Ofcom's Impact Assessment of Changes to Switching Options for Fixed Voice/Broadband Lines: *An Economic Review*

Prepared for

BSkyB, BT and Virgin Media

Prepared by

Cristina Caffarra, Geoff Edwards, Hristina Dantcheva and Gareth Shier

Charles River Associates
99 Bishopsgate
London EC2M 3XD

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CRA Charles River Associates

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EXECUTIVE SUMMARY

1. Ofcom is currently consulting on a number of potential options for changes to the way switching processes currently operate for fixed voice and broadband services on Openreach's copper network. Ofcom's latest Consultation Document (Ofcom, *Consumer Switching – A consultation on proposals to change the processes for switching fixed voice and broadband providers on the Openreach copper network,* 9 February 2012) identifies a number of alleged problems with the current switching processes for these services, and outlines various alternative options that are intended to deal with these problems (at least partially). It then assesses these alternatives with regard to how well they deal with each of the problems, taking into account their costs and benefits relative to the status quo, and to each other.

2. We have been asked by a group of Communication Providers ("CPs") – BSkyB, BT and Virgin Media – to consider Ofcom's impact assessment of the likely costs and benefits associated with the implementation of these alternatives; and specifically, whether the assessment adequately motivates the preference expressed by Ofcom for a shift to a Gaining-Provider Led process with Third Party Verification (the "GPL-TPV process"). The focus of this report is thus on Ofcom's evaluation of the alleged welfare impact of the various options, which it uses to support its preference for a shift to the GPL-TPV process. We focus in our discussions on those options that remain in serious consideration by Ofcom as potential alternatives to the status quo, which we understand to be – in addition to the GPL-TPV process – also the so-called "GPL-TxC", "LPL-TxC" and "LPL-ALT" processes.[1]

3. We do not believe that Ofcom has appropriately discharged its duties with respect to producing a suitable impact assessment for intervening to modify industry practice in relation to switching of fixed voice and broadband services in the UK. The impact assessment is flawed in a number of respects, and Ofcom's appraisal of the available options should be revised in light of its current shortcomings.

4. Even on its own terms (i.e. independently of a number of errors and omissions relating to costs and benefits, and modelling issues in Ofcom's quantitative assessment) we have considerable reservations on several aspects of Ofcom's impact assessment.

5. The "traffic light" approach used to grade the performance of the various options along different dimensions is largely uninformative and inadequate as a tool to justify the finding in favour of the GPL-TPV process. First, it is unclear what weights should be put on each factor which Ofcom includes in the assessment. For instance, is "all green but for one amber light" better than "all green but for three amber lights"? This entirely depends on the relative importance of the individual features to which the "traffic light" approach is applied. Second, in light of a number of errors and omissions found in Ofcom's analysis we consider that the "wrong colours" may have been assigned to the various processes with respect to some factors. This has the effect of systematically overstating the benefits of the GPL-TxC and GPL-TPV processes, and understating the benefits of the

[1] That is to say, the so-called: Gaining Provider Led process using Transfer Codes (GPL-TxC); Leading Provider Led process using Transfer Codes (LPL-TxC); and an Alternative Leading Provider Led process in which reactive save is permitted (LPL-ALT).

harmonised LPL processes. We believe that – correcting for various biases and errors – a more favourable view might be taken of the harmonised LPL processes relative to the GPL-TPV process. At any rate the traffic light approach does not provide adequate support for the view that the GPL-TPV process should be the preferred alternative.

6. In addition, Ofcom's analysis does not demonstrate that the proposed changes to the switching processes (and in particular the adoption of the GPL-TPV process) will deliver significant quantifiable net benefits to consumers or society in general. The quantified net benefits that Ofcom reports are *extremely small* – both in absolute terms, and relative to total spending by consumers on fixed voice and broadband. Precisely because these quantified net benefits are so small, greater caution needs to be exercised in weighing the merits of the various options (particularly those that are the most intrusive and costly). What is more, the "quantified benefits" are entirely dominated by the estimated benefits of addressing a single concern (slamming).

7. Moreover, the impact assessment is unreliable as it mis-estimates the costs and benefits of the proposed options in several respects. We identify various errors and omissions in Ofcom's analysis as well as a number of concerns with the modelling choices in Ofcom's quantitative assessment.

8. We then explored the effects of correcting the "Ofcom Base Case" (as reported in Figure 38 of the Consultation Document) for those errors and omissions that we have identified and can readily quantify. Taking these corrections together we arrive at a "CRA Base Case" quantitative assessment that is very different from the Ofcom Base Case.

9. The net benefits of each of the harmonised GPL options are lower in the CRA Base Case, by around £1.2 million, while the net benefits of the harmonised LPL options are higher by around £10 million. Thus, while under the Ofcom Base Case the GPL-TPV option and the harmonised LPL options appear to have similar quantifiable net benefits, the CRA Base Case suggests that the harmonised LPL options are likely to deliver substantially greater quantifiable net benefits than the GPL-TPV option (and the other harmonised GPL options). What is more, the time taken for positive cumulative benefits to be delivered is longer for the GPL-TPV option and shorter for the harmonised LPL processes under the CRA Base Case. We conclude that Ofcom's quantitative assessment has tended to overstate the benefits of the harmonised GPL processes and understate the benefits of the harmonised LPL processes, with substantial impact on the quantified net benefits of the various options.

10. We have also explored the sensitivity of the Ofcom and CRA base cases to a large number of assumptions built into the modelling. We conclude that the results of the model are sensitive to many assumptions and that the model is consequently not a reliable basis on which judgements should be made as to whether to move from the status quo or how. In particular, we find that under plausible alternative assumptions the quantifiable net benefits of all alternative options can be *negative* compared to the status quo. For example adopting a plausible change in the estimated incidence of slamming can, *on its own*, turn the quantified net benefits of all options negative (using the "low" end of Ofcom's quantification of consumer benefits). A plausible alternative estimate of the implementation costs of the GPL-TPV option can also, on its own, turn the net benefits of the GPL-TPV option negative. The model is also sensitive to a plausible alternative estimate of the discount rate to be applied to CP costs and benefits, the time period over which costs and benefits are assessed and alternative assumptions on implementation timeframes.

11. The conclusion of our sensitivity analysis is that Ofcom's quantitative assessment is not robust to plausible alternative assumptions with respect to a number of parameters. It should therefore be used very carefully in forming a judgement as to whether any particular option should be preferred to the status quo or to any other option.

12. Overall, even after correcting errors and omissions and testing sensitivities the quantifiable net benefits of all options remain extremely small as a proportion of total consumer spending on fixed voice and broadband services. We conclude that Ofcom's quantitative assessment provides no support for Ofcom's proposal to move from the status quo to the GPL-TPV option.

13. Ofcom's impact assessment rests ultimately on a qualitative judgement that it is desirable to move from the status quo, and the GPL-TPV should be preferred over the harmonised LPL options. However, we believe the assessment of qualitative factors to be also flawed. Specifically, for reasons we explain in a companion paper which reviews Ofcom's analysis of reactive save activity[2], the conclusion that a prevention of such activity would be welfare enhancing is not well founded. Ofcom condemns reactive save activity as anticompetitive without giving adequate weight to its potential for significant pro-competitive effects. We believe Ofcom has also overstated the qualitative benefits of the GPL-TPV option relative to the harmonised LPL options with respect to switching costs/hassle. Overall we consider that Ofcom's qualitative analysis is not solid enough to justify regulatory intervention, let alone any intervention that would impose costs on the industry and have no clear beneficial effects on the competitive dynamic.

14. We conclude that Ofcom needs to exercise much greater caution in appraising the costs and risks of the various options that it is consulting on, particularly those that are the most intrusive and costly. The net benefits that Ofcom quantifies in this Consultation Document are entirely dominated by reducing the costs of slamming, while the qualitative assessment is dominated by Ofcom's negative view of reactive save activity. Since slamming is only one of a number of concerns with switching processes discussed by Ofcom, and the rejection of reactive save activity is not soundly based in economics, this seems an unsatisfactory basis on which to reach a policy decision.

15. We would urge Ofcom to reconsider its analysis and conclusions. As it stands, the impact assessment fails to clear the hurdle set by Ofcom for overcoming its bias against intervention (one of its "key regulatory principles") and is not a sound basis for a move from the status quo to the GPL-TPV option.

2 *Ofcom's Assessment of the Use of Reactive Save Activity by Suppliers of Fixed Voice and Broadband Services: An Economic Analysis,* CRA, May 2012.

1. INTRODUCTION AND OVERVIEW

16. This report has been prepared by a group of economists from Charles River Associates ("CRA"), led by Dr Cristina Caffarra, Vice President and head of CRA's European Competition Practice. The CRA team includes PhD-qualified economists with experience of competition and regulatory policy matters. We have worked extensively in the telecommunications sector, having advised clients on numerous matters including specifically in relation to investigations of anti-competitive conduct and market inquiries by both competition and regulatory authorities.

17. We have been asked by a group of Communication Providers ("CPs") – BSkyB, BT and Virgin Media – to consider Ofcom's impact assessment of the likely costs and benefits associated with the implementation of a number of possible changes to consumer switching processes for fixed voice and broadband services on Openreach's copper network.

18. Ofcom has been conducting since 2010 a consultation on the effectiveness of the switching processes currently in use in the industry. In the course of this investigation it has identified a number of alleged problems with the way these processes currently work – as a result of which (according to Ofcom) consumer switching is undermined, and competition is being dampened (in particular, as "incumbents" tend to be favoured over suppliers seeking to gain new customers). Ofcom's latest Consultation Document[3] is consulting on a number of potential options for changes to the way switching processes currently operate on Openreach's copper network, which are intended to facilitate switching by consumers and render the process more "competitively neutral". Ofcom proposes that future parts of its review will consider switching involving cable technologies, next generation access technologies, mobile and pay TV services. Therefore the scope of Ofcom's current consultation is limited in the context of communications services generally.

19. The Consultation Document identifies a number of potential options for changes to the existing switching processes, and also includes an evaluation of respective "costs" and "benefits" of the options being considered for the purpose of an impact assessment. Section 7 of the Consultation Document contains a description of the approach used by Ofcom to identify costs and benefits of the various options, with Annex 8 providing more detail on the methodology. Estimates of costs which would be incurred by CPs for the implementation of each option have been generated by CSMG, a consultancy retained by Ofcom.

20. The focus of this report is not the analysis conducted by Ofcom of alleged problems with the current switching processes. The focus is rather, specifically, on the assessment of the alleged welfare impact of the various options which Ofcom puts forward to support its conclusions that a shift to a Gaining-Provider Led process with Third Party Verification (the "GPL-TPV process") would be desirable, and overall deliver the largest net benefits. We understand that a separate review of the specific cost implications of the GPL-TPV process for CPs has been conducted by PWC for BSkyB, BT and Virgin Media, and we

3 Ofcom, *Consumer Switching – A consultation on proposals to change the processes for switching fixed voice and broadband providers on the Openreach copper network,* 9 February 2012 (hereafter the "Consultation Document").

therefore do not focus in this report on evaluating the quantification of implementation costs undertaken in the CSMG cost model. We do rely however on our own separate analysis of Ofcom's view (as laid out in Section 5 of the Consultation Document) that "reactive save activities" (i.e. counteroffers to customers declaring an intention to switch) which are possible under the current switching processes are in fact problematic, and indeed a major reason for introducing the changes that Ofcom proposes (see *Ofcom's Assessment of the Use of Reactive Save Activity by Suppliers of Fixed Voice and Broadband Services: An Economic Analysis,* CRA, May 2012).

21. Our focus is on those options that remain in serious consideration by Ofcom as potential alternatives to the status quo, which we understand to be the GPL-TPV and GPL-TxC processes and the LPL-TxC and LPL-ALT processes.

22. The remainder of this report is structured as follows.

- We start in Section 2 with a brief discussion of the role of impact assessments to inform proposals for regulatory intervention.
- Section 3 then summarises Ofcom's approach and preliminary conclusions of its impact assessment of consumer switching options, and sets out our concerns with the robustness of Ofcom's quantitative and qualitative assessments.
- Our analysis starts in Section 4 with a high-level view of Ofcom's impact assessment. We discuss the limitations of Ofcom's reliance on a "traffic light" approach, the partial quantification of the net benefits of alternative approaches (relative to the status quo), the finding that such net benefits are in fact small and barely distinguishable from zero, and the ultimate reliance on a qualitative assessment to reach the conclusion that the GPL-TPV process is the preferred regulatory solution to the identified problems with consumer switching.
- In Section 5 we consider Ofcom's "traffic light" assessment of how well each of the options deals with the identified problems. We explain the weaknesses of this analysis, and present a reasonable alternative view.
- Sections 6 and 7 identify significant errors and omissions of costs and benefits in Ofcom's quantitative analysis.
- Section 8 discusses a number of modelling issues that we have identified with Ofcom's quantification of net benefits.
- Section 9 presents a scenario and sensitivity analysis of Ofcom's quantitative assessment of costs and benefits, which explores the robustness of Ofcom's findings to changes in assumptions.
- In Section 10 we comment on Ofcom's qualitative assessment of costs and benefits that were not quantified.
- Finally, Section 11 concludes.

2. STANDARDS FOR GOOD IMPACT ASSESSMENT

23. A regulatory impact assessment is the process of identifying and juxtaposing the positive and negative impacts of proposals for regulatory intervention (relative to the status quo and relative to alternative options) to determine whether regulatory intervention is welfare enhancing, and, if so, which option is likely to result in the greatest increase in welfare.

The process of conducting regulatory impact assessment is based on recognition of (a) the fact that the introduction of new regulation is likely to involve costs as well as delivering benefits, and (b) the value of the discipline involved in systematically identifying and evaluating the costs and benefits of proposals for new regulation. Regulatory impact assessments are now commonplace in a wide variety of contexts.

24. The 2003 Communications Act imposes on Ofcom a legal duty to carry out impact assessments (Section 7) and to have regard to the best regulatory practice (Section 3(3)(b)) for each proposed intervention. Ofcom has indeed produced its own guidance on how it will approach regulatory impact assessments in the course of its decision making.[4] In this, Ofcom states (paragraph 1.1):

> *The decisions which Ofcom makes can impose significant costs on our stakeholders and it is important for us to think very carefully before adding to the burden of regulation. One of our key regulatory principles is that we have a bias against intervention. This means that a high hurdle must be overcome before we regulate. If intervention is justified, we aim to choose the least intrusive means of achieving our objectives, recognising the potential for regulation to reduce competition.*

25. Ofcom's guidance proceeds to quote from the Better Regulation Task Force:[5]

> *The option of not intervening…should always be seriously considered. Sometimes the fact that a market is working imperfectly is used to justify taking action. But no market ever works perfectly, while the effects of … regulation and its unintended consequences, may be worse than the effects of the imperfect market.*

26. All regulatory intervention which is ultimately intrusive and carries implementation costs therefore needs to be underpinned by a reliable impact assessment. This should include a robust quantitative assessment. While we recognise that not all impacts are capable of quantification, it is well accepted as a matter of guidance and best practice in the UK, EU and US that where feasible a quantitative assessment of costs and benefits is an important part of any regulator's analysis of a proposed intervention. As Ofcom itself states (paragraph 5.30):

> *Costs and benefits should be quantified where possible, although benefits in particular may be hard to quantify as they tend to be more uncertain and are often spread across many citizens or consumers.*
>
> *Precise quantification will often not be possible and we should avoid spurious accuracy. Where quantification is possible, it will often be partial i.e. it is not possible to quantify all the relevant costs and benefits.*
>
> *Where costs and benefits cannot be quantified precisely, we should aim to give broad estimates e.g. in the order of £x million, or ranges of costs and benefits e.g. between £x million and £y million. It is also helpful to form an idea of the relative size of the respective costs and benefits. As a minimum, costs and benefits should be described qualitatively.*

27. The EC Impact Assessment Guidelines of January 2009 states:[6]

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4 Ofcom, *Better Policy Making: Ofcom's Approach to Impact Assessment*, 21 July 2005.

5 Better Regulation Task Force, *Imaginative Thinking for Better Regulation*, September 2003, page 4.

> *[g]ood quality data – facts as well as figures – are an essential part of any IA. You need to define the problem and the baseline scenario, and to identify the impacts of alternative options for dealing with the problem. Particular attention needs to be paid to quality and credibility of data.*

28. This said, we agree with Ofcom that the assessment of costs and benefits needs to be approached in a way that is proportionate; that a quantitative assessment needs to be robust to plausible changes in assumptions; and that it is important to consider risks and unintended consequences of intervention.[7]

29. Any attempt at quantification which relies on a number of assumptions necessarily requires extensive sensitivity analysis so that the robustness of the results to changes in the model's inputs can be ascertained. Sensitivity analysis is essential to establish the level of confidence that can be placed in the conclusions reached. If the results of a quantitative model are very sensitive to changes in certain inputs, the values of which are not known with certainty, then the reliability of the model is undermined. In its guidelines for the submission of economic evidence,[8] which are intended to apply both to parties and to economists within the Commission, the Chief Economist Team at DG Competition is very clear on the need to present results with extensive sensitivities. Section 2.5 on "Robustness" explicitly says:

> *an economic model should generally be accompanied by a sensitivity analysis with respect to the key variables, to the extent only the plausible but not the exact value of each variable can be determined. All results from the sensitivity analysis conducted should also be reported and not only those that support the argument.*

30. We note in addition that the CAT has previously found that Ofcom's assessments and decisions must be robust to "profound and rigorous" scrutiny.[9]

31. In the rest of this report we explain why we do not believe that – notwithstanding its own guidance – Ofcom has appropriately discharged its duties with respect to producing a suitable impact assessment for intervening to modify industry practice in relation to switching of fixed voice and broadband services in the UK. The impact assessment is flawed in several respects, and Ofcom's appraisal of the available options should be revised in light of its current shortcomings.

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6 European Commission, *Impact Assessment Guidelines*, 15 January 2009, page 18.

7 As Ofcom states (paragraph 5.30): *"In analysing costs and benefits it is necessary to apply the principle of proportionality, which means it will often be appropriate to focus on the most significant costs and benefits and not spend a disproportionate amount of time considering costs and benefits which are relatively minor".* And: *"Where there is significant uncertainty about the impact of an option, it is good practice to present an analysis of the sensitivity of the results to changes in some of the most important variables. This should help ensure that the Impact Assessment and the final policy decision are more robust".*

And at paragraph 5.31: "*It is also important to consider the risks relating to particular options, for example, the risk that the intended impact would not be achieved or would be delayed by problems with implementation. An option which has a high net benefit, but which carries a high risk, might be less attractive than a lower risk option which has a lower net benefit. The degree of risk will be influenced by the likelihood of it occurring and the extent to which it may be possible to mitigate the risk".*

8 DG Competition, *Best Practice for the Submission of Economic Evidence and Data Collection*, 2010, available at: http://ec.europa.eu/competition/consultations/2010_best_practices/best_practice_submissions.pdf.

9 See paragraph 164 of *Hutchison 3G UK Ltd v Office of Communications* [2008] CAT 11 and paragraphs 36 and 46 of *Vodafone Ltd v Office of Communications* [2008] CAT 22.

3. OFCOM'S IMPACT ASSESSMENT

3.1. Ofcom's proposals for changes to switching processes for fixed voice and broadband services

32. Ofcom's latest Consultation Document on Consumer Switching provides a review of various processes which are currently available to customers (depending on a number of factors) for switching their fixed voice/broadband provider on Openreach's copper network (namely, the "Notification of Transfer" (NoT) process, the "Migration Authorisation Code" (MAC) process and the "Cease and Reprovide" process).

33. Ofcom concludes that the status quo is highly unsatisfactory as it involves multiple processes which are likely to get even more complex as technology continues to evolve, with significant costs to consumers in terms of the cost and hassle of changing provider, and with likely distortions of competition (a "lack of competitive neutrality") between providers. In addition to the problems of multiple switching processes, Ofcom classifies the other "problems" it identified in its review of switching processes under five main categories:

    (a) "Back end system deficiencies" – i.e. mainly "behind the scenes" problems with identifying the correct line to be taken over, an issue that mainly concerns erroneous transfers (ETs) of lines in the context of homemoves and which "will get worse" in the future as new services and technologies are rolled out;

    (b) "Insufficient consumer consent and slamming" – i.e. consumers being switched to another provider without their explicit knowledge or consent (other than by ETs), so that hassle and costs (including possibly an early termination charge if switching occurs in a minimum contract period) are incurred by consumers in rectifying the problem;

    (c) "Lack of awareness of the implications of switching" – e.g. in terms of service implications for other products, or contractual liabilities including early termination charges (ETCs);

    (d) "Other forms of hassle" – mainly time and frustration associated with delays; and

    (e) "Reactive save and its impact on competition" – i.e. the concern that the "losing provider" is able to make offers during the formal switching process, and retain the customer. According to Ofcom the process "damages competition" as "new entrants and providers looking to grow" face higher customer acquisition costs and are frustrated in their efforts to expand their customer base.

