OFCOM

Charge Control for LLU/WLR Services

TalkTalk Group response

NON-CONFIDENTIAL VERSION

July 2011

INTRODUCTION

1 This is TalkTalk Group's (TTG) response Ofcom's consultation on the Charge Control for LLU/WLR services[1].

2 TalkTalk Group provides broadband to over 4 million residential and business customers under the TalkTalk, AOL, TalkTalk Business and Pipex brands. We are the UK's biggest local loop unbundler, operate the UK's largest next generation network (NGN) and are Openreach's largest wholesale customer.

3 LLU is the bedrock of competition and consumer benefits in the telecoms sector. The conclusion that Ofcom reaches on LLU and WLR prices (and particularly MPF prices) will have a profound effect on UK consumers, on our business and more broadly on the effectiveness of competition and consumer benefits in the UK. For instance, setting MPF prices too high and/or setting the WLR / MPF price difference too low will result in consumers paying excessive prices, less effective competition and reduced innovation and investment. Just a 1% rise Ofcom's MPF and WLR cost estimates, for example, will increase the aggregate amount paid by UK consumers by £70million[2]. It is critical that the assumptions used are sound and evidence based. Given the impact of just small changes it warrants Ofcom investing significant resources to get the charge control set at an appropriate level.

4 The key points in our response are as follows:

5 Understandably many of the assumptions in the model are provided by BT e.g. valuations, cost estimates, allocations. Unsurprisingly these will be biased to favour BT by exaggerating LLU/WLR costs. These assumptions need challenging and intense scrutiny to ensure they are reasonable for the purposes of this charge control. However, it appears that in some areas Ofcom has accepted BT's claims without sufficient scrutiny. Further the lack of transparency (though better than in the 2009 Review) is inadequate to allow stakeholders to properly scrutinise BT's assumptions. The poor transparency (combined with lack of clarity and inconsistency) also makes it difficult for stakeholders to respond properly and intelligently to the consultation.

6 In this light it is essential that Ofcom is willing to adopt different assumptions to those provided by BT even the if assumption may have a relatively small impact or if Ofcom will have to make a 'best guess' to correct the assumption. If not the model will be populated with many biased assumptions that favour BT and in aggregate will means that the prices will be materially higher than is justifiable.

7 The allocation of many BT Group costs has been based on UK FTEs. This results in an inappropriately high allocation to Openreach - for example: procurement costs

[1] It excludes responses on the cost of capital (question 7.9) which was provided to Ofcom in June 2011

[2] a 1% rise in costs in 2013/14 is ~£1 per line. 23million lines i.e. total impact £23m in 2013/14. Aggregate impact reflects glidepath in this and next charge control

should be allocated in proportion to costs (not FTE); less strategy and policy cost should be allocated to Openreach since this activity of limited relevance to LLU/WLR and is used by overseas subsidiaries; overseas subsidiaries should be allocated a share of BT Group computing cost since they use this facility. We have outlined a simple method by which Ofcom can correct these excessive allocations. Though the approach is arguably not 'perfect' it is unquestionably preferable to continuing with BT's assumption. The correction is also material – probably around £30m on LLU/WLR.

8 Ofcom has under-allocated cost to NGA – this results in excessive allocation to LLU/WLR and a range of harmful distortions and inefficiencies. For example: no cost is allocated to NGA for its use of duct (Ofcom's justification for this is based on a misapplication of the anchor pricing approach); and, it appears no Openreach/BT Group overhead is allocated to NGA roll-out and provisioning. Ofcom must correct these errors.

9 Openreach currently provide MPF using a wiring approach involving two jumpers (double jumpering). Instead it could (as is done for WLR and 21CN) be wired using single jumper which would reduce the cost per line by £6 (which is ,of course, why Openreach use it themselves). BT have a particular incentive to be inefficient in the delivery of MPF since it is used by competitors to compete with BT. Ofcom have allowed BT to fully recover thee inefficient costs meaning that BT have no incentive to reduce costs. Ofcom need to resolve this problem now by (ideally) setting the MPF price on that basis that all new MPF lines (after 2007 when BT was aware that single jumpering was more efficient) were installed using single jumpering. Consumers and competition have suffered significantly already but if Ofcom fails to act decisively now it will be forcing consumers to pay £100s millions in excess charges and weakening the competition they so depend on.

10 We agree with Ofcom's approach on asset valuation. Using a CCA valuation approach (rather than RAV) for pre-97 assets and employing a 'direct' CCA valuation method (rather than CCA indexation) would be clearly against consumers interests and gift BT a windfall gain that is based on spurious and inaccurate assumptions.

11 The allocation approach Ofcom has used for Cumulo rates (which is BT's approach) is contrary to the cost causality relationships implicit in the way the VOA undertake valuations. This results in Cumulo rates costs for MPF that are four times what they should be. This part of the cost estimates needs to be fully reworked.

12 Based on an undisclosed BT study Ofcom has assumed no line length adjustment. This is contrary to a number of independent and transparent reports and analysis that indicate that MPF lines are substantially shorter than WLR lines. A line length adjustment must be made unless Ofcom can provide sound reasoning as to why no adjustment is appropriate.

13 The cost estimates should assume no DACS.

14 Frame use costs should be derived on the base of single jumpering.

15 The fault repair costs assumed (for duct/copper and frame) for MPF in 2013/14 are excessive (compared to WLR) since implicitly assume that the high level of faults for MPF (which is driven by a high proportion of 'young' lines which have a much higher fault rate) will continue whereas this effect will mostly reverse out by 2013/14. The overall effect is that by 2013/14 MPF fault repair costs will be lower than WLR (not higher as Ofcom assume)

16 The computing cost estimates and allocations seem riddled with anomalies. These need a full review.

17 There seem to be a number of cost items (as well as product management) that are not, but should be, allocated to BT's Northern Ireland activities most particularly 'IT Net Development' and 'Design costs'.

18 There appears to be a significant under-allocation of costs to certain so-called 'non-regulated services' such as TRC, SFI and enhanced care (as there was in the 2009 Review). Ofcom needs to make transparent how much cost is allocated to these services and allow stakeholders to comment on appropriate adjustments.

19 BT Group overhead costs should reflect changes in volume – they currently presume constant volume.

20 Ofcom must scrutinise and verify that the cost of staff in BT's Career Transition Centre (currently numbering we understand 3,500) are excluded from the LLU/WLR costs.

21 On volumes, we consider that the total number of lines will not (given the recent growth in lines) decline at the rate Ofcom projects.

22 Regarding efficiency, the most relevant and reliable benchmarks are historic rates (which indicates a 6% gross efficiency gain) and the Oliver Wyman study (7.5%) though both of these are (for differing reasons) underestimates of what Openreach could have achieved in the past or could achieve in the future if it were to match the level of the most efficient firms. These rates of efficiency gain are also consistent with a number of aspects of BT – particularly its non compulsory redundancy policy and seemingly very high wage rates – which indicate that it is highly inefficient. Public statements made by management to the City also support the case that continuing high level of efficiency improvements are possible in future. We estimate that Openreach should be able to achieve 6% to 8% in gross terms. We think the cost that Ofcom should allow for achieving these gains should be small.

23 We consider 2% pay inflation to be in line with both economic forecasts and other companies.

24 Price differences between MPF and WLR/SMPF are critical to ensuring efficient competition and meeting consumers interests. We consider that Ofcom's use of its anchor pricing approach to be harmful to consumers interests (and that Ofcom has seemingly ignored these harmful effects). We agree with Ofcom's overall approach of basing costs on FAC and cross-checking that the resulting price difference is

greater that the LRIC cost difference. However, we think that: the FAC cost estimates are flawed; the cross-check should be done using LRIC+EPMU; and that the LRIC cost estimate are inappropriate.

25 Consumer interests will be best met by a number of changes on the regulation of ancillary services. The main recommendation are:

- Align MPF to WLR transfer charge with MPF and SMPF connection charges
- Align MPF new provide and WLR new provide charges
- Recover 'equalised' cease costs from MPF and SMPF rentals
- Create a basket for SFI and TRC services
- Include electricity mark-up component of electricity charge in co-mingling basket
- Include enhanced care services in a basket (or baskets)
- Put tie cables in a separate basket

26 It appears that the costs of WLR ceases and WLR jumper removals (which are about £30m in total) have been recovered across all services. This must be corrected by allocating these costs to WLR only.

27 The path of prices is distorted by a strange and unwanted inflation effect. This can and should be easily corrected.

28 This response laid out as follows:

Overall approach to setting charges

- Reliability of BT data
- Transparency
- Materiality
- Need for 'best guesses'

Starting / base year costs

- BT Group cost allocation
- Cost allocation to NGA services
- Single jumpering
- Asset valuation
- Cumulo rates
- Duct / copper use (Line length and DACS)

- Other – frame use, frame repair, TAMs, computing, product management, BT Northern Ireland, non-regulated services, Openreach vans, other

Forecasts

- Volume
- Efficiency
- Inflation
- Use of CPI / RPI

Price difference

- Use of anchor pricing approach
- FAC cost differences
- Cross-check approach / method
- LRIC cost estimates

Ancillary services

Glidepath

Other issues

29 Our response on cost of capital issues was covered in our response of the WBA Charge Control. We have not repeated that here.

30 This response draws on reports commissioned by TalkTalk and Sky from Frontier Economics and Analysys Mason. In the event of any inconsistency between this response and the reports, this response represents TalkTalk's view. The reports have been provided to Ofcom separately.

IMPORTANT NOTE: We are waiting for Ofcom to provide a large number of additional pieces of data. When this information is provided we may revise our position and make additional submissions. We fully expect Ofcom to properly take account of these submissions. This submission is without prejudice to TTG's final position. As a result of this missing data, this submission is, for the moment, confidential in its entirety.

If there are any questions regarding this submission please contact Andrew Heaney (*andrew.heaney@talktalkplc.com* or 07979 657965).

APPROACH TO CHARGE SETTING

31 This first section addresses a number of related issues regarding the context and approach that Ofcom has used to develop and consult on the charge control. The points raised should shape the way that Ofcom considers submissions from BT and other stakeholders and ultimately the assumptions that it uses. The key issues are:

- The unreliability of the data that BT provides and therefore the need for intense scrutiny of this data
- The need for transparency both since it improves the quality of submissions and because it will allow others to scrutinise the data BT provides
- The need to adjust BT's assumptions even the impact they may individually seem small
- The need to make 'best guesses' where truly robust data is not available

32 The first issue relates to reliance on BT data. Though the models are Ofcom's models they rely on a large amount of data and assumptions that is provided by BT such as valuations, costs estimates, allocation bases, usage factors, management budgets. In some cases Ofcom has properly scrutinised the data BT has provided (e.g. duct valuation). However, it appears that in certain cases Ofcom has accepted BT's assumptions without sufficient scrutiny.

33 BT has an incentive to provide biased data that exaggerates its costs. Though unfortunate this is not surprising given BT's commercial incentives. In fact, BT has a track record of over-stating LLU/WLR costs and providing incorrect claims regarding future costs. We provide some example below:

- In relation to the allocation of costs in the 2009 LLU Charge Control review ('2009 Review') BT allocated no (or very little) cost to certain unregulated services with the result that LLU/WLR costs were exaggerated by almost £100m (over 4%)
- During the 2009 Review BT stated that they could only achieve a 0.6% to 2.4%[3] efficiency improvement in 2009/10 – yet their own internal plans from the same time showed that they had planned to achieve 5.1% in 2009/10[4]
- In 2008 and 2009 BT insisted that Cumulo rates costs could not be reduced ('unambiguously non-compressible') but within a few months they had reduced

[3] Openreach second consultation response (August 2008) page 37: "*an assumption of a 1% reduction on the broad "compressible" costs would be a very challenging target. Anything above this level would be unreasonable*". Assuming 60% (all costs) to 75% (MPF costs) are compressible gives 0.6% to 0.8%. They also claimed no fault rate reduction was possible

Openreach second consultation response (March 2009) page 3: "*We expect to deliver to the 4% range in 2009/10*". This was 4% on compressible costs. Assuming 60% (all costs) to 75% (MPF costs) are compressible gives 2.4% to 3%. They also claimed no fault rate reduction was possible

[4] "*During the progress of the LLU Appeal a number of Openreach documents* [from Dec 2008] *were admitted into the confidentiality ring. … The total of these three* [efficiency] *components is 5.1 per cent in both 2008/09 and 2009/10*" LLU Determination §2.121.

these costs by over 40%[5] - it is implausible that they did not know this or at least the possibility of this at the time of the charge control. For example in their first consultation response BT said:

> *Almost 20% of Openreach's operating costs are unambiguously "non-compressible" operational costs and no efficiency assumptions can realistically be applied to the following items: ... Accommodation: 59% of these costs are considered non- compressible as they relate to cumulo rates (which are levied by the Government) and the rental of floor space …*

- During the 2009 Review BT claimed that fault rates could not be reduced further. Yet in 2009/10 they reduced faults by 11%[6].
- These false and misleading claims about efficiency have been repeated on many occasions. For example, in each of the following cases BT claimed that they could only achieve around 1% efficiency – yet the evidence has shown that they then went onto achieve 4% efficiency improvements (or more). For example:
  - WLR price setting in 2006: "*BT stated that the efficiency target* [1.5%] *was too challenging*"
  - LLU price setting in 2005: "*BT considers that an efficiency factor of 1.5% is very challenging and that a lower assumption should be used*"
  - PPC charge setting in 2004: "*BT set out further arguments that a measure* [of its inefficiency] *of 0% to 1% is more appropriate*"
  - Network charge control in 2005: "*BT is already at the frontier of network efficiency. A target of less than 2% per annum improvement is more appropriate*"
- BT claimed to the Competition Commission ('CC') that their 'Right First Time' initiative '*will not contribute to efficiency savings at all*' (WS Shurmer §§91-95) in an attempt to justify a lower efficiency assumption. Yet, documents that were revealed later in the appeal showed a different story. They said[7]:
  - "*the initiatives enshrined in Right First Time will allow us to reduce our cost base ...*" Openreach's 2008 Operating Plan
  - BT's plans for managing labour costs "*are primarily underpinned by the Group's focus on Right First Time' measures and the associated removal of the labour cost of failure of key provisioning, billing and customer service processes*" BT's Medium Term Financial Plan (April 2008)
- From the recent SLU dispute it has transpired that BT has set the SLU connection prices to include cease costs (even though a provision process does not involve a cease!) and the SL-MPF product to include e-side duct/copper

[5] Consultation Fig 8.3 Cumulo rates fell from £178m to £101m (43%)

[6] see footnote 107

[7] See LLU Appeal CPW Reply VI §26(b)

costs (even though it does not use any e-side duct/copper) – bath were tactics to inappropriately exaggerate the cost of regulated services

34 Thus experience shows clearly that much data provided by BT is biased and unreliable.

35 Even though BT's data is highly unreliable, we are not suggesting that Ofcom should wholly ignore BT's claims – after all Ofcom's assessment of BT's costs needs to start somewhere. Rather, we suggest that Ofcom should be extremely wary of relying on BT's claims – it should be highly sceptical of what BT claims, it should start with a presumption that the data is biased and, as a consequence, it should closely scrutinise BT's claims.

36 In some areas such as duct valuation Ofcom has closely scrutinised BT's claims (which unsurprisingly has resulted in BT's approach being rejected). However, we are concerned that Ofcom has adopted some of BT's assumptions without proper scrutiny (or in some cases understanding BT's justification[8]) – for example, on Cumulo rates, the RAV model, non-regulated service allocation, BT Group allocation, NGA allocation.

37 In an ideal world Ofcom would have a source of independently verified (or verifiable) data. However, this is not always possible. Therefore, it should exploit all the capabilities it can to scrutinise and help verify the data. One particular resource is that of stakeholders – however, other stakeholders will only be able to properly scrutinise BT's assumptions if transparency is provided.

38 We note that Ofcom suggests that the RFS audit provides some form of assurance of the reliability of some of BT's data[9]. In reality very little assurance can or should be taken from the RFS audit in respect of reasonableness of allocations for the purposes of a charge control – the nature of the audit merely provides some comfort that the allocations are not unreasonable (see Annex 1). It provides no comfort that the allocations are fair or suitable for the purposes of a charge control.

39 The second issue regards <u>transparency of both evidence and reasoning</u>. We consider that it is widely accepted that transparency improves the consultation process by enabling respondents to submit more intelligent and better reasoned responses and provide more robust challenge. Transparency also allows respondents to scrutinise BT's assumptions which is particularly important in areas where Ofcom has not closely scrutinised them itself. Effectively, transparency and scrutiny are critical tools for protecting consumers interests.

