increases welfare, providing that markets are not foreclosed.*"[10]

In the context of the specific Ofcom conclusion above we note first that some customers may be charged less with price discrimination (who also might otherwise not have purchased the service) and second even those charged more may benefit if new services – such as next generation broadband – are made available on a timelier basis. Price discrimination involves both lower and higher prices, and "surplus extraction" can benefit not only producers but consumers. The reason that "surplus extraction" can be good for consumers in a dynamic market is that it improves incentives for innovation and efficient and timely investment.

[7] Ofcom suggests that discounts may be higher than to match the rival price as consumers also benefit from avoided switching costs. However, this does not account for behavioural expectations of consumers of a "better" deal, which may be required to entice customers who have decided to leave to remain with the provider.

[8] Armstrong. 2006. "Price discrimination." http://else.econ.ucl.ac.uk/papers/uploaded/222.pdf

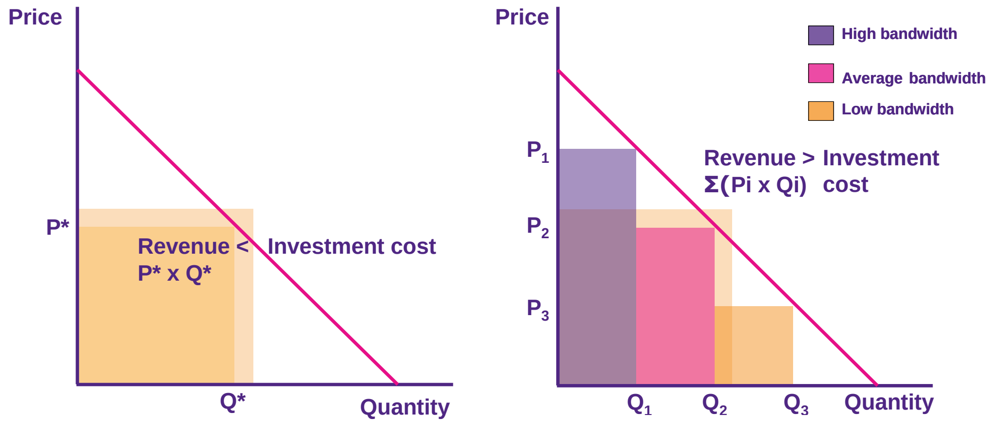
[9] Concern may also arise in relation to the distributional impacts of price discrimination amongst consumers – though this is not the focus of Ofcom or our own analysis. For a discussion of this point more generally see: Odlyzko. March 2009. "Network neutrality, search neutrality, and the never-ending conflict between efficiency and fairness in markets*". Review of Network Economics*, Volume 8(1).

[10] Lars Stole. 2007. "Price discrimination and imperfect competition," *Handbook of Industrial Organization*, vol. 3, pages 2221-2299.

Valletti (2005) analyses an example of pricing according to differences in demand and incentives to invest in R&D, and shows that *ex ante* incentives to invest increase with price differentiation.[11] However, it is important to note that literature on the optimality (or not) of price differentiation does not consider the dynamic question when investment choices are involved.

A diagrammatic representation of how price discrimination may improve incentives for efficient and timely investment in next generation broadband is provided in Figure 3-1.[12] In the left hand figure a single price would raise insufficient revenue to justify investment even though aggregate consumer willingness to pay exceeds the investment cost. In the right hand figure price discrimination according to bandwidth tiers allows sufficient surplus extraction to align investor and consumer interests.