34. Ofcom identifies a list of possible options for modifications to the switching processes which are intended to deal with the problems above. These include, in addition to a "do nothing" option and marginal "enhancements to the current NoT and MAC" options, the following:

    Gaining provider led options:

    - 2a: an "enhanced Notice of Transfer" process with some modifications to e.g. reduce opportunities for slamming, and elimination of the MAC option;
    - 2b: a "Gaining Provider Led Transfer code" ("GPL-TxC") process, where the customer wishing to switch would provide information about themselves (service to be switched, address, etc.) to the GP which would be then entered into a "hub" (centralised database) to identify the correct services to be switched, and the GP

would then forward the request to the LP. A transfer code (TxC) would be provided by the LP via the hub to the GP and the switching would occur following relevant communications to the customer;

- 2c: a "Unique Service Number" (USN) to be provided to customers on their bill, which would be used to assist providers to identify the services to be switched, and the customer details. The customer would pass its USN to the GP (thereby providing its consent for the switch) who would then go via the "hub" and the process would continue as above;
- 2d: a "Third Party Validation" (TPV) model in which following a successful "sale", the GP would hand over the customer to an independent body which would record the customer consent, and electronically confirm to the GP that consent has been validated. The process would then continue with the GP requesting a TxC from the hub and then on as above;

Losing provider led options:

- 3a: a "Losing Provider Led Transfer code" ("LPL-TxC") process, whereby the customer requests the LP directly for a TxC using a dedicated line, and then authentication and consent validation are performed by the LP. LP retention activity (i.e. reactive save activity) would not be permitted. The TxC would be provided by a TxC Issuing Authority, then the LP would pass it on to the customer who would then pass it to the GP (Ofcom describes this as similar to an "enhanced MAC process");
- 3b: an "Alternative" Losing Provider Led ("LPL-ALT") model, proposed by a number of CPs, which differs from 3a in that customers wishing to switch would call a dedicated line and would be given the option of receiving their TxC without listening to any save offers. Calls would be conducted subject to a Service Level Agreement that would be "agreed, reported and auditable". The TxC would be provided to the customers directly or within 2 hours by SMS/email, and an assessment of the "impact of ceasing the service" would also be offered to the customer verbally or by SMS/email.

35. In Section 7 of the Consultation Document, Ofcom considers how each of these different options fare in terms of addressing the problems it has identified with the current switching processes. For reasons discussed in the next sub-section, Ofcom comes to the conclusion that the GPL-TPV option (2d above) "*delivers the best in terms of dealing with all of the problems investigated*" (paragraph 1.37), and even taking into account the higher implementation costs to CPs, it "*delivers the highest net benefit to consumers (considering both quantitative and qualitative assessment of the costs and benefits of the options)*" (paragraph 1.37), so it is "*the most proportionate way of dealing with the problems identified*" (paragraph 1.40). The GPL-TxC process (option 2b) is regarded as next best, but inadequate in terms of the protection it provides against slamming. LP-led options are considered as generally inferior, essentially on grounds that they do not offer "fully effective" protection against reactive save activities, and they involve "greater hassle for consumers".

3.2. Ofcom's approach to measuring the net impact of the various options

36. Ofcom's analysis of the respective performance of the various options is essentially in three parts.

37. First, (in paragraphs 7.17 to 7.134 of the Consultation Document) Ofcom discusses the extent to which each of the options it has identified deals with each of the problems it has found to exist, including quantitative assessment in places as well as qualitative observations. The upshot of this Ofcom analysis is essentially a matrix in which the various options are scored against each of the problems using a "traffic light" coding system ("green" if the option "deals largely with the problem", "amber" if it "partly deals with the problem", and "red" if it does "not deal with the problem"). This matrix, reproduced below, is interpreted by Ofcom as showing that the GPL-TPV option performs best as it apparently deals well with all problems (except for the customer fully understanding the "implications of switching"). Other options perform variedly in terms of solving the various problems, with "greens", "ambers" and "reds" in different places – notably with LP-led activities performing poorly (or very poorly) in terms of dealing with the "problem" of "reactive save", and "switching costs/hassle" as well as "lack of reliability" at the back-end system level. As discussed in more detail in Section 5 below, it is unclear that equal weight should be placed on each "traffic light" aspect, thus Ofcom's interpretation of the matrix according to which the GPL-TPV option performs best is called into question.

Table 1: Reproduction of Figure 36 of Ofcom's February 2012 Consultation Document

Problem	Option 1a – Current NoT and MAC	Option 1b – Enhanced NoT and MAC	Option 2a – Enhanced NoT harmonised	Option 2b – GPL-TxC	Option 2c – USN	Option 2d – TPV	Option 3a – LPL-TxC	Option 3b – LPL-ALT
Multiple switching processes	Red	Red	Green	Green	Green	Green	Green	Green
Back end system deficiencies:								
- Lack of reliability	Red	Amber	Amber	Green	Amber	Green	Amber	Amber
- Loss of service	Red	Amber	Amber	Green	Green	Green	Green	Green
- Lack of competitive neutrality	Red	Red	Red	Green	Green	Green	Green	Green
Customer consent	Red	Red	Red	Red	Amber	Green	Green	Green
Implications of switching	Amber	Amber	Amber	Amber	Amber	Amber	Green	Green
Varying and unnecessary switching costs/hassle	Amber	Amber	Green	Green	Amber	Green	Amber	Amber
Reactive save activity	Amber	Amber	Green	Green	Green	Green	Amber	Red

Source: Ofcom, Consumer Switching Consultation Document, page 138

38. In addition, Ofcom has attempted to provide a ("partial" and "indicative")[10] quantitative assessment of the respective costs and benefits of the various options. The results are set out in Figure 38 of the Consultation Document (reproduced below), which summarises the more detailed calculations laid out by Ofcom in Annex 8. Essentially, Ofcom calculates first a total benefit arising from the main options (2b, 2c, 2d and 3a-b) in terms both of reduction in consumer costs, and reduction in CP costs. For instance, an option that "deals well" with the problem of "back end system deficiencies" will entail lower costs both for consumers and CPs in dealing with erroneous transfers. Ofcom also considers an estimate of the implementation costs for the CPs of putting in place the various options, as developed by consultancy CSMG. The difference between total benefits and implementation costs for CPs is the net benefit, which is expressed in terms of annuitised NPV (assuming 10 years of ongoing costs and benefits and discounting at a "social rate of time preference" of 3.5%). In Sections 6, 7 and 8 below we discuss our concerns that there are various errors and omissions and modelling issues in this quantification and in Section 9 we model alternative scenarios and sensitivities to explore the effects of these concerns.

10 See Consultation Document, paragraphs 7.148, 7.151, 7.170, A8.85 in particular, which all discuss the partial nature of Ofcom's quantification. The word "indicative" is also used more than 30 times in the document.

Table 2: Reproduction of Figure 38 of Ofcom's February 2012 Consultation Document

	2b - GPL-TxC	2c - USN	2d - TPV	3a-b - LPL-TxC and LPL-ALT
Benefits:				
Back end system deficiencies				
Reduction in consumer costs due to ETs	0.5 - 1.1	0	0.5 - 1.1	0
Reduction in CP costs due to ETs	2.9	0	2.9	0
Customer consent				
Reduction/increase in consumer cost due to slamming	-0.4 - -0.1	1.2 - 3.5	1.4 - 4.2	1.5 - 4.4
Reduction/increase in CP cost due to slamming	-0.9	8.4	10.1	10.7
Reduction in consumer cost - no need for Cancel Other	0.1	0.2	0.2	0.2
Reduction in CP costs - no need for Cancel Other	0.9	0.9	0.9	0.9
Implications for switching				
Reduction in consumer harm due to better information about ETCs	0	0	0	0.4
Varying and unnecessary switching costs/hassle				
Decrease/increase in time spent on the switching process (consumer)	0.5	-0.6	-0.5	-1.4
Reduction in consumer cost - no abuse of Cancel Other	0.03	0.03	0.03	0.03
Reduction in CP costs - no abuse of Cancel Other	0.1	0.1	0.1	0.1
Total benefits (consumers)	***0.8 - 1.6***	***0.7 - 3.1***	***1.7 - 5.1***	***0.7 - 3.7***
Total benefits (CPs)	***3***	***9.4***	***14***	***11.6***
Total benefits (consumers and CPs)	**3.8 - 4.6**	**10.1 - 12.5**	**15.7 - 19.1**	**12.4 - 15.3**
Costs:				
Implementation costs for CPs (annuitised)	4.8	8.4 - 9.4	11.4	7.6 - 7.7
Annuitised NPV	**-1.2 - -0.3**	**0.3 - 3.6**	**3.8 - 7.1**	**4.2 - 7.2**

Source: Ofcom, Consumer Switching Consultation Document, page 145

39. Third, (in paragraphs 7.153 to 7.170 of the Consultation Document) Ofcom conducts a largely qualitative comparison of the options, with a particular focus on qualitative differences between the GPL-TPV and the two harmonised LPL options, to reach its conclusion in favour of the GPL-TPV option. Ofcom argues that the GPL-TPV option has "significant qualitative benefits" relative to the harmonised LPL options and that despite the GPL-TPV option being "a more intrusive option to implement" this "may be justified by the long term consumer benefits that the TPV would bring". In Section 9.1 we provide our opinion on Ofcom's qualitative assessment of the options and explain why we think that the conclusion that Ofcom has reached is not justified.

3.3. Concerns with Ofcom's approach

40. We have a number of concerns with the way in which Ofcom lays out its impact assessment and reaches its preliminary conclusions.

41. Our concerns include:

- Ofcom's "traffic light" approach does not justify the finding in favour of the GPL-TPV process. First, it is unclear what weights should be put on each factor. Second, in light of the errors and omissions in Ofcom's analysis we consider that "wrong" colours are assigned to the various processes with respect to some factors. This systematically overstates the benefits of the GPL-TxC and GPL-TPV processes, and understates the benefits of the harmonised LPL processes. In particular, we disagree with Ofcom's assessments and colour codings with respect to "erroneous transfers resulting from back end systems deficiencies", "varying/unnecessary switching costs/hassle" and "reactive save". In short, we consider that a more favourable view might be taken of the harmonised LPL processes relative to the GPL-TPV process. Certainly, the traffic light approach does not provide clear support for the view that the GPL-TPV process should be the preferred alternative.
- Ofcom does not demonstrate that the proposed changes to the switching processes (and in particular the adoption of the GPL-TPV process) will deliver significant quantifiable net benefits to consumers or society in general. The quantified net benefits that Ofcom reports are extremely small – in absolute terms, and relative to total spending by consumers on fixed voice and broadband. Because Ofcom's quantified net benefits are so small, greater caution needs to be exercised in weighing the various options (particularly those that are the most intrusive and costly). What is more, these benefits are entirely dominated by the estimated benefits of addressing a single concern (slamming).
- Ofcom's attempt at quantifying the costs and benefits of alternative processes is also flawed by a number of errors, omissions, and modelling deficiencies. Remodelling Ofcom's quantitative assessment to address several of these errors/omissions, and test sensitivities, leads to very different results under reasonable assumptions. After correcting for a number of errors and omissions that we have been able to quantify we find that the harmonised LPL options are likely to deliver substantially greater quantifiable net benefits than any of the harmonised GPL options (including the GPL-TPV option). In addition, Ofcom failed to perform a sensitivity analysis, which would have revealed that its quantitative assessment is not robust to a number of plausible alternative assumptions. In particular, we find that under plausible alternative assumptions the quantifiable net benefits of all options can be negative compared to the status quo. For example, using a plausible alternative estimate of the incidence of slamming can, on its own, turn the quantified net benefits of all options negative. The "big picture" is that even after correcting errors and omissions and testing scenarios and sensitivities, in all cases the quantifiable net benefits of all options remain extremely small. Ofcom's quantitative assessment therefore provides no support for Ofcom's proposal to move from the status quo to the GPL-TPV option.
- Ofcom's impact assessment rests ultimately on qualitative assessments and judgements. There are several flaws with the assessment of qualitative factors. For reasons we explain in our companion paper, Ofcom's analysis of reactive save activities is economically unsound. Ofcom condemns reactive save activities as

anticompetitive without adequately considering their significant pro-competitive implications. Ofcom has also overstated the qualitative benefits of the GPL-TPV option relative to the harmonised LPL options with respect to switching costs/hassle. Overall Ofcom's qualitative analysis appears too superficial and uncertain to justify regulatory intervention.

42. We believe that these issues render Ofcom's impact assessment unreliable and on this basis we consider that Ofcom's conclusion that a move to a GPL-TPV process is the preferable option for the evolution of consumer switching is unwarranted.

4. OFCOM'S IMPACT ASSESSMENT IS INCONCLUSIVE ON ITS OWN TERMS

43. In Sections 6, 7 and 8 we report on our review of the details of Ofcom's impact assessment, identifying a number of errors, omissions and modelling issues. But before doing that, we think it is important to highlight that even on its own terms (i.e. before we consider these more detailed issues) the impact assessment offered in the Consultation Document is not suitable to underpin robust conclusions on which specific option is materially preferable.

44. As described previously, Ofcom's Consultation Document identifies a number of alleged problems with current switching processes and discusses a number of alternative switching process options. It then reviews the extent to which each of the options deals with each of the problems and purports to weigh their costs and benefits relative to the status quo and each other (Section 7).

45. Ofcom's approach to evaluating the "pros and cons" of moving away from the status quo, and if so, with which option, is comprised of three steps.

    (a) First, Ofcom produces a "traffic light" summary of the extent to which it considers that each option deals with each problem (reproduced in Section 3 above).

    (b) Second, Ofcom reports on the results of an effort to (partially) quantify the net benefits of each option relative to the status quo (also reproduced in Section 3 above). The implementation costs for CPs of each option are built in here.

    (c) Finally, under a heading "Comparison of the options and conclusions" Ofcom quickly narrows its options to GPL-TPV vs. the two harmonised LPL processes (LPL-TxC and LPL-ALT). As based on Ofcom's own quantitative analysis these appear to deliver similar quantified net benefits, Ofcom specifically focuses on the qualitative differences between these options.

46. We are concerned that – even before getting into errors and omissions and modelling issues – this approach does not allow for systematic, well-founded comparisons between the available options. We therefore do not see how this approach can be used to support Ofcom's conclusion that specific modifications are required of the switching process. We discuss each step in turn below.

4.1. Ofcom's "traffic light" analysis has limited analytical content

47. A "traffic light approach" has significant (and very obvious) limitations. First, it provides no sense of the relative "value" which is to be placed on solving each "problem". Even if an option were to provide green lights with respect to all problems, a traffic light analysis

cannot even be used to conclude that the option is preferable to the status quo: without some sense of quantification of the benefits, we cannot be sure that they outweigh the implementation costs.

48. Second, again because it does not assign values or weights to each problem, the approach can only be used to compare options in limited circumstances. Assuming equivalent implementation costs, an option that deals well with all problems but for, say, problem A might be considered preferable to an option that cannot deal with problem A or problem B. However, the first option cannot be considered preferable to an option that deals well with problem A, but not with problems B or C.

49. A "traffic light" approach is inherently very crude and lacks generality. Any use it may have is narrowly limited to (a) comparing options with each other (not with the status quo), (b) situations when implementation costs of the various options are the same and (c) situations where one option performs as well or better than other options with respect to all problems (not when a number of options perform better than each other with respect to different problems).

4.2. The quantified net benefits of the various alternatives are small, and unrelated to the focus of Ofcom's consultation

50. In addition to the traffic light methodology, Ofcom seeks some degree of quantification of the benefits of dealing with each problem and the costs of implementing each option. However, the attempt at quantification does not support anything like a well-founded choice between alternative switching processes. First, as Ofcom admits, its quantification is only "partial" and "indicative". While of course this is still only a consultation document, and moreover certain features of the assessment may not lend themselves to precise quantification (or may carry a significant level of uncertainty), the fact remains that all regulatory intervention which is ultimately intrusive, and carries implementation costs needs to be underpinned by a reliable impact assessment (including a quantitative assessment) showing significant benefits from moving from the status quo to the proposed intervention – indeed, Ofcom is, we understand, under a duty to conduct such an assessment.

51. Importantly, the quantified net benefits that Ofcom estimates are so small relative to the value that consumers clearly place on fixed voice and broadband services as to cast significant doubt on Ofcom's conclusion in favour of the GPL-TPV option. The quantified net benefits of at most around £7 million on an annuitised basis represent just 0.059% (i.e. less than one-tenth of one percent) of retail fixed voice and residential broadband revenues.[11] The quantified net benefits for consumers – at most, £5.1 million per year – are even smaller, representing less than one-twentieth of one percent (just 0.043%) of retail fixed voice and residential broadband revenues.

52. The net benefits that Ofcom has quantified are in effect virtually indistinguishable from zero in the context of the value that consumers place on the services. Yet even well-justified intervention has inevitable associated costs, such as potential distortions caused by the regulatory process itself and adverse effects on incentives in the affected markets that escape formal modelling or quantification. The bar for intervention needs thus to be

11 Data on total retail fixed voice revenues (£9.3 billion) and residential broadband revenues (£2.5 billion) are from Ofcom, *Communications Market Report 2011*, Figure 5.39 (page 283) and Figure 5.57 (page 294).

set relatively high, requiring significant positive benefits to be demonstrated to a reasonable degree of certainty before regulation can be imposed. Because Ofcom's own quantification of net benefits is so startlingly small, great caution needs to be exercised in terms of the costs and risks of the various options.

53. Third, even if one were to take seriously the quantified consumer net benefits despite their small size, it is apparent that they are explained practically in their entirety by an estimated reduction in consumer costs due to erroneous transfers and deliberate slamming (with a reduction in deliberate slamming contributing 82% of the net benefit).[12] Whether looking only at net benefits to consumers or net benefits overall (to consumers and CPs) the quantified benefits of reducing slamming explain virtually all of the net benefits for those options that have positive net benefits. Without the effects of reducing slamming all options would produce negative net benefits to consumers and CPs.

54. Thus if one was to look at Ofcom's quantification of net benefits on its own, the conclusion to draw would be that the justification for moving away from the status quo must be to deal with slamming. However the problems of slamming are only one of a number of concerns discussed by Ofcom in the Consultation. Indeed, Ofcom begins its Consultation Document with the following statement that makes no mention of slamming (paragraphs 1.1 and 1.2):

> *1.1 Competitive communications markets are more likely to work well for consumers when it is quick and easy to switch between providers.*
>
> *1.2 Our review of consumer switching processes is focussed on ensuring that:*
>
> - *An individual consumer's experience of switching communications services is easy and hassle free.*
> - *Switching processes do not get in the way of providers competing with each other to deliver benefits to all consumers in terms of lower prices, greater choice, innovation and value for money.*

55. The remainder of the introductory paragraphs to the Consultation Document continue to focus on ease of switching and choice. The problem of slamming is not even mentioned, yet slamming entirely dominates the quantified net benefits of the options that Ofcom is consulting on.

56. What is more, on plausible alternative assumptions as to the incidence of slamming all options produce negative net benefits relative to the status quo (when using the low end of Ofcom's range for the financial harm caused by slamming). That is, even assuming that some of the options would deal with slamming – GPL-TPV and the harmonised LPL options in particular – under plausible assumptions as to the incidence of slamming (and using the low end of Ofcom's range for the financial harm caused by slamming) the benefits of dealing with slamming do not outweigh net costs of other effects in Ofcom's own model. It is clear from this simple sensitivity that Ofcom's quantitative analysis provides no basis whatsoever for a move away from the status quo.

12 It is possible for more than 100% of the quantified consumer benefits to be explained, because the options also have additional costs for consumers.

4.3. The qualitative assessment (on which Ofcom's conclusions ultimately turn) is flawed

57. Given the limitations both of the traffic light analysis and the attempted quantification, Ofcom's impact assessment ultimately stands or falls on Ofcom's qualitative assessment, which is to say on Ofcom's judgement. Ofcom relies indeed on qualitative arguments to conclude not only that it is desirable to move away from the status quo (for a variety of reasons, including those listed in paragraph 7.130) but also that the GPL-TPV option should be preferred over the two harmonised LPL options.

58. Ofcom's qualitative analysis is much too superficial and uncertain to justify intervention that would impose costs on the industry and, perhaps more importantly, affect its competitive dynamic. In Section 9.1 of this report we elaborate on the concerns that we have with Ofcom's qualitative assessment. The following paragraphs summarise our findings there.

59. Ofcom identifies two respects in which it considers the GPL-TPV option is "superior" to the harmonised LPL option (reactive save and switching costs/hassle), and one respect in which the harmonised LPL options trump the GPL-TPV option (awareness of the implications of switching). The logic appears to be *either* that two apples are better than an orange *or, more likely*, that reactive save as an issue trumps all else. Indeed, by the end of the impact assessment, one is left wondering whether Ofcom's entire consultation is really about a view of the world that reactive save activities must be banned at all cost (and if slamming can be prevented at the same time, that is a bonus).

60. We think that in fact the "count" is, at best for GPL-TPV, one-nil in favour of the harmonised LPL options. As we discuss in Sections 6.4 (time spent on switching), 7.1 (cancelled orders), 7.3 (failed TPV calls), 7.5 (delays in switching) and 7.6 (reactive save direct cost savings), Ofcom has overstated the benefits of the GPL-TPV option with regard to switching costs/hassle. And as we discuss in our companion report on reactive save, Ofcom has mis-understood the significance and nature of reactive save – the prevention of reactive save under the GPL-TPV process may well be detrimental to consumer welfare.

5. OFCOM'S "TRAFFIC LIGHT" ASSESSMENT

61. Ofcom reports that based on its traffic light summary of how the options perform against the various problems the GPL-TPV option "delivers best" in terms of dealing with the problems and that "none of the other options scores as highly across all the identified issues": see paragraphs 7.121-7.133 of the consultation. This interpretation of the traffic light summary in Figure 36 of the consultation is flawed in our view, and the conclusion Ofcom reaches in favour of the GPL-TPV process is not justified.

62. As discussed in Section 4.1, the lack of any values or weights for dealing with each problem means that the traffic light analytical approach provides extremely limited guidance, both with respect to whether a move from the status quo is required (given that there are implementation costs of each option) and with respect to which of the alternative options is preferable.