[8] For example: consultation §A8.62, questions TTG7, TTG24, 25, FE13, FE 26a, 26b, 26c, TTG 32,

[9] For example, consultation §3.16, answer to question AM12, LLU Appeal Defence §§C3, C28, C31.1, C32, C58. Question AM12: "*What is Ofcom's rationale for not allocating transfer charges to BT overseas subsidiaries? What about shared management resources?*" Answer: "*Not Ofcom rationale, is RFS the treatment* [sic]."

40 The level of transparency provided in this consultation is for the most part better than in the 2009 consultation – for example:

- We have some visibility the usage factors and costs by different cost elements so we can understand what is causing the cost/price difference (as between MPF and WLR/SMPF) and so can focus on the most relevant areas and comment on the reasonableness of the assumptions
- We have clarity on the LRIC cost differences assumptions (in the 2009 Review no LRIC cost differences were provided in the LLU consultation)
- We have data and explanation on how the duct valuation has been done (including having access to the RAV model for the first time) which allows us to comment in much more detail and much more intelligently on the valuation approach
- We have some more information available on the way in which the Cumulo rates has been calculated and allocated by Ofcom so can more intelligently comment on whether it is reasonable
- We have access (albeit limited) to some of the models which allows us to identify modelling errors (our consultants identified one that reduced MPF and WLR costs by £2)

41 However, though transparency has been improved it remains very far from ideal. In particular, the models provided are either highly redacted and non-functioning or populated with 'dummy' data. Some of the information that has been provided in the consultation and model is insufficiently granular and/or unclear/inconsistent and/or is not adequately explained. Further, there are several areas where Ofcom has not provided sufficient evidence and reasoning for its position.

42 Though we have presented further questions to Ofcom and Ofcom has responded to many of these, the answers provided are often not complete or clear and many questions remain unanswered. This significantly hinders our ability to scrutinise the assumptions ourselves and respond intelligently. For example:

- We do not know some of the basic assumptions. For instance:
  - we do not know what % of Group HQ costs are allocated to Openreach or how much cost is allocated to Openreach
  - we do not know what cost is allocated to different non-regulated services (or why) and anomalous overall cost allocations are unexplained
  - we have no useful understanding of how Ofcom has allocated Cumulo rates to different products
  - we do not know how much computing cost is allocated overall to MPF versus WLR
  - we do not know why the cost of MPF connection is 20% more than SMPF connection even though they broadly include the same activities

- large amounts of cost are categorised under 'other' with no description or breakdown
- anomalies in repair costs (where MPF costs are higher than logic would suggest) remain unexplained or justified
- Ofcom has not disclosed the evidence and reasoning that it is relying on to justify zero line length adjustment

- We are forced to spend a large amount of our limited time and resources merely asking questions of Ofcom to gain a sufficient understanding of the assumptions made, the reasons for them and then to try and resolve anomalies and discrepancies (though in many cases this information has not been forthcoming)
- We remain at a significant disadvantage to BT who knows all (or most of) the assumptions used and does not have to waste time/resources or suffer delay in being able to respond

43 This lack of transparency are prejudicial to our and consumer interests. It is widely accepted by the Courts (CAT and Court of Appeal) that transparency (of evidence and of reasoning) is necessary to allow consultees to respond intelligently and so ensure that the consultation is proper and effective[10]. Transparency is not merely a procedural requirement but can fundamentally improve the quality and accuracy of a decision. In this case, where BT have access to all the assumption and Ofcom is relying on BT's biased claims (often without scrutiny), transparency is even more critical to protect consumers interests and ensure a level playing field.

44 This situation intensifies the need for Ofcom to challenge and scrutinise the data that BT provides it.

45 The third issue regards <u>materiality</u>. We accept that as a matter of effective use of resource it is not possible to investigate in depth every single issue and that effort should be focussed on more material issues. However, the reality of a charge control

[10] For example from CAT judgement (Vodafone Ltd & Ors v Ofcom and H3G [2008])

"… it is still incumbent on OFCOM … to conduct their assessment with appropriate care, attention and accuracy so that their results are soundly based and can withstand the profound and rigorous scrutiny …" (§46)

"The essential question for the Tribunal is whether OFCOM equipped itself with a sufficiently cogent and accurate set of inputs to enable it to perform a reliable and soundly based CBA." (§47)

"It is the duty of a responsible regulator to ensure that the important decisions it takes, with potentially wide ranging impact on industry, should be sufficiently convincing to withstand industry, public and judicial scrutiny." (§47)

"… mere consultation and transparency alone are not sufficient grounds to save a decision … the purpose of consultation is to seek the informed views of, and best available information from, industry …" (§94)

From Lord Woolf M.R., giving the judgment of the Court of Appeal in *ex p Coughlan* (albeit in a judicial review context), at paragraph 108

"*To be proper, consultation must … include sufficient reasons for particular proposals and allow those consulted to give intelligent consideration and an intelligent response …*"

is that many individually small assumptions cumulate to have a very large effect (and this is reflected in the modelling approach that Ofcom has adopted). If these 'smaller' assumptions are not scrutinised and amended then it makes a large part of the cost effectively immune from challenge.

46 In a situation where there is no systematic bias in the starting assumptions used by Ofcom then one might reasonably expect the impact of correcting smaller issues would be for some costs to go up and for some costs to go down with the overall cumulative impact of making all the corrections being relatively neutral overall.

47 However, the situation here is different. There is consistent bias in the starting assumptions and most corrections are likely to act in one direction (reducing cost). Therefore, if Ofcom does not investigate these smaller issues then the likely cumulative effect will be a very material over-estimation in the total cost.

48 Given the high risk of bias in the assumptions that BT has provided and the material cumulative effect it is imperative, in our submission, that:

- issues are assessed even if they appear small. Even a 10p change in final year cost estimate will have (cumulative over several years) a £7m impact on the amount customers pay[11]. Thus it is proportionate for Ofcom to spend some time investigating even a 10p issue – we would argue that spending a day of analysis and consideration (which might cost Ofcom £500) is a wholly proportionate use of resources since the impact/benefit of the change will be 14,000 times the cost to Ofcom
- The CC did accept that materiality was a valid consideration in considering where Ofcom should direct its effort. However, it was clear that where an error was known it should be corrected even if it was small. For example, in relation to allocation of product management cost to Northern Ireland the CC said:

  > *Whilst we can see that any adjustment to reflect these costs may well be small, we do not see that it follows that, because an adjustment is small it should not be made.* (CC Determination 2.614)

- Ofcom must set out an objective and transparent for deciding whether an issue is material enough to warrant further investigation. Where Ofcom does decide to not investigate further an issue because it considers it not material it must provide some evidence and reason/justification to support taking such an approach. Such a justification would reflect both the impact of a potential amendment as well as the required effort to investigate an issue since, for instance, a particular amendment may have a small effect but it can be concluded on with little effort (like the Northern Ireland example above). It appears to us that in a number of cases Ofcom has not provided any

[11] 10p on 23m lines equals £2.3m in 2013/14. Including effect over this and next charge control results in aggregate total of £7m

justification for not making amendments but rather has asserted that something is not material[12] (or simply ignored the concern).

49 The forth issue regards making 'best guesses'. There were a number of cases in the 2009 consultation (and subsequent appeal) where Ofcom stuck with the assumption BT provided since Ofcom could not identify a sound alternative. For example, it used BT's assumption of allocating no Group HQ cost to overseas subsidiaries since even though it was accepted that some group HQ costs were used by overseas subsidiaries it was difficult to know exactly what elements of Group HQ costs were used by them. Thus in effect the approach adopted by Ofcom was to be '*precisely wrong*'. Rather than making no correction and so adopting the assumption that BT have offered we consider that Ofcom should use its discretion to make a best estimate (i.e. be '*approximately right*') in these cases. The burden of proof would then rest with BT to demonstrate that Ofcom's assumptions are incorrect – this is a much fairer approach since BT have the information to build a counter-argument.

50 In effect, Ofcom should have no qualms about adopting an assumption that is different to that which BT has proposed if that assumption is preferable.

51 It is important to recognise how this relates to the points made in the CC's LLU Determination. In that case the CC did not suggest that Ofcom should not make an adjustment but rather concluded that the adjustment suggested by TalkTalk was not clearly preferable and that Ofcom had a 'margin of discretion' before the CC and that Ofcom's approach fell within that margin of discretion. It does not follow from CC Determination that Ofcom should make no adjustments at all in these type of cases. Obviously the task in front of Ofcom at this stage is not simply to make an assumption that might be within the margin of discretion that the CC might allow it in the case of an appeal but rather the most appropriate assumption given Ofcom's duties.

52 A related point is it appears to us that sometimes Ofcom seems to suggest that it is acceptable to allow an error in one area since there is imprecision elsewhere in the calculation. We profoundly disagree with this approach for two reasons.

- First, as a matter of principle the only reason to adopt this approach (of ignoring an error) would be if it were known that there were a countervailing error that went in the opposite direction of the same size
- Second, because much of the data is provided by BT it is likely that the errors are systematically biased in favour of BT by increasing the cost estimates, so it is highly unlikely that there are countervailing errors

53 In any case, we consider that Ofcom's role is to make the 'best stab' that it can of setting the right prices.

[12] For example, §A8.92, §A8.62, §§8.14/8.15

54 These points regarding the overall approach suggest a number of principles that Ofcom should adopt when developing this charge control:

- Ofcom must not rely on or trust the data that is provided by BT – BT have clear incentives and a strong track record of providing biased information. Consequently, all BT data needs close scrutiny
- Provide as much transparency as possible to CPs (particularly non-BT CPs) – this must cover both evidence and reasoning. This allows more intelligent responses and better scrutiny of BT's claims. Though transparency has improved it is still inadequate
- Given the bias and the lack of transparency there is a large burden on Ofcom to heavily scrutinise all the data BT's provides it There are several areas where we consider the level of scrutiny inadequate
- In order to reduce the bias and excessive level of LLU/WLR costs that results from using BT's data Ofcom must:
    - Be prepared to adjust assumptions provided by BT even though they may individually seem small
    - Be prepared to make 'best guesses' even though truly robust data is not available

ALLOCATIONS OF GROUP COSTS

55 A number of BT Group costs are allocated to different divisions on the basis of reasonably causal relationships. For example: accommodation is allocated on the basis of floor space used by each division; IT / Net Development is allocated on the basis of actual projects (and so is Design); and, fleet costs are allocated on basis of vehicles used.

56 However, in Ofcom's model a large proportion of the cost allocated to Openreach (about £220 million covering Group HQ, Group CTO, Applications Maintenance and Computing) is allocated in a more arbitrary manner on the basis of UK FTEs since (BT claim) no direct or causal basis is easily identifiable. In many cases though there is likely to be an underlying causal relationship (i.e. the costs are not truly fixed and common). Further, UK FTEs may be a poor proxy for the underlying relationship and so the allocation of costs will be inappropriate. We are concerned that the approach used by Ofcom (which is the same as that used by BT) results in a materially excessive level of cost being allocated to Openreach (and so LLU and WLR).

57 Ofcom's apparent reasoning given for using this (i.e. BT's) approach is that it is the same approach as was adopted in the 2009 Review and the CC did not overturn its approach. Ofcom has not assessed whether this allocation approach is the most appropriate approach or scrutinised the method BT has used. For instance, Ofcom said:

> *" … the Competition Commission (CC) found that the overall approach* [in 2009] *to allocating Group transfer charges was reasonable given the complexities involved and the materiality of further adjustments."* (§A8.14)
>
> *"Our overall approach to modelling transfer charges is similar to our approach used to set the previous LLU controls. For this reason we consider that the current allocation of Group transfer charges as described and supplied by Openreach to Ofcom is appropriate for the purpose of setting a charge control."* (§A8.15)

58 We do not think that either of these reasons represent a sound basis for adopting the approach that Ofcom has:

- Using the same approach as before is simply a recipe for regulatory stasis and lack of progress. Ofcom should adopt the best approach it can in each instance
- Just because the CAT/CC did not overturn the previous allocation approach does not mean that it is the 'best' approach. Ofcom's obligation is not to adopt a method which can be defended in the CAT/CC but rather adopt the approach that it most consistent with its duties to serve consumers interests (which incidentally will also be defensible in the CAT/CC)
- It is worth noting that the CC determination in the 2009 appeal did in no way preclude Ofcom from adopting a better allocation method but rather the CC

determined that the alternative methods suggested by TTG were not preferable[13]

59 We think that if Ofcom simply adopts the allocation approach that BT has suggested it will result in a flawed outcome with too much cost allocated to Openreach. For example under Ofcom's approach:

- No Group HQ cost is allocated to overseas subsidiaries even though they use, to some degree, Group HQ functions. This was accepted by the CC in the 2009 appeal[14]. For example, the CC said[15]:

  "It appears to us that the overseas subsidiaries contribute 20 per cent of group revenues. In such circumstances, it seems likely that at least some amount of management time is devoted to them …"

  Overseas operations are significant. They account for around 20% of BT[16]

- No applications systems/maintenance and computing cost is allocated to overseas subsidiaries even though (according to Ofcom) overseas subsidiaries use this cost[17]

- All the costs are allocated using FTE as the driver. It may be more appropriate to allocate some costs using other drivers – for instance procurement would be better allocated on the basis of share of total operating costs[18]

- The group costs allocated using FTE include some costs (we suspect) which have little or no relevance to Openreach (and/or WLR/LLU) such as sponsorship, R&D and market research. For example, BT's R&D efforts are focussed on core network and application developments, not on LLU and WLR development

60 As we highlight above, Ofcom should be very wary of using the allocation approach that BT has suggested since BT has the incentive and track record of being biased by over-allocating cost to Openreach / regulated products. Furthermore, as we described above (§38) Ofcom can derive almost no comfort from the PWC audit opinion that the allocation basis is reasonable.

61 We recognise that it is difficult to be definitive about the 'right' allocation method. However, it is Ofcom's duty in setting prices to use the 'best' method. By using the

[13] For example, see LLU Determination §§2.596, 2.602, 2.607

[14] Ofcom now seems to prefer BT's claims over the view that the CC took. "*On the basis* [of BT's claim] *that BT's overseas businesses do not appear to be using shared Group services, we think it is reasonable that none of these costs should be allocated to overseas subsidiaries.*"(§A8.62)

[15] See LLU Determination §2.594

[16] 18% of employees (17.5k of 94.6k), 22% of revenue (£4.5bn of £20.1bn) and 17% of non-current assets (£3.2bn of £18.5bn). BT Annual Report 2011 pages 108 and 110.

[17] The answer to TTG13 and discussions with Ofcom indicate that IT services for overseas subsidiaries are provided by BT Group. Further, the FTE figure used to allocate these costs is, we imagine, UK FTE though we are awaiting Ofcom confirmation of this

[18] using FTE results in the high proportion (30%) of cost being allocated to Openreach since it is staff intensive (compared to using other allocation bases)

method that BT uses, and making no adjustments for the factors highlighted above, Ofcom is essentially being precisely wrong. We strongly encourage Ofcom to seek a preferable method. The CC agree, it said:

> *While cost allocation is not the sort of exercise where there can always be said to be only one right answer, some methods of allocation will suit some purposes better than others and reasoned judgements can be made.*[19]

62 We have provided a suggested method for an improved allocation approach (see Annex 3). It is based on assessing the appropriate allocation basis at a more granular level of costs – it is easier to identify appropriate alternative allocation methods at this level rather than when costs are aggregated into categories that include many different types of activities.

63 In this method, for some of the cost categories we amend the UK FTE allocation basis to reflect a more reasonable allocation. For example:

- Legal costs are allocated on basis of operating cost (not FTE) (since most work is related not to staff but to contracts with customers and suppliers) and also assume a little of legal cost is used by overseas subsidiaries
- Procurement costs are allocated on the basis of opex (plus ideally capex) since procurement costs will be related to the costs of services/product procured. The Group procurement function will also serve overseas subsidiaries since many contracts are global)
- Allocation of sponsorship costs to Openreach reduced by 50% since any benefits of sponsorship are likely to predominantly accrue to retail (business and consumer) types activities
- Risk and audit – an allocation made to overseas activities since they use this function
- Allocation of BT Group strategy to Openreach reduced since they activities are predominantly about new products and developments e.g. NGA, 4G and have almost nothing to do with LLU and WLR which are 'legacy' products
- BT Group R&D activities allocation reduced for similar reasons
- Board/secretariat – Board obviously has responsibility for BT's activities overseas and thus wholly inappropriate for zero cost to be allocated to overseas subsidiaries
- Application systems/maintenance are allocated to overseas subsidiaries since they use BT Group for these functions

64 In our model, using these plausible assumptions for cost breakdown and adjustments it would result in a £30m[20] reduction in costs. It is clearly a potentially material adjustment.