Figure 3-1: Potential take-up and revenue without and with price differentiation



In the telecommunications market price discrimination would appear particularly well suited to contributing to a number of goals of telecommunications regulation and policy: namely furthering competition, investment, innovation and digital inclusion. In relation to next generation access Ofcom has adopted a policy of not applying price regulation given information constraints and to facilitate price experimentation (including service differentiation and price discrimination[13]).[14] Another example is the approach to regulation of conditional access and EPG listing services where Ofcom reviewed Sky's approach to Fair Reasonable and Non-discriminatory (FRND) pricing and agreed to an approach whereby recovery of common costs is according to the benefit each customer receives – an

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[11] Tommaso M. Valletti. September 2006. "Differential pricing, parallel trade, and the incentive to invest." *Journal of International Economics.* Volume 70, Issue 1. Pages 314-32.

We note that this analysis *"…assumed linear demand curves and that all markets are served under both differential and uniform pricing. This has assumed away the potential market-expanding effects of differential pricing by opening up new markets."* In relation to NGA we are of course also concerned with the opening up of new markets, a prospect that is made more likely if price discrimination is allowed.

[12] Brian Williamson. 2009. The regulation of next generation access networks and the draft Commission Recommendation. http://www.plumconsulting.co.uk/pdfs/Plum_Sept09_Regulation_of_NGA.pdf

[13] To be clear, price discrimination in this context does not include discrimination against third party access seekers by the access provider but discrimination on the basis of service levels in a manner which is not necessarily cost reflective (indeed the concept of cost reflectivity is not meaningful when applied to individual products on a multiservice platform with high joint common costs).

[14] Ofcom. October 2010. "Review of the wholesale local access market." http://stakeholders.ofcom.org.uk/binaries/consultations/wla/statement/WLA_statement.pdf

application of the Ramsey efficient price discrimination principle (for smaller customers a common rate card approach was adopted).[15]

The Ofcom conclusion regarding per se consumer detriment from price discrimination is not justified based on the economic literature, market experience or prior Ofcom consideration of other issues in communications markets.

[15] Ofcom. 2005. "Provision of technical platform services." http://stakeholders.ofcom.org.uk/binaries/consultations/tps/summary/tps.pdf

4 Dynamic competition and avoided switching costs should be considered

4.1 Dynamic competition impacts should be considered

Ofcom assumes that banning of LPL save activity or a move to GPL would benefit those customers who do not switch. This is because the benefits of competition would be spread across the whole market and operators would be expected to offer lower prices to all customers. However, this ignores the impact on consumer behaviour of rewarding switching. If, as assumed by Ofcom, competitive activity is focused on customers who give notice to switch and these customer benefit from lower prices from switching or from discounts offered via the save process, then this may induce consumer search and switching activity. If the reward to switchers is reduced (say due to banning of LPL save activity) then this may result in less consumer search and switch activity and reduced competitive pressures in the market.

Ofcom's concludes that "locked in" customers will pay high prices, while customers who switch will be offered low prices i.e. market segmented into loyal and vulnerable customers. However, Ofcom does not allow for the benefits of the lower initial prices that will be offered to attract customers. If save activity can be used to increase the "stickiness" of customers i.e. reduce the risk of churn, then it will increase the attractiveness of gaining a customer to a network and this will be reflected in introductory prices to customers in a competitive market. In assessing whether or not consumer welfare is adversely impacted by save activity in LPL processes, Ofcom needs to account for the benefit of the lower initial prices along with losses from higher ongoing prices. However, Ofcom omits this benefit in drawing its conclusions. Ofcom (paragraph 5.10) does note the use of attractive introductory offers in the broadband and mobile sectors, but does not appear take account of these benefits in reaching its conclusions.

Ofcom is concerned that low introductory prices/high ongoing price structure may distort buyer quantity choices and give consumers the wrong incentive to switch.[16] However, it is not clear that these are material concerns in regard to broadband and mobile markets. Further, broadband access and internet use are arguably experience goods (with higher willingness to pay once consumers have experienced the services) universal adoption is a policy goal.[17] Low introductory prices are therefore likely to support government policy objectives and the vision of the Digital Champion for the UK.[18]

4.2 The benefits of avoided switching costs should be considered

Ofcom considers the potential impact of hypothetically avoided switching costs on producer pricing, but does not consider the consumer benefits of switching costs actually avoided due to save activity:

[16] Ofcom cite Joseph Farrell and Paul Klemperer, "Coordination and lock-in: competition with switching costs and network effects", *Handbook of Industrial Organisation*, Volume 3, 2007.