63. According to Ofcom, the GPL-TPV option gets an amber light only with respect to one problem: implications of switching. As we will explain in Section 7.1 below, failure to adequately communicate the implications of switching is likely to have a greater impact than Ofcom has considered. By contrast, the harmonised LPL processes are assigned

amber (or red) lights with respect to three problems. However, crucially, these are three *different* problems. Ofcom has not explained why the three problems that it considers are not adequately addressed by the harmonised LPL options outweigh the problem of inadequate communication of the implications of switching under the GPL-TPV option. The quantification exercise can go some way towards this, but not fully, as not all effects can be quantified. Ofcom nonetheless assumes that one amber light is better than three. There is no justification for this when the lights are against different problems.

64. Quite apart from this fundamental criticism of interpretation, we do not agree in the first place with the colour codings that Ofcom has assigned to the various options with respect to several of the problems. In the following table we have revised the traffic light assessment in accordance with our own findings. The main changes we have made are the following.

- **Lack of reliability in back end systems with respect to erroneous transfers.** We consider that the GPL-TxC and GPL-TPV processes might well be assigned an amber light (in place of green) as it is not clear to us that the centralised databases envisioned under these processes would address as large a proportion of ETs that arise in the context of homemoves as Ofcom assumes. Alternatively, if a green light is retained for these processes then a green light might also be assigned to the harmonised LPL processes, as they may well deal as well with ETs that arise in the context of homemoves as the GPL-TxC and GPL-TPV options. See our discussion of this issue in Section 6.1.

- **Varying and unnecessary switching costs/hassle.** All of the harmonised GPL processes (including the GPL-TxC and GPL-TPV processes) might well be assigned an amber light (instead of green) because it is not clear that they reduce switching costs/hassle more than the harmonised LPL processes. See our discussion in Section 10.2.

- **Reactive save activity.** Our companion report on reactive save activity (see *Ofcom's Assessment of the Use of Reactive Save Activity by Suppliers of Fixed Voice and Broadband Services: An Economic Analysis,* CRA, May 2012) explains that the prevention of reactive save activity may be detrimental to consumer welfare. Given this, we think it is appropriate to assign the same colour to options that allow and ban reactive save. This colour could be green, amber or red, but for the sake of presentation we choose amber.

65. Implementing these adjustments, we see no reason why the "traffic light" assessment could not look as follows.

Table 3: Adjusted version of Figure 36 of Ofcom's February 2012 Consultation Document

Problem	Option 1a – Current NoT and MAC	Option 1b – Enhanced NoT and MAC	Option 2a – Enhanced NoT harmonised	Option 2b – GPL-TxC	Option 2c – USN	Option 2d – TPV	Option 3a – LPL-TxC	Option 3b – LPL-ALT
Multiple switching processes	Red	Red	Green	Green	Green	Green	Green	Green
Back end system deficiencies:								
- Lack of reliability	Red	Amber	Amber	Amber	Amber	Amber	Amber	Amber
- Loss of service	Red	Amber	Amber	Green	Green	Green	Green	Green
- Lack of competitive neutrality	Red	Red	Red	Green	Green	Green	Green	Green
Customer consent	Red	Red	Red	Red	Amber	Green	Green	Green
Implications of switching	Amber	Amber	Amber	Amber	Amber	Amber	Green	Green
Varying and unnecessary switching costs/hassle	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber
Reactive save activity	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber

Source: CRA

66. Even with these (reasonable) amendments, one would still only be able to reach conclusions on how the various options may rank relative to each other (assuming equal implementation costs); but not with respect to whether the options are sufficiently superior to the status quo (given the implementation costs). Since the harmonised LPL processes may score as well or better than all other options with respect to all problems, one could conclude that these should be preferred. There is no clear support, in any event, for the view that the GPL-TPV process should be the preferred alternative.

6. ERRORS IN THE ANALYSIS OF INCLUDED COSTS AND BENEFITS

67. In this section we identify a number of respects in which those costs and benefits that Ofcom has considered have been assessed erroneously.

6.1. Erroneous transfers

68. For clarity, it is important to distinguish between "slams" that are the result of erroneous transfers and "slams" that are not. We refer to "erroneous transfers" as instances where there has been some customer consent to the switch of CP, but the wrong line has been taken over or switched. Our understanding is that there are three main explanations for slamming incidences:

    (a) Erroneous transfers due to back-end systems deficiencies and customer and CP errors in the working line takeover (WLTO) homemove process, leading to failures to identify and takeover the correct line;

    (b) Erroneous transfers due to back-end systems deficiencies and errors unrelated to the WLTO process, leading to failures to identify and switch the correct line; and

    (c) What we will call "non-erroneous" transfers without customer consent. These include deliberate slams and also a range of other instances where there is no customer agreement to switch CP, but that are not necessarily deliberate slams (e.g. failures to cancel),

69. As Ofcom has observed, from the customer perspective a slam and an erroneous transfer (however caused) may look very similar. We deal with the two kinds of erroneous transfers in this sub-section and with non-erroneous transfers without customer consent in the following sub-section.

6.1.1. Erroneous transfers resulting from the WLTO homemove process

70. According to Ofcom the vast majority of erroneous transfers (ETs) are due to back-end systems deficiencies in the context of homemoves under the WLTO process.[13] This is confirmed, for BT at least, in a study of **[● Redacted]** potential slamming complaints to Ofcom over the six month period from May to October 2011. BT's own investigation of these cases found that **[● Redacted]** were ETs in the context of WLTOs[14] and **[● Redacted]** were ETs unrelated to the WLTO process.[15] The vast majority of the remaining **[● Redacted]** complaints proved to be unfounded following BT's investigation of them (as we discuss further in Section 6.2 below). These figures suggest that for BT, around **[● Redacted]** of ETs between May and October 2011 were due to WLTOs. This can be explained in large part because in the context of a WLTO the customer is less likely to have access to the CLI for the line at the new home and the CP is more likely to have to rely only on address information. Identifying lines using only address information can be unreliable (e.g. in cases where multiple lines enter the same building).

71. Homemove concerns are somewhat distinct from concerns with switching processes. First, some homemoves do involve switching: i.e. when a consumer moving home

13 Consultation Document, paragraph 4.62.

14 BT considers that **[● Redacted]** of the complaints were ETs in the context of WLTOs. Of these, **[● Redacted]** were categorised by BT as either advisor error, customer error or system error, **[● Redacted]** were due to the date of the homemove being wrong initially or being moved, **[● Redacted]** were due to some other CP issue and for the final **[● Redacted]**, BT was unable to determine the cause of the complaint.

15 The figure of **[● Redacted]** complaints due to ETs unrelated to the WLTO process comprises the following: **[● Redacted]** complaints due to advisor error and **[● Redacted]** complaints due to process issues.

decides simultaneously to switch CP. BSkyB estimates that **[● Redacted]**. It is likely that many of these new BSkyB customers were switching from another CP simultaneously with their homemove. BT has advised us that **[● Redacted]**.[16] BT, Sky and Virgin Media recently jointly commissioned market research into consumer experiences and preferences regarding switching of landline telephone and broadband services (the "BT/Sky/VM telephone and broadband market study"). This online research surveyed 2,000 respondents during May 2012 and included questions on homemoves. The survey found that 10% of the respondents moved home in the previous 12 months, and of these, 34% simultaneously switched their landline telephone provider.

72. However, in these cases there are differences from normal switching that render many of Ofcom's concerns for consumer switching redundant. There is no risk of deliberate slamming with a homemove and Ofcom's concerns for reactive save under LPL processes are also not valid in this context. There is no need for the existing CP of the homemover moving in (the LP in a *switching* context)[17] to be contacted to provide a switching code (whether a MAC code under the current processes or a TxC in the harmonised LPL processes that are being consulted on) since the homemover moving in is not retaining the line at their old home.[18] The homemover moving in will, however, have to contact their existing CP (the LP) in order to cancel service at their old home, and at that point the LP may have an opportunity to "save" by offering a deal for service at the new home. However that will be the case regardless of which option is chosen to deal with switching (whether it is the status quo, a harmonised GPL process or a harmonised LPL process).

73. Second, the remainder of homemoves do not involve consumers switching their CP. These homemoves are therefore beyond the strict scope of a consultation on consumer switching.

74. Nonetheless, we understand that Ofcom sees an opportunity to take advantage of the centralised databases that would be created in the GPL-TxC and GPL-TPV options to deal with ETs due to homemoves. These databases would, we understand, contain CLI, address, customer name and other account information for each line. Ofcom suggests that the centralised databases could be queried to identify the correct line to be taken over on the basis of CLI, address and account information supplied by the homemover moving in. We discuss this further below.

Ofcom's assignment of benefits to the GPL-TxC and GPL-TPV processes

75. Ofcom considers that the GPL-TxC and GPL-TPV processes (and in particular, the centralised databases envisioned in these processes) would reduce ETs by 80% (paragraph A8.47). For this reason Ofcom has assigned benefits to the GPL-TxC and

16 We understand that **[● Redacted]**. Even so, BT informs us that **[● Redacted]**.

17 The LP in a switching sense will be different from the LP in a homemove sense. The LP in the homemove sense will be the CP serving the homemover moving out.

18 Under the harmonised LPL processes the LP may also – as we discuss below – take this opportunity to give the consumer a TxC, but this would be for the benefit of the household moving *in* to the home that the consumer is leaving, not for the purpose of the consumer switching to a new CP.

GPL-TPV options in the form of reducing consumer and CP costs due to ETs.[19] We understand that Ofcom's 80% estimate is based on root cause analysis conducted by OTA that suggests that roughly 80% of ETs are due to an agent selecting the wrong address (with the other 20% due to issues unlikely to be dealt with by any TxC process).

76. We are not convinced that the centralised databases in the GPL-TxC and GPL-TPV processes will reduce ETs by as much as Ofcom suggests. We therefore suspect that Ofcom has overestimated the benefits of the GPL-TxC and GPL-TPV processes with respect to reducing the costs of ETs.

77. Ofcom explains the ability of the GPL-TxC and GPL-TPV processes to deal with ETs as follows (paragraph 7.26):

> *Because the database supporting these switching processes contains both address and customer account information we would expect that these options would deal with the most significant current source of ETs (i.e. homemover ETs).* ***The incoming occupier can supply the address of the property to the GP who can use the database to identify the correct line.*** *The line is then tagged with the TxC to ensure the correct line is taken over. (Emphasis added.)*

78. The emphasised sentence in the above quote may be recognition by Ofcom that while the centralised databases will contain more than just address information, the homemover moving in may still only be able to provide address information and reliance will therefore often continue to be placed on address information, just as in the WLTO process. Elsewhere, however, Ofcom appears to assume that the customer moving in can also supply information on the CLI, name and/or the account reference of the homemover moving out to enhance identification.[20]

79. The current WLTO process allows for identification of the line to take over based on CLIs and/or address information (unless the line to be taken over is an MPF line in which case CLI matching may not be possible). In those cases where the homemover moving in cannot in addition provide the *name or account reference* of the homemover moving out, it is unclear to us how these processes would overcome the current WLTO ET problem at all. Paragraph A8.7 of Ofcom's consultation states that ETs under the existing WLTO process are largely "caused by an over-reliance on address-matching tools to identify the correct assets". The GPL-TxC and GPL-TPV processes would also rely on address-matching tools and offer no improvement over the existing WLTO process in those instances where the homemover moving in does not have the name or account information of the homemover moving out. This seems quite likely where a rented property is involved. In those cases it is just as likely for the CP to place an order for the wrong address and for ETs to occur under these processes as under the existing WLTO process. We note that under the GPL-TPV process the TPV would not be used for a useful purpose in the context of homemoves: i.e. the homemover *moving out* would not

19 In doing so Ofcom may have overlooked an important CP cost of ETs. In paragraph A8.44 of the Consultation Document Ofcom considers the time cost for the CP of a discussion with the homemover moving in to rearrange for the line to be taken over and explain what went wrong the first time. However there would also be additional Openreach charges for re-ordering the takeover of the line.

20 See the description of Option 2d in Figure 35 on page 115 of the Consultation Document, and the note below the table denoted "***".

be asked to validate the switch through the TPV. There is therefore no advantage conferred by the existence of the TPV in the GPL-TPV option.

80. Indeed, the GPL-TxC and GPL-TPV processes could potentially make ETs in the context of homemoves more virulent. Under the current WLTO process, it is recognised by CPs that a WLTO does not have the explicit consent of the current user of the line. Under the GPL-TxC and GPL-TPV processes, a TxC would be issued against the line and this may be taken as a signal of consent, adding legitimacy to the order, when it remains the case that the current user of the line has not given explicit consent.

81. The only instances where the centralised databases under the GPL-TxC and GPL-TPV processes might improve over the status quo for homemoves would be where (a) the customer moving in does not have the CLI, but somehow happens to have the name and/or account information of the customer moving out (although we wonder about the implications of the latter for account security as this might allow the customer moving in to make unauthorised changes to the account of the customer moving out); or (b) the customer moving in can provide the CLI of the line to the new home and where the line to the new home is currently an MPF line. It is unclear how common these cases would be, but we do not think they would represent 100% of the cases where ETs currently occur due to the wrong address being selected. This is because we do not think that on every occasion when the customer moving in does not know the CLI they will nonetheless be able to obtain the name or account reference of the homemover moving out. Yet that is the implication of Ofcom's assumption of an 80% reduction in ETs.

82. As explained, for the GPL-TxC and GPL-TPV options to improve on the status quo the homemover moving in must somehow obtain information from the one moving out (whether this is their name or account reference). This presumably requires some cooperation from the homemover moving out. It is puzzling, therefore, that Ofcom should assign benefits to the GPL-TxC and GPL-TPV options yet deny any benefits to the harmonised LPL options on the basis that the latter require the cooperation of the homemover moving out. We discuss the harmonised LPL options below.

Ofcom's assignment of no benefits to the harmonised LPL processes

83. Ofcom has assigned no benefits to the harmonised LPL processes with respect to reducing ETs. Ofcom's current view is that the harmonised LPL processes would not effectively deal with homemoves on the basis that (a) these processes require the homemover moving out to obtain a TxC from their existing CP and pass this on to the homemover moving in, and (b) the homemover moving out has little motivation to do this. Ofcom therefore assumes that the existing WLTO process (with its risk of ETs) would need to be retained to support all homemoves and assigns no benefits to the harmonised LPL processes in terms of reducing ETs.

84. This seems to us an overly narrow conclusion. Ofcom has too quickly dismissed the possibility that even if the harmonised LPL processes could not address all ETs in the context of homemoves, they could address a substantial proportion if these processes were to operate in parallel with the existing WLTO process. This is because there would be at least some cases where the homemover moving out would be willing to assist the homemover moving in by actively obtaining or passively receiving a TxC from his/her CP. In cases where a TxC is passed to the homemover moving in, the potential for ETs would be eliminated as the TxC would ensure that the correct assets would be taken over.

85. The *active case* would be where, after being contacted by the homemover moving in, the homemover moving out actively seeks a TxC from his/her CP and passes it on to the homemover moving in. This seems more likely to us to occur in the case of private home sales by the current occupier, than in the case of tenancies.

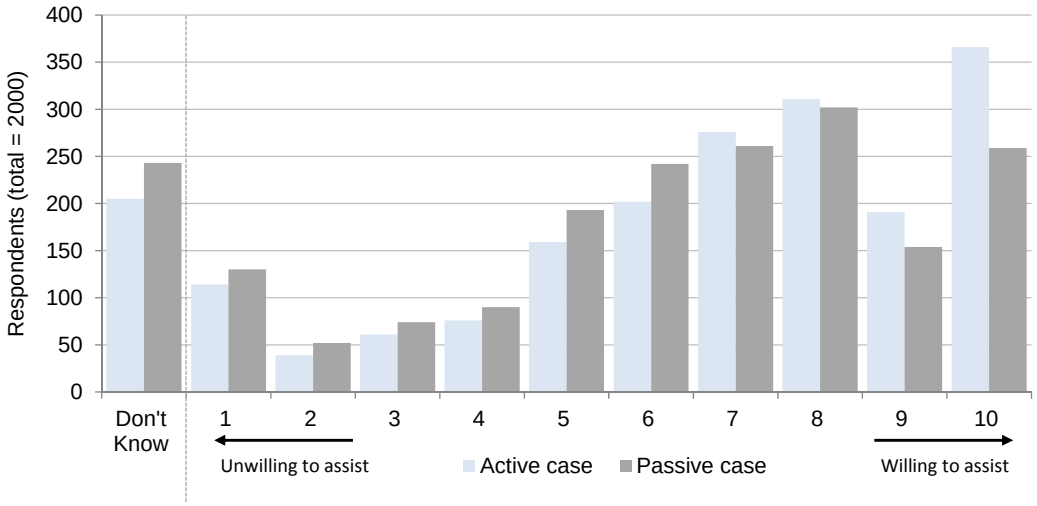
86. The *passive case* would require even less effort by the homemover moving out. Most homemovers moving out will contact their existing CP to cancel service on the line and in many (perhaps most) cases, to arrange service at their new home. Under the harmonised LPL processes there could be a requirement that, if contacted, the CP must provide the homemover moving out with a TxC that they may pass on to their sales/letting agent; or just keep in case the homemover moving in contacts them for it. The homemover moving in may then obtain the TxC by contacting the sales/letting agent or the homemover moving out. This passive case seems to us no more onerous on the homemover moving out than that which is required of them in order for the GPL-TxC or GPL-TPV options to improve on the status quo (i.e. provision of name or account reference).

87. In order to encourage the homemover moving in to seek a TxC from the homemover moving out (or from the letting agent or sales agent), the CP could explain to them that the TxC will guarantee they will get service on the day that they move in. If the homemover moving in cannot obtain a TxC, then the move can still be attempted under the existing WLTO process, although with no guarantee that the correct line will be identified.

88. The BT/Sky/VM telephone and broadband market study also included questions (asked of all respondents, not just those who had moved home in the past 12 months) on the respondents' willingness as a homemover moving out to either *actively* or *passively* assist in the provision of a TxC to a homemover moving in.[21] As Figure 1 below shows, a significant proportion of respondents report a willingness to assist. For the *active* case, 57% of respondents report a willingness to assist (scores of 7-10) while for the *passive* case 49% of respondents report such willingness.

21 The "active" question was: "At the request of the person moving into your home, you contact your current provider to obtain a transfer code - you then pass this to the person moving into your home. This transfer code would enable the person moving into your home to have a working line on the day they moved in. To what extent do you agree or disagree that you would be happy to do this?" The "passive" question was: "Whilst discussing moving or cancelling services at your old address, your current provider gives you a transfer code and asks you to either give it to your current letting agent or just keep it in case the person who will be moving into your home contacts you and asks for it. To what extent do you agree or disagree that you would be happy to do this?"

Figure 1: Extent to which respondents would be willing (actively or passively) to assist homemovers moving in to obtain a TxC to facilitate an LPL switch



Source: BT/Sky/VM telephone and broadband market study

89. What is more, even in those cases where the homemover moving out is not contactable or not cooperative, it may be possible to further reduce WLTO related ETs through coordination between the CPs. If a homemover moving in cannot get a TxC from the homemover moving out, then instead of the current WLTO process the CP of the homemover moving in could follow a different process in which it looks up the incumbent provider of the line of the new home by searching Openreach's Dialogue Services on address (and, if available, CLI) and requests a TxC from the incumbent provider (providing the name of the homemover moving out, if known, to aid identification of the correct line by the incumbent provider). If the incumbent provider has already had notice from the homemover moving out of the move, then the incumbent provider may issue the TxC. If not, then there is immediate reason to question if the line is the right line, and the incumbent provider would need to try to check with the homemover moving out to confirm their intention to move out before issuing the TxC and passing it to the CP of the homemover moving in.

90. We conclude that Ofcom has erred in assigning no benefits to the harmonised LPL processes in reducing ETs related to WLTOs. At a minimum, some benefits should be assigned in recognition that some homemovers moving out will actively or passively assist the homemover moving in. Even in those cases where the homemover moving out is not contactable or not cooperative, there is the potential for homemove ETs to be reduced under the harmonised LPL processes through cooperation between the CPs directly.

6.1.2. Erroneous transfers unrelated to WLTOs

91. Although homemoves are the main case, ETs also occur (less frequently) in the context of pure switching processes.

92. As Ofcom has acknowledged, ETs are not an issue in LPL switching processes, because the requirement for the customer to obtain a code from the LP (whether a MAC under

current processes or the TxC contemplated under the harmonised LPL processes) and provide this to the GP ensures accurate identification of the line to be switched.[22] Therefore, the issue arises at the moment only under the GPL NoT process.

93. In pure switching contexts under the GPL NoT process the customer is likely to give the GP the correct address and the correct CLI as well. If the line is not an MPF line, then an erroneous transfer is unlikely as the GP will be able to use Openreach's Dialogue Services to identify the correct line using the CLI. However, when the line is an MPF line, problems may arise as Openreach does not maintain these CLIs. If the GP fails to find a match for the CLI in the Openreach database, the GP may rely instead on address information to identify the line and this can lead to the wrong line being identified (e.g. where there are multiple MPF lines entering a single building). The result is that the current GPL NoT switching process can lead to ETs when consumers are switching from an MPF provider. The centralised databases created for the GPL-TxC and GPL-TPV processes may be able to reduce these ETs because these may aid correct identification of MPF lines. The harmonised LPL processes would certainly deal with these ETs, since the LP will be able to identify the correct line and tag it with the TxC.

94. However, as Ofcom has acknowledged, these cases are the minority of ET cases.[23] Indeed, BT informs us that its review of **[● Redacted]** complaints to Ofcom concerning potential slamming found that **[● Redacted]** were ETs due to lack of visibility of CLIs in pure switching contexts. These represent just **[● Redacted]** of the **[● Redacted]** ET cases that BT identified.[24]

95. As just mentioned, these ETs would be entirely addressed under the harmonised LPL processes, since these would require the switching customer to obtain a TxC from the LP, at which point the correct line would be identified. We therefore think that Ofcom should assign at least the same benefit to the harmonised LPL processes as to the GPL-TxC and GPL-TPV processes with regard to reducing ETs unrelated to WLTOs.