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[19] LLU Determination §2.437

[20] On LLU/WLR in 2013/14. The total reduction in the amount consumers will pay over this and the next charge control will be about £90m. This is based on the total difference in

65 The suggested approach is necessarily illustrative at this stage since Ofcom have not yet provided the heads of the main cost categories or the amount of cost in each category[21]. We have requested that Ofcom provide this information.

66 The key barrier to completing this analysis is having sufficiently granular information from BT. There is no good reason for BT to not provide this data. Once this is done Ofcom can easily complete the analysis[22]. Given the clear materiality of this point the onus is clearly on Ofcom to investigate it further. If they do not then, we contend, it will be neither be fair or legal (particularly since stakeholders do not have access to the necessary data).

67 When Ofcom gathers this information we would like to be able to provide additional comments to Ofcom on the assumptions to use. This may require an additional meeting/submission(s).

charges paid by consumes if a £30m reduction in 2013/14 costs is made. The effect of this is a reduction in charges rising (in a glidepath) to £30m in 2013/14 and then falling away (in a glidepath) to zero at the end of the next charge control (in 2016/17)

[21] We asked Ofcom (Sky5, TTG10) to explain the basis for 43% of corporate overheads being charged to Openreach (since an FTE based allocation would indicate 30%). Ofcom said that various 'regulatory adjustments' were made and that after this the allocation was about 30%. Ofcom said that they would provide more information. We have also asked for a breakdown of Group HQ costs and various other relevant data (questions: TTG16, TTG8, TTG17) which is also outstanding

[22] Though not essential this analysis could benefit from some more understanding of how BT operates – for instance, the nature of the group strategy activities and how much of Group legal effort is used for overseas activities. Consultees lack the knowledge and investigatory powers to be able to gather this data. However, Ofcom do have the relevant ability and powers.

ALLOCATION TO NGA

68 Ofcom has opted (incorrectly in our view) to apply an approach to setting charges which takes into account 'anchor pricing'. Under an anchor pricing approach charges are prevented from rising above the level which would be implied by the hypothetical continued use of existing technology (i.e. in this case no NGA). For instance, Ofcom has said:

> *During a period of major technological change, we generally adopt an approach to charge control setting which we refer to as "anchor product pricing" approach. Under this approach we do not allow prices to rise above the level implied by the hypothetical continuation of the existing technology. This prevents the introduction of new technology increasing pricing for the same services.* (§3.22)
>
> *… Essentially, this methodology sets price ceilings with reference to existing technology by assuming no investment or migration to the new technology network. (§3.28)*

69 The effect of using this approach is that the LLU/WLR cost used to set LLU/WLR prices is the minimum of two scenarios (a) the fully allocated cost derived assuming expected NGA deployment and (b) the cost under a hypothetical no NGA deployment case. This algorithm is clear from what Ofcom say, for example:

> *The controls should be set with reference to current technology costs to establish an upper bound for pricing consistent with the principle of "anchor pricing" (§3.3)*
>
> *We propose to employ anchor product pricing as a guiding principle in setting the charge controls to ensure that NGA investments do not result in the charges rising for existing products (§3.26)*
>
> *… the relevance of anchor pricing is to ensure that charges for regulated products and services do not rise as a result of NGA deployment. (§3.27)*
>
> *We believe that the most appropriate application of the anchor product pricing principle in the setting of these charge controls is to set an upper bound for prices under charge control. (§3.30)*

70 In effect the anchor pricing is a 'safeguard' check on the level of charges rather than the primary method of setting charges. In this particular case the lower cost scenario (and the one that binds) will be the scenario assuming expected NGA deployment since the network is (for the most part) an overlay network rather than a replacement network[23]. The cost derived assuming the hypothetical no NGA scenario will not be the binding constraint.

71 Focussing on the question of the cost in the scenario of expected NGA deployment Ofcom suggest that costs have been allocated properly to NGA. Ofcom said:

[23] As a result there will be no reductions in economies of scale for the existing network due to the roll out of NGA. Indeed we would expect demand under a hypothetical no NGA case to be lower as the BT network would be less competitive compared to alternative networks such as cable on 4G mobile.

Cost categories that relate exclusively to NGA, in particular NGA equipments costs have been excluded from the cost model. Common costs have been allocated across services including NGA. This is different from a model of existing technology in which common costs would all be allocated to copper products. (§7.21)

72 However, it appears to us that (in some cases by Ofcom's own admission) costs have not in fact been properly allocated to NGA. The consequence of this is that excessive costs have been allocated to LLU/WLR. For example:

- No adjustment to the base year costs and allocations have been made to reflect the costs incurred in planning and implementing the NGA roll out in the base year
- The cost forecasts and allocations have not been fully modified to reflect changes in the cost structure due to NGA e.g. higher cost of engineers used for NGA, the proportion of systems costs relating to NGA service provision, management time/effort, duct upgrade, increase fault rates on existing lines due to intervention in the local network etc.
- NGA has not been allocated its share of fixed and common costs e.g. no e-side duct cost allocated to NGA, no cost allocated to NGA for use of existing cabinets, a proportion of 'common' corporate costs

73 Ofcom seem to justify this departure from a proper allocation of costs to NGA on the basis that this allocation is reasonable since it results in costs that are less than costs derived under the hypothetical case where no NGA is assumed. For example Ofcom said in respect of allocating no duct cost to NGA:

"… given that we have already made cost adjustment related to NGA which leave costs for the charge controlled services below the upper bound set by our anchor pricing approach we did not consider that it was necessary or appropriate to establish such an allocation basis for this control."[24]

74 This is to misunderstand and misapply the anchor pricing approach:

- the correct approach is to derive (a) the fully allocated LLU/WLR cost based on expected NGA deployment scenario and (b) the hypothetical cost under no NGA deployment scenario and set LLU/WLR prices to equal the minimum of the two cost under the two scenarios
- it is incorrect (as Ofcom have effectively done) to calculate LLU/WLR costs above the FAC based on expected NGA deployment because the costs based on a hypothetical no NGA deployment case would be higher. In effect Ofcom is saying that any price between the two approaches is acceptable rather than the minimum

75 The flaw in Ofcom's approach is evident when you consider what the impact of Ofcom's method is. The purpose of the anchor pricing approach is to ensure that prices are set at the FAC of expected NGA deployment or less. Yet the effect of the

[24] Answer to question Sky17

Ofcom arithmetic is to set price above the FAC in the case of expected NGA deployment.

76 Deviating from the FAC/anchor pricing approach will set costs / prices above FAC and will have a number of harmful consequences:

- It would represent an arbitrary inconsistency in approach since all other products (regulated and unregulated[25]) are costed on the basis of FAC
- It would mis-allocate costs that are incremental to NGA to be recovered from non-NGA services and customers, potentially lead to a reduction in allocative efficiency
- In effect it would allow NGA to 'free ride' on existing investments
- It would create competitive distortions as between downstream broadband services that use BT's NGA (e.g. GEA) and those that are based on LLU or PIA/SLU (whose costs are based on FAC/LRIC+[26]). By allocating more costs per line to broadband based on LLU or PIA/SLU than to GEA this would artificially promote GEA-based broadband services. Ofcom have been clear that they expect PIA and MPF prices to be set using the same method (§§3.46-3.47)
- It would discriminate in favour of BT's NGA (e.g. GEA) and against other services e.g. LLU or PIA/SLU
- It would discriminates against operators such as Virgin and distort and deter competitive investment (versus GEA) by them
- It would penalise customers of LLU/WLR who would effectively subsidise NGA deployment (even though in many cases they cannot access NGA services or in most case they have no interest in the services)
- If the reasoning is in fact that this will induce more NGA investment by BT it is a flawed logic since BT's logical behaviour in response to raised LLU prices (as a result of this approach) will not be to invest more in NGA – this is because its investment in NGA depends predominantly on the incremental return on NGA investment (not on return on LLU/WLR)
- Appears to be incompatible with Ofcom's technology neutral approach.

77 Therefore, we believe firmly that the allocation approach should not depart from FAC and the cost allocation to NGA should be done properly and consistently with other cost allocations. Only then will LLU/WLR price be appropriately set.

78 It is rather opaque as to what NGA costs have been included in the model and how the cost allocation to NGA has been done. It appears that some elements have been

[25] Cost allocation to unregulated products is relevant only inasmuch that it affects the cost allocation to regulated services. For example, in the RFS BT Retail is allocated a share of BT Group's fixed and common cost and, as a consequence, regulated products receive less allocation. Also see allocation of costs to 'non-regulated services' in 2009 LLU Charge Control

[26] See WLA Market Review Dec 2010 §7.76. LRIC+ prices include incremental costs plus a mark-up (typically EPMU) to cover fixed and common costs

correctly excluded from LLU/WLR costs. For instance certain FTTC costs (new cabinets, DSLAMs, modems, handover equipment) and FTTH costs (new duct, OLT, CPE) have not been included in the LLU/WLR costs and therefore seem to have been allocated fully to NGA. We require more transparency on how allocations have been done in order to be able to intelligently respond. Ofcom must review the cost allocation to NGA in detail, make fully transparent the approach and allow comments to be made.

79 Notwithstanding the need for further transparency, we have identified a number of errors that think have been made:

<u>Use of existing assets</u>

- In respect of product management and systems costs we note that a large proportion of Openreach's product and systems development effort is invested in NGA products. The forward looking cost allocation should reflect this – we doubt it does.
- It appears (and Ofcom confirmed) that NGA had been allocated no (existing) duct cost even though NGA will use a variety of duct assets[27]
    - FTTC will use e-side duct for new fibre
    - FTTH will use existing d-/e-side duct 'en route' to new developments

  To date where duct has been shared between copper and fibre networks, costs have been allocated on the basis of cross sectional area. In the absence of any decision to move away from this methodology we would expect this approach to be adopted for NGA fibre, and hence the allocation of duct cost to MPF and WLR to be proportionately reduced. It could be argued that fibre should (per customer/line) take a higher allocation of duct cost since it is more valuable rather than the allocation being on a cross-sectional basis
- It is not clear whether NGA has been allocated any of the cost of the existing cabinet/frame as the relevant allocations do not appear to have been modified in any way to reflect NGA roll-out. Some allocation is appropriate since tie cables (to the VDSL DSLAMs) will need to be connected into the existing cabinet frame
- It is not clear whether NGA has been allocated any cost for the accommodation it uses to house NGA exchange equipment (i.e. OLT for FTTH and Ethernet / handover equipment for FTTC)[28]

[27] For example: answer to question Sky 17 "*At present there has been no clearly agreed basis allocation of ducts costs to NGA over the charge control period. However, given that we have already made cost adjustment related to NGA which leave costs for the charge controlled services below the upper bound set by our anchor pricing approach we did not consider that it was necessary or appropriate to establish such an allocation basis for this control. We welcome the views of stakeholders.*"

[28] Though not directly part of the LLU/WLR costs, an allocation to NGA services would reduce the cost of exchange buildings (run by BT Operate) that are allocated to, for example, the frame and LLU accommodation services

Provisioning

- We have been told by Openreach on a number of occasions that the engineers used for provisioning NGA services are more highly qualified / skilled. It follows that these staff will be more expensive (per hour). However, this appears not to have been recognised since the cost allocation is done of the basis of time booked and does not reflect the higher average cost of engineers used for NGA and hence reduced costs per hour of engineers required for LLU/WLR activities
- NGA engineering will require a lot of additional training. The cost of this should be properly allocated to NGA. We understand that costs associated with non-operational time such as training costs are recovered evenly over all engineers in proportion to time spent on other work in which case too much cost is allocated to LLU/WLR

Faults[29]

- The NGA build activity is likely to cause disruption and faults on the existing copper network e.g. cable breaks, cabinet frame faults. The repairs of these faults (even when they occur on the existing legacy network) should be properly allocated to NGA (since they are caused by NGA and hence are incremental costs to NGA). Similarly, the GEA jumpering process may cause faults on the copper network that should be properly allocated to NGA
- When a broadband-only fault occurs on a sub-loop used for GEA it is not clear whether the fault repair cost is (fully) allocated to NGA
- The installation of GEA may result in a higher level of voice faults due to extended and more complicated wiring in the cabinet – these additional voice faults should be properly allocated to GEA (not MPF/WLR) to reflect causality
- The presence of VDSL on lines (used for FTTC) is likely to increase cross-talk and cable fill and so increase faults on non-GEA lines – these additional broadband faults should be properly allocated to GEA

Overhead costs

- Ofcom says that 'NGA equipment costs have been excluded from the model' (§A7.21). Whilst clearly the actual NGA equipment cost should not be included in LLU/WLR costs, the supporting activities associated with the equipment should also attract an allocation of fixed and common costs that is related to this (e.g. BT Group corporate overhead, Openreach management, product management, OSS/BSS). It is not clear that this has been done.
- It also appears that the network build may been allocated some fixed and common costs but that in effect no fixed and common costs are allocated to

[29] We note that in certain cases (particularly in relation to faults) it may be that provided that the base year costs are on pre-NGA operations then the (fault) cost allocated to LLU/WLR will implicitly exclude the impact of NGA costs (i.e. faults caused by NGA). However, this will not be the case in the next charge control and Ofcom will need to distinguish between copper faults costs resulting from NGA services and those resulting form LLU/WLR services

GEA provisioning activities such as connections, transfers and ceases (since these services are not modelled at all)

- Much of the current NGA effort is network build which we understand is carried out by contractors. If management costs are allocated by FTE then no management cost will be allocated to NGA. Furthermore it is not clear that the cost forecast model reflects the use of non-permanent staff as the tailing off in roll out appears to lead to significant leavers costs being forecast

Other

- We understand that the sub-loop is upgraded ('uplifted') in some cases for FTTC. It is not clear whether this cost is fully allocated to NGA
- Much of Openreach's senior management effort and time is focussed on the NGA programme. This should be properly reflected in a higher allocation to NGA. It is not clear how this cost is allocated in the case of NGA
- Cumulo rates. We consider that the implied Cumulo rate charge per line with GEA is higher than for a line with standard broadband since it is more profitable. We discuss this below at §126

80 Overall we also note from the cost allocation ('CA') model that the proportion of operating costs allocated to 'Other (incl NGA)' remains almost static over the period (2011/12 to 2013/14) despite a 139% increase in forecast revenue (at constant nominal prices) and a large increase in forecast NGA subscribers (see question FE26a). This reinforces and corroborates the view that NGA is not being allocated sufficient cost.

81 As we highlight above we consider that Ofcom need to provide more transparency about how the allocation to NGA is done. Once this is provided we request to ability to provide a submission to Ofcom on the changes to the allocation.

SINGLE JUMPERING

82 MPF connections are wired in exchanges using two jumpers (called 'double jumpering'). In contrast WLR connections are wired using a single jumper (called 'single jumpering') and BT use single jumpering for their own 21CN network. Technically MPF could be wired using single jumpering but is not[30].

83 In Annex 2 we have provided some relevant background on this issue.

- A description of the jumpering arrangements and cost impacts
- A timeline of developments regarding double and single jumpering

84 The added complexity from double jumpering drives significant extra cost of about £6 per line or £40 million a year (in 2013/14). The added cost comes from:

- Requirement for additional engineering resource to install additional jumpers
- Increased use of the MDF / frame. The increased use of frames also, as BT and Ofcom accept, causes difficulties due to space constraints and the 'finite' space available in exchanges[31]
- Higher frame fault rates and repair costs due to the additional components used
- Higher fault rates also result in a poorer customer experience and added cost for TTG to handle the faults
- More tie cables are required

85 Unfortunately, particularly because BT themselves do not use MPF, there is a strong incentive for BT not to reduce the costs of MPF by moving to single jumpering:

- Maintaining double jumpering on MPF makes WLR relatively more attractive – Openreach favour selling WLR since it is a more downstream product (i.e. vertical leverage within Openreach)
- Since BT Retail use WLR/SMPF maintaining double jumpering on MPF favours BT's downstream divisions through handicapping its competitors (i.e. vertical leverage across BT)
- If Ofcom allow BT to recover the inefficient costs of double jumpering then BT are able to fully recover the additional costs (i.e. there is no disadvantage to BT resulting form being inefficient)

[30] Single jumpering is used in the UK for BT's own 21CN deployment and Ireland (Eire) MPF is provided using a single jumpering arrangement. There are two variants of single jumpering both of which deliver significant savings over double jumpering. Single jumpering is also used by WLR

(1) Use of an 'in-line' TAM where the TAM is wired into the tie cable. This is referred to as 'single jumper MPF' (as is done for BT's own 21CN deployment)

(2) BT not providing any TAM and the testing being provided by the LLU operator. This is referred to as 'TAM-less MPF' (as is done in Ireland)

[31] See for example Ofcom WLR Defence Annex §85 and Witness Statement Dolling III §24

- Moving to single jumpering may result in some stranded assets[32]

86 Thus BT has limited incentive to deliver MPF efficiently and, in fact, it has an incentive to be inefficient particularly if it knows that it can recover the inefficient costs (as has been Ofcom's previous approach). BT's incentive to avoid use of single jumpering for MPF has been demonstrated clearly by its behaviour over the last two years where in the face of the LLU appeal ('LLU Appeal') and an SOR it has consistently obfuscated and failed to provide any cogent reasoning to support its view of the efficiency of single jumpering – this has been, in our view, a wilful tactic to delay the introduction/use of single jumpering and/or reductions in MPF charges.