[17] Raceonline. Manifesto for a Networked Nation." http://raceonline2012.org/sites/default/files/resources/manifesto_for_a_networked_nation_-_race_online_2012.pdf

[18] Higher ongoing prices might be a concern if they curtailed efficient consumption; however, there appears to be little evidence of existing consumers dropping broadband and mobile services.

> "*The existing provider can lower the price it is currently charging the consumer but can keep that price above the rival's offer and still prevent switching. This is because the relevant level of price that the existing provider has to match or beat is not the alternative price offered to a consumer but that price plus any switching costs consumers would incur to switch.*" Ofcom, paragraph 5.69.

The avoided cost of switching from save activity is a direct benefit to the consumer and the economy. Consumers need only engage in very limited search or hear via word of mouth to be aware of rival offers. Armed with such information and awareness of save activity they may then seek better terms from their exiting provider and avoid actual switching costs (or indeed act strategically even if they have no intention of actually switching). Switching costs avoided may be considerable and include time costs of completing the switching process, engineer site visit and new equipment such as a router. The risk of service interruption may also be material. Survey evidence indicates that interruption of service is experienced by 27% of broadband customers and a period with payment to more than one provider is experienced by 14% of broadband customers. The avoidance of such costs represents a benefit which should be considered in an overall assessment of save activity.

Appendix A: Literature on switching costs

Ofcom discusses the impact of switching costs on the structure and level of prices, entry and expansion, and consumer welfare and profit. Ofcom's views draw heavily on surveys of the literature by Farell and Klemperer (2007) and NERA (2003). Ofcom finds that:

- The structure of price implied by switching costs will be low introductory prices and high subsequent prices and these prices will distort buyers choices and give consumers wrong signals about whether to switch.
- The impact on the level of prices will depend on the maturity of the market and the possibility of price discrimination between new and existing customers.
  - In the absence of price discrimination, in growing markets, switching costs will intensify competition while in mature markets competition will be diminished and prices are likely to be higher.
  - Firms with higher market share will tend to set higher prices.
  - If price discrimination is possible, then firms will set low prices for new customers and high prices for existing customers.
- Switching costs will discourage larger scale entry (in the presence of economies of scale or network effects) but encourage new entry at the fringes (as large incumbent firms will prefer to "harvest" their customer base).
- It is likely that prices and firm profits will be higher over the lifecycle of a product.

Ofcom (paragraphs 5.31 and 5.32) concludes as follows:

> *In summary, overall the academic literature's position on switching costs is that "on balance switching costs seem more likely to increase prices" which would tend to reduce consumer welfare. Furthermore, "switching costs can segment an otherwise undifferentiated market as firms focus on their established customers and do not compete aggressively for their rivals' existing customers, letting oligopolists extract positive profits". This conclusion takes into account not only the theoretical literature, but also the empirical literature that often lends support to the view that switching costs dampen competition. In relation to entry we have noted above that switching costs tend to make entry more difficult, and where price discrimination between new and existing customers is possible, the barriers to entry are higher.*

We believe that Ofcom's views of the impact of switching costs on competition is not wholly consistent with conclusions of literature cited by Ofcom and is inconsistent with more recent academic studies. We discuss each of these issues in turn.