6.1.3. Modelling alternative assumptions on the effectiveness of the various processes in reducing ETs

96. As explained above, based on the BT complaints data **[● Redacted]** of ETs are those that are unrelated to WLTOs and might potentially be addressed by the centralised databases envisioned for the GPL-TxC and GPL-TPV options. Ofcom assumes that a further **[● Redacted]** (i.e. to reach a total of 80%) of ETs would be addressed by the GPL-TxC and GPL-TPV options. These would be ETs that currently occur in the context of the WLTO homemove process. Ofcom's assumption appears to be that in *all* homemoves the homemover moving in would receive some cooperation from the homemover moving out, as the name or account information of the homemover moving

22 We note paragraph 4.45 of the consultation, in particular, which states that "[t]he MAC process currently appears to provide a reliable method of ensuring correct service and asset identification at present for broadband switches where both the GP and LP use IPStream or SMPF technologies (i.e. within the Openreach managed copper network).

23 Consultation Document, paragraph 4.62.

24 The **[● Redacted]** figure is the sum of the WLTO ET cases (**[● Redacted]**) and the non-WLTO ET cases (**[● Redacted]**). See footnotes 14 and 15 above.

out is needed in order for these options to improve on the status quo, and the 80% assumption appears to assume that such information will always be available.

97. As mentioned, Ofcom assumes that the harmonised LPL options would not deal with *any* ETs. We consider this to be an overly narrow position, particularly in light of Ofcom's treatment of the GPL-TxC and GPL-TPV options. First, the harmonised LPL options would certainly deal with ETs unrelated to WLTOs that currently occur due to lack of visibility of CLIs. There seems no reason to treat the harmonised GPL and harmonised LPL options differently in this regard. Second, for the reasons explained above, the harmonised LPL options would also be capable of dealing with many WLTO ETs, both where there is cooperation from the homemover moving out, and in some cases even where there is not. We therefore think it is reasonable to consider an alternative assumption that the harmonised LPL options would be able to deal with a proportion of ETs. We cannot be precise about the proportion, but we consider in our modelling an assumption that the harmonised LPL options would deal with 40% of ETs. This is half the number of ETs that Ofcom assumes could be dealt with by the GPL-TxC and GPL-TPV options, and is, if anything, conservative in light of the results of the BT/Sky/VM telephone and broadband market study and the potential, even in those cases where the homemover moving out is not contactable or not cooperative, to further reduce WLTO related ETs through coordination between CPs.

6.2. Non-erroneous transfers without customer consent

98. In this sub-section we deal with what we call "non-erroneous" transfers that lack any customer consent. These include deliberate slams and also a range of other instances where there is no customer agreement to switch CP, but that are not necessarily deliberate slams (e.g. failures to cancel).

99. There are also some occasions where there is consent to switch, but the customer is given incorrect information about the services to be purchased (e.g. that calls to country A will be 5p per minute when they are in fact 10p per minute under the plan) or is provided with a different service option than the option that they agreed to (e.g. a less suitable or more expensive call plan). We will refer to these occasions as "within service mis-sells". It is important to note that these types of actions may sometimes appear in the Ofcom complaints data as potential slams[25] (and may also appear when consumers respond to survey questions asking them if they have been slammed). However, if slams are defined as customers being sold a service that they did not agree to buy, then these are not slams, as in these cases the customer agreed to buy the service, but was misinformed or was sold the wrong service option. In any event, these do not seem to be types of actions that Ofcom appears to be concerned with when Ofcom considers slamming and it

25 For example, BT informs us that of **[● Redacted]** complaints between May and October 2011 that Ofcom classified as potential slams, **[● Redacted]** were in fact mis-sells rather than no agreement slams.

is unlikely that they will be dealt with under any of the switching processes that Ofcom is consulting on.[26]

100. Ofcom's quantitative assessment of the net benefits of the various switching processes is *driven mainly* by its quantification of the benefits of each process in *reducing slamming*. For example, for the GPL-TPV process, benefits from reducing slamming account for 80-81% of the total benefits for consumers and CPs according to the Ofcom analysis (depending on whether the low end or high end of the range of consumer benefits is used). For the harmonised LPL processes the proportion of total benefits explained by reducing slamming exceeds 100% (because Ofcom has assessed some of the other "benefits" of these processes to be negative).

101. Given that there are also implementation costs associated with all of the harmonised processes, if the benefits of reducing slamming were removed from Ofcom's assessment the annuitised NPV of all of the options would be negative and Ofcom's quantitative results would provide no basis whatsoever to move from the status quo. The quantified benefits of reducing slamming therefore appear to be a significant contributor to Ofcom's decision to move from the status quo, at least as far as Ofcom's quantitative assessment points Ofcom in that direction. It is therefore particularly important to consider the robustness of Ofcom's estimates of the benefits of reducing slamming.

102. The Ofcom results depend critically on Ofcom's estimate of the incidence of slamming under current processes. There is, however, considerable uncertainty regarding this estimate. First, Ofcom relies on the mean estimate of the incidence of slamming (or, more strictly, the incidence of customers reporting to have experienced the symptoms of slamming) from its 2011 slamming research (2.5%). Ofcom does not explain why this should be preferred over the mean estimate from its 2010 consumer research (1.84%) (or a simple average of the two). As Ofcom notes, the margins for error in the estimates (as reported in Figure 15 on page 60 of the Consultation Document) make it difficult to measure a change in the incidence of slamming between 2010 and 2011.[27] It is therefore unclear why Ofcom should rely solely on the higher 2011 figure. Moreover, as we discuss in Section 8.3 below, instead of using just the mean estimate for 2011, Ofcom should have considered the confidence interval ranges across the 2010 and 2011 research (1.19% to 3.42%) to reflect the uncertainty in the estimates. The BT/Sky/VM telephone and broadband market study included questions on recent slamming incidences. Out of 2,000 respondents to the online survey, only 12 (i.e. 0.6%) reported their landline telephone and/or their broadband service being switched without consent in the previous

26 It is conceivable that they might be dealt with under the GPL-TPV process, but for this to be the case the TPV agents would need to have complete and up-to-date details of all the offers of all CPs, and be able to confirm all those details with each customer, which we think would take considerable time, and add significant complexity. Moreover, it would be likely to open the TPV system to a higher rate of TPV call failures as customers may become confused when the details are presented to them again. See our discussion of failed calls to the TPV agency in Section 7.3. We assume that instead the TPV agency will just confirm with the customer which broad services are to be switched (e.g. broadband or calls), rather than be familiar with the full details of all offers of all CPs.

27 Consultation Document, paragraph 4.108, page 59.

12 months.[28] This gives further reason to question the quality of the (much higher) estimates that Ofcom is relying upon. It also suggests that even the lower bound of Ofcom's 2010 consumer research (1.19%) is a plausible estimate of the incidence of slamming, and as such should be modelled as a sensitivity.

103. Second, Ofcom's estimate that around 80% of instances in which customers experienced the symptoms of slamming were likely to be deliberate slams (with the other 20% being ETs) has weak foundations. Again, sensitivity tests on this figure would have been advisable. Ofcom's 20% estimate for the proportion of ETs appears to be a rough average of a figure of 16% from Ofcom's 2011 slamming research and a figure of 25% from Ofcom's analysis of complaints data (see paragraph A8.8 of the Consultation Document).

104. With regard to the slamming research, the first point to make is that the sample size is very small (just 48 respondents). Further, there appears to be a significant flaw in Ofcom's calculation. Ofcom's approach is to consider as ETs the proportion of respondents who reported receiving a welcome letter addressed to someone else or having their phone number changed without their knowledge or consent. Although there was the option for respondents to say "none of these", Ofcom appears to implicitly assume that where a respondent said "don't know/can't remember" it was not an ET. This does not seem to us a safe assumption. Instead, we think that Ofcom should have excluded the "don't know/can't remember" responses from its calculation. Doing so changes the proportion of respondents that received a welcome letter or had their phone number changed from 16.7% to 26.7%.

105. Turning to the 25% figure from Ofcom's analysis of complaints data, according to BSkyB, **[● Redacted]**. We also note that BT's analysis of **[● Redacted]** potential slamming complaints against it between May and October 2011 found that **[● Redacted]**.[29] In other words, for BT at least, considerably more than half of potential slamming complaints appear to be ETs, and, moreover, **[● Redacted]**. The latter finding suggests that Ofcom may have too quickly assumed that any instance in which a customer alleges to have been slammed is either an ET or a deliberate slam (see paragraphs 4.109 and A8.7-A8.8 of the Consultation Document). Instead of a two-way split of customer reports of slamming experiences (i.e. between ETs and deliberate slams) a three-way split might have been more appropriate: i.e. between (i) erroneous transfers where there was some customer consent, but the wrong line was switched in error; (ii) slams without any customer consent; and (iii) erroneous reporting of slamming experiences.

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28 A further ten respondents reported that they had switched landline telephone and/or broadband provider, but that they did not know whether they had done so intentionally or if the switch had occurred without their consent. It is unclear whether these respondents were switched without their consent or not. If they were all treated as having been switched without their consent, this would raise the proportion of respondents switched without their consent to 1.1%.

29 Of the **[● Redacted]** BT potential slamming complaints, **[● Redacted]** were cases in which there was no basis at all for a slamming or erroneous transfer complaint against BT. In **[● Redacted]** cases BT's investigations revealed that BT had taken appropriate action. In a further **[● Redacted]** cases BT had taken no action at all to cause a complaint. And in **[● Redacted]** further cases the complaints concerned billing or other non-transfer issues.

106. Our conclusion is that there is *significant uncertainty* regarding the extent of slamming, and therefore, significant uncertainty regarding the benefits of the GPL-TPV and harmonised LPL processes in reducing slamming. Ofcom has relied on point estimates of slamming volumes, and point estimates of the proportion of these that are ETs rather than deliberate slams. Given this uncertainty, we think it would have been advisable for Ofcom to have modelled *ranges* instead of point estimates for these critical variables. In our sensitivity analysis in Section 9.2.3 below, we examine the effect of using the confidence interval ranges across the 2010 and 2011 research (1.19% to 3.42%) to reflect the uncertainty in the estimates of slamming incidence. As we report there, using the 2010 mean instead of the 2011 mean turns the quantified net benefits of all of the harmonised GPL options negative under the low end of Ofcom's estimates of consumer benefits.[30] Using the lower bound of the 99% confidence interval of either the 2010 estimate (1.19%) or the 2011 estimate (1.58%) turns the quantified net benefits of *all* options negative under the low end of Ofcom's estimates of consumer benefits. Given the sensitivity of the modelling results to alternative plausible assumptions on slamming incidence, it is important that further investigation into the incidence of slamming is conducted (as Ofcom is planning to do)[31] and greater accuracy is achieved in the estimate of slamming incidence.

107. We have also considered Ofcom's assessments that the GPL-TPV process would deal with 90% of slamming compared to 95% for the harmonised LPL processes. Ofcom's figure of 90% for the GPL-TPV process is based on US experience with a TPV process. We note that there are differences between the tools available for customer verification that can be used by the TPV and those available to the LP which may explain why TPV processes may not be able to prevent all deliberate attempts to slam by a GP impersonating a customer. Whereas the LP is able to verify the customer's identity using not only a password associated with the customer's account with the LP, but also security questions and other information such as the past history of the customer, the TPV is unlikely to have access to this information and may therefore sometimes fail correctly to validate the identity of the caller when the caller is determined to impersonate the customer. This explains a figure less than 100% for the GPL-TPV process. However Ofcom has offered no reason in the Consultation Document why the figure assigned to the harmonised LPL processes should be less than 100%. For a GP to successfully impersonate a customer to pass through LP verification would require at least access to the customer's bills with the LP. A GP intent on deliberately slamming a customer may sometimes have this information, however BT estimates that such cases would be rare and would represent no more than 1% of cases. In our modelling we therefore assume that the harmonised LPL processes would overcome 99% of deliberate slams.

30 The low end of Ofcom's estimates of consumer benefits from the various switching processes is produced when Ofcom's median estimate of the financial harm due to slamming and ETs is used. The high end is produced when the mean estimate of the financial harm due to slamming and ETs is used.

31 Consultation Document, paragraph 4.118.

6.3. Estimation of reduction in consumer harm due to avoided ETCs

108. Ofcom assumes that just 1.1% of switchers that paid ETCs would not have switched if they were aware of the ETCs before the switch occurred.[32] In the Consultation Document Ofcom refers to its 2011 broadband consumer research as the source for its estimates that "21% of broadband and broadband/fixed voice bundle switchers who paid an ETC were unaware of ETCs when the switch happened" and "5% of these switchers were unhappy with the decision to switch as a result". By multiplying these two figures, Ofcom arrives at its result that 1.1% of switchers unwillingly paid ETCs.

109. Ofcom has explained that the 21% figure for the percentage of switchers who paid an ETC and found out about it *after the switch occurred* is a subset of the 42% that paid an ETC and found out about it *after they signed up* with a new provider, that this subset "is based on weighted data" and that the analysis is not available in the 2011 broadband consumer research spreadsheet that accompanied the 2011 broadband consumer research presentation.[33] It is unclear to us which questions in the survey Ofcom could have used to identify this subset, since there is no question that we can see that clearly identifies the point in time of the switch occurring.

110. Ofcom has also explained that the 5% figure for switchers that were unhappy with the decision to switch as a result (and therefore "unwillingly" incurred ETCs) is based on bespoke analysis that is again not available in the 2011 broadband consumer research spreadsheet.[34] Again, it is unclear to us how Ofcom could identify a base of switchers that were unaware of ETCs *when the switch happened* to perform this analysis on.

111. As we observe in Section 9.2.6 below, sensitivity tests on the 1.1% assumption find that changes in this assumption can move the results substantially. Given the importance of this assumption for the model results, we think that Ofcom should make the basis for the assumption clearer and more transparent, and also acknowledge the sensitivity of the model to changes in the assumption.[35]

6.4. Time spent on the switching process

112. Ofcom's impact assessment finds a more negative effect of time spent on the switching process for the harmonised LPL processes than for the harmonised GPL processes. We note, however, that Ofcom has overlooked a number of time costs associated with the processes. We discuss separately the following:

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32 Paragraph A8.51 of the Consultation Document and email from Matthew Chapman (Ofcom) to Grant Forsyth (BSkyB) at 1.14pm on 11 May 2012 titled "RE: Consumer Switching: question on analysis".

33 Email from Matthew Chapman (Ofcom) to Grant Forsyth (BSkyB) at 1.14pm on 11 May 2012 titled "RE: Consumer Switching: question on analysis".

34 Email from Matthew Chapman (Ofcom) to Grant Forsyth (BSkyB) at 1.14pm on 11 May 2012 titled "RE: Consumer Switching: question on analysis".

35 In its modelling Ofcom has included a saving to consumers for ETCs avoided under the harmonised LPL processes, but not a corresponding cost for additional ETCs incurred under the harmonised GPL processes. We think that this is an oversight, as more switches will occur under GPL processes compared to the status quo and therefore more ETCs are likely to be paid than Ofcom has accounted for. This marginally overstates the net benefits of the harmonised GPL processes. Since the effect of this overstatement is small, we have not included a correction for this in our modelling.

(a) time spent calling the LP under the harmonised GPL processes;

(b) time spent calling the GP under harmonised LPL processes; and

(c) time spent reviewing written communications from the LP under the harmonised GPL processes.

6.4.1. Time spent calling the LP under the harmonised GPL processes

113. Ofcom explains that it has not modelled the time cost of calls to LPs under the harmonised GPL processes, since such calls would be outside the formal switching process and at the discretion of the consumer. This is not a sound basis for ignoring this time cost. If consumers will make such calls (e.g. to understand better the implications of switching such as ETCs or because they are not aware that the call to the LP is not required) then there are real costs incurred by consumers and CPs that are associated with the harmonised GPL processes. What matters is what customers *actually do*, not what they *hypothetically could do*. Our view is therefore that Ofcom has underestimated the time spent on the switching process under the harmonised GPL options by failing to include the time costs to consumers and CPs of calls to LPs.

114. According to Ofcom's broadband consumer research 2011 (slide 14) 77% of consumers still call the LP under the current GPL NoT switching process, even though they do not need to as part of this process. We see no reason for this percentage to be different under the harmonised GPL processes. We therefore include in our modelling an assumption that, compared to the status quo, under the harmonised GPL processes 77% of orders to switch that are currently SMPF to SMPF orders (i.e. those under the LPL MAC process) will involve time spent by consumers and CPs on such calls. For our modelling of the net benefits of the harmonised LPL processes we assume that 77% of orders that are currently "to WLR" or "to MPF" orders will no longer involve time spent on such calls. Additionally, we include a sensitivity test of these assumptions in section 9.2.6 that reduces the rate of calls to the LP in the GPL processes to 40%.[36]

115. We use data supplied by BT on the average length of calls to BT as the LP under the GPL NoT process to estimate an average length of these calls to LPs of **[● Redacted]** minutes.[37] We find that on the basis of these assumptions the harmonised GPL options will result in additional time costs (i.e. time costs additional to what Ofcom has modelled) for consumers and CPs of £0.2m and £0.6m respectively. The harmonised LPL options

36 We have chosen 40% as a "round figure" approximation of the proportion of respondents to the BT/Sky/VM telephone and broadband market study that indicated that they would still contact their LP even if told by their GP that this was not necessary: 43%. The survey also asked the reason why those respondents would still contact the LP. Those that responded that they would do so to better understand the consequences of switching were then asked if they would still contact the LP to discuss the consequences of switching if they knew that before the switch actually took place they would receive written confirmation of all the consequences of switching and would be given the opportunity to cancel the switch via an automated phone system. After accounting for those that would no longer contact the LP to discuss the implications of switching given this information and that would not contact the LP for any other reason, the proportion of respondents that reported that they would still contact the LP falls to 41%. This figure is conservative since another 14% of respondents reported that they did not know whether they would still contact their LP or not in these circumstances.

37 Virgin Media also supplied us with information on **[● Redacted]**.

will offer savings in time costs (relative to Ofcom's modelling) of £1.2m and £4.2m for consumers and CPs respectively.

116. Ofcom's modelling of the time spent by consumers in the harmonised LPL processes also does not include additional time spent on an initial call with the GP prior to contacting the LP for a TxC. In principle, if consumers are likely to spend any *additional* time on initial calls to GPs in the harmonised LPL processes, then again, in our view this time should be modelled even though it is not part of the "formal" switching process.

117. We note that consumers will not always call the GP first before obtaining a TxC from their LP. For example, consumers that are dissatisfied with the LP's service or have a complaint with the LP may call the LP to discuss these issues and during the call request to be able to leave, at which point we understand that the LP would be obliged to provide them with a TxC. Some other consumers may be aware (e.g. because they have previously switched or for other reasons) that they need to obtain a TxC before switching and may contact their LP to obtain a TxC before first contacting the GP. However, BSkyB **[● Redacted]**. In other words, there will be an initial call to the GP (before the call to the LP to obtain the MAC) in **[● Redacted]** of cases.

118. What is more, we understand from BT and BSkyB that what will likely happen when the consumer calls the GP first is that the GP will take down all the customer's details and take the order as far as possible without the TxC before referring the customer to their LP to get the TxC. When the customer subsequently calls the GP back with the TxC, the order can be picked up where it was left off and quickly placed. Therefore there may not be significant additional time involved when the customer calls the GP first (before obtaining the TxC from the LP) compared to when the customer calls the LP first (unless there are long call waiting times to speak to the GP).[38]

6.4.2. Time spent reviewing written communications from LPs under the harmonised GPL processes

119. Ofcom also appears not to have modelled the time cost to consumers under the harmonised GPL processes of reading and thinking about the information that will be contained in the written communication from the LP that follows the placing of an order to switch. This written communication may be the first time the consumer is made aware of ETCs and other implications of switching, and consumers may spend some time comprehending and digesting the information and thinking about their options before finally deciding to proceed with the switch. This is part of the formal switching process and as such should be modelled even if time spent outside the formal switching process is not modelled. This time can be seen as a replacement for the time spent discussing ETCs and other implications of switching on the call to the LP that occurs under LPL processes (which *has* been modelled for those processes).

38 This will, of course, depend on whether the GP's systems allow the storing of order details pending a TxC. Virgin Media informs us **[● Redacted]**, **[● Redacted]**.

120. We model the cost of this time assuming that consumers will spend three minutes reviewing and digesting the information in these letters.[39] The overall effect is an additional £0.1m of time costs for consumers under the harmonised GPL processes; and a saving £0.7m in time costs for consumers under the harmonised LPL processes.

7. SIGNIFICANT OMISSIONS OF COSTS AND BENEFITS

7.1. Benefits/costs from fewer/more cancelled orders

121. When quantifying the "implications of switching", Ofcom's analysis is restricted to quantifying the reduction in consumer harm from harmonised LPL processes due to ETCs that consumers would avoid if they were better informed about the implications of switching. In addition to ETCs, customers that switch without full information on the implications of switching may also suffer financially from the loss of bundled discounts, and in non-financial ways, such as from the loss of email accounts. These effects have not been modelled by Ofcom, but should not be forgotten and need to be factored into Ofcom's qualitative assessment. It is likely that the harmonised LPL processes would also reduce costs to consumers and CPs of cancelling orders that would not have been placed if the consumer had full information on the implications of switching before placing the order. This sub-section explores this issue and attempts a quantification of the effects on consumers and CPs.

122. Under GPL processes (including the harmonised GPL-TPV process) many consumers will only become aware of the full implications of cancelling their existing service (e.g. early termination charges (ETCs), loss of bundled discounts, loss of email accounts, etc.) sometime after placing the order with the GP (e.g. when the letter from the LP arrives detailing these implications or if they call the LP unprompted). If the consumer no longer wishes to switch once aware of the full implications, it will be necessary to cancel the order.