87 There may be some additional costs that result from using single jumpering. However, these are, we believe, small in comparison with the potential savings. For example, single jumper MPF can result in lower TAM utilisation (where a TAM is used) and this added cost will offset some of the savings. However, the cost is very small – the cost of lower TAM utilisation is about 10p[33].

88 That single jumpering is lower cost and more efficient is self-evident from the fact that BT from 2007 was planning to use single jumpering for 21CN. Mr Dolling of BT said[34]:

> *Since 2007, BT has rolled out EvoTAM3 capability to all of its exchanges that have been upgraded for 21CN, and it is only in these exchanges that a single jumper option is available*

89 BT's own behaviour for 21CN is *prima facie* evidence that single jumpering is more efficient even after considering offsetting costs. If single jumpering was not more efficient (at least for new connections) then there would have been no reason for BT to use it themselves.

90 We consider that this evidence effectively places the burden on Openreach/Ofcom to demonstrate cogently why single jumpering is not an efficient practice for MPF. It is only fair that this burden rests with Openreach/Ofcom since they (and not CPs) hold the information necessary (and have in Openreach's case been unwilling to share it).

91 Assuming use of single jumpering is also appropriate in light of core economic principles and Ofcom general duties and preferred approach to determining costs. We discuss this below.

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[32] On the stranding issue we have two comments. First, this is not a new issue. The possibility of stranded assets arises from instance due to reduction in volumes of all lines and of WLR lines (since fewer linecards are required). Second, the possible existence of stranded assets is due to BT acting inefficiently and therefore is their own fault

[33] Assumes evoTAM (fully utilised) capital cost £2 per line and 10p per year opex (based on CPW purchase of testing equipment). Assuming 8.6% cost of capital, 7 year annuity results in capital cost of 40p. Including operating costs total is 50p per year. If usage is (say) 85% rather than 95% (due to lower utilisation) then the increased cost is 9 pence.

[34] LLU Appeal Witness Statement Dolling §13

92 Ofcom's general approach to setting charges is clearly to set charges based on necessarily and efficiently costs which implies the use of the most efficient technology – this is also known as the MEA approach. Thus assuming single jumpering is the correct assumption since it is more efficient. Ofcom has said:

> *Our specific policy objectives in proposing the charge controls for LLU and WLR services are … to ensure that the delivery of the regulated services is sustainable, in that the prevailing prices provide BT with the opportunity to recover all of its relevant costs (where efficiently incurred), including its cost of capital*[35]*.* (emphasis added)
>
> *CCA FAC is a suitable cost standard to prevent excessive levels of charges being levied by Openreach. It also ensures that the delivery of regulated services is sustainable by enabling Openreach to recover all relevant and efficiently incurred costs.* [36]*.* (emphasis added)
>
> *In general, our preferred approach to setting charges is to base costs on what is believed to be the most efficient available technology. This is sometimes described as the "Modern Equivalent Asset" (MEA) approach to pricing.* [37] (emphasis added)

93 More generally, prices should reflect those that would be experienced in a competitive market. Clearly in a competitive market place, operators would seek to act efficiently by reducing costs and these cost reductions would be passed through to wholesale customers through the competitive process (for example see Consultation §9.56). It is inconceivable that in a hypothetically competitive MPF market that MPF providers would have continued using double jumpering.

94 If prices are based on costs that are not efficiently incurred (as it the case now) there a number of damaging effects:

- BT have limited incentive for cost minimisation (productive efficiency) since they are permitted to recover inefficiently incurred costs. Notably this incentive is particularly strong given that BT do not use the product themselves (which means that they do not suffer reduced demand at the retail level)
- It will create allocative inefficiencies because there would be less demand than if prices were set at the level of efficiently incurred costs [38]
- Dynamic efficiencies and competition will be weakened since BT's competitors (most of which rely on MPF) will be handicapped by having to bear the extra cost. This will have harmful consequences for dynamic efficiency (i.e. innovation and investment) by ISPs

[35] Consultation §2.39

[36] Consultation §3.19

[37] Consultation §3.21

[38] From consultation §8.6: "*'Allocative efficiency' is achieved when prices are close to cost. This ensures that all consumers who value a product at more than its cost are able to purchase it*". The 'cost' referred to here is the forward looking efficient cost (see §A5.31)

95 Ofcom has suggested in its documents and meetings various options for addressing this issue. We discuss our views below of Ofcom's and other options. We see a number of approaches:

- Option 1: Set the (single) MPF rental price based on use of single jumpering
- Option 2: Create new MPF single jumper product (using single jumpering costs)
- Option 3: Pool and spread additional costs of double jumpering across MPF and WLR

96 Option 1: The best approach is, we think, to set the MPF rental price based on use of single jumpering. This is the standard approach to determining costs/prices in a charge control whereby costs are determined on the basis of efficiently incurred costs.

97 We accept that it may not be appropriate to assume that early MPF connections (up to, say, 2005) should have been based on the used of single jumpering. However, given that in 2007 it was clear to BT that single jumpering was more efficient for deploying MPF, all MPF lines installed after 2007 could have and should have been based on the use of single jumpering. If that had happened then the vast majority of MPF lines today would use a single jumper configuration.

98 In practice in the cost modelling, to effect this approach the MPF cost/price (in 2013/14) should be based on a mix of double jumpering and single jumpering assuming that all new MPF lines installed after 2007 were single jumpered. The impact of this would be that prices would glide from the 2010/11 level (which were based on double jumpering costs) to the 2013/14 costs (which reflects use of single jumpering).

99 We note that even if this approach is adopted it will not fully redress the excess charges that LLU operators/consumers have paid and will pay for MPF:

- It will not redress excessive prices in the period prior to this charge control
- The prices during the charge control will be in excess of the efficient cost until 2013/14 since the starting price for this charge control was based on costs for a double jumpered configuration

100 We also note that only by fully redressing the excessive charges will BT's incentives to act efficiently in the future be optimal. If some or all of BT's inefficiency is not redressed then its incentive to act efficiently in the future in similar situations will be weakened.

101 We recognise that setting a *single* MPF rental price (based on single jumpering costs) for all MPF lines whether single or double jumpered may create some concerns (Consultation §8.47). We understand from Ofcom that the potential problem would be that there may be no incentive (or a disincentive) for CPs to move to use of single jumpering connections since (a) the MPF rental price is the same irrespective of the jumpering method they (opt to) use and (b) there might be a slightly higher cost to

CPs from using single jumpering since the tie cable cost will be higher[39]. We do not, as Ofcom suggest, think these distortions will be 'significant' (§8.47) – Ofcom has provided no evidence for its claim. We suspect that this claim is probably BT's unsubstantiated view.

102 Frankly, the existence of this difficulty is a problem of BT's own making and it is for BT to resolve. If BT had acted efficiently in 2007 then this problem would not have arisen. Resolving this problem is in effect part of the 'penalty' for not acting efficiently when it should have. BT should feel the full impact of this penalty so that it is properly disincentivised from acting inefficiently in the future. If Ofcom decides to not choose option 1 as a result of this difficulty then it is basically determining that other CPs need to continue to suffer because of BT's past inefficient practices – that is simply unacceptable.

103 Notwithstanding that it is BT's responsibility to resolve this problem we imagine that pricing could be used to incentivise certain behaviour – for example, lower connection charges to connect to single jumper MPF, equalising the prices of standard tie cable and evoTAM tie cables and/or refunding for under utilised tie cables could all be used to create the right incentives.

104 Option 2: An alternative approach is to have a separate single jumper MPF rental product with a different price. In this case the cost/price of the existing MPF (double jumper) product would remain based on the use of double jumpering. CPs could then opt to use whichever MPF variant they wished. This though has a number of significant problems:

- It gives BT the incentive and ability to continue to prevaricate and obfuscate in the development of the product since the later the new product is introduced the better financially for them[40]
- It rewards BT for its prior inefficiency and abuse (and delaying becoming efficient). Not only will this allow BT to retain the gains of their inefficiency and abuse but it will send a clear signal that future abuse will not be fully punished. This will leave BT with an incentive to be inefficient in future since it will profit to some degree from it
- Consumers will continue to suffer from the competitive distortion that has been caused by BT's previous inefficient actions

105 We strongly believe that this option is very poor and will not protect consumers interests or be compatible with Ofcom's duties.

106 Notwithstanding, if Ofcom were to take this route then it would be essential that Ofcom set-out in detail:

[39] This is due to two factors. First, single jumpering will require a slightly more expensive evoTAM tie cable (that CPs need to purchase). Second, splitting lines across two sets of tie cables will reduce utilisation and marginally increase cost.

[40] this incentive could be overcome by saying that all new connections after a certain point will be charged as though there was a single jumper product irrespective of whether there was one or not

- A very rapid timetable for the introduction of the new single jumper MPF product with suitable penalties if BT does not meet the target
- How the price for the single jumper MPF product should be set else BT will set an absurdly high price and it will take another year of negotiations and dispute resolution to have a product at a fair price.

107 Option 3: Another approach would be to 'pool and spread' the jumpering costs for WLR and MPF. In effect, the relevant jumpering costs for WLR and MPF would be combined and then allocated equally (on a per line basis) between WLR rental and MPF rental.

108 This option is not as good as option 1 since BT is still allowed to recover (and consumers will pay) inefficiently incurred costs. However, this option does have some benefits over the current situation[41]:

- It will create some weak incentive to minimise cost by moving to the use of single jumper MPF since downstream divisions of BT will benefit from use of single jumper for MPF (since it will also reduce WLR prices when prices are reset in the next charge control). However, the cost minimisation incentive will not be as strong as if MPF prices are based on use of single jumpering.
- It will remove some of the competitive distortion and the discrimination that is implicit in the current costing / pricing

109 This option could be done in combination with option 2 which would provide greater incentives to minimise costs.

110 This approach would be consistent with the approach that Ofcom has adopted to aligning ancillary services that have (or should have) similar costs and also the approach to pooling/spreading TAM costs in order to achieve effective competition.

111 As well as addressing the MPF rental cost / price Ofcom also needs to address the use of single jumpering for certain other MPF including:

- MPF Connection
- MPF New Provide
- MPF Connection Expedite
- MPF Jumper Removal

112 In the consultation Ofcom took the position that: "*it is not clear whether the single jumpering approach, as advocated by TTG, would be more or less costly than the current jumpering approach when all aspects of it are considered.*" Ofcom did not

[41] Option 1 also has these benefits (and to a greater extent)

grapple with the central issue of the efficiency of single jumpering. In effect, it accepted BT's claims regarding efficiency of single jumpering without any apparent scrutiny or challenge (as it had done in the 2009 Review and the LLU Appeal). Given BT's incentives and past behaviour in relation to single jumpering such an approach by Ofcom was highly unsatisfactory.

113 We are pleased that subsequent to the consultation Ofcom has decided to investigate this matter further (though we maintain that Ofcom should have taken action much earlier). Ofcom have explained that they expect more information to be forthcoming as a result of their investigations. We wish to remain very closely involved with this and will make further submissions to Ofcom as more information is provided. We expect Ofcom to fully take account of these submissions prior to reaching its Statement.

114 We also note some other arguments that have been advanced variously by Ofcom, BT and the CC. We comment on these below:

- It has been suggested by BT that single jumpering is not more efficient since no LLU operator opted to use single jumpering evoTAMs product that is available as part of 21CN. This fact is irrelevant to the question of whether single jumpering is more efficient. An LLU operator would get no benefit from using single jumpering in this case since the MPF price they would pay would be exactly the same (as if they used double jumpering) yet they would incur some extra costs (e.g. higher tie cable cost, slightly lower tie cable utilisation)
- Several parties have suggested that the fact that no SOR was submitted in 2007 by CPs is relevant to the question of whether single jumpering is efficient or not. We consider it wholly irrelevant. BT has had for the last eight years (as it has now) an obligation to act efficiently – that obligation is not contingent on its customers informing them of how they should be more efficient.

ASSET VALUATION

115 Asset valuation has a large impact on the overall valuation. For instance, if Ofcom implemented the changes to duct valuation that are in the RFS it would add £12-14 price of MPF and WLR and increase BT's revenue / charges consumers pay by £300m a year.

116 There are two particular issues relating to the valuation that are most relevant:

- Should the pre-97 assets continue to be valued on a RAV basis[42] (i.e. HCA indexed by RPI from 2005) or should the valuation method be changed to CCA (as for post-97 assets) ?
- What method should be used for CCA valuation approach (for those assets where CCA is used) ? Should it be a 'direct' or 'absolute' valuation estimate (based on a periodic survey of assets in service and BT's estimates of the costs of replacing them) or an indexation approach based upon the actual expenditure by BT, revalued to take account of price changes since acquisition?

117 There are a number of objectives that may be relevant when deciding on an asset valuation approach:

- Need for the value to result in 'cost oriented' charges that:
  - protect consumers form excessive prices
  - ensures cost recovery and fairly compensates investors for efficient investments (and avoids windfall losses/gains)
  - creates cost minimisation incentives for future expenditures
  - provides correct 'build vs buy' signals
  - provides sound basis for downstream competition
- Provides predictability and regulatory transparency. This objectives points to the need for consistency of approach and, if possible, little need to rely on subjective and arbitrary assumptions

118 One of the key differences between valuation methods are those which attempt to proxy the charges that would prevail in a hypothetical competitive market and those which ensure predictable and precise prices. Which of these two are preferable depend on the relative benefits of approximating the outcome in a hypothetical competitive market versus the dis-benefits resulting from increased price volatility and reduced certainty (that are inherent in methods that attempt to proxy charges in a hypothetically competitive market). Methods that base costs / prices on actual replacement costs may deliver better build versus buy signals than methods which

[42] The RAV valuation approach was adopted in 2005 since if instead a CCA valuation was used for pre-97 assets BT would have over-recovered since prior to 1997 investments were made on the basis that they would be valued on an HCA basis (see §A5.22, §3.36)

aim to have predictable prices which closely reflect actual expenditure[43]. However, the benefit of sending correct build/buy signals is only important if an asset is 'replicable'.

119 In the case of duct assets we agree with Ofcom that there is unlikely to be increased competitive investment in the provision of these assets. We see several reasons as to why this is unlikely: (a) BT has an entrenched position with many sunk costs, (b) there are high scale economies (e.g. high minimum economic scale), (c) little dynamic benefit derives from competition in the provision of ducts compared to the cost of duplicating existing assets and (d) PIA should allow other unbundled access to these assets.

120 This was Ofcom's view in 2005 (see §A5.22) and like Ofcom we do not consider that there has been any change to that conclusion. In particular, the advent of NGA is unlikely to significantly change competition in the provision of duct since there will be little need for large scale additional duct build.

- In the case of FTTC, which is the majority of deployment there will be very high level of duct re-use – d-side ducts will be fully re-used (since FTTC uses existing copper sub-loops) and most of the fibre deployed will be able to use existing e-side ducts.
- There will be some FTTH – BT originally claimed 25% of the total but this is looking highly unlikely (less than 10% is realistic in the next 5 years) – but there will be a high degree of duct re-use here as well.
- Further and importantly, PIA will mean that other operators should be able to re-use BT's ducts capturing many of the benefits that could be delivered by duplicated duct build.

121 Thus, in this case the need for prices to reflect those that might prevail in a hypothetically competitive market should not be a major concern when considering what valuation method to use as the benefits from duplicating BT's duct network would be relatively small, and greatly outweighed by the costs.

122 We agree with Ofcom that in light of these objectives and the relative little weight that should be placed on encouraging competition in the provision of ducts, that the appropriate approach for pre-97 assets is to continue with the RAV valuation method which provides a reasonable return to BT's investors while protecting customers. Changing from the RAV (i.e. HCA) valuation method to CCA would also result in over-recovery by BT[44]. The resultant increases in prices would increase the charges paid by wholesale customers and consumers and diminish downstream

[43] Although investors may prefer markets where prices are transparent and predictable to those where prices are dependent on the judgement of the regulator/incumbent or are volatile, depending on fluctuations in some exogenous variable.