A.1 The impact of switching costs on competition are ambiguous

As outlined by Ofcom, there is an extensive economic literature on switching costs and implications for competition. Surveys of the literature cited by Ofcom are cautious about drawing conclusions about the impact of switching costs on competition. Switching costs may adversely impact on competition by deterring large scale entry, facilitating collusion or *ex post* competition may be insufficient to compete away rents generated by switching costs. However, both survey papers cited by Ofcom are cautious about drawing general conclusions:

> "*So one must not jump from the fact that buyers become locked in to the conclusion that there is an overall competitive problem. Nor should one draw naïve inferences from individual transaction prices, as if each transaction were the locus of ordinary competition*." (Farrell and Klemperer, page 2005)

> "*Whilst switching costs affect how competition operates in a market, they do not necessarily make markets less competitive. Switching costs can intensify competition in growing markets but even in more mature markets, the softened competition once customers are locked-in may have been, at least in part, compensated for by previously aggressive ex-ante competition*." (OFT/NERA, page 3)[19]

They are also cautious about potential intervention to address switching costs:

> "*In most cases the existence of switching costs is relatively benign as they will often not be sufficiently large to disrupt the operation of competition and no intervention will be required*." (OFT/NERA, page 5)

> "*… so policy intervention to reduce switching costs may be appropriate. For example, policy might cautiously override intellectual property rights, especially of copyright-like intellectual property that may have little inherent novelty, if those rights are used only as a tool to enforce incompatibility and so create private rewards that bear no relationship to the innovation's incremental value*" (Farrell and Klemperer, page 2006)

We have discussed the relevance of the concerns about entry and competition in section 2.6, the key point is that the impact of switching costs on a particular market will depend on the specific nature of the market and a general link between switching costs and competition should not be assumed.

A.2 Ofcom have not take full account of different findings in recent literature

Recent switching cost literature suggests that the impact of switching costs on competition is at best ambiguous and that the impact of switching costs depends on their size and nature. Dube, Hitsch and Rossi (2009) developed an empirically realistic model of dynamic price competition that allows for differentiated products and imperfect lock-in of consumers.[20] They calibrate the model with data from frequently purchased packaged goods markets. They consider that this data is ideal in the sense as it has the necessary variation to separately identify switching costs from consumer heterogeneity and consumers inertia in their brand choices. In their simulations, prices are as much as 18% lower with than without switching costs. An earlier version of this paper is cited in a footnote as a very recent development by the Farrell and Klemperer (2007) survey, but the implications of the study do not otherwise appear to be taken into account.

[19] NERA. April 2003. "Switching costs" Economic discussion paper prepared for OFT/DTI. http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft655aannexea.pdf

[20] Jean-Pierre Dubé, Günter J. Hitsch and Peter E. Rossi (2009), "Do Switching Costs Make Markets Less Competitive?", *Journal of Marketing Research*, Volume: 46 Issue: 4.

Dube *et al* find that very high levels of switching costs must prevail in order to obtain the results ”as conjectured by Klemperer”[21] Dube *et al* (2009) find that the results of lower prices with switching costs hold for switching costs of up to twice the purchase price of a product. Further research has confirmed the results obtained by Dube et al. Cabral (2008)[22] find that the numerical results obtained by Dube *et al* are general, in a dynamic model of price competition with switching costs, average price decreases for low values of switching costs. Cabral notes that the standard reference paper for dynamic competition with switching costs, Beggs and Klemperer (1992), who find that that switching costs increase prices, assumes infinite switching costs.[23]

New developments in the economic literature are raising questions about the general presumption that switching costs will usually lead to higher prices and lower welfare. Interestingly, they suggest that the results depend on the relative size of switching costs compared to produce prices and the classic results from the dynamic literature depend on an unrealistic assumption of infinite switching costs.

[21] Jean-Pierre Dubé, Günter J. Hitsch and Peter E. Rossi (2009), “Do Switching Costs Make Markets Less Competitive?”, *Journal of Marketing Research*, Volume: 46 Issue: 4.

[22] Luis Cabral. 2009. “Small Switching Costs Lead to Lower Prices.” *Journal of Marketing Research,* 46, 449-451.

[23] Beggs and Klemperer. 1992. Multi-period competition with switching costs. *Econometrica*, 60.