123. Under LPL switching processes, consumers are fully informed of the implications of cancelling their existing service by the LP prior to placing the new order. Under an LPL switching process a consumer that will not want to switch once aware of the implications of switching will not place a new order in the first place, and no order cancellation will be required.

124. Compared to the status quo (which is partly LPL and partly GPL), there would be a *reduction* in consumer and CP costs under the harmonised LPL switching processes and an *increase* in consumer and CP costs under the harmonised GPL processes (including the GPL-TPV process).

125. Ofcom acknowledges these additional costs of the harmonised GPL processes compared to the harmonised LPL processes, but does not attempt to quantify them. Ofcom

39 To arrive at an estimate of the length of time spent reviewing written communications we have tried to identify a length of time that is consistent with timing assumptions in the Consultation Document. When arriving at an assumption on the time taken by consumers to deal with a slam (see footnote 358 on page 188 of the Consultation Document) Ofcom assumes ten minutes would be spent (a) on hold before the customer talks to the CP; (b) reading communications from CPs; and (c) (in some cases) making complaints (e.g. to Ofcom or the Ombudsman). It is hard to say what the relative contributions of these three items is, so we have assumed roughly the same length of time for each, and specifically, three minutes to read written communications.

therefore includes them only in its qualitative assessment, but concludes that the other qualitative benefits of the TPV process would outweigh these additional unquantified costs. At paragraph 7.162 Ofcom states:

> *There will be some benefits to having the information provided earlier under the LPL-TxC e.g. less consumer hassle having to cancel orders due to unexpected implications and less CP resource expended placing orders which are ultimately cancelled. However, we consider that these benefits are not sufficiently large to outweigh the other benefits of the TPV relative to the LPL-TxC option.*

126. We have attempted to quantify the additional benefits (costs) to consumers and CPs that would arise under the harmonised LPL processes (harmonised GPL processes) relative to the status quo from dealing with fewer (more) orders that would ultimately be cancelled once the consumer has full information on the implications of switching.

127. The first stage in our quantification is to estimate the number of cancelled orders under the GPL NoT process in the status quo and under the harmonised GPL processes that Ofcom is consulting on. We begin with the data in the following table on the number of migration orders placed by type of switch recorded by BT Openreach between April 2011 and March 2012. Orders to switch to WLR and to MPF fall under the GPL NoT process, whereas orders to switch from SMPF to SMPF fall under the LPL MAC process. In total, there were around **[● Redacted]** orders to switch requiring some action by Openreach.

128. The figures in Table 4 do not capture all orders to switch fixed voice or broadband services on Openreach's copper network. This is because there will also have been some orders to switch between ISPs using the same wholesaler (e.g. a switch between ISPs such as BT Retail and Zen Internet using BT Wholesale's IPStream product), switches of calls only (without switching of the line) and switches between lines/calls/broadband resellers. Since these switches do not concern Openreach, they are not captured in the figures in the table below.

Table 4: Openreach migration orders by migration type (April 2011 to March 2012)

Migration type	Orders	Percentage of Total
Orders to switch to WLR	**[● Redacted]**	**[● Redacted]**
Orders to switch to MPF	**[● Redacted]**	**[● Redacted]**
SMPF to SMPF orders	**[● Redacted]**	**[● Redacted]**
Total	**[● Redacted]**	**[● Redacted]**

Source: BT Openreach

129. We then apply assumptions on the proportion of cancellations of each type of migration order so as to estimate the number of cancellations by type of order. BT Openreach estimates that between April 2011 and March 2012 the rate of cancellation of Openreach migration orders under the current GPL NoT process was **[● Redacted]**. Openreach also estimates that around **[● Redacted]** of SMPF to SMPF orders (currently under the

LPL MAC process) were cancelled over that period.[40] We also gathered data from BT, Sky and Virgin Media on cancellation rates;[41] however we consider that Openreach is the best source of an industry-wide estimate of the rate of cancellation of orders on the Openreach copper network. On the basis of the Openreach estimate for the rate of cancellation of GPL NoT orders, we assume that **[● Redacted]** of orders under the harmonised GPL processes (which will include SMPF to SMPF orders) will be cancelled.[42] This produces the figures in Table 5 for the number of cancelled orders per year in the status quo and under harmonised GPL processes.

130. We note that the figures in Table 4 and Table 5 raise questions with regard to Ofcom's reliance on CSMG's estimate of a total of 2.1 million completed switches per year (paragraph A8.63 of the Consultation Document). The figures suggest that the CSMG estimate is an under-estimate of the extent of switching of fixed line and broadband services on the BT Openreach copper network.[43]

40 This figure may be slightly overstated as Openreach has not been able to exclude cancellations of bulk migrations, whereas bulk migration orders were excluded from the number of SMPF to SMPF orders listed in Table 4 (**[● Redacted]**).

41 According to BT Retail, **[● Redacted]**. According to BSkyB, **[● Redacted]**. According to Virgin Media, **[● Redacted]**.

42 We therefore assume that under harmonised GPL processes an additional **[● Redacted]** of SMPF to SMPF orders (i.e. orders that are currently under the LPL MAC process) would be cancelled.

43 As shown in Table 4, Openreach reports around **[● Redacted]** migration orders over a 12 month period. As shown in Table 5, Openreach estimates that **[● Redacted]** of those migration orders are cancelled (although this figure is likely to be over-estimated due to the inclusion of bulk order SMPF to SMPF cancellations). These figures imply that the number of *completed* Openreach migrations is at least **[● Redacted]** a year. Some of the SMPF to SMPF migrations may be part of bundled switches with migrations to WLR and may therefore double count the number of switches. Let us, therefore, conservatively (and only for expositional purposes) assume that all of the completed SMPF migrations are double counting switches and exclude them. This leaves around **[● Redacted]** switches that result in completed Openreach migration orders. Ofcom assumes that 18% of switches are currently under cease and reprovide (C&R) processes. These will not be counted in the Openreach migration figures. If we gross up our conservative estimate of the switches that result in completed Openreach migration orders to include C&R switches, we arrive at an estimate of around **[● Redacted]** switches. This figure, however, ignores switches between ISPs using the same wholesaler (e.g. a switch between ISPs such as BT Retail and Zen Internet using BT Wholesale's IPStream product). BT Wholesale estimates that it deals with approximately **[● Redacted]** of these a year. This would take the total number of switches per year to around **[● Redacted]**. Even this figure would be an underestimate as it does not include switches between ISPs using other wholesalers such as C&W, switches of calls only (without switching of the line) or switches between lines/calls/broadband resellers. We understand from BT that there are around **[● Redacted]** million copper lines. This includes businesses as well as residential customers. This (conservative) level of switching implies a switching rate per line of around **[● Redacted]**. However, it should be noted that some customers (particularly businesses) will switch multiple lines/broadband services at the same time, which would involve only one call to the TPV to verify or cancel an order.

Table 5: Estimated cancellations of migration orders in a year by migration type

Migration type	Estimated cancellations in status quo	Percentage of orders	Estimated cancellations under harmonised GPL processes	Percentage of orders
Orders to switch to WLR	**[● Redacted]**	**[● Redacted]**	**[● Redacted]**	**[● Redacted]**
Orders to switch to MPF	**[● Redacted]**	**[● Redacted]**	**[● Redacted]**	**[● Redacted]**
SMPF to SMPF orders	**[● Redacted]**	**[● Redacted]**	**[● Redacted]**	**[● Redacted]**
Total	**[● Redacted]**	**[● Redacted]**	**[● Redacted]**	**[● Redacted]**

Source: CRA calculations and the figures in Table 4

131. The second stage in our quantification is to apply to the numbers in Table 5 an estimate of the proportion of orders cancelled under GPL processes due to a lack of information on the implications of switching at the time the order was placed. In paragraph 4.146 of the Consultation Document Ofcom states that according to BT "at least 10%" of orders placed under the GPL NoT process are cancelled due to a change of mind, "some of which might occur due to the lack of awareness of switching implications". We understand that BT has since carried out further analysis and reports that **[● Redacted]**.[44] This suggests that at least **[● Redacted]** of cancelled orders are due lack of information on ETCs and potentially another **[● Redacted]** may be due to lack of information on other implications of switching.

132. The following table shows our assumed numbers of orders cancelled due to initially insufficient information on the implications of switching in the status quo, under harmonised GPL processes and under harmonised LPL processes. For the status quo we assume that **[● Redacted]** of orders cancelled under the GPL NoT process (i.e. switches to WLR or to MPF) are due to initially insufficient information on the implications of switching. This is conservative according to the BT data. For the harmonised GPL processes we also include **[● Redacted]** of the estimated cancellations of SMPF to SMPF orders under those processes (i.e. we add **[● Redacted]** * **[● Redacted]** = **[● Redacted]** orders). For the harmonised LPL processes we assume that the number of orders that will be cancelled due to initially insufficient information on the implications of switching will be negligible, as we understand that under those processes there will be

44 **[● Redacted]** We also reviewed the results of a study provided by Virgin Media of the reasons for cancellation of **[● Redacted]** orders. This study included homemove orders (for new and existing customers) as well as pure switches. In **[● Redacted]** of the cases the cancellation was recorded as due to the customer being "in contract", which we interpret as meaning that the cancel occurred because the customer had become aware of the implications of switching including ETCs. Since the study sample includes homemove orders, this figure underestimates the proportion of Virgin Media's pure switching orders that were cancelled due to gaining information on the implications of switching. The Virgin Media study also reported that **[● Redacted]** cancelled due to change of mind.

obligations on LPs to give customers precise information on the implications of switching when customers contact the LP for a TxC.

Table 6: Cancellations in a year due to initially insufficient information on the implications of switching

Process	Orders cancelled due to initially insufficient information on implications of switching
Status quo	**[● Redacted]**
Harmonised GPL processes	**[● Redacted]**
Harmonised LPL processes	negligible

Source: CRA calculations and the figures in Table 5

133. Our third stage is to model two types of costs associated with orders cancelled due to initial lack of information on the implications of switching:

    1. the additional time costs to consumers and CPs of cancelling orders; and

    2. Openreach charges for cancelling orders that are paid by CPs (but may ultimately be passed through to consumers in prices for services).

134. With regard to time costs for consumers and CPs, we assume the same value of time per minute for consumers and CPs as Ofcom. In terms of the amount of time spent on each process, compared to the status quo we assume that under harmonised LPL processes those customers that would cancel (due to initially insufficient information on the implications of switching) under the GPL NoT process will no longer do so. We assume that this will save those customers and the GP **[● Redacted]** minutes in the form of time spent contacting the GP to cancel the order. We have based this length of time on information from BT on the average length of calls to BT as a GP to cancel orders under the GPL NoT process. We estimate the savings in time costs under the harmonised LPL options would be £0.5m.

135. Under the harmonised GPL-TxC process we assume that compared to the status quo there would be additional time costs for consumers and CPs since a higher proportion of those customers that currently use the MAC process will cancel orders when under a GPL process (whereas under the MAC process they would have been unlikely to have placed orders in the first place). Under the harmonised GPL-TPV process there will be the same additional consumer time cost, but no additional time cost for CPs, as we understand that the calls to cancel will be to the TPV. This will of course impose time costs on the TPV; however these costs are best modelled in the implementation costs of the GPL-TPV option. Our estimates of the additional time costs under the harmonised GPL-TxC and GPL-TPV options are quite small: £0.07m and £0.02m respectively.[45]

136. With regard to Openreach charges for cancelled orders, we understand that the applicable Openreach charges are the charges shown in the following table. Openreach applies different charges for line migrations depending on the migration type (e.g. MPF to

45 See footnote 48 below. The discussion there as to why our estimates may underestimate or overestimate the effects is applicable equally here.

MPF or WLR to WLR or SMPF to SMPF). If the order is cancelled after 4pm on the day before the migration date then the full migration charge is applied. If the order is cancelled before 4pm on the day before the migration date, a reduced cancellation charge applies. It is likely that most orders would be cancelled before 4pm the day before the migration date, as the migration date in a harmonised GPL process would be ten days after the order is placed. Inevitably some orders would be cancelled after this point, however we conservatively assume that all orders would be cancelled before 4pm on the day before the migration date and so only the cancellation charges would apply (not the full migration charges).

Table 7: Openreach charges for migrations and cancellations of migration orders before 5pm on the day before installation (the point of no return – PONR)

Migration type	Migration charge	Charge if cancelled prior to PONR
MPF to MPF	£33.54	£11.73
WLR/SMPF to MPF	£33.54	£11.73
MPF to WLR	£34.86[46]	£3.50
WLR to WLR	£3.29	£3.29
SMPF to SMPF	£33.54	£11.73[47]

Source: BT Openreach price lists

137. Compared to the status quo, the additional cancellation charges under the harmonised GPL processes will be the cancellation charge for SMPF to SMPF orders (£11.73) (which are currently under the LPL MAC process) multiplied by the number of SMPF to SMPF orders that we assume will be cancelled due to initially insufficient information on the implications of switching (i.e. **[● Redacted]**). We estimate the additional cost to CPs of cancellation charges under the harmonised GPL processes would be £0.1m per year.[48]

138. The harmonised LPL processes, by contrast, will save on cancellation charges relative to the status quo since we assume that all cancels that occur currently in the status quo due to initially insufficient information on switching will be avoided. We therefore calculate the

46 Note that this is classified on the BT Openreach price lists as a "conversion" rather than a "connection" or "migration" charge.

47 This figure is conservative, as many SMPF to SMPF migrations involve ISPs using BT Wholesale's IPStream product, and BT Wholesale applies a cancellation charge for an IPStream migration order of **[● Redacted]**. Other wholesalers may also apply their own mark-up to the Openreach cancellation charge.

48 This is, in one sense, an underestimate, because it ignores the many SMPF to SMPF switches that currently occur under the LPL MAC process between ISPs using the same wholesaler. BT Wholesale estimates that it deals with approximately **[● Redacted]** such switches a year and there will be further switches between customers of other wholesalers and between resellers. These switches are not captured by Openreach and therefore the figures in Table 4 significantly underestimate the true number of relevant switches. On the other hand, it may be an overestimate to the extent that many of the current SMPF to SMPF switches recorded in Table 4 may be orders that are bundled with WLR, and would therefore not require distinct cancellations under harmonised GPL processes.

benefit from the harmonised LPL processes in saving cancellation charges by multiplying the number of "to WLR" and "to MPF" orders cancelled in the status quo due to initially insufficient information on the implications of switching by the respective cancellation charges (£3.29 for "to WLR"[49] and £11.73 for "to MPF"). We estimate the saving to CPs of cancellation charges under the harmonised LPL processes would be £0.5m per year.

7.2. Costs to CPs of written communications

139. Ofcom's impact assessment does not consider the additional costs to CPs under the harmonised GPL processes of physical written communications (i.e. letters) from LPs (explaining ETCs and other implications of switching). Physical (i.e. paper-based) communications are not necessary under the harmonised LPL processes.[50] Therefore, relative to the status quo (where physical communications are required under the GPL NoT process) there would be savings in terms of physical communication costs under the harmonised LPL processes.

140. We have estimated the additional (reduced) costs to CPs of physical communications under the harmonised GPL processes (harmonised LPL processes) compared to the status quo by multiplying the additional (reduced) number of orders to switch that require physical communications from the LP by an estimate of the production and despatch costs per letter. This assumes that all LP written communications under GPL processes are and would be by physical mail rather than by email.[51]

141. Drawing on the information in Table 4 above, we estimate the number of orders to switch under the current GPL NoT process by summing orders to switch "to WLR" and "to MPF" (i.e. **[● Redacted]** + **[● Redacted]** = **[● Redacted]**). We estimate the number of orders to switch under the harmonised GPL processes by adding to this figure the number of orders to switch from SMPF to SMPF (i.e. **[● Redacted]** + **[● Redacted]** = **[● Redacted]**).[52]

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49 Since we do not know the proportion of "to WLR" cancellations that are from MPF or from WLR, we assume conservatively the lower of the two cancellation charges (i.e. £3.29 rather than £3.50) apply for all "to WLR" cancellations.

50 It is possible that under the harmonised LPL processes LPs may send letters advising of or confirming TxCs, as sometimes may occur under the current LPL MAC process. We understand, however, that the preference of CPs is to send TxCs by electronic means wherever possible (e.g. by email).

51 It is possible that some CPs may choose to communicate the implications of switching by email rather than by physical letter to at least some of their customers. In this case, our estimates of the costs of written communications would overstate those costs. It is, however, difficult to estimate the proportion of written communications that would be sent electronically rather than physically. We understand that in order for electronic communications to be sent there would need to be explicit prior customer consent for this method of communication.

52 This is in one sense a underestimate of the number of orders to switch as it does not include, for example, switches between ISPs using the same wholesaler or switches of calls only, as these do not trigger migration orders observed by Openreach. On the other hand, it may overestimate the number of orders to switch to the extent that Openreach may record a single switch order from the customer and CP perspective as two orders (i.e. where there is a bundled switch of WLR and SMPF together).

142. BT advises us that its production and despatch cost per letter are **[● Redacted]**.[53] BSkyB and Virgin Media advise us that their costs per letter are, respectively, **[● Redacted]** and **[● Redacted]**. In our modelling we assume that on average production and despatch costs per letter are 30p. Multiplying this by the number of orders to switch per year under the GPL NoT process gives the cost savings from harmonised LPL processes. Multiplying this by the number of orders to switch per year not currently under the GPL NoT process gives the additional cost of the harmonised GPL processes. We find that the cost savings to CPs in terms of written communications under harmonised LPL processes would be £0.7m per year, while the additional costs under harmonised GPL processes would be £0.1m per year.

7.3. Costs of failed TPV calls

143. Ofcom's impact assessment does not take into account costs of failed calls to the TPV. We assume that the TPV will be efficiently run and adequately staffed to avoid excessive waiting times, although we note that a challenge for the TPV will be to forecast switching volumes across hundreds of CPs and taking into account promotions (particularly of the largest CPs) that will likely drive peaks and troughs in demand for the TPV's services on a day to day basis. We assume also that the costs of adequately staffing the TPV to ensure excessive waiting times are avoided at all times is accounted for in the estimates of the implementation costs of the TPV option.

144. However, even if calls do not fail due to excessive waiting times, calls may fail for other reasons. The TPV agent may not always be able confirm that the customer understands what he/she is signing up to, and in those cases the customer must be referred back to the GP (as the TPV cannot validate the switch if the customer is unclear) and the customer will have to also speak again to the TPV. This will require the customer and the GP to spend additional time on the process with associated time costs.[54] For example, the TPV agent would not be able to answer questions such as "can you remind me of the monthly cost/length of contract term etc. of what I'm signing up to?" and would have to refer the customer back to the GP without validating the switch.

145. According to data collected by BT Ireland, the call fail rate of the Irish TPV was **[● Redacted]** over the six month period before BT exited the retail market in Ireland (April to September 2009).[55] In other words, roughly one out of every ten calls to the TPV would

53 **[● Redacted]**

54 When the customer calls the GP back it should be possible for the order to have been saved and picked up again quickly, but there would nonetheless be additional time for the customer and the GP clarifying the details of the order that led to the confusion. For the customer there would also be additional time speaking again to the TPV.

55 We understand that the TPV process in Ireland was set up as an alternative to having to send order forms by post and get signatures from customers to verify their consent and their agreement to contractual terms and conditions. There was also an alternative e-mail process, where the GP would e-mail the customer a link that they would have to click on to progress the order. For the orders that went via the TPV, it is unclear whether the TPV had a link into the GP's systems in order to see the pending order and check it with the customer, or whether the GP sent an extract of the order to the TPV, with the customer's details and information about the package they had agreed to order. Either way, if the customer asked a question of the TPV agent that the TPV agent could not answer, the process failed and the customer would have to start again by contacting the GP.

fail and the customer would have to go back to the GP for clarification and through the TPV again.

146. Ofcom also does not take into account costs of failed calls to the dedicated lines to the LPs under the harmonised LPL processes. We understand that the harmonised LPL processes envision that stringent service levels on call queues, time to answer, and so on would be set and monitored. We therefore assume that CPs will staff these lines adequately to avoid calls failing due to excessive waiting times. The likelihood of these calls failing due to customer confusion is, we think, less than for the TPV calls, because the LP's agents will typically only be asked by the customer to provide a TxC to facilitate the switch, whereas the TPV agent will have to confirm that the customer understands the main implications of the customer's new contract with the GP. Moreover, if the customer does become confused for some reason during the call to the LP, the customer will have the opportunity to clarify the confusion when the customer subsequently calls the GP with the TxC to place the order.

147. Moreover, success of the TPV call is more critical to the GPL-TPV process than success of the call to the LP's dedicated TxC line in the harmonised LP processes. If the call to the LP's dedicated line fails (due to excessive waiting times, for example) then the customer can call back at another time. If the call to the TPV fails (for the same reason) the customer cannot simply call back the TPV. The customer will have to call the GP again and re-confirm the order that the customer wishes to place before being transferred through to the TPV. This will take more time and hassle.

148. Overall we consider that the omitted costs of failed calls may be somewhat higher for the GPL-TPV option than for the LPL processes, although we have not attempted to quantify these costs.

7.4. Monitoring and enforcement costs

149. Ofcom did not attempt to quantify the costs to Ofcom (or some other independent body) and CPs associated with monitoring and enforcement of the alternative switching process options. In paragraph 7.150 Ofcom states:

> *We consider that the information provided by CPs and independent work by CSMG has given us a reasonable view of the implementation costs for CPs. However, it is important to note that the costs of enforcement (which could be significant for LPL-TxC and LPL-ALT) are not included.*

150. We have not attempted to estimate these costs. However, it is not clear that Ofcom is justified in suggesting that they could be significant for the harmonised LPL processes without making a similar observation with respect to the GPL-TxC and GPL-TPV processes. There are reasons to think that the monitoring and enforcement costs of these two GPL processes could be significant.