[44] any change in valuation method part way through the life of assets will tend to result in over- or under-recovery. A shift from HCA to CCA would result in an over-recovery. See Consultation §A5.6

competition – yet there would be no clear countervailing benefit. Furthermore, a shift in approach would be inconsistent with Ofcom's certainty objective.

123 In respect of the CCA valuation method (for post-97 assets) we consider that, as Ofcom has proposed, an indexation method should be used. The absolute or direct CCA valuation method (particularly the one that BT has proposed) has a number of very significant flaws:

- It is opaque, unreliable and potential inaccurate since it relies on a complex methodology and a number of arbitrary and highly subjective assumptions (see §5.116). This further reduces predictability
- In the case of BT's suggested revaluation, the huge 55% increase in price[45] is based on a single 'guesstimate' of the price/discount for work that will never actually happen and so is wholly hypothetical (and consequently unreliable)
- It could lead to under- and/or over-recovery due to changes in methodology or due to methodological, measurement or sampling errors in the construction of the valuation
- Such an approach is not required to give BT appropriate incentives to expand its network since it can recover additional capex whichever CCA method is used
- It provides no additional incentives for BT to make efficient investments in the future as all investments are included in the asset base
- It leads to uncertainty in costs and price levels[46]
- It is unreliable and potential inaccurate since it relies on a complex methodology and a number of arbitrary and highly subjective assumptions (see §5.116). This further reduces predictability
- There is clearly a strong incentive for BT to game[47] this valuation method to inflate the value to achieve windfall gains – for instance, conducting this type of upward revaluation prior to a charge control review resulting in holding gains that are not reflected in a reduction in charges in the period in which they are recognised
- As Ofcom has found, BT's calculation and result is riddled with errors, anomalies and/or implausibilities. For instance:
    - The result is not consistent with actual capex spend since 1997 (see §A5.131)
    - The method implies that the value today of build that has occurred in the last 2 years is 30% more than the actual cost of that build (see §A5.155)

[45] Previously there was a 45% discount for national deployment. Therefore assuming average non-national price was £100 then national price was £55. There is now a 14.5% discount so (assuming the non-national price is unchanged) then the national price is £85. Thus there is a 55% increase = (£85 - £55) / £55

[46] there was previously a large reduction in NRC in 07/08 (see Frontier report)

[47] We understand that there has been encouragement internally in BT to find new valuation methods that inflate the value

    - Notably, as Ofcom point out the RFS audit provides little comfort that the valuation is fit for purpose (see §A5.139)
    - There are several internal consistencies (§A5.122)
- As Ofcom noted, BT's valuation appears to a significant extent to be a consequence of 'arithmetic' rather than evidence (§3.74)

124 In summary, absolute CCA valuation methods generally do not meet Ofcom's cost orientation and certainty objectives and the particular approach that BT has proposed would be particularly prejudicial to consumers' interests.

125 We have a number of other points in respect of the valuation:

- The indexation used for the CCA value of post-97 assets should reflect efficiency / productivity improvements. At §A5.80 Ofcom notes that BT has assumed a 2% annual productivity improvement. This may well under-estimate what BT has actually achieved since assets were acquired or what an efficient operator could achieve compared to BT's level of unit costs when the capital expenditure was made (given, for instance, BT's difficulty in improving its efficiency by making employees redundant – see §287 below). Therefore the efficiency assumption that Ofcom should make to reflect BT's current costs or those of an efficient operator may be higher
- It appears that CCA depreciation charges in the RAV model are too high since they have been consistently above CAPEX over the last 10 years (yet there is no indication of underinvestment)
- While there are fewer apparent anomalies in the valuation of copper cable, the underlying methodology used to estimate a valuation of BT's cable network is similar and hence will suffer from many of the same issues, which may become apparent in the future. In addition the volatility in copper commodity prices feeds through into volatility in downstream prices, with little benefit in terms of build or buy signals to competitors, who are unlikely to be installing new copper cable. Therefore, we consider that an indexation approach based on a stable price index should be used for rolling forwards the future copper valuation

CUMULO RATES

126 Cumulo rates are non-domestic rates that relate to the use of certain UK 'rateable' assets. In BT's case its rateable UK assets[48] include its exchange buildings, ducts, poles, manholes, cabinets, copper, fibre, payphones – these are known as its 'hereditament' and is rated as a single asset. The total rateable value (RV) for the whole of BT Group is set by the Valuation Office Agency (VOA) every five years (with mid-term adjustments possible). The poundage rate (i.e. business rate £ per £ RV) is set annually in advance (and is known). The allocations of the total Cumulo rates cost between different divisions / products are set by BT.

127 The most recent RV and rates are shown in table below. The large fall in RV in 2010/11 reflects a 'revaluation' by the VOA.

Cumulo rates cost (2009/10 and 2010/11)

	2009/10	2010/11
BTG rateable value (£m)	442	294
Poundage	48.5	41.4
BTG Cumulo rate (£m)	214	122
% allocation to Openreach	83%	83%
Openreach Cumulo rate (£m)	178	101

128 The Openreach cost is allocated between Openreach products. The allocation to MPF and WLR rental is about £5.40 in 2009/10 (see Fig A8.10) and around £3.10 in 2010/11[49].

129 Ofcom's model is based on the allocation approach used by BT. However, there is very little description of how BT (and so Ofcom) performs the allocation between products – transparency is very poor and the allocation is effectively a black box. Literally the only explanation provided is that BT use profit weighted net replacement cost (PWNRC) as the basis for allocating the cost between products[50]. However, there is no definition of what PWNRC is and the assumptions for the PWNRC for different products are not provided (nor is even an explanation of how the PWNRCs are derived). The allocation method for Cumulo rates does not seem to appear anywhere in the detailed attribution methodology (DAM). It does not appear that Ofcom has scrutinised whether BT's is a reasonable allocation method or whether the assumptions used are reasonable.

130 We think that this allocation basis is incorrect. Ideally allocations should be based on causality. In other words in this case, the allocation to a particular product should be based on how much of the RV or Cumulo rates was 'caused' by the production of

[48] Ofcom say that there are two hereditaments for BT – one that covers its network assets and one that covers other rateable assets (§8.27)

[49] Not shown in Fig A8.10 – however, % fall in total Cumulo rates is a reasonable proxy for % fall in MPF Cumulo rate per line.

[50] See §A8.89 and §A8.34

that product. This can be answered by reference to the way in which the VOA determines valuations. BT's RV is derived using a method known as 'receipts and expenditures' ('R&E'). Under this method the RV is derived as follows:[51]

"Firstly the gross profit derived from occupation of the hereditament is calculated by deducting the cost of purchases made [by the hypothetical tenant] *from* [the hypothetical tenant's] *gross receipts. The working expenses, including an allowance for renewal of the tenant's assets, are then deducted from the gross profit to give the divisible balance. The divisible balance represents the amount to be shared between the tenant (tenant's share) and the landlord (rent, or rateable value)."*

"The receipts to be taken into account will comprise income from all sources insofar as they arise from the occupation of the hereditament"

131 In effect the RV is based on the net profit that BT derives from services that use/occupy the hereditament. BT's hereditament includes many different forms of network assets including exchange buildings, access and core duct, fibre and payphones. Therefore, the vast majority of BT's products use or occupy this hereditament – we conservatively estimate that about £12.5bn of BT revenues use the hereditament[52]. The higher the profit from services that use the hereditament the higher the RV (and the Cumulo rates charge).

132 It is important to note that the methodology does not distinguish between services that use the hereditament a lot or a little. Whether the profit for a particular services is accounted for in the RV is based on a simple binary test of whether the service uses the hereditament. This is also clear from one of the worked examples that the VOA provide of the receipts and expenditure method[53]. They give the example of a hotel with four services / revenues streams (accommodation, food, liquor and other) which all use the hotel building to varying degrees – the valuation depends on the aggregate profit from all services.

133 It follows from this that the appropriate allocation basis to derive the Cumulo rates charge for each service is that service's net profit since it is the service's net profit that causes the Cumulo rates charge. That the RV is derived in this way is implicit from the recent reduction in RV which, according to BT and Ofcom[54], was due to a shift from retail PSTN and external WLR lines to MPF lines (which have a lower profit). BT said in the LLU Appeal:

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[51] VOA, "Rating Manual, Volume 4, Section 6: the Receipts and Expenditures Method" §§1.2 and 5.11.
(http://www.voa.gov.uk/corporate/Publications/Manuals/RatingManual/RatingManualVolume4/sect6/b-rat-man-vol4-s6.html)

[52] Based on estimation of use of hereditament by revenue category provided in BT Annual Report 2011. ICT and managed services (50%), calls and lines (100%), transit (100%), broadband and convergence (80%), other global carrier (100%), conveyance and interconnect (100%), other products and services (50%). Of total UK revenue of £15.6bn, £12.5bn uses the hereditament. This is 80% of the total.

[53] VOA Rating Manual Appendix 4:6:2

[54] Consultation §A8.33 bullet 3

"The rebate reflected a reduction in BT's rateable value as a result of local loop unbundling. […] *The effect of local loop unbundling is that Openreach continues to use the same copper lines to provide the* [CRS] *and to derive revenues from them; that is so irrespective of whether CPs take MPF, SMPF or WLR Rental; however, other downstream parts of BT no longer derive revenue from the use of those lines by CPs who have unbundled local loops to supply voice and broadband services to customers further downstream (end-users). Local loop unbundling therefore results in a reduction in the overall net earning potential of the* [BT hereditament][55]*.* (our emphasis)

134 We do not have access to the net profit of each service. However, revenue is likely to be a reasonable proxy (implying that net profit as a % of revenue is similar between different services). Using this we can, as an example, estimate the appropriate allocation of Cumulo rates cost for an MPF rental in 2010/11.

	2010/11
Revenue of services that use hereditament	£12.5bn
MPF rental revenue	£0.34bn
MPF share of revenue	2.7%
MPF share of Cumulo rates	2.7%
Total BT Cumulo rates	£122m
MPF Cumulo rates allocation	£3.3m
MPF lines	3.8m
MPF rental Cumulo rates per line	£0.84

135 This shows that the MPF rental Cumulo rate per line should be £0.87[56] in 2011/12. This compares to the allocation in Ofcom's model of about £3.10 in 2010/11. It appears that Ofcom's model (which has been based on BT's allocation method) is in error.

136 We understand that Cumulo rates have been allocated to other LLU/WLR services including rental services and ancillary services – we imagine that the allocation of Cumulo rates to other LLU/WLR services is also in error.

137 We also note that aside of setting excessively high levels of Cumulo rates Ofcom's model results in relative levels of Cumulo rates between MPF and WLR that are incorrect (Ofcom estimates that Cumulo rates for MPF are higher than WLR[57]). Since revenue and profit is higher for WLR lines sold externally and even higher for WLR lines used internally (i.e. retail PSTN) then the Cumulo rates charge on these would be higher per line than that for MPF.

[55] LLU Appeal WS Dolling II §21

[56] Arguably this overestimates the appropriate profit for MPF since the profitability (i.e. net profit % revenue) for MPF is likely to be lower than other services since (in part) it has a lower allowed ROCE and is regulated

[57] WLR £5.35, WLR £5.45 in 2009/10 – Fig A8.10

138 Calculating the RV, Cumulo rates and allocations going forward will require projections for revenues across the BT Group (including NGA), consideration of whether the VOA will make changes in the RV (to reflect changes in profits reflected in MCCs), the share of LLU/WLR within this overall revenue / net profit and changes in poundage rate. A simpler (and probably more reliable) method would be to assume that the MPF RV per line remains flat and so the MPF Cumulo rates cost per line will only increase with increasing poundage rates. The same approach could also be adopted for other services.

139 We believe that this allocation approach is sound since it properly reflects the way the VOA approaches valuation. Ofcom has provided no transparency of its current approach nor any reasons why it is appropriate. Whether Ofcom decides to persist with its method (which is effectively BT's) or adopt a different one it must provide transparency of the allocation method and assumptions used and give interested stakeholders an opportunity to formally respond. What has been done to date does not constitute any meaningful form of consultation.

OTHER COST ASSUMPTIONS

DUCT/COPPER USE – LINE LENGTH ADJUSTMENT

140 In previous LLU charge controls (2005, 2009) the duct and copper cost allocated to MPF lines (compared to WLR) was reduced to reflect that MPF lines are shorter/lower cost[58] than WLR lines since:[59]

- MPF is only used where exchanges have been unbundled and exchanges that are not unbundled tend to be smaller / more rural exchanges that have longer than average lines
- Within unbundled exchanges MPF is predominantly only used to offer voice and broadband and since broadband is unfeasible on longer lines – therefore in these unbundled exchanges MPF lines are shorter that he average line
- If MPF lines are shorter than average then it follows that WLR lines are longer than average (and longer than MPF lines)

141 According to Ofcom the line length (cost) difference between MPF and WLR in the 09/10 RFS is 3% (Question TTG 57). Ofcom also say that BT has provided data from the 'BT Local Line Costing Study'. From this evidence, Ofcom has provisionally concluded that there will be no line length adjustment on the basis that there is no 'meaningful difference'. Ofcom stated:

> *The data that BT has now provided indicates that there is no meaningful difference between the average amount of copper in a WLR line (which now includes the lines previously designated as business and residential WLR) and that in a MPF line.* (§A8.137)

142 Ofcom have been unable / unwilling to share the data from BT.

143 We consider the conclusion that Ofcom have reached is incorrect for several reasons

- Even if the difference was just 3% (and so justified a 3% difference in usage factor) then it is clearly material enough to warrant an adjustment since the impact on MPF costs is £1.50[60]. Notably Ofcom made an adjustment (which we dispute) for DACS that only made a 0.6% difference in usage factor
- Analysis of various publicly available data indicates that the length of MPF lines is at least 30% less than WLR lines
- There are other factors that may (in addition to differing line lengths) result in a cost difference as between MPF and WLR – these are likely to further reduce cost of MPF lines (relative to WLR lines)

[58] In discussions, Ofcom have indicated that the adjustment is not just to reflect line length differences but more generally line cost differences

[59] Ofcom confirmed in discussions that the adjustment was to reflect both of these factors

[60] d-side/e-side duct/copper use – £49 and d-side/e-side duct/copper repair - £9

- There are other data sources which support the view that the overall duct/copper cost of MPF lines is less than WLR lines

144 We expand on some of these points below.

145 Analysys Mason have (on TTG's and Sky's behalf) carried out analysis from publicly available sources to assess the length of lines used for broadband versus the length of all lines. This has been based on measured performance of actual customers connections so is robust compared to other methods for estimating line length which are highly assumptions based. Their analysis (provided separately to Ofcom) shows that using conservative assumptions broadband lines are over 30% shorter than all lines. They concluded that:

- The average UK line is about 3.4km in length (this figure is effectively provided by BT)
- The average broadband line is 2.2km in length

146 Even this data underestimates the relative length difference as between MPF and WLR lines since:

- The average WLR line will be longer than 3.4km since all lines include MPF lines which are shorter. Lets say WLR lines are 3.5km in length
- Broadband lines include SMPF and MPF – MPF lines are shorter than SMPF lines. SMPF is predominantly used by BT itself to cover all lines in the UK whereas MPF is only used by LLU operators who cover (currently) the 2,000 larger exchanges (which have shorter line lengths). In fact the length of MPF lines can be estimated at around 1.8km since all MPF lines are ADSL2+ lines (and the average length of ADSL2+ lines is 1.8km – see Analysys report Fig 6). Lets conservatively assume that MPF lines are 2.0km in length

147 Reflecting this the correct comparison would be:

- The average WLR line is about 3.5km in length
- The average MPF line is 2.0km in length

148 And so the MPF lines are 43% shorter than WLR lines.

149 There are other factors that will affect the relative duct/copper cost as between MPF lines and WLR lines such as cost per metre of duct and duct fill. On balance we would expect that these factors would tend to further reduce the cost of MPF lines compared to WLR lines.