151. The GPL processes both require a centralised database that will need to be constantly updated (24/7) with information supplied by all CPs (of which there are, we understand, many hundreds).[56] These CPs (including the entire long tail – there are, we understand

56 CSMG's model reports 301 CPs in three tiers. Tier A contains the smallest CPs, of which there are 287. Tier B contains medium CPs, of which there are ten. And Tier C contains the four largest CPs. CSMG reports that these numbers are based on "Ofcom industry data". BT informs us that **[● Redacted]**.

at least 287 "small" CPs with average customer bases of 15,000)[57] may need to be monitored to ensure that they are keeping personal customer data secure when sending data to the database and that they are all updating the database in an accurate and timely fashion. It is, we note, presumably in their interests *not* to do so with respect to their own customer details, since not doing so may frustrate the customer from switching away from the CP to a competitor. The TPV may also need to be monitored regarding the number of calls answered, calls failed, call waiting times, etc., although we imagine that under the harmonised LPL processes some monitoring would be required of all LPs to ensure that they are abiding by their obligations and service level agreements in terms of providing TxCs.

7.5. Delays in switching

152. Compared to the status quo, the harmonised LPL processes offer *benefits* in terms of consumers being able to switch more immediately than is currently the case under the GPL NoT process. Under the GPL NoT process the transfer occurs ten working days after the decision to switch (strictly speaking, ten days after notification by the access operator (AO) to the GP and LP).[58] For fixed voice services when both the LP and GP use WLR, switching under LPL processes could be on the same day that the customer agrees to switch, although depending on system capacity and scheduling issues it could potentially take up to three working days. For broadband services where the GP and LP use the same wholesale supplier, switching can occur under LPL processes as soon as the customer receives customer premises equipment (CPE) from the GP. This is likely to be *within a few days to a week* after the decision to switch. Where the GP and LP do not use the same wholesale supplier, then a switch will not be able to occur until an Openreach engineer has switched the line between the wholesalers, however this is likely to take less than ten working days (generally around or less than four working days).

153. Compared to the status quo the harmonised GPL options will harm consumers. Switches that currently occur under the MAC process can be completed *either immediately or within a few days to a week*. Under the harmonised GPL processes, however, these switches will not be able to be completed until ten working days have expired (during which time the consumer is given the opportunity to cancel the order to switch).

154. Ofcom's analysis does not take into account the quicker switching under LPL processes as a benefit of the harmonised LPL processes compared to the harmonised GPL processes. This may be a benefit both for consumers directly (as their wishes are met much more quickly and with less "mental overhang") and for competition.

155. We note that Saville Rossiter-Base, in their 2010 Consumer Switching and Bundling research, reported that consumers have a preference for a guaranteed date for the switch over how quickly the switch will happen.[59] Unfortunately, the way in which the question was asked of consumers provides no meaningful information regarding consumer

57 This is based on data in the CSMG model – see the previous footnote. Again, according to Openreach the number is actually higher than this.

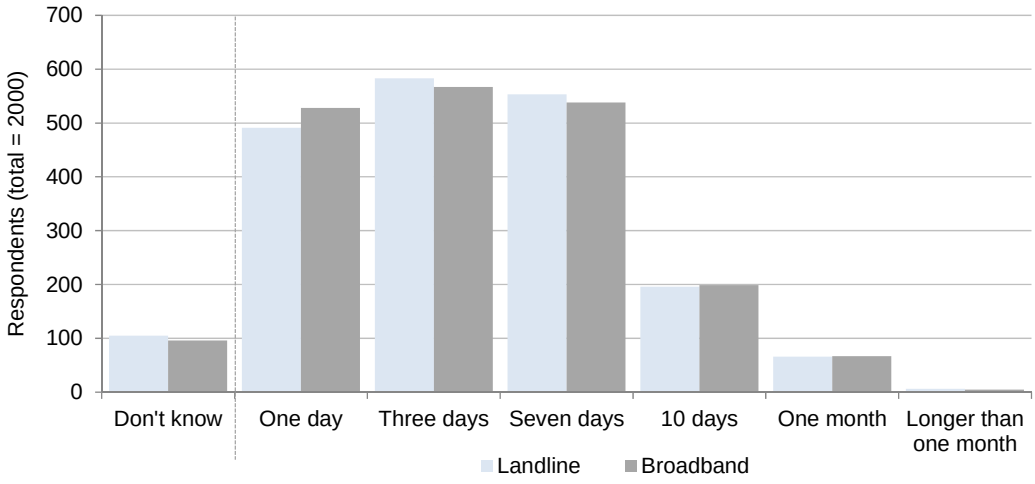
58 Consultation Document, Figure 2, page 26.

59 Saville Rossiter-Base, *Consumer Switching and Bundling: A report commissioned by Ofcom*, September 2010, page 36.

preferences over the time it takes to switch services. Saville Rossiter-Base posited a choice between (a) a quick switch with an uncertain date and (b) a longer period to switch with a guaranteed date. They reported that the majority of respondents preferred the latter. This does not, however, answer the question of the extent to which consumers would prefer a shorter period to switch all else equal (including certainty as to the date). The YouGov online focus group research reported that some would like a "quicker process (should take less than a week)",[60] however little weight can be placed on this research given the small size of the focus groups.

156. As mentioned, we have had the benefit of reviewing the results of the BT/Sky/VM telephone and broadband market study. This asked what length of time consumers thought would be reasonable to have to wait for their landline telephone and broadband services to be switched from one provider to another. The results of this survey are presented in Figure 2 below. The most common response for both services was "three days", but similar numbers of responses were also recorded for both "one day" and "seven days". Overall, we find that for both services, over 80% of respondents answered "seven days" or fewer; and over 90% answered "10 days" or fewer. Given that GPL processes take ten *working* days for switches to occur, the vast majority of respondents consider this length of time as beyond a reasonable length of time to have to wait for a switch to occur. This suggests to us that the respondents to this survey view the length of time that it takes to switch under GPL processes as a form of hassle compared to the time it takes under LPL processes.

Figure 2: Length of time considered reasonable to have to wait for a landline telephone or broadband service to be switched from one provider to another



Source: CRA analysis of the BT/Sky/VM telephone and broadband market study

157. The time taken to switch landline telephone or broadband provider is also considered by the survey respondents to be an important consideration when switching. The vast majority of respondents to the survey (86%) reported that the length of time to switch is important to them (i.e. 86% of respondents gave this factor a score of 7-10 on a 1-10 scale), with 56% reporting that it was very important (i.e. a score of 9-10). The responses

60 YouGov, *Ofcom: Switching Broadband Suppliers*, Slide 24.

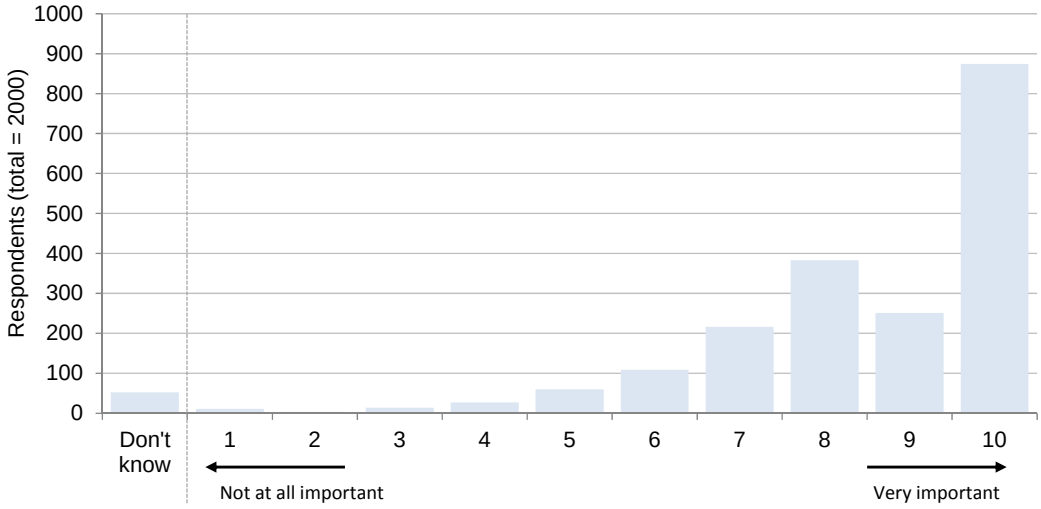
in relation to the importance of the time to switch are summarised in Table 8 and Figure 3 below.

Table 8: Importance placed on time to switch

Responses to the Survey	%
Respondents that find switching time important (scores of 7-10)	86%
Respondents that find switching time very important (scores of 9-10)	*56%*
Respondents that find switching time unimportant (scores of 1-4)	3%
Respondents that are neutral (5 or 6) or "don't know"	11%

Source: CRA analysis of the BT/Sky/VM telephone and broadband market study data

Figure 3: Importance placed on time to switch



Source: BT/Sky/VM telephone and broadband market study

7.6. Direct benefits from reactive save in reducing switching costs/hassle

158. In this report we use the term "reactive save" to refer to situations where the LP is able to accurately identify customers intending to switch solely as a result of information the LP receives as part of the formal switching process (e.g. in the call to the LP that is required under the MAC process and under the harmonised LPL processes to obtain TxCs) and makes them counter-offers not to switch.[61]

159. In our companion report on reactive save activity we consider the possibility that reactive save will deliver better terms and conditions (including possibly lower prices) directly to

61 We have based this understanding on Ofcom's definition of reactive save in paragraph 5.1 of its February 2012 consultation.

those customers that are saved.[62] In addition, reactive save may deliver further direct benefits to consumers from *avoiding the costs and hassle of switching providers*.

160. The direct time saving to consumers from reactive save is the call to the GP that would otherwise occur after obtaining the TxC from the LP. This time saving may be (partially or fully) offset by longer calls with the LP under processes that allow reactive save such as LPL-ALT (i.e. longer time spent discussing save offers and agreeing on new terms). However, aside from the time spent speaking to CPs (which may or may not be greater in processes without reactive save) consumers will benefit from reactive save to the extent that installing the GP's customer premises equipment (CPE) can take time and switching CPs can be a point at which service can fail for a period, requiring the customer to spend time resolving the problem and preventing the customer from enjoying service for that period. Ofcom has noted that according to its own 2011 consumer research more than 20% of broadband consumers that switched using the NoT and MAC processes suffered a loss of service when switching, with the average loss of service around a week and with a significant minority having a break in service lasting more than two weeks (paragraph 4.78 of the Consultation Document). We understand that one of the benefits of the harmonised processes (whether GPL or LPL) would be to reduce the likelihood of breaks in service, however we also understand that the chances of a break in service will always be higher with a switch of CP than with no switch, even under these processes. Breaks in service can have significant impacts on customers and to the extent that risks of service breaks would remain even under harmonised processes, these would be avoided when a customer is the subject of successful reactive save activity.

161. It follows that the benefits of LPL-ALT may need to be considered separately from LPL-TxC, since LPL-ALT would have some additional benefits for consumers compared to LPL-TxC. At the same time, Ofcom may have overstated the benefits of the GPL-TxC, TPV and LPL-TxC options, since they preclude all reactive save, whereas some reactive save occurs in the status quo under the LPL MAC process.

8. MODELLING ISSUES

162. In this section we discuss a number of assumptions in Ofcom's quantitative modelling of costs and benefits that we consider questionable.

163. Before we turn to specific modelling issues, however, we note that Ofcom's choice to present the results as annuitised figures, instead of as the NPV of the total net benefits from each process (the traditional way of presenting the results of an impact assessment analysis) has the effect of obscuring the timing of when a particular process first delivers positive net benefits to society and the timing of when the process first produces positive cumulative net benefits for society. An impact assessment should properly focus on the (NPV of the) total costs and benefits over the period modelled, but all else equal, a regulation which delivers net cumulative benefits faster may in general be expected to be preferable to a regulation that delivers such benefits more slowly. By way of example, Ofcom's impact assessment model calculates that the cumulative NPV of the net benefits of the harmonised LPL processes turns positive in year three of the assessment period,

62 CRA, *Ofcom's Investigation of Reactive Save Activity for Fixed Voice/Broadband Lines: An Economic Analysis,* May 2012.

while the cumulative NPV of the net benefits of the GPL-TPV process turns positive in year four of the assessment period.[63] Thus, LPL processes will deliver positive net benefits to society faster than the GPL-TPV process. This conclusion is lost when results are reported in terms of annuitised net benefits.

8.1. Implementation timeframe

164. Ofcom's impact assessment model does not take into account differences in the implementation timeframe between the different switching processes proposed: such differences, were they taken into account, will affect not only the time profile of implementation costs, but also the time profile of the benefits.

165. All three harmonised GPL processes require building and populating an industry wide database. Given the large number of CPs in the UK fixed line and broadband market, one could expect that reaching an agreement on a standard interface for an industry-wide central database and the technical implementation of such interface into the systems of all CPs would be likely to take a substantially longer period than the time to implement the harmonised LPL processes. While we acknowledge that there is uncertainty about the exact time it would take to implement each of the different switching processes on which Ofcom is consulting, we note that BT, Sky, Virgin Media and Zen Internet have submitted that the harmonised LPL processes could potentially be operational in 18 months.[64] By contrast, we understand from BT, Sky and Virgin Media that the central database required by the harmonised GPL processes (and the GPL-TPV process in particular) would be likely to take longer. For example, we understand that as part of the process of implementing number portability in the UK, a similar central database was proposed and Ofcom allowed the industry approximately five years to have the database fully populated and operational.[65]

166. The implementation period of the different switching processes proposed by Ofcom in the Consultation Document could have substantial implications for when consumers would be able to start enjoying the benefits of the (improved) switching process. The longer a process takes to implement, the more uncertain the quantifiable benefits from this process, as the industry could experience substantial changes in the period between the start of the implementation and the date the process is operational. For example, improvements in back-end systems or better coordination between CPs may result in

63 These results are generated by the Ofcom impact assessment model using the independent estimates of implementation costs (from the CSMG model) in order to make the cost base between the GPL-TPV and the LPL processes comparable (since the industry estimates of the implementation costs are available only for the LPL processes; not for the GPL-TPV process). Similarly, the analysis relies on the median financial harm to consumers from slamming and ETs used in the Ofcom model. The conclusion reported above holds also when the mean financial harm from slamming and ETs is used, although in that case the cumulative NPV of the net benefits of the harmonised LPL processes turns positive in year two, while the cumulative NPV of the net benefits of the GPL-TPV process turns positive in year three.

64 See footnote 226 of the Consultation Document.

65 In particular, Ofcom allowed approximately five years for the UK industry to establish and fully populate a common database allowing direct routing of calls to fixed and mobile ported numbers. See Ofcom, *Concluding Statement on Telephone Number Portability for Consumers Switching Suppliers*, November 2007, (available online at: http://stakeholders.ofcom.org.uk/binaries/consultations/gc18review/statement/statement.pdf), paragraphs 1.10 and 4.1.

reductions in ETs unrelated to changes in switching processes. Similarly, over a five year period further improvements in mobile broadband products may (potentially significantly) reduce the number of UK households with an operational fixed phone/broadband line into their home and thus, the number of consumers switching who may benefit from the improved switching process.

167. In Section 9.2.1 below we explore the significance to the results of the impact assessment of assuming different timeframes for when the GPL-TPV process and the harmonised LPL processes could be operational. We were advised by BSkyB that a harmonised GPL-TPV process would take **[● Redacted]**. The LPL processes are expected to take less time than the GPL processes to implement.

8.2. Period modelled in the impact assessment

168. When deciding on the appropriate period to be covered by an impact assessment in a regulatory context, two separate issues ought to be considered:

(i) The useful economic life of the investments; and

(ii) The regulatory implications of the period chosen for the review.

169. Demonstrating net positive benefits from the proposed regulation over a shorter period (e.g. five years) may make the regulation more attractive than if net benefits can be demonstrated only over a longer (and thus more uncertain) period (e.g. ten years). However, an impact assessment over a shorter period may be subject to criticisms of omitted costs and benefits that only occur past the initial (say five-year) period.

170. Ofcom provides no explanation in the Consultation Document for the ten-year period chosen for the impact assessment in this case. Without specific (objective) reasons underlying the period chosen for the review, Ofcom ought to have considered the sensitivity of the results to undertaking the analysis on alternative (shorter or longer, as appropriate) periods.

171. Alternatively, Ofcom should have considered the useful life of the investments affected by the proposed changes in the switching processes and weighted this information against the regulatory goals served by the impact assessment. For example, we understand that based on Virgin Media's **[● Redacted]** may be representative of the useful life of the affected assets and thus, it may have been appropriate for Ofcom to consider a shorter period than ten years for the impact assessment.

172. The implications of undertaking the impact assessment of the different switching processes over alternative periods than the one modelled by Ofcom are reported in Section 9.2.2.

8.3. Use of mid-points instead of ranges for estimated costs and benefits

173. The CSMG model of implementation costs and Ofcom's slamming research produced upper and lower bounds for the estimates of the implementation costs of the various processes and the incidence of slamming. In its impact assessment, however, Ofcom has chosen to adopt the mid-points to estimate the net benefits associated with each of

the processes.[66] We believe that it would have been more appropriate for Ofcom to consider the range of each cost and benefit in order to examine the robustness of the impact assessment results against changes to the level of costs/benefits assumed. Further, it may have been appropriate for Ofcom to consider the likelihood that a certain cost (or benefit) would in fact be closer to the lower estimate or the higher estimate.

174. To illustrate this point, in Section 9.2.3 we report the results of a sensitivity analysis where instead of relying on the mid-points of the CSMG implementation cost estimates for each switching process, we consider individually the upper and lower bounds of the CSMG estimates of implementation costs.

175. Similarly, in our view Ofcom should have considered the available range of estimates for the number of households experiencing slamming, rather than relying only on the 2011 mean figure. Also in Section 9.2.3 we report the effect on the impact assessment results from modelling the estimated costs of slamming under the alternative estimates for the total number of households experiencing slamming (based on the 2010 mean and the 2010 and 2011 confidence intervals).

8.4. Discount rate

176. Ofcom relies on the 'social' discount rate of 3.5% to derive its NPV estimates for both the costs and benefits accruing to consumers and those accruing to producers. The social discount rate provides a measure of the willingness of society as a whole to trade off consumption today versus consumption tomorrow. However, the discount rate applicable to the commercial transactions of the CPs is likely to be substantially different from the social discount rate. In particular, it may be argued that the commercial cost of capital applicable to CPs should have been applied to CP costs and benefits in the model. In the absence of specific evaluation of each CP's cost of capital, Ofcom might have considered whether a discount rate that reflects Ofcom's estimate of BT's cost of capital (i.e. the 6.5% pre-tax real WACC for BT's non-access related activities)[67] should have been applied to the costs and benefits accruing to all CPs as a proxy for their capital costs.

177. Ofcom did not consider the implications of applying an alternative discount rate to the communication providers' costs and benefits in the impact assessment model. In Section 9.2.4 below, we report the effect on the impact assessment results from adopting a discount rate based on BT's regulated WACC for the CPs' costs and benefits.

66 For example, in its estimates of the costs of slamming to both consumers and CPs, Ofcom relies on the estimated mean of households experiencing slamming based on the 2011 slamming research (e.g. see paragraph A8.6 and Table 15 of the Consultation Document) instead of the confidence interval ranges across the 2010 and 2011 research.

67 See Ofcom, *WBA Charge Control Statement*, 20 July 2011 (available online at: http://stakeholders.ofcom.org.uk/binaries/consultations/823069/statement/statement.pdf), paragraphs 1.17-1.19.

8.5. Constant annual costs and benefits

178. The Ofcom impact assessment model assumes that all annual costs[68] and benefits associated with each of the proposed switching processes are constant in real terms over the entire duration of the period modelled (i.e. ten years). By making this assumption, Ofcom may not be properly taking into account the distribution of the costs (and benefits) over time.

179. In particular, Ofcom failed to consider that industry developments (unrelated to the proposed changes to switching processes) may result in the net benefits varying over time. Some developments may affect the estimated net benefits of all switching processes, while others may affect only some of the proposed processes (or affect some processes more than others). For example, as mentioned above, it is possible that the total number of UK households with a fixed phone/broadband line into their home would go down with improvements in mobile voice and internet products (or equally, it is possible that the number of fixed phone / broadband lines will go up with population growth and/or higher broadband penetration). Similarly, it is possible that consumer preferences for obtaining information will become even more reliant than currently on the internet for researching and understanding the different telephony and broadband products available from each supplier. This may lead to average call times (and the associated costs) falling over time, as consumers prefer alternative forms of communication. Further, to the extent that some of the proposed processes are less effective in resolving the problems identified by Ofcom, the costs of rectifying these problems (and thus, the benefits from implementing the alternative switching process) may change over time.

9. SCENARIO AND SENSITIVITY ANALYSIS OF OFCOM'S QUANTITATIVE ASSESSMENT OF COSTS AND BENEFITS

180. In this section we explore the effects on the results reported in Ofcom's quantitative assessment (the "Ofcom Base Case") of correcting for those errors and omissions identified in Sections 6 and 7 that we can readily quantify. Taking these corrections together we arrive at a "CRA Base Case".

181. As mentioned in Section 2, any attempt at quantification that relies on a number of assumptions necessarily requires extensive sensitivity analysis to ascertain the robustness of the results to changes in those assumptions. If the results of a quantitative model are very sensitive to changes in certain inputs, the values of which are not known with certainty, then the reliability of the model is undermined and there can be little confidence in conclusions reached on the basis of the model. We therefore test the sensitivity of both the Ofcom Base Case and the CRA Base Case to variations in key assumptions and with respect to the various modelling issues discussed in Section 8.

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68 The only costs associated with the proposed switching processes quantified in the Ofcom impact assessment model are the implementation costs of the different processes. In its impact assessment, Ofcom used the estimates of implementation costs (including both set-up and on-going operational costs) for each switching process produced by the CSMG model. It is not in the scope of this report to comment on the methodology used by CSMG to estimate the implementation and operational costs of each of the switching processes. Ofcom then assumed that the annual on-going operational costs for each switching process (as estimated by CSMG) are constant in real terms over the period modelled.

9.1. CRA adjustments to the Ofcom Base Case

182. As discussed in Sections 6 and 7, we believe that Ofcom has erred in its assessment in certain respects and omitted to quantify a number of important costs and benefits associated with the proposed switching processes.

183. The table below demonstrates the effect on the impact assessment results of correcting these errors and including omitted but quantifiable costs and benefits. In Table 9, the effect of correcting each of the errors and modelling the additional costs and benefits identified in Sections 6 and 7 is added *individually* to the Ofcom Base Case and the results are reported in the relevant line of the table. We also report the cumulative effect of adding *all* the corrections and additional costs and benefits. We call this scenario the CRA Base Case. These results are before any analysis is undertaken on the sensitivity of the results to the modelling issues raised in Section 8 and other parameters.

184. In this table and subsequent tables in this section, we follow the Ofcom approach of reporting both the "low" estimates using the "median" estimate of the financial harm to consumers from ETs and slamming, and the "high" estimates using the "mean" estimate of the financial harm to consumers from ETs and slamming. Both the low and the high estimates are produced by relying on the independent estimates of implementation costs produced by the CSMG model in order to make the cost base comparable between the different options (i.e. the industry estimates of implementation costs are available only for the USN and LPL processes).

185. We also note that Ofcom's estimates for the GPL-TxC process included a minor computational error (at cell I136 in tab "CBA" of the Ofcom model). The estimated benefits to consumers from preventing behavioural slamming incorrectly use the "mean" financial harm to consumers when the model is set to use the "median" option and vice versa. This is corrected in the Ofcom Base Case results we report.

186. As can be seen from the results reported below, once the errors and additional quantifiable costs and benefits that we identified in Sections 6 and 7 are taken into account, the estimated net benefits from all harmonised GPL processes are lower than those estimated by Ofcom, while the net benefits from the harmonised LPL processes are higher. What is more, in the CRA Base Case the net benefits from the harmonised LPL processes are substantially greater than the estimated net benefits from any of the harmonised GPL processes (including GPL-TPV).

Table 9: Estimated total net benefits from the different switching processes, including the further costs and benefits quantified by CRA

Net impact (annuitised NPV, £m)[69]	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Ofcom Base Case (as reported in the consultation document)	-1.2	-0.3	0.3	2.6	3.8	7.1	4.3	7.2
Ofcom Base Case (corrected for formula error in GPL-TxC consumer benefits)	**-0.9**	**-0.6**	**0.3**	**2.6**	**3.8**	**7.1**	**4.3**	**7.2**
+ Reduction of erroneous transfers under LPL = 40% (see Section 6.1.3)	-0.9	-0.6	0.3	2.6	3.8	7.1	6.0	9.2
+ Reduction of non-erroneous transfers without consent under LPL = 99% (see Section 6.2)	-0.9	-0.6	0.3	2.6	3.8	7.1	4.8	7.8
+ Time spent calling LPs under GPL processes (see Section 6.4.1)	-1.7	-1.3	-0.4	1.8	3.0	6.3	9.5	12.4
+ Time spent reviewing written communications from LPs (see Section 6.4.2)	-1.0	-0.7	0.2	2.5	3.7	7.0	5.0	7.9
+ Benefits/costs from fewer/more cancelled orders (see Section 7.1)	-1.1	-0.7	0.1	2.4	3.6	7.0	5.3	8.1
+ Costs to CPs of written communications (see Section 7.2)	-1.0	-0.7	0.2	2.5	3.7	7.0	5.0	7.9
CRA Base Case (Combined effect of all the above adjustments)	**-2.1**	**-1.7**	**-0.8**	**1.5**	**2.7**	**6.0**	**14.0**	**17.3**

69 In order to make the results reported in this table directly comparable to those reported at Figure 38 of the Consultation Document, we report the results of our analysis in terms of annuitised NPV, though we note that we disagree that this is an appropriate way to present the results of the impact assessment analysis (see our discussion in Section 8 above).

Source: CRA analysis based on Ofcom's "Consumer switching cost-benefit model".

187. Furthermore, considering the effect on consumers only (rather than the combined effect on both consumers and CPs), Table 10 shows again that under the CRA Base Case scenario the LPL process delivers noticeably greater benefits than any of the GPL processes.

Table 10: Estimated net benefits to consumers only from the different switching processes, including the further costs and benefits quantified by CRA

Benefit to Consumers (£m per year)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Benefit to consumers under Ofcom Base Case (corrected)	1.0	1.4	0.7	3.1	1.7	5.1	0.7	3.7
Benefit to consumers under CRA Base Case	0.7	1.1	0.4	2.8	1.4	4.8	3.1	6.5

Source: CRA analysis based on Ofcom's "Consumer switching cost-benefit model".

9.2. Sensitivity analysis on the Ofcom and CRA Base Cases

188. For a quantitative impact assessment to be reliable and informative, the results would need to be robust to a reasonable sensitivity analysis. At paragraph A8.85 of the Consultation Document, Ofcom states that, "[g]iven the indicative and partial nature of the quantified benefits we do not consider it helpful to conduct a further sensitivity analysis on the results." Yet, without such sensitivity analysis it is unclear what significance (if any) should be placed on the Ofcom quantitative impact assessment, as the Ofcom results have not been tested for robustness.

189. We consider the effect of changes to a number of the parameters used in the Ofcom model, as well as changes to some of the modelling assumptions (in particular, those discussed in Section 8).

190. By way of general observation we note that plausible changes to certain Ofcom assumptions (e.g. plausible changes to the incidence of consumers experiencing slamming) can alone turn the estimated net benefits of all the different switching processes negative (under the "low" estimates of the Ofcom case). This implies that the Ofcom quantitative impact assessment is not robust to possible alternative assumptions and as such should not be regarded as a sound basis for imposing intrusive regulation.

9.2.1. Different implementation timeframes

191. As discussed in Section 8.1 above, it is unlikely that all of the proposed switching processes can be implemented in a single year (year zero in the Ofcom ten-year review period, i.e. 2013), thus allowing consumers and CPs to benefit from the relevant improved switching process from year one (2014). While, as Ofcom acknowledges in the Consultation Document (see footnote 226), the harmonised LPL processes might be operational within 18 months, we understand that implementing and populating the central database required by the harmonised GPL processes could take considerably longer (potentially up to five years).

192. In Table 11 below, we report the results for both the Ofcom and CRA Base Cases of assuming different implementation timeframes for the GPL and LPL processes. We assume that benefits to consumers and CPs accrue (and CPs incur on-going operating expenses) only after the process is fully implemented. For example, if the relevant scenario assumes that it takes three full years to implement the GPL-TPV process (year zero, year one and year two), benefits to consumers and CPs accrue from year four (i.e. 2016) onwards and similarly, the on-going operating expenses incurred by CPs appear from year four onwards. In the case of the LPL processes, we assume that these take 18 months to implement and thus, in year one of the review period only half a year (50%) of benefits accrue and only half of annual operational costs are incurred. In our modelling we have preserved Ofcom's assumption that the impact assessment includes ten years of quantifiable benefits (starting from the year after the process is fully implemented).

Table 11: Estimated net benefits from the different switching processes assuming alternative implementation timeframe[70]

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Ofcom 'Base case' (corrected)	**-0.9**	**-0.6**	**0.3**	**2.6**	**3.8**	**7.1**	**4.3**	**7.2**
- GPL processes take 3 years to implement: 10% of CapEx incurred in 2013; 45% of CapEx in 2014; 45% of CapEx in 2015; benefits/OpEx 10 years from 2016 - LPL processes take 18 months to implement: 50% of CapEx incurred in 2013; 50% of CapEx in 2014; benefits/OpEx 10 years from 2014 mid-year	-0.9	-0.6	0.2	2.4	3.5	6.6	4.0	6.7

70 We have modelled a number of alternative implementation paths for both the GPL and LPL processes. We report here the results for the path discussed at the end of Section 8.1. The results from the other alternatives are generally within one decimal point of the results reported in the table. The following alternatives to the reported path were considered for the GPL processes: a) GPL processes take 3 years to implement: 10% of CapEx incurred in 2013; 60% of CapEx in 2014; 30% of CapEx in 2015; benefits/OpEx 10 years from 2016; b) GPL processes take 3 years to implement: 0% of CapEx incurred in 2013 (assuming the first year is taken up by negotiations on the interface standard); 50% of CapEx in 2014; 50% of CapEx in 2015; benefits/OpEx 10 years from 2016; and c) GPL processes take 2 years to implement: 20% of CapEx incurred in 2013; 80% of CapEx in 2014; benefits/OpEx 10 years from 2015. For the LPL processes we also considered: a) LPL processes take 18 months to implement: 80% of CapEx incurred in 2013; 20% of CapEx in 2014; benefits/OpEx 10 years from 2014 mid-year.

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
CRA Base Case	**-2.1**	**-1.7**	**-0.8**	**1.5**	**2.7**	**6.0**	**14.0**	**17.3**
- GPL processes take 3 years to implement: 10% of CapEx incurred in 2013; 45% of CapEx in 2014; 45% of CapEx in 2015; benefits/OpEx 10 years from 2016 - LPL processes take 18 months to implement: 50% of CapEx incurred in 2013; 50% of CapEx in 2014; benefits/OpEx 10 years from 2014 mid-year	-2.0	-1.6	-0.8	1.3	2.4	5.5	13.1	16.2

Source: CRA analysis based on the Ofcom 'Consumer switching cost-benefit model'.

193. As can be seen from the table above, assuming an implementation time-frame of more than a year, all else equal, tends to reduce slightly the expected net benefits from all of the proposed switching processes.

194. What is more, if we examine the cumulative net present value year-by-year, we find significant differences in the speed at which the various processes deliver positive results. In particular we note that under both the Ofcom and CRA Base Cases, the harmonised LPL processes deliver positive net-benefits sooner than the GPL-TPV process. In both cases, this difference becomes even starker when considering the alternative implementation timeframes presented at the end of Section 8.1. Under the Ofcom Base Case with the revised implementation timeframes, we find the harmonised LPL processes deliver positive net-benefit in the fourth year (2017) while the GPL-TPV process remains negative until the seventh year (2020). Under the CRA Base Case, this difference becomes larger again: the LPL process delivers positive benefit in the second year (2015), while the GPL-TPV process takes until the eighth year (2021) to turn positive.

Table 12: Time taken to deliver positive cumulative net-benefits (in present value) under the different switching processes, assuming alternative implementation timeframes

Number of periods (2013 = period 0)	2b – GPL TxC	2c – GPL USN	2d – GPL TPV	3a-b – LPL TxC and LPL ALT
Ofcom 'Base case' (corrected)	**n/a**	**9 (=2022)**	**4 (=2017)**	**3 (=2016)**
- GPL processes take 3 years to implement: 10% of CapEx incurred in 2013; 45% of CapEx in 2014; 45% of CapEx in 2015; benefits/OpEx 10 years from 2016 - LPL processes take 18 months to implement: 50% of CapEx incurred in 2013; 50% of CapEx in 2014; benefits/OpEx 10 years from 2014 mid-year	n/a	12 (=2025)	7 (=2020)	4 (=2017)
CRA Base Case	**n/a**	**n/a**	**5 (=2018)**	**2 (=2015)**
- GPL processes take 3 years to implement: 10% of CapEx incurred in 2013; 45% of CapEx in 2014; 45% of CapEx in 2015; benefits/OpEx 10 years from 2016 - LPL processes take 18 months to implement: 50% of CapEx incurred in 2013; 50% of CapEx in 2014; benefits/OpEx 10 years from 2014 mid-year	n/a	n/a	7 (=2020)	2 (=2015)

195. Source: CRA analysis based on the Ofcom "Consumer switching cost-benefit model".

9.2.2. The time period modelled

196. In Section 8.2 above, we argued that without a sound basis for selecting a ten-year review period for its impact assessment, Ofcom should have considered the implications for regulatory intervention if the impact assessment period was shorter (e.g. linked to the useful life of investments which, according to Virgin Media, is estimated to be **[● Redacted]**). In the table below we report the results of a sensitivity analysis where we undertake the impact assessment over a progressively shorter period of nine, eight, seven, six and five years. In this analysis, we follow Ofcom's approach of assuming no residual value of costs and benefits beyond the review period.

Table 13: Estimated net benefits from the different switching processes under alternative review periods

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Ofcom Base Case (corrected)	**-0.9**	**-0.6**	**0.3**	**2.6**	**3.8**	**7.1**	**4.3**	**7.2**
9 years	-1.2	-0.8	0.0	2.3	3.5	6.8	4.1	7.0
8 years	-1.5	-1.1	-0.3	1.9	3.2	6.5	3.9	6.8
7 years	-1.9	-1.6	-0.8	1.4	2.7	6.0	3.6	6.5
6 years	-2.5	-2.1	-1.5	0.8	2.1	5.4	3.2	6.0
5 years	-3.2	-2.9	-2.4	-0.1	1.3	4.6	2.6	5.5
CRA Base Case	**-2.1**	**-1.7**	**-0.8**	**1.5**	**2.7**	**6.0**	**14.0**	**17.3**
9 years	-2.3	-2.0	-1.1	1.2	2.4	5.7	13.8	17.1
8 years	-2.6	-2.3	-1.5	0.8	2.1	5.4	13.5	16.8
7 years	-3.1	-2.7	-2.0	0.3	1.6	4.9	13.2	16.5
6 years	-3.6	-3.3	-2.6	-0.4	1.0	4.3	12.8	16.1
5 years	-4.4	-4.0	-3.6	-1.3	0.2	3.5	12.3	15.5

Source: CRA analysis based on the Ofcom 'Consumer switching cost-benefit model'.

197. As one would expect, all else equal, reducing the length of the review period has a negative impact on the net benefits from the different switching processes, both under the Ofcom Base Case and the CRA Base Case (since there is a shorter period over which the initial set-up costs are recovered). In particular under the CRA Base Case (which incorporates the additional quantifiable costs and benefits we identified in Sections 6 and 7) the low estimate of the net benefits from all of the harmonised GPL processes is negative or close to zero when the impact assessment is undertaken over a five-year review period.

9.2.3. Effects of modelling mid-points instead of ranges

Use of mid-points instead of ranges for the estimates of implementation costs

198. In Section 8.3 we discussed that in the impact assessment model Ofcom relied on the mid-point estimates of the implementation costs of the different switching processes as estimated by CSMG, without considering the effect on the results if the lower or upper CSMG estimates were applied instead. The table below reports the results of a sensitivity test where the lower and upper CSMG estimates of implementation costs are considered.

Table 14: Estimated net benefits from the different switching processes under alternative assumptions on the implementation costs estimated by CSMG

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Ofcom Base Case (corrected) (Mid CSMG estimates)	**-0.9**	**-0.6**	**0.3**	**2.6**	**3.8**	**7.1**	**4.3**	**7.2**
Low CSMG estimates	0.2	0.5	3.2	5.5	6.9	10.3	6.9	9.7
High CSMG estimates	-2.0	-1.6	-2.6	-0.3	1.0	4.3	1.8	4.7
CRA Base Case (Mid CSMG estimates)	**-2.1**	**-1.7**	**-0.8**	**1.5**	**2.7**	**6.0**	**14.0**	**17.3**
Low CSMG estimates	-1.0	-0.6	2.1	4.4	5.9	9.2	16.5	19.8
High CSMG estimates	-3.1	-2.8	-3.7	-1.5	-0.1	3.2	11.5	14.8

Source: CRA analysis based on the Ofcom 'Consumer switching cost-benefit model'.

199. We note that Ofcom provides no reasoning for why it chose to rely solely on the mid-point CSMG estimates of the implementation costs. It is not clear to us that the mid-point estimates are the most likely (or even more likely than the low or high estimates produced by CSMG). We note further that when the high CSMG estimates are applied (to all switching processes) the estimated net benefits are negative or close to zero for all harmonised GPL processes under the "low" estimates produced by the Ofcom model.

Use of mid-points instead of ranges for the incidence of slamming

200. As discussed in Section 8.3 above, we believe that Ofcom should have considered the range of the available estimates on the incidence of consumers experiencing slamming (based on the 2010 and 2011 slamming research), rather than relying only on the 2011 mean estimate. In the table below, we report the effect on the impact assessment results from modelling the estimated costs of slamming under the alternative estimates for the total number of consumers experiencing slamming (based on the 2010 mean and the 2010 and 2011 confidence intervals).

Table 15: Estimated net benefits from the different switching processes under alternative assumptions on the incidence of consumers experiencing slamming

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Ofcom Base Case (corrected) (2011 mean = 2.50%)	**-0.9**	**-0.6**	**0.3**	**2.6**	**3.8**	**7.1**	**4.3**	**7.2**
2010 mean = 1.84%	-1.5	-1.3	-2.1	-0.4	-0.0	2.4	1.2	3.3
2010 lower bound = 1.19%	-2.1	-2.0	-4.5	-3.4	-3.8	-2.2	-1.8	-0.5
2011 lower bound = 1.58%	-1.8	-1.6	-3.1	-1.6	-1.5	0.6	-0.0	1.8
2010 upper bound = 2.49%	-0.9	-0.6	0.3	2.6	3.7	7.0	4.3	7.1
2011 upper bound = 3.42%	-0.1	0.4	3.8	6.8	9.1	13.6	8.7	12.6
CRA Base Case (2011 mean = 2.50%)	**-2.1**	**-1.7**	**-0.8**	**1.5**	**2.7**	**6.0**	**14.0**	**17.3**
2010 mean = 1.84%	-2.7	-2.4	-3.3	-1.6	-1.1	1.3	10.3	12.7
2010 lower bound = 1.19%	-3.3	-3.1	-5.7	-4.6	-4.9	-3.3	6.7	8.2
2011 lower bound = 1.58%	-2.9	-2.7	-4.2	-2.8	-2.6	-0.5	8.8	10.9
2010 upper bound = 2.49%	-2.1	-1.7	-0.8	1.4	2.6	5.9	13.9	17.2
2011 upper bound = 3.42%	-1.2	-0.7	2.6	5.7	8.0	12.6	19.1	23.6

Source: CRA analysis based on the Ofcom 'Consumer switching cost-benefit model'.

201. The results of considering the range of estimates available on the potential incidence of slamming experiences reveal on their own the lack of robustness of Ofcom's impact assessment quantification to plausible changes in assumptions. When using the 2010 mean estimate of the incidence of slamming, the net benefits of all of the harmonised GPL options turn negative (even from the Ofcom Base Case when using Ofcom's median estimate of the financial harm from slamming – i.e. the "low" end Base Case estimate) and the net benefits of the harmonised LPL processes approach zero. Looking at the range of values for slamming incidence, the estimated net benefits of all of the harmonised GPL processes turn negative at the 2010 and 2011 lower bounds under both the Ofcom Base Case and the CRA Base Case (and again assuming the low end estimate of the financial harm from slamming – i.e. the "low" Base Case estimates). This implies that the estimated net benefits from these processes may not be significantly

different from zero. This sensitivity, on its own, implies that the quantitative analysis should not be used as a basis for moving from the status quo to any of the GPL processes.

9.2.4. Alternative discount rate

202. Table 16 below reports the results of applying an alternative discount rate for CP costs and benefits (instead of the social discount rate of 3.5%). The alternative that we use is the 6.5% return expected to be generated by BT as a regulated telecoms operator. We use this as a proxy for the commercial cost of capital applicable to all CPs.

Table 16: Estimated net benefits from the different switching processes under alternative assumptions for the discount rate applicable to CPs

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Ofcom Base Case (corrected)	**-0.9**	**-0.6**	**0.3**	**2.6**	**3.8**	**7.1**	**4.3**	**7.2**
6.5% discount rate applied to CPs costs & benefits	-1.0	-0.6	-0.0	2.2	3.0	6.4	3.5	6.3
CRA Base Case	**-2.1**	**-1.7**	**-0.8**	**1.5**	**2.7**	**6.0**	**14.0**	**17.3**
6.5% discount rate applied to CPs costs & benefits	-2.0	-1.6	-1.0	1.2	2.1	5.4	11.9	15.2

Source: CRA analysis based on the Ofcom 'Consumer switching cost-benefit model'.

All else equal, adopting a proxy for the commercial discount rate for the costs and benefits accruing to CPs results in less weight being placed on the cost and benefits for CPs relative to the costs and benefits for consumers (as the CP costs and benefits are discounted by a higher factor). This has the effect of reducing the estimated net benefits for all switching processes under both the Ofcom Base Case and the CRA Base Case.

9.2.5. Alternative implementation cost estimates for the GPL-TPV process

203. We understand that BSkyB, BT and Virgin Media have retained PwC to comment on the CSMG estimates of the implementation costs of the GPL-TPV process. As part of this work, PwC produced an independent estimate of the likely implementation costs (both CapEx and on-going OpEx) of the GPL-TPV process. We were provided with the PwC estimates of these costs (as reported in *"Ofcom customer switching consultation: An independent cost assessment of the alternative GPL TPV model"*, PwC, May 2012). We have modelled a scenario where we use the PwC estimates of the implementation costs of the GPL-TPV process (instead of the CSMG estimates) in the Ofcom impact assessment model. The results are reported in the table below.