- Factors *reducing* cost of MPF relative to WLR
    - Higher duct fill (i.e. lines per duct) on MPF lines since MPF is used proportionately more in urban areas with higher population density
    - Larger copper cables will be used for MPF lines since MPF is used proportionately more in urban areas with higher population density (the larger the cable the lower cost per line)

- Reduced travel distance/time for repair and maintenance (capex and opex) due to high density

- Factors *increasing* cost of MPF relative to WLR
  - Lower cost per duct metre since ducting in rural areas is lower cost (since, for instance, trenching is done in soft verges and reinstatement is cheaper)

- Other factors of unknown impact
  - Copper thickness – Openreach claim that thicker copper is used in urban areas though arguably thicker copper may be used in rural areas to overcome attenuation from long lines. In any case the cost of copper is a small proportion of the overall cost (duct predominates)
  - Age – age is unlikely to be a relevant factor since as there is no reason to expect the mix of asset lives to vary significantly between different areas pairs

150 A number of other data sources support the view that the duct/copper cost for MPF lines is materially less than for WLR lines.

151 First, independent work[61] for the Broadband Stakeholder Group (BSG) assessed NGA costs and looked at duct/pole costs in detail[62]. Analysis of this data shows that the duct capex cost for MPF lines would be 23% lower than for WLR assuming that MPF is only used in exchanges of less than 3,000 lines (which approximately equates to the current MPF footprint of 2,000 lines) whereas WLR lines are used in all exchanges.

[61] Study was conducted by Analysys Mason

[62] This was done to assess the cost for an FTTH deployment but the duct and final drop costs estimates would be similar to those for copper lines (certainly in relative terms)

Comparison of MPF and WLR duct cost per line

	Exchanges > 3k lines	Exchanges < 3k lines
Premises passed (m)	23.9	3.4
Civils cost (£ bn)	18.8	7.8
Civils cost per home passed (£)	787	2,310
Mix of lines		
MPF	20%	0%
WLR	80%	100%
Cost per line		
MPF	787	
WLR	1,017	
MPF vs WLR	-23%	

152 In fact, 23% will be an underestimate of the duct/copper cost of MPF versus WLR since:

- It does not take account of MPF only serving shorter lines in unbundled exchanges (i.e. MPF lines will have a cost less than £787)
- Copper costs which will have a higher cost per line differential (since duct cost is reduced by higher cost of ducting in urban areas)

153 Work completed by Ofcom/BT in the assessment of BT's universal service obligation ('USO') showed that the 'most remote and least densely populated' 1% of the UK were uneconomic (i.e. where revenue was less than incremental costs of provision) costing an estimated £5-10m in 1998/99. Analysis of this data shows that the cost of lines in more remote areas is significantly higher.

154 Assuming a cost of £10m in 2011 (to reflect inflation) and 230k lines in remote areas this means that the incremental costs for these lines are £40 per line more than the revenue. Given line rental revenue (which is likely to be approximately equal to average FAC) is about £100 the incremental cost in these areas will be £140 and so the FAC £200 (i.e. incremental costs <70% of FAC). This shows:

- In most remote areas FAC is £200
- On average FAC is £100

155 This reinforces the case that lines in more remote areas (which WLR tends to serve) are more expensive. It is highly likely that the majority of this cost difference is driven by the cost of duct/copper rather than (say) exchange buildings or line cards.

156 Thus in summary we contend that there is clear, compelling and transparent evidence that supports the case that MPF lines are significantly shorter than WLR lines. If Ofcom is not to adopt this evidence it needs to provide a lot more transparency of the evidence and reasoning that it is relying on (i.e. the BT study).

DUCT/COPPER USE – DACS

157 Ofcom have assumed that the duct/copper[63] usage factor for WLR is 0.6% less than for MPF due to the use of DACS which allows two WLR / voice lines to provided over a single copper pair.

158 We disagree with this assumption for two main reasons.

159 First, it is based we understand on past usage levels and DACS usage levels are reducing rapidly. Obviously, the costs for 2013/14 (which are the relevant year) should be based on likely DACS usage in 2013/14 and not past levels of DACS use. Based on the current rate of decline DACS usage will be very low by 2013/14 – in 2009/10 there were 307,000 DACS lines[64] and the number of lines has been reducing at more than 100,000 per year (in 2005/06 the corresponding figure was 838,000. This decline reflects higher uptake of broadband (reducing the ability to use DACS) and reducing line demand resulting in fewer capacity constraints on the copper cable.

160 Second, though Ofcom have included the impact of DACS reducing use of duct/copper it has not properly included the costs of deploying and operating DACS equipment. The cost of DACS equipment that is included in Ofcom's model is implausibly low. It is just £0.40 per line with DACS[65] or £0.001 per all line. Yet the cost saving from DACS is £0.30[66] per all lines or 300 times the equipment cost – this is highly improbable and is also inconsistent with data in the RFS which suggest a cost 15 times higher[67]. There are clearly other costs incurred in using DACS else BT would not be reducing its use of DACS so much. Part of the reason that the cost estimate is so low may be that the equipment cost is highly depreciated (as Ofcom admit) and so not reflective of forward looking cost. The cost that should be used is the forward looking cost.

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[63] d-side and e-side

[64] Page 94 of the 2010 BT Regulatory Financial Statements sets out the equivalent number of lines using pair gain equipment

[65] Answer to Question TTG31 regarding DACS cost: "*Not zero but very small (c£20k). There are only about 50k lines with the equipment. The equipment itself is highly depreciated.*" We also note that the 50k DACS lines is inconsistent with the 0.6% cost reduction (which implies ~140k DACS lines). We are waiting on Ofcom to resolve this discrepancy

[66] Usage factor for d-side / e-side duct/copper is 0.6% lower for WLR. Cost of d-side / e-side duct/copper is about £50. Thus saving is £0.30

[67] This information (£50k cost of DACS equipment) seems to be at variance with the volumes and reported cost of pair gain equipment in the RFS which give costs of £2 million over 307,000 lines giving an average cost of £6.52 a line

161 We consider that the DACS assumption must be revised – the current situation where the cost reduction (to WLR) of DACS is included (at an exaggerated level) but the costs are massively underestimated is simply incorrect. We see two methods to address this flaw:

- Either: assume no DACS since the amount is so small and/or will be so small in 2013/14 and it is likely that at this point it would not reflect the efficient cost of operation. This would mean removing the duct/copper usage factor adjustment and removing all costs involved in DACS
- Or: apply a plausible and internally consistent set of assumptions for 2013/14 costs reflecting (a) a far lower level of DACS use than currently and (b) realistic costs that reflect the proper forward looking costs of using DACS

162 We think that the first option is probably more robust and reliable.

DUCT/COPPER FAULT REPAIR COSTS

163 Ofcom has assumed a higher duct/copper fault repair cost for MPF than WLR and SMPF. The fault repair usage factors are as follows:

Duct/copper fault repair FAC costs (2013/14)

	d-side duct/copper	e-side duct/copper
MPF	1.04	1.04
WLR	1.00	1.00
SMPF	0.15	0.15
ISDN30	0.01	0.01

164 We disagree with a number of aspects of this.

165 According to Ofcom the 4% higher level for MPF is based on actual historic fault rates for Oct 2009 to January 2011 (§A8.141) – though Ofcom say elsewhere in its document (§8.74) that the difference in fault repair costs is 3%. Ofcom also note that the difference is not stable and sometimes fault levels on MPF are lower than WLR (§8.74).

166 Of course the relevant question is what are the appropriate fault repair usage factors in 2013/14. We see no sound reason to assume that actual[68] historic fault repair costs to be higher for MPF than WLR in 2013/14[69]. We explain our reasoning below.

[68] Reported faults on MPF might be higher that WLR (since broadband is on the line), however actual faults that BT accept to repair will be the same since they are tested on the same SIN349 standard

[69] A higher usage factor might be appropriate in 2009/10 though it is 2013/14 costs (and not 2009/10) that affect the prices

167 One might conceive that a possible reason for higher faults on MPF lines (than WLR lines) is that MPF have higher faults since they carry broadband which is more fault sensitive. Indeed, in the 2009 Review (and LLU Appeal) Ofcom and BT argued that the higher fault repair cost was due to broadband causing additional faults. However, Ofcom have backed away from this position explaining that the higher fault rate is due to more complex jumpering. This makes logical sense since Openreach only accept and repair a fault on a line if the line does not meet a certain standard (SIN349)[70]. This standard is set for voice (i.e. to allow a voice service to operate). Therefore, the existence of broadband on the line is not likely to cause additional accepted faults.

168 We think that the reason that MPF lines had higher fault levels than WLR is that MPF lines are 'younger' on average than WLR lines. Younger lines have more faults in their first year that in following years. A much higher proportion of MPF lines are younger that WLR lines (reflecting that MPF is growing).

169 The impact of this can be derived from various operating statistics

- In 2009/10 the average MPF fault rate was about 8%[71] i.e. 0.007 faults per month
- Lines under 28 days old had 0.035 faults per month[72] i.e. 3.5% of provisions had a fault in the first 28 days. The monthly rate is about five times the rate of faults for older lines
- Assuming that MPF and WLR have the same underlying monthly fault rates for each category of line and applying this to 2009/10[73] we get the following results
    - MPF would have 0.0083 faults per line (per month) reflecting that on average 5.6% of lines are under one month old
    - WLR would have 0.0068 faults per line (per month) reflecting that on average 0.6% of lines are under one month old

170 In other words, because MPF lines are 'younger' they have a 20% higher fault rate.

171 However, over time as MPF becomes more mature this effect will diminish – we estimate by 2013/14 MPF fault rates will (all other things being equal) fall 12% due to the change in mix whereas. WLR lines won't experience this fall since the lines are not becoming 'younger'.

[70] If there is a network fault but the line meets SIN349 standard then the LLU operator has to request and pay for a separate fault repair (called a special fault investigation – SFI)

[71] See footnote 107

[72] In the early days of MPF (2007/2008) there was a more significant effect with DOAs (dead on arrival) and ELFs (early life failures in first month) during 2007 running at 5% (DOAs) and 10% (ELFs)

[73] Used average number of lines in 2009/10 and connection divided by 12 so implicitly derives fault rate at mid-tear

172 From the analysis above, one would expect that if underlying fault rates for MPF and WLR were the same then the overall fault rate for MPF would be (in 2009/10) 20% higher than WLR. However, in fact the MPF fault rate is only 4% higher than WLR. This implies that the underlying fault rates for MPF are lower than WLR (by 14%). This is shown in the table below.

173 If we combine this assumption with the change in the mix of young lines we can calculate that the overall MPF fault rate will be (in 2013/14) 9% less than the overall WLR fault rate. This is also shown in the table below.

MPF and WLR fault rate levels

	MPF	WLR	MPF vs WLR
Fault rate lines over 1 month old	0.0057	0.0067	-14.0%
Fault rate lines under 1 month old	0.0301	0.0350	-14.0%
2009/10			
% lines under 1 mth old	5.64%	0.60%	
Overall fault rate	0.0071	0.0068	4.0%
2013/14			
lines < 1 mth old	2.13%	0.62%	
Overall fault rate	0.0063	0.0068	-8.6%

174 A lower underlying fault rate for MPF is also consistent with our view that MPF lines are shorter than WLR lines (see §140 above). One would expect the WLR fault rate to be higher since 'there is more to go wrong'.

175 We also note that the ISDN30 duct/copper fault repair cost looks very low (0.01). The usage of duct/copper assets by ISDN30 compared to MPF is 0.044[74]. It is not clear why the duct/copper fault repair is so much lower.

176 As Ofcom have noted the standard MPF and SMPF products have a higher standard of care than WLR and so faults get repaired more quickly[75].

- The standard MPF/SMPF product has care level 2 and faults are repaired by end of the next working day

[74] 0.044 = 31.79 / 720.42 (Fig A8.14)

[75] standard WLR is on Service Maintenance Level 1 (SLA End of Next Working Day +1 Working Day, fix Monday – Friday) and standard MPF and SMPF are on service Maintenance Level 2 (SLA End of Next Working Day, fix Monday – Saturday)

- The standard WLR product has care level 1 and faults are repaired by end of the day after the next working day

177 We do not consider that the higher care level will actually drive significant additional costs (between these two levels) since the time and cost of fixing the fault will be the same whether it is done the following working day or the next working day after that. We note that Ofcom seems to agree in that it has said that there is 'no material difference in the cost stack' of PSTN Premium and PSTN Basic (where the main difference is the repair time).

FRAME USE COSTS

178 The frame use costs reflect the use of double jumpering.

Frame use cost usage factors (2013/14)

	Frame use usage factor
MPF	2.00
WLR	1.00
SMPF	1.00

179 We consider (as described above §82) that the MPF FAC and LRIC costs should be based on the use of single jumpering in which case the usage factors will be 1.00 for each product since each product involves one jumper.

180 Ofcom does not show a usage factor for ISDN30. It is not clear whether this is because it was left out or whether ISDN30 does not use the frame. We would appreciate an explanation of this and, if appropriate, this being corrected.

FRAME FAULT REPAIR COSTS

181 The frame repair FAC costs usage factors that Ofcom has assumed is shown in the table below (also shown is the frame use usage factors)

Frame fault repair usage factors (2013/14)

	Frame repair	Frame use
MPF	2.13	2.00
WLR	1.00	1.00
SMPF	0.71	1.00

182 Assuming double jumpering, we would expect MPF repair to be two times that of WLR repair (reflecting the higher use of the frame). However, the fault rate is 7% more than this.

183 As for duct/copper, this difference cannot be driven by broadband being on the line. We consider that the difference is driven by the younger mix of MPF lines whereby younger lines have a much higher fault rate. In line with the analysis above the correct frame fault rate (assuming double jumpering) would be that MPF lines have 12%[76] fewer faults that WLR lines in 2013/14.

184 Of course under an efficient single jumpering arrangement the MPF frame use and would be the same as for WLR. In this case the fault repair usage factor for MPF should be 0.97.

185 We also are concerned about two other aspects of the frame fault repair usage factors

- That the SMPF fault repair usage factor looks low (0.71). Based on its use the of frame (one jumper like WLR) one would expect a usage factor of 1.00. This anomaly is unexplained . The low repair figure is also inconsistent with the RFS (see below). Unless there is a credible reason it should be set at 1.00.
- The ISDN30 usage factor is zero. It is not clear whether this is because it was left out or whether ISDN30 does not use the frame. We would appreciate an explanation of this and, if appropriate, this being corrected.

186 As we explain above (§176) we do not consider that the higher standard of care results in additional cost.

187 We also note that BT's own CCA FAC accounts for 2009/10 have implied usage factors for frame use/repair that are different to those used by Ofcom (see Fig 8.9).

[76] 76% lower fault rate per jumper and so 12% less that two times WLR in case of double jumpering

Frame use/repair usage factors (2013/14)

	RFS 09/10	Ofcom model – use	Ofcom model – repair
MPF	2.02	2.00	2.13
WLR	1.00	1.00	1.00
SMPF	1.02	1.00	0.71
ISDN30	n/a	0.00	0.00

188 We summarise our view of the appropriate fault repair usage factors below

Frame repair usage factors (2013/14)

	Ofcom model	TTG proposal under double jumpering	TTG proposal under single jumpering
MPF	2.13	1.88	0.94
WLR	1.00	1.00	1.00
SMPF	0.71	1.00	1.00
ISDN30	0.00	tbd	Tbd

TAMS

189 We comment briefly here on a number of aspects of the TAM costs. We comment later in our response on the question of pooling and spreading certain of these costs (in the section discussing FAC price differences).

190 The TAM cost in the model is £3.99 in 2013/14 (£3.00 operating costs and depreciation, £0.99 ROCE). This is our view looks excessive. We provide testing capability for ourselves using JDSU equipment which is more functional than BT's testing equipment. The annualised cost is about [✂] per line[77]

191 It is also not clear why 49% of evoTAMs are allocated to 21CN.

192 With regard to question 7.8 regarding the inclusion of the cost of evoTAMs we think more context is required to be able to answer this question. Can other LLU operators (apart from BT) request deployment of evoTAMs? Is there a risk that (external) SMPF customers get charged twice for evoTAMs? Who will actually deploy and manage the evoTAMs? Are the evoTAMs to test Openreach assets (or also other assets)? Generally we see benefit in the approach to deployment and charging of evoTAMs being similar to that for other testing equipment and also Openreach charging for equipment that is deployed to test its assets.

[77] JDSU equipment that CPW uses costs about [✂] per line and [✂] per year opex. Assuming 10% cost of capital, 7 year annuity results in capital cost of [✂]. Including operating costs total is [✂] per year

COMPUTING COST

193 There are a number of IT/computing costs that are incurred by Openreach. The amount of allocation of BT Group IT costs is discussed above (§55). Here we comment on the allocation as between MPF and WLR. There are a number of computing costs per line that are provided in the model and elsewhere. We summarise these below.