Table 17: Estimated net benefits from the different switching processes when the PwC estimates of the implementation costs of the GPL-TPV processes are used

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Ofcom Base Case (corrected)	**-0.9**	**-0.6**	**0.3**	**2.6**	**3.8**	**7.1**	**4.3**	**7.2**
PwC 'Likely' case	-0.9	-0.6	0.3	2.6	-1.0	2.3	4.3	7.2
PwC 'Best' case	-0.9	-0.6	0.3	2.6	4.7	8.0	4.3	7.2
PwC 'Worse' case	-0.9	-0.6	0.3	2.6	-7.6	-4.3	4.3	7.2
CRA Base Case	**-2.1**	**-1.7**	**-0.8**	**1.5**	**2.7**	**6.0**	**14.0**	**17.3**
PwC 'Likely' case	-2.1	-1.7	-0.8	1.5	-2.1	1.2	14.0	17.3
PwC 'Best' case	-2.1	-1.7	-0.8	1.5	3.6	6.9	14.0	17.3
PwC 'Worse' case	-2.1	-1.7	-0.8	1.5	-8.7	-5.3	14.0	17.3

Source: CRA analysis based on the Ofcom 'Consumer switching cost-benefit model'.

204. Applying the PwC estimates of the implementation costs of the GPL-TPV process to the impact assessment analysis reduces substantially the estimated net benefits from this process. Holding all else equal, the estimated benefit is near zero or negative under PwC's "likely" scenario and (substantially) negative under PwC's "worse-case".

9.2.6. Further tests of sensitivity to parameter changes

205. As discussed above, a sensitivity analysis should test the robustness of the modelling outcomes to variation in all key model inputs. In addition to those outlined above, we have also run sensitivity tests for the following model parameters:

(a) changes to the assumed percentage of slamming experiences that are due to ETs (as discussed in Section 6.2);

(b) changes to the assumed proportion of consumers that would not have switched had they known prior to the switch occurring that they would incur ETCs (discussed in Section 6.2);

(c) for the CRA Base Case, an alternative assumption on the number of consumers contacting their LP under GPL processes (40% instead of 77%, as discussed in Section 6.4.1);

(d) changes to the assumed total number of switches per year; and

(e) changes to the assumed reduction in slamming achieved by the GPL-TPV process.

206. In Table 18 below we report the results of these further changes to parameters. As can be seen, these further changes to the parameter values used by Ofcom can result in substantial changes to both the levels of the quantified net benefits and their balance between the different switching processes. For example, assuming the GPL-TPV

process reduces slamming by 75% rather than 90% (same as GPL-USN) results in a 30-70% reduction in the net benefit reported for the GPL-TPV process.

Table 18: Estimated net benefits from the different switching processes assuming small changes to the model parameters[71]

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
Ofcom Base Case (corrected)	**-0.9**	**-0.6**	**0.3**	**2.6**	**3.8**	**7.1**	**4.3**	**7.2**
+ 16% of slamming symptoms due to ETs (base = 20%)	-1.6	-1.4	0.8	3.2	3.7	7.0	4.9	7.9
+ 25% of slamming symptoms due to ETs (base = 20%)	-0.0	0.5	-0.2	1.9	3.9	7.2	3.6	6.3
+ 2.2% of consumers not switching if aware of ETCs in advance (base = 1.1%)[72]	-0.9	-0.6	0.3	2.6	3.8	7.1	4.7	7.6
+ 4.4% of consumers not switching if aware of ETCs in advance (base = 1.1%)[73]	-0.9	-0.6	0.3	2.6	3.8	7.1	5.5	8.3
+ 20% fewer total switches	-1.0	-0.7	0.5	2.7	3.9	7.2	4.6	7.5
+ 20% more total switches	-0.8	-0.5	0.2	2.5	3.7	7.0	4.1	6.9
+ assume GPL-TPV reduces slamming by 75% (base = 90%)	-0.9	-0.6	0.3	2.6	1.9	4.8	4.3	7.2

71 Again, for clarity, each of the sensitivity changes listed is applied *individually* to each of the Ofcom and CRA Base Cases.

72 The Ofcom model includes a saving to consumers for ETCs avoided under the harmonised LPL processes, but not a corresponding cost for additional ETCs incurred under the harmonised GPL processes. We think that this is an oversight, as more switches will occur under GPL processes compared to the status quo and therefore more ETCs are likely to be paid than Ofcom has accounted for. Because Ofcom has not modelled additional costs of ETCs unwillingly paid under the harmonised GPL processes, this sensitivity on has no effect on the results for harmonised GPL processes. The figures reported in this row therefore somewhat overstate the net benefits under the harmonised GPL processes.

73 See footnote 72 – the same comment applies to this sensitivity.

Net impact (annuitised NPV, £m)	2b – GPL TxC		2c – GPL USN		2d – GPL TPV		3a-b – LPL TxC and LPL ALT	
	Low	High	Low	High	Low	High	Low	High
CRA Base Case	**-2.1**	**-1.7**	**-0.8**	**1.5**	**2.7**	**6.0**	**14.0**	**17.3**
+ 16% of slamming symptoms due to ETs (base = 20%)	-2.8	-2.6	-0.3	2.0	2.6	5.9	14.2	17.6
+ 25% of slamming symptoms due to ETs (base = 20%)	-1.2	-0.6	-1.4	0.7	2.8	6.1	13.6	16.8
+ 2.2% of consumers not switching if aware of ETCs in advance (base = 1.1%)[74]	-2.1	-1.7	-0.8	1.5	2.7	6.0	14.4	17.6
+ 4.4% of consumers not switching if aware of ETCs in advance (base = 1.1%)[75]	-2.1	-1.7	-0.8	1.5	2.7	6.0	15.1	18.4
+ 40% of consumers call LP under GPL (base = 77%)	-1.7	-1.3	-0.4	1.8	3.1	6.4	11.5	14.8
+ 20% fewer total switches	-2.2	-1.8	-0.7	1.6	2.8	6.1	14.2	17.5
+ 20% more total switches	-2.0	-1.6	-0.9	1.3	2.6	5.9	13.7	17.0
+ assume GPL-TPV reduces slamming by 75% (base = 90%)	-2.1	-1.7	-0.8	1.5	0.8	3.7	14.0	17.3

Source: CRA analysis based on Ofcom's "Consumer switching cost-benefit model".

9.3. Summary of scenario and sensitivity analysis of Ofcom's quantitative assessment

207. Figure 38 of the Consultation Document presents Ofcom's quantification of costs and benefits for each of the options. We refer to these results as the "Ofcom Base Case". We have explored the effects of correcting the Ofcom Base Case for those errors and omissions identified in Sections 6 and 7 that we can readily quantify. Taking these corrections together we arrive at a "CRA Base Case" quantitative assessment that is very different from the Ofcom Base Case.

74 See footnote 72 – the same comment applies to this sensitivity.

75 See footnote 72 – the same comment applies to this sensitivity.

208. The net benefits of each of the harmonised GPL options are lower in the CRA Base Case, by around £1.2 million, while the net benefits of the harmonised LPL options are higher by around £10 million. Therefore, whereas under the Ofcom Base Case the GPL-TPV option and the harmonised LPL options appear to have similar quantifiable net benefits, the CRA Base Case suggests that the harmonised LPL options are likely to deliver substantially greater quantifiable net benefits than the GPL-TPV option (and the other harmonised GPL options). What is more, the time taken for positive cumulative benefits to be delivered is longer for the GPL-TPV option and shorter for the harmonised LPL processes under the CRA Base Case.

209. The largest contributors to the differences in net benefits between the Ofcom and CRA base cases are:

    a) the time spent calling LPs under GPL processes, which was excluded in the Ofcom Base Case, but included in the CRA Base Case (which contributes around £5 million to the net benefits of the harmonised LPL options under the CRA Base Case); and

    b) the 40% reduction in ETs that the CRA Base Case assumes will occur under the harmonised LPL options, whereas the Ofcom Base Case assumes that the harmonised LPL options will not deal with any ETs (which contributes around £2 million to the net benefits of the harmonised LPL options under the CRA Base Case).

210. Our conclusion is that Ofcom's quantitative assessment has tended to overstate the benefits of the harmonised GPL processes and understate the benefits of the harmonised LPL processes, with substantial impact on the quantified net benefits of the various options.

211. We have also explored the sensitivity of the Ofcom and CRA base cases to a large number of assumptions built into the modelling. The main finding of our sensitivity analysis is that the results of the model are sensitive to many assumptions and that the model is consequently not a reliable basis on which judgements should be made as to whether to move from the status quo or which option to prefer. In particular:

    a) Using ranges rather than midpoints with respect to the CSMG estimates of implementation costs produces very different results. For example, testing the high CSMG implementation cost estimates with the "low" estimate of consumer benefits reduces the net benefits of the GPL-TPV option to £1 million (a reduction of 74%) under the Ofcom Base Case. Under the CRA Base Case the same sensitivity turns the net benefits of the GPL-TPV option negative.

    b) For the incidence of slamming, using the 99% confidence interval range rather than the 2011 mean and using 2010 instead of 2011 estimates has an even greater effect. For example, using the 2010 mean slamming incidence (instead of the 2011 mean) turns the net benefits of the GPL-TPV option negative using the "low" estimate of consumer benefits, even under the Ofcom Base Case. Using the 2010 and 2011 estimated lower bounds for slamming incidence turns the net benefits of *all* options negative under the Ofcom Base Case (again, using the "low" estimate of consumer benefits). Under the CRA Base Case, all of the harmonised GPL options deliver negative net benefits when using the 2010 and 2011 lower bounds, even when using the "high" estimate of consumer benefits, while the harmonised LPL options continue to deliver positive (though substantially lower) net benefits. In the

other direction, using the 2011 upper bound increases the net benefit of the GPL-TPV option by 139% and 92% when using, respectively, the "low" and "high" estimates of consumer benefits under the Ofcom Base Case. The net benefits of the harmonised LPL options increase by similar amounts when using the 2011 upper bound estimates of slamming incidence. The sensitivity of the model to assumptions on slamming incidence is therefore a significant concern, given that there is so much uncertainty over the amount of slamming that is occurring in the status quo, as we discussed in Section 6.2.

c) Using PwC's estimates of the implementation costs of the GPL-TPV process instead of the CSMG estimates, we find that the PwC "likely" and "worse" cases for GPL-TPV implementation costs turn the net benefits of the GPL-TPV option negative using the "low" estimate of consumer benefits under both the Ofcom Base Case and the CRA Base Case. Indeed, using the PwC "worse" case we find the net benefits of the GPL-TPV turn negative even using the "high" estimate of consumer benefits (again, under both the Ofcom Base Case and the CRA Base Case). Again, this sensitivity on its own raises significant concerns regarding the robustness of the model to reasonable alternative assumptions.

d) Using a plausible alternative discount rate for CP costs and benefits reduces the net benefits under the GPL-TPV option by as much as 21% (using the "low" estimate of consumer benefits under the Ofcom Base Case).

e) The time period over which costs and benefits are assessed can also make a significant difference. For example, compared to the Ofcom Base Case, which models costs and benefits over ten years, a five year modelling period produces net benefits for the GPL-TPV option up to 66% lower (and as low as £1.3 million) using the "low" estimate of consumer benefits. Compared to the CRA Base Case, using a five year modelling period reduces the net benefits of the GPL-TPV option to £0.1 million (again, using the "low" estimate of consumer benefits).

f) The modelling is also sensitive to assumptions on implementation timeframes; plausible alternative assumptions on implementation timeframes can, in particular, have a significant impact on the time taken for the GPL-TPV option to deliver cumulative net benefits, extending this from 4-5 years (depending on which base Case is used) to 7-8 years.

212. The conclusion from our sensitivity analysis is that the model that Ofcom has used in its quantitative assessment is not robust to plausible alternative assumptions with respect to a large number of parameters. It therefore should not be relied upon to reach any judgement as to whether any particular option should be preferred to the status quo or to any other option.

10. OFCOM'S QUALITATIVE ASSESSMENT OF THE OPTIONS

213. Given the limitations with both the traffic light analysis and quantification of net benefits, Ofcom's impact assessment rests ultimately on a series of qualitative assessments and judgements: see paragraphs 7.153 – 7.174 of the Consultation Document. Ofcom relies on qualitative judgements not only in its conclusion that it is desirable to move from the status quo (for a variety of reasons, including those listed in paragraph 7.130) but also to conclude with a preference for the GPL-TPV option over the two harmonised LPL options (see, in particular, the discussion in paragraphs 7.159 – 1.170).

214. Ofcom identifies two respects in which it considers the GPL-TPV option to be superior to the harmonised LPL option (reactive save and switching costs/hassle) and one respect in which the harmonised LPL options trump the GPL-TPV option (awareness of the implications of switching). The logic appears to be *either* that two apples are better than an orange *or, more likely*, that reactive save as an issue trumps all else. Indeed, by the end of the impact assessment, one is left wondering whether Ofcom's entire consultation is really about a view of the world that reactive save activities must be banned at all cost.

215. We think that in fact the "count" is, *at best for GPL-TPV*, nil-one in favour of the harmonised LPL options, since *at best for GPL-TPV* the issues of reactive save and switching costs/hassle should be scored as draws. There are arguments to suggest that *all three issues* should be scored *even more favourably than this* to the harmonised LPL processes. The following sub-sections explain our reasoning.

10.1. Reactive save activity

216. Ofcom argues that reactive save activity dampens competition and creates barriers to new entrants. As we discuss in our companion report on reactive save, Ofcom's analysis relies primarily on appeals to intuition rather than robust economic analysis and is based on partial empirical analysis and a misunderstanding of the nature of reactive save activity. What is more, Ofcom has an inappropriate focus on reactive save activity when in fact these activities are not meaningfully distinct from other retention activities. We also make the following observations:

- Ofcom does not put forward an affirmative case for why the effects it identifies in relation to reactive save would result in consumer harm rather than – at most – competitor harm, since Ofcom's concerns about switching and entry are misdirected;
- Ofcom's conceptual arguments as to why reactive save may have adverse effects on competition are not robust;
- The most relevant economic literature emphasises the pro-competitive effects of save activities and simple conceptual modelling indicates that reactive save may in fact be of benefit to consumers, meaning that preventing it would harm consumers; and
- Ofcom does not consider the counterfactual adequately – i.e. what would happen to contracts and retention activities if reactive save activity were prevented.

217. In short, our view is that Ofcom has mis-understood the significance and nature of reactive save – the prevention of reactive save under the GPL-TPV process may well be *detrimental* to consumer welfare.

218. It should also be noted that even if one were to accept that banning reactive save would have these benefits (which we do not) one should assign the same benefits (or at least a large portion of them) to the LPL-TxC process, since reactive save is also banned in that process. We understand that there may be some doubts in Ofcom's mind about whether reactive save would continue to occur in the LPL-TxC process (despite the creation of a dedicated phone line and clear rules to preclude save activities on that line backed up by call recording and monitoring of those calls by Ofcom). However, those doubts cannot justify assigning no benefit at all to LPL-TxC in terms of banning reactive save, which is what Ofcom's qualitative assessment currently appears to do.

10.2. Varying and unnecessary switching costs/hassle

219. With respect to switching costs/hassle, Ofcom has overstated the qualitative benefits of the GPL-TPV process relative to the status quo and relative to the harmonised LPL processes. When comparing the GPL-TPV and harmonised LPL processes Ofcom argues that the GPL-TPV process will have lower switching costs because the consumer only needs to make one contact with the GP and the GP has an incentive to make switching easy and hassle free, whereas under the LPL processes the consumer will have to contact the LP "which adds friction to the process" and is "heavily reliant on monitoring and enforcement (with associated costs) to ensure that the LP provides consumers easy access to the switching code".

220. This is an overly favourable view of the GPL-TPV process. As our analysis in Sections 6 and 7 reveals, this view overlooks a large number of factors that point towards greater switching costs and hassle under the GPL-TPV process.

- **Time spent on the switching process.** As we discuss in Section 6.4, Ofcom has overlooked the reality that customers will call the LP in the vast majority of cases even under the GPL-TPV process. Ofcom chooses to disregard this on the basis that customers do not have to call the LP, but our view is that what matters for the impact assessment analysis is what customers will actually do, not what they hypothetically could do.[76] Ofcom also disregards the time that customers will have to spend time reviewing the written communication from their LP explaining the implications of switching (including ETCs, etc.) despite the fact that this is a replacement of part of the call to the LP that must occur under the harmonised LPL processes (which Ofcom has not overlooked).

- **Unquantified harms from insufficient information on the implications of switching and more cancelled orders under GPL-TPV.** As we discuss in Section 7.1, in addition to ETCs, consumers may also unwillingly lose bundle discounts and access to email accounts if they switch without full information on the implications of switching. Also, the GPL-TPV process is likely to lead to an increase in the number of orders that are cancelled where this could have been avoided by earlier provision of information on the implications of switching. Cancelling orders generates additional costs and hassle for both consumers and CPs. These issues appear to have been entirely overlooked by Ofcom in its assessment of which of the processes generates greater switching costs and hassle.

- **Failed TPV calls.** In Section 7.3 we note that the introduction of a third party into the GPL-TPV process creates the risk of failed TPV calls that may contribute to greater costs and hassle for consumers in the GPL-TPV process compared to the harmonised LPL processes.

76 Ofcom also overlooked that customers will often call the GP first before calling the LP under the harmonised LPL processes, but we understand that in those cases the GP will likely take that opportunity to do all that is necessary to complete the sale but for processing the order, so that when the customer calls back with the TxC, all that is needed is to place the order. This is therefore not additional time, since Ofcom has included the full time of a call to the GP to discuss and place an order.

- **Greater delays in switching.** As we discuss in Section 7.5, the GPL-TPV process will impose on consumers greater delays in switching compared to the harmonised LPL processes (which can achieve completed switches in less than ten working days and in some cases on the same day). The length of time to switch under GPL processes generally is longer than is considered reasonable by the vast majority of respondents to the BT/Sky/VM telephone and broadband market study, and the same study suggests that the time it takes to switch is important for consumers. This is another respect in which switching hassle is higher under the GPL-TPV process.
- **Direct cost savings from reactive save.** In Section 7.6 we observed that reactive save (permitted under the harmonised LPL-ALT process) can deliver direct benefits to consumers in avoiding costs and hassle of switching providers. This is a qualitative benefit that Ofcom has altogether ignored when comparing the options.

221. Ofcom's comment regarding the reliance of the harmonised LPL processes on monitoring and enforcement is also partial and overly favourable to the GPL-TPV process. As we observe in Section 7.4, it is far from clear that the GPL-TPV process would come with a lower monitoring and enforcement burden, given its reliance on a centralised database that needs to be constantly updated by hundreds of CPs, all of whom have incentives not to update the database accurately or in a timely fashion.

222. Paragraphs 7.166 and 7.167 of the Consultation Document attempt a quantification of benefits if more consumers were to switch due to lower switching costs. It would seem that these paragraphs should have followed paragraph 7.169. Concerns could be expressed with Ofcom's assumptions here.[77] The bigger picture is that, since it is unclear whether the GPL-TPV process or the harmonised LPL processes would exhibit lower switching costs and hassle for consumers, it is unclear to which process these benefits, if they exist, should be assigned.

10.3. Awareness of the implications of switching

223. Ofcom's qualitative assessment accepts that the harmonised LPL processes "could" deliver an additional benefit relative to the GPL-TPV process in relation to awareness of the implications of switching that has not been quantified. Ofcom suggests that the difference between the options relates only to the timing of when the information is provided, not whether the information is provided or not. This is not entirely true, since the written communication from the LP in the GPL-TPV process may get lost or simply not read prior to the switch being completed, in which case the customer might be entirely uninformed.

224. Ofcom then asserts that the benefits of having the information earlier (including fewer orders unnecessarily placed and cancelled) "are not sufficiently large to outweigh the other benefits of the TPV relative to the [harmonised LPL options]". This is a sweeping statement without obvious justification.

77 For example, Ofcom's analysis assumes that the marginal switcher (i.e. a consumer that would not currently switch, but would decide to switch with slightly lower switching costs) would achieve the average cost saving made by those that have already decided to switch given current levels of switching costs. This seems to us unlikely.

10.4. Conclusion on Ofcom's qualitative assessment

225. Ofcom's qualitative analysis is too superficial and uncertain to justify heavy handed regulatory intervention that would impose costs on the industry and, more importantly, alter the competitive dynamic. In light of the significant doubts that we consider exist regarding Ofcom's analysis of reactive save, Ofcom's impact assessment, which ultimately rests on an intuitive (but unsupported) qualitative judgement regarding reactive save, is not a sound basis for a move from the status quo or to the GPL-TPV option.

11. CONCLUSIONS

226. We conclude that Ofcom needs to exercise much greater caution in terms of the costs and risks of the various options that it is consulting on, particularly those that are the most intrusive and costly. The net benefits that Ofcom has quantified are entirely dominated by one factor only (reducing the costs of slamming) and after correcting for a number of errors and omissions in Ofcom's Base Case results we find in our CRA Base Case that the harmonised LPL options are likely to deliver substantially greater quantifiable net benefits than any of the harmonised GPL options (including the GPL-TPV option). In addition, Ofcom failed to perform a sensitivity analysis, which would have revealed that its quantitative assessment is not robust to a number of plausible alternative assumptions. Meanwhile, Ofcom's qualitative assessment is dominated by Ofcom's negative view of reactive save activity – which lacks sound economic foundation. This appears an unsatisfactory basis on which to reach a conclusion.

227. We would urge Ofcom to reconsider the whole analysis. When looked at closely, the conclusion that the status quo requires modification and the ranking of alternative options turns ultimately on a qualitative analysis, and a series of value judgements that are not analytically well supported. In light of this, Ofcom's impact assessment fails to clear in our view the hurdle for overcoming the bias against intervention, and is not a sound basis for a move from the status quo to the GPL-TPV option.