FAC computing cost per rental line (2013/14)

	Fig 9.3/9.5			Fig 8.10
	Opex, depr	ROCE	Total	Total
MPF	£0.70	£0.47	£1.17	£2.78
WLR	£0.00	£0.46	£0.46	£2.91
SMPF	£0.70	£0.07	£0.77	£0.59

194 There are clearly several problems with these figures:

- There is a large inconsistency between two different parts of the consultation document. Ofcom has not explained this
- In the data from Figs 9.3 and 9.5 the amount of computing costs allocated to MPF, WLR and SMPF rentals looks bizarre
    - for instance, WLR rental is allocated no computing opex or depreciation but is allocated some of the computing ROCE!
    - The SMPF opex/depr cost is the same as MPF but the ROCE allocation is one sixth of MPF

195 These two results appear to reflect two wider problems within the cost model:

- There are inconsistencies in the allocation of the costs of similar activities between WLR and MPF/SMPF (the treatment of the costs of ceasing a line appears to be another example).
- The model allows, and sometimes implements, two different cost allocations to be used for depreciation for a given asset, and the capital employed, and hence return, for that asset.

196 Overall it appears that too much cost has been allocated to MPF rental and too little to WLR and SMPF. We would suggest that the same amount should be allocated to each rental service. Ofcom have suggested that some computing cost is allocated to ancillary services. Ofcom must provide transparency of how much is allocated to these so that the overall cost can be assessed.

197 When these have been provided (and this inconsistency cleared up) we will make further submissions. The information provided to date is insufficient to be able to make an intelligent response.

PRODUCT MANAGEMENT

198 The assumed FAC product management costs in 2013/14 are shown in the table below (from Fig 9.3, 9.4, 9.5).

Product management costs (2013/14)

	Product mgt costs
MPF	£0.33
WLR	£0.27
SMPF	£0.29

199 No explanation is given for these costs. We would expect WLR to have higher costs since the product is more complex (since it is a more downstream product that includes features). We note (in its discussion of LRIC cost differences - §8.82) that Ofcom argue that 'MPF users tend to have diverse requirements' and so higher product management costs – this was an argument advanced by BT in the LLU Appeal. However, when asked to explain this Ofcom was unable to provide any evidence to substantiate this claim and said they needed to refer back to BT. This appears to be a case where Ofcom is accepting what BT is claiming without scrutiny.

200 We look forward to seeing Ofcom justification of why MPF product management costs are higher (and not lower) than those of WLR.

BT NORTHERN IRELAND

201 BT Northern Ireland ('BTNI') provide LLU/WLR products but is not part of Openreach – it is part of BT Retail. For most cost categories this does not present a cost allocation problem. For example:

- the cost of engineers carrying out LLU/WLR activity in Northern Ireland is allocated directly to BT Retail
- Certain BT Group costs (such as Group HQ) will be allocated to the activities in BTNI since the engineers in Northern Ireland will count as UK FTE and so attract an allocation

202 However, there are other costs of LLU/WLR that are solely allocated to Openreach – product management costs are one example. Some of the product management cost should be allocated to BTNI (i.e. BT Retail). Ofcom have agreed (correctly) that this reallocation should be made (§A8.59)

203 We think that there are other cost categories that also need to be reallocated from BTNI in this way:

- IT Net Development (BAU) which is allocated to Openreach on the basis of Openreach project spend (i.e. not per FTE)
- Design costs[78] which are allocated to Openreach on the basis of Openreach design spend (i.e. not per FTE)
- Vacant property costs which are allocated to Openreach on the basis of Openreach spend
- Possibly certain NGA management activities since NGA is being rolled out in Northern Ireland and the management and design activities are effectively provided by Openreach

204 Ofcom should consider (given its greater knowledge of the model and allocation) as to whether other costs should be reallocated from Openreach to BTNI.

ALLOCATION TO OTHER (NON-REGULATED) SERVICES

205 In the 2009 Review Ofcom found that BT had significantly under-allocated costs to a number of other copper related services (such as TRC, enhanced care, SFI, RedCare). These were referred to as non-regulated services. Accordingly Ofcom made a highly material correction by reducing the cost allocated to LLU/WLR rental services by £88m.

206 No similar adjustment has been proposed in this review. TTG asked Ofcom (question TTG40) whether the allocation of costs to these services was reasonable. Ofcom's answer was:

> *At this stage we have not found any need to reallocate costs from non regulated copper products as BT amended its RFS allocations for the major items. Additionally, in the product metrics tab of the published model you are able to comment on product profitability.*

207 We are not aware of how Ofcom reached this conclusion or whether Ofcom has sought to identify under-allocations. Further, it is not possible to see product profitability from the published model for individual services outside the scope of the current price control as all revenues and costs are aggregated into a single category 'Other inc. NGA'. Because the revenues and costs of these services have been aggregated into one category that also includes NGA it is not possible to assess on whether these services have been allocated the appropriate level of cost.

208 Another fact that reinforces the impression that insufficient costs have been allocated to these services is that for TRC (though the prices/revenue should be cost orientated) the revenue is far higher than the efficient cost of labour (see §298 above). This implies that the prices are above efficient cost (in which case a

[78] see Consultation Figure 8.7

charge control is required) and/or insufficient cost is allocated to TRC and therefore a reallocation is required.

209 We anticipate that aborted visit charges are another example of a service that has insufficient revenue allocated to it.

210 Before reaching any final conclusion on any reallocation of costs Ofcom must provide the necessary data in sufficient detail to consultees and allow them to comment on whether the allocation to these services is appropriate and if not the appropriate adjustments that should be made.

211 We note that if, as we suggest below (§§468, 492), certain of these services (such as TRC, SFI) are placed in baskets and prices are set to trend to FAC then the problem of BT under-allocating costs to these services would reduce since they will not be able to profit from gaming the allocation. Of course, we might actually find that BT wants to increase the allocation of costs to these services (and so reduce the allocation to other LLU/WLR services).

BT BRANDING ON OPENREACH VANS

212 Openreach vans (of which there are about 15,000) carry a (large) BT logo. This is clearly a marketing benefit to the retail customer-facing parts of BT particularly BT Retail and BT Global Services. This advertising is worth perhaps as much £30m a year[79]. Even if lower estimates were made it is a material amount of value.

213 Previously TTG have argued that the other parts of BT should pay for this service to reflect the benefit that they enjoy. BT / Ofcom have countered that[80]

- The provision of the BT logo causes no incremental cost
- Openreach has to include the logo
- Openreach may benefit from the inclusion of the logo since it means Openreach engineers are more accepted by customers when they make home visit
- The estimate of the value is not reliable

214 We do not think these arguments are reason for not including any payment by the rest of BT to Openreach for the value of this advertising.

[79] If BT were to buy a fully covered advertising space on a black cab it would cost around £4,000 per annum (e.g. http://www.marketingminefield.co.uk/outdoor-advertising/vehicle-advertising/costs.html). Given that the BT logo is only part of the image I assume a cost of £2,000 per year. Assuming that Openreach has 15,000 vans (Openreach have 21,000 field staff) (d) 15,000 vans x £2,000 per van equates to £30m

[80] See LLU Appeal Defence §C38 and WS/S Dolling I §55

- We agree that the addition of the BT logo costs Openreach little, but this point is irrelevant to the question of the value that the rest of BT enjoys and whether it should be charged for it
- Openreach does not have to include a BT logo in its advertising as a result of the Undertakings (instead the Undertakings allow it to include a BT logo)
- The benefit to Openreach from the inclusion of the BT logo was relevant in the early days of Openreach in 2006 when it was unknown. However, Openreach is a reasonably well known brand. Furthermore, other businesses with engineers are able to visit customer homes without the need for a 'big brand' to back them up. No reliable evidence has been presented that Openreach enjoys any significant benefit from being part of the BT Group
- There may be alternative ways of calculating the value but just because it is difficult to calculate cannot justify totally ignoring the value totally. The advertising 'estate' could be easily valued by an experienced professional. TTG would be happy to pay for that valuation to be done

215 Aside of this being a matter of fair allocation there is an additional strong benefit to support the rest of BT paying for this service – namely competitive neutrality and avoiding distortions. Whilst BT Retail / BT Global Services gets value from being on Openreach vans but does not pay a fair market rate for that value, competition will be distorted.

216 The CC in its Determination[81] did not consider that Ofcom erred by not making an adjustment. It considered that the value from advertising was one externality (flowing to rest of BT) but that there were other externalities that flowed the other way to Openreach (e.g. value of being associated with BT Group, scale economies). They concluded that it would be wrong to make an 'adjustment for this one externality in isolation'.

217 We invite Ofcom to make an assessment of these other externalities (that Openreach allegedly enjoys) to see if indeed (a) they exist and (b) they outweigh the substantial benefit that rest of BT enjoys from free advertising on Openreach vans. In essence there are three options for the way the question of value and of competitive distortion could be addressed:

- BT Retail could be required to pay a fair market rate
- The BT advertising on the vans could be removed
- Other customers of Openreach (such as TTG, Sky) could also advertise on Openreach vans for the same 'price' (either market based price or free)

[81] LLU Determination §2.612

OTHER

218 We have a number of other points to make regarding costs

219 BT Group corporate overhead. We understand that the way that the Openreach allocation of BT Group corporate overhead and IT spend is calculated is to take the 2009/10 allocation. Efficiency and inflation assumptions are then applied to produce cost forecasts for 2010/11, 2011/12 and 2013/14. This effectively does not reflect volume changes which will impact on the demand for centrally provided services from Openreach. For example as the number of FTEs within Openreach falls, the requirement for human resources activity will clearly be reduced. Similarly as overall costs are reduced, the cost of procurement will fall.

220 Ofcom predict a ~5% fall in volume (§A6.8). Assuming a CVR of 0.85[82] then this reduction in volume should result in a fall in these costs of about 4% - this equates to £21m[83] or £0.90 per line. This is material and an simple adjustment to make.

221 Another way to reflect reductions in volumes of these costs could be to either:

- Reduce the corporate overhead cost in line with number of FTE (i.e. assume corporate overhead per FTE trends with efficiency and inflation assumptions) – this is consistent with BT/Ofcom's use of FTE as an allocation basis for certain BT Group costs
- Reduce the corporate overhead cost in line with total other Openreach costs (i.e. keep corporate overhead costs as a % of other costs fixed)

222 Assuming no change in cost to reflect volume changes would be plainly incorrect. Ofcom should make a 'best guess' as to how the cost may vary. We consider that the FTE method is probably most suitable.

223 The cost of staff in Career Transition Centre must be excluded from the wholesale costs (we understand that there are currently 3,500 in this position or 4% of the total workforce). These are staff who are between roles and they are clearly not necessary costs to provide wholesale services and nor are they efficiently incurred costs (most obviously an efficient firm would not operate a non compulsory redundancy scheme). Ofcom must verify that these costs have not been included in LLU/WLR charges – Ofcom needs to check that, for instance, they are not part of the BT Group corporate overhead cost which is then allocated to Openreach

224 As part of BT's sponsorship of the Olympics Openreach will be (indirectly via BT Global Services) providing a variety of services to the Olympic sites and events.

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[82] For example, see BT DAM Appendix 2 which shows the relationship between volume and costs for different cost categories. Three possible suitable proxies for corporate overheads are General Management and Other (CV168), General Management and Other , legal charges and other fees (CV168) and Personnel and administration (CV174). These show CVRs varying between 0.85 and 1.00. We assume a CVR of 0.85

[83] We estimate that total BT Group corporate overheads and IT spend is £525m. 4% of that equals £21m

Though this work may be provided *pro bono* by BT, Openreach must charge BTGS for this work. Ofcom should confirm that this is actually happening.

225 Ofcom says that SLG costs are included in the model (both internal and external). However, it is not clear what assumptions were used and/or what the costs are (these were made more transparent in the 2009 Review). It is legitimate to include some SLGs but it must be at an efficient level. SLGs costs should not be based on the level in 2010/11 – performance in this period was very poor and therefore the SLGs are not indicative of an efficient level

226 If Ofcom use 2010/11 data (either RFS or management accounts) as a base year from which to forecast future costs it is important to ensure that this data does not include cost anomalies. In particular Ofcom must exclude from the base year estimates the effect of high overtime levels that resulted from having too few engineering staff to provide an acceptable fault repair and new provide service. Performance fell massively below acceptable levels and as a result very high levels of overtime (which has a higher hourly cost) were incurred[84]

227 From the LLU Appeal it was apparent that Ofcom did not properly apply the right base year efficiency gain for 2008/09 when it updated the model (in April 2009) to include the then latest figures for 2008/09 (which for the most part were actuals). For instance, the fault rate reduction assumed in the model was less than BT actually achieved (which was known at the time) and the efficiency assumption was less than BT expected to achieve[85] (which was also known) and was less than it actually achieved. Ofcom needs to ensure that any update to the base year (2010/11) costs properly reflects the latest data. The proposed assumptions to be used (with supporting evidence) should discussed with stakeholders prior to the statement being published.

VOLUME ESTIMATES

228 We have a number of comments in respect of the volume assumptions regarding overall number of lines, number of broadband lines and MPF ancillary volumes.

229 The decline in number of lines (i.e. MPF+WLR) is too rapid. Ofcom is assuming that after a large decline in 2010/11 (170k) the lines will decline more rapidly by 300k per year which is similar to the rate of decline in the 3-4 years up to 2009/10. However,

[84] For instance, from BT Q4 analysts transcript: "*That said the level of overtime for example on the Openreach has increased quite materially but both Liv and Helen have assured me categorically that the level of her Openreach labour costs will reduce in the course of the year*" and "*However, we have also had increased levels of Openreach agency staff costs and overtime caused by the impact of the adverse weather in December and an increase in volumes.*"

[85] See CPW Reply VI §§16-18

in fact the number of lines in actually grew by 11k[86] in 2010/11 and the annualised growth rate in the last half was 140k per year. This growth occurred even though there was little increase in housing stock.

230 It seems implausible that in 2011/12 the trend will return to an annual decline averaging 300k. We think a more plausible forecast would be

- Update 2010/11 lines to actuals (i.e. growth of 11k)
- 2011/12: 100k increase
- 2012/13: flat
- 2013/14: 100k decrease
- No change in lines in 2011/12
- Annual decline of 150k thereafter

231 The table below shows broadband of all lines (for the BT network). The % broadband is calculated as MPF+SMPF of MPF+WLR.

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
% broadband	53.5%	58.8%	61.2%	65.6%	67.7%	69.6%

232 The % broadband appears to us to be rather low with only very moderate growth over the next three years – figure nearer 75% seems more reasonable.

233 It appears that the MPF ancillary volumes (particularly MPF New Provide and MPF Single Migrations) are too low. The table below shows the implied churn rate for each service – we describe this churn as intra-ISP switching. Churn is % of subscribers leaving an ISP in each year (as % of start year subs) and can be derived from knowing the net growth in subscribers ('net adds') and gross additions ('gross adds' – which is the number of new connections made). In this case gross adds is equal to new provides, single migrations, new connections and transfers for each product..

[86] See BT slides 10/11 Q4 slides p29

	2011/12	2012/13	2013/14
MPF			
Year average	5,230	6,040	6,660
End year	5,635	6,350	7,002
Net adds	1,113	715	652
Gross adds*[87]	1,880	1,760	1,690
Intra-ISP switching	17.0%	18.5%	16.3%
SMPF			
Year average	10,140	9,640	9,160
End year	9,890	9,400	8,932
Net adds	-511	-490	-468
Gross adds*	2,760	2,650	2,530
Intra-ISP switching	31.4%	31.7%	31.9%
WLR			
Year average	18,200	17,120	16,070
End year	17,660	16,595	15,577
Net adds	-1,360	-1,065	-1,018
Gross adds*	4,270	4,200	4,130
Intra-ISP switching	29.6%	29.8%	31.0%

234 The table shows that the MPF churn rate is much lower than SMPF and WLR – this is to be expected to some degree since there is ongoing migration from WLR/SMPF to MPF. However, the MPF churn rate looks low given expectations of observers which is for churn rates to be around [✂]. Higher churn is likely if, as Ofcom has proposed, a new migration process is introduced that will make switching easier.

[87] *There are two features of the gross adds number which mean it is not an accurate indicator of intra-ISP switching. One feature will tend to over-estimate intra-ISP switching and the other will have the opposite effect

First, intra-ISP switching will be slightly underestimated since SMPF and MPF gross adds excludes switching between ISPs where the gaining ISP use the same network provider. For example, a migration from (say) BT Retail (who uses BT Wholesale who uses SMPF) to Zen Internet (who also uses BT Wholesale). In this case though there is switching at the retail level it will not show as a SMPF migration

Second, some of the MPF gross adds will not actually result from switching between ISPs but rather an LLU operator upselling a customer from broadband only (on SMPF) to broadband and voice (on MPF) which does not involve intra-ISP switching

EFFICIENCY ASSUMPTIONS

235 Efficiency is effectively reductions in unit costs that are not caused by volume effects (e.g. scale economies) or price inflation effects. There are many different sources of efficiency gains including:

- Increased labour productivity (i.e. reduced time/cost per task) – this could arise from better labour flexibility, reduced downtime, improvements in scheduling, more faults fixed 'right first time', better diagnostics, improved tools, improved skills, fewer aborted visits, process re-engineering
- Unit price reductions – paying lower salaries or purchasing equipment at lower prices by, for example, achieving larger discounts with suppliers independently of general price trends
- Fault reductions (and other reductions in the number of tasks)
- Other sources such as: use of new technology; more efficient mix of macro inputs (i.e. technology versus labour); optimising mix of labour inputs (own staff / contractors / outsourcing); and, reductions in management / overhead costs due to improved working practices or de-layering

236 In considering the appropriate efficiency gain assumption it is important to recognise two points.

237 First, the efficiency assumption should be set so that Openreach's costs would come into line with costs of an efficient operator (by the end of the charge control). This implicitly means that ideally costs should be benchmarked against those experienced by efficient companies in competitive markets – Openreach should not be benchmarked against other (inefficient) monopolies. In particular, the efficiency improvement should not be based on what BT believes it can achieve or what BT plans to achieve as these do not necessarily reflect the costs of an efficient operator.

238 The CC broadly agrees with this. It said in the LLU Appeal:

> *… we think that Ofcom's task was to apply an efficiency target that would incentivize Openreach to bring its costs in line with those of an efficient operator, rather than to set targets closely aligned with the actual savings that the company proposes to make. For example, we were concerned that the application of the rate of efficiency improvement had regard to concepts that had their origins in BT's submissions (e.g. non-compressible costs and tapering rates). We think that this point is similar to the point made by CPW that the regulator's task is not to merely accept what BT thinks it could do*[88].

239 Second, the assumption should represent what is realistically achievable by an efficient operator. It has been suggested in the past that the efficiency improvement assumption should be set lower than is realistic to provide BT the incentive to reach and exceed the target. This makes no sense – the incentive to reduce costs and be efficient will the same irrespective of what the actual target is given since, for

[88] LLU Determination §2.165(b)

instance, profits, bonus payments and rewards will increase with every increment of reduced cost or increased profit.

240 We are pleased that Ofcom has abandoned the flawed approach that it took to efficiency in the 2009 Review and in particular the bizarre concepts such as:

- Certain costs were immune from efficiency gains ('non-compressible' costs)
- Efficiency gains will reduce over time ('tapering')
- Efficiency gains that would take longer that the period of the charge control to achieve should be disregarded

241 The general approach that Ofcom has adopted this time (which excludes these flawed concepts) is the correct approach. We hope that Ofcom doesn't reintroduce these flawed concepts in its final decision.

242 In terms of setting the assumption for future efficiency gain Ofcom has used a number of sources:

- Comparison versus other telecom incumbents. There are two different studies:
  - Statistical analysis by NERA / Deloitte
  - 'Industry benchmark' by Oliver Wyman
- Unit cost comparison by KPMG
- Historic efficiency gains
- Openreach own plans / budget

243 Ofcom says that it has attached relatively more weight to the historical trends and the industry benchmarking work than on the statistical analysis, KPMG analysis and Openreach budget.

244 We discuss each of these sources below in terms of their relevance and reliability as a basis for forecasting Openreach's future efficiency improvement. We also include an important discussion of other indications and evidence of whether BT is efficient or not. We then provide our view on the appropriate assumption to use in the charge control model.

STATISTICAL STUDIES (NERA / DELOITTE)

245 These studies (NERA which has been updated by Deloitte) effectively compare BT's costs to those of US LECs (incumbent regional monopolies) applying corrections ('controls') for some exogenous differences between the different operating environments. They conclude that annual savings of about 2% per year might be possible (§A7.11).

246 In the 2009 LLU Statement, Ofcom discounted using this information (though in the LLU Appeal Defence it attempted to place greater weight on it[89]). In response to questions, Ofcom has said that it has placed 'relatively less' weight on this. However, in the consultation document Ofcom's view on the relevance and reliability of this data is rather vague. For instance, it says of this type of study:

> *Given the limitations, we have not updated this analysis, which is still relatively recent, for the purposes of this review. We consider that the analysis is still relevant, in that it might suggest caution before suggesting that Openreach is particularly inefficient, but do not consider that it would be appropriate on the basis of this evidence alone to conclude that Openreach was already operating at a reasonably efficient level and did not need to save costs to catch-up with industry best practice* (§A7.13)

247 We believe that there are very clear and very strong reasons as to why this analysis is of very limited relevance and low reliability and therefore it can and should be ignored.

- It compares BT to other monopolies rather than companies in competitive markets and therefore is not indicative of efficient costs
- It compares BT Group with US LECs and BT Group and there are very significant differences in their operating environments – for example, different regulatory systems, different cost measures e.g. HCA vs CCA accounting, different product mixes, different accounting standards and geographical differences. We doubt that many of these will have been properly controlled for
- It provides benchmark costs for BT Group not for Openreach. Openreach may be able to achieve greater efficiency savings as it likely to face less competition than the rest of BT Group. Ofcom expressed a similar view in its recent statement on the wholesale broadband access charge control.[90]
- The base NERA study was done in 2008 so it is now 3 years out of date
- It only includes (we understand) operating costs, not capex
- It is not used by BT or Openreach as a basis for their own budgets/planning suggesting that BT does not consider it that is relevant or reliable
- It has historically greatly underestimated Openreach's potential efficiency gains. For instance
    - in the 2009 Review this analysis indicated an annual efficiency gain of around 1%[91] yet the actual outturn was over 6%
    - in 2006 a similar study suggested a 1.5% gain but the outturn was a 4% efficiency gain[92]

[89] For example, the CC said "*We also concluded that ranges indicated by the econometric studies could not be accorded greater prominence in the Defence than in the LLU Statement*" LLU Determination §2.165(a)

[90] See §5.197

[91] Report estimated 0.8% and 1.8% on compressible costs including depreciation. This equates to 0.8% to 1.5% on opex and capex

248 Notably the CC concurred with much of our view of the weaknesses of the NERA study. The CC said: "*There are, however, two important limitations to it* [the NERA study]*: (i) the comparison drawn with the LECs is that of the BT Group and not Openreach; and (ii) the comparators might not operate in a competitive market*"[93]

249 In summary, the NERA and Deloitte studies have been and will remain very poor indicators of Openreach's potential future efficiency gain.

INDUSTRY BENCHMARK (OLIVER WYMAN)

250 Ofcom has gained access (through s135 information gathering powers) to an Oliver Wyman report that assesses efficiency of telecom operators. This is based on comparing BT to about 40 other European incumbents[94] and has been conducted for over 10 years[95]. We understand that it is used by BT in its budgeting/planning.

251 Though this type of benchmarking has some weaknesses it has a number of strengths and is a significantly better benchmark that the NERA / Deloitte type studies. In particular:

- It is based on European operators who have more similar regulatory and accounting regimes to BT (e.g. use of CCA rather than HCA)
- It covers opex and capex
- Since it is paid for / used by the participants for purpose other than regulatory submissions this indicates that it is considered by them to be relevant and reliable
- It is used by BT in its budgeting/planning

252 Its major weaknesses are:

- It compares BT to other monopoly operators and so will underestimate the potential efficiency gain to reach an efficient operator
- It relies on comparing different types of operators in different countries and environments and may not sufficiently take control for how these differences affect costs. Therefore, it may not be perfectly accurate
- It provides benchmarks for the whole of BT Group rather than for Openreach

253 The results of the Wyman study are (according to Ofcom)

- for BT to move into line with the peer average would require BT to improve efficiency by 5%[96] a year for three years

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[92] LLU Determination §2.195

[93] LLU Determination §2.194

[94] Ofcom said that was European incumbent operators

[95] Quote from Oliver Wyman website: "*Over the last decade, Oliver Wyman has regularly conducted an international benchmarking effort, allowing the 40 operator participants to compare proprietary operational efficiency data.*"

[96] Ofcom suggested that these numbers are gross efficiency gain

- for BT to move into line with the 'most efficient' operators (defined by Wyman as the top quartile) would require BT to improve efficiency by 5.5% a year for three years.

254 Clearly the relevant figure in the case of setting BT's efficiency improvements is 5.5% since the objective of setting the efficiency gain should be so that BT reaches the efficiency level of the most efficient companies, not some average of efficient and inefficient. Arguably the benchmark should be even higher than 5.5% since the efficiency target should be based on achieving the top decile (not top quartile).

255 According to Ofcom the 5.5% figure is 'catch-up' efficiency gain only and excludes the 'frontier movement' (frontier movement is improvement in efficiency that the most efficient companies can achieve). In other words a 5.5% efficiency improvement will (in three years time) move BT into line with the efficiency of the most efficient operators today. Including frontier movement will mean that BT will reach the efficiency level that the most efficient operators will be operating at in three years. It is only this second concept that is relevant for forecasting Openreach's costs – the estimate must include frontier movement as well as catch-up.

256 KPMG have estimated the efficiency frontier movement at 2.0% to 2.3%[97]. Using (conservatively) 2% this means that based on the Oliver Wyman study BT will need to improve efficiency at 7.5% a year in order to (in three years time) reach the level of efficiency that the most efficient companies will operate at in three years time.

257 In summary we consider that this report is substantially more relevant and reliable that the NERA/Deloitte studies though it may under-estimate the potential gain. This report indicates that BT can improve its efficiency by 7.5% a year.

PRICE COMPARISON (KPMG)

258 Ofcom also draws on the KPMG study that benchmarks the unit costs/prices that Openreach pays for certain inputs e.g. salaries, non-network equipment etc. It concludes that there is a potential efficiency gain of 2.3% to 2.6% a year (reflecting catch-up efficiency gain and frontier movement) if BT were to achieve best practice.

259 Though this is a relevant study particularly since it (attempts) to benchmark against competitive companies (rather than monopolies) it has a number of very significant weaknesses. The biggest weakness is that it excludes savings from two very important sources and therefore significantly underestimates potential efficiency savings.

- It excludes efficiency gains from fault rate reductions. Over the last few years Openreach has achieved a 2% to 3% efficiency gain solely from fault rate reductions

[97] See KPMG Report section 3.8.1

- It excludes any efficiency gains from productivity improvements and task time reductions. Given how inefficient Openreach's workforce is (see §§291-308 below) ignoring this is to disregard a huge source of efficiency gain.

260 BT itself identify that there are large savings possible from these areas through reducing faults and improving productivity so reducing labour costs. Indeed most savings are from labour reductions which come from fault rate and productivity improvements[98].

> *Specific examples include improving field force productive through improvements in work scheduling and the setting of more rigorous performance standards. We are also delivering savings through greater automation and doing things right first time for our customers, therefore eliminating the cost of failure.*
>
> *We expect to continue to deliver further reductions in our total labour costs, driven by productivity improvements, process re-engineering and a continued focus on driving value from our suppliers.*
>
> *This programme has identified savings through process re-engineering which has reduced task times and identified better opportunities to realign our resources*

261 Thus the KPMG study will significantly underestimate the potential savings. It will probably captures less than a ¼ of the potential savings – thus the study misses ¾ of the potential savings.

262 The other weakness of the study is that it is not highly reliable since about 56% of the costs efficiency gains are extrapolated.

263 Though the KPMG report was relied on before (e.g. 2009 Review and LLU Appeal) this was because it was 'the best of a bad bunch'. Fortunately, this time better benchmarks (particularly the Oliver Wyman study) are available.

HISTORIC PERFORMANCE

264 Another data source that Ofcom draws on in considering future efficiency gains on is historical efficiency improvements. We think that historical performance is a good 'starting point' for considering future efficiency improvements particularly for the early years of a charge control.

265 As Ofcom noted the CC supported this view in its LLU Determination: Ofcom said, "*In its decision on the appeal of the ORFF (the "LLU decision"), the CC indicated that significant weight should be placed on historic trends in efficiency …*"[99]. The CC said:

> *In general terms we think that the predictive power of historic rates of efficiency saving diminishes over time as circumstances, including cost structures and technology trends, change. In our view, however, the historical indicators of*

[98] See Q4 11 results slides page 41 and Q4 11 transcript

[99] WBA Charge Control consultation Jan 2011 §A7.42

Openreach efficiency should be reliable for at least the first year of the price control, and represent useful indicators for the whole period under review[100].

266 That historic rates are a reasonable indicator of future efficiency gain is also supported by other evidence:

- Evidence across other companies and industries shows that efficiency gain (measured by labour productivity) tend to be on average steady over time[101];
- no other regulator that we are aware of has assumed a declining (or increasing) level of efficiency[102].

267 BT's often mentioned argument against the use of historic rates as the basis for future efficiency improvements is that BT have squeezed out all the easy wins and what they did in the past is one-offs and not repeatable – Ofcom say of BT's position: "*Openreach has argued that some of the savings were one-off in nature and will not be repeated in the future*"[103].

268 These types of claims are not new – during the 2009 Review and subsequent appeal BT frequently said that the previous rate of efficiency gains (3% to 4%) was not repeatable. For example[104]:

"the scope for further cost savings without threatening the improved service levels is limited"

"The scope for efficiency and Openreach's ability to realise efficiencies will diminish over time"

"these gains [from previous years] *are not sustainable or replicable over a sustained period"*

"As the "easy win" opportunities (in terms of improvements to fault rates) of the past 5 years have already largely been taken, Openreach predicts that the overall fault rates are more likely to be flat over the next 4 years"

The workforce is now deployed to efficiently and effectively meet what is variable and often volatile demand; the scope for further cost savings without potentially threatening the improved service levels is significantly more limited (A §40)

"Historical rates are not repeatable" (title to section)

"Openreach has delivered significant efficiencies since its establishment. These cost reductions and efficiency levels are not repeatable nor sustainable indefinitely"

[100] LLU Determination §2.185

[101] see LLU Appeal WS Heaney I §102

[102] see LLU Appeal WS Heaney I §§130-131

[103] Consultation §A7.30

[104] Sources: 2009 Review BT first consultation response (p38); 2009 Review BT second consultation response (p3, §106, §130, B3.1.1 and §83); LLU Appeal (WS Shurmer I §40)

269 As we know now rather than achieving less than 3% to 4% efficiency gain as they claimed Openreach actually achieved over 6%[105]. Also rather than achieving no reduction in fault rates (as they claimed) they actually achieved 11%.

270 Ofcom must not give any credence to BT's claims that their historic levels of efficiency gain cannot be repeated. In the LLU Appeal the CC also rejected similar BT claims:

> *We also noted Mr Shurmer's argument that specific savings Openreach had made in the past were unsustainable. In our view, Mr Shurmer's arguments explained why specific savings made in the past might not be repeated but did not explain why historic rates of savings were an unreliable guide to savings that may be made in the future*[106]

271 In fact BT's management themselves agree that there is lots of future opportunity for cost reductions – the following quotes are from BT's analyst calls (Q211, Q311 and Q411):

> *"There are plenty more opportunities in this area* [contracts] *and I'll give you an update as we progress on that."*
>
> *"We continue to reduce our labour costs which have reduced by 6% in the half year … there is material opportunity to continue to reduce our labour costs and we will take them."*
>
> *"Just to reiterate, this is not about finding opportunities; it's our ability to action and implement them.*
>
> *"As I have said before, there remains plenty of opportunity to transform our cost base"*
>
> *"There is still a lot of self- help in the group. We believe we can reduce our costs further. We believe we can improve operations …"*
>
> *"I've said it before and no doubt I'll say it again - we have made more progress but we remain very well aware that there is a lot more we can do and more importantly there is a lot more we will do."*

272 In summary, there is sound reason for using historic efficiency gains as the basis for future efficiency forecasts. Openreach's arguments that historic levels are not repeatable are nonsense:

- They have been rejected by the CC
- BT have made the same claims in the past and these have proven to be wrong
- BT's own management claims to shareholders contradict the idea that historic levels are not repeatable

273 The next issue is then what is the historic level of efficiency that is appropriate to be used as a benchmark.

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[105] 08/09 – 6.2%; 09/10 – 4%; 10/11 – 9% (see §274 below and Consultation §A7.29)

[106] LLU Determination §2.183

274 Ofcom has stated that Openreach's efficiency gain over the last two years has been

- 07/08 and 08/09[107]: ~6%
- 09/10: 4.0%
- 10/11: 9.0%
- average: over 6%

275 Openreach claim that 2% of the 6.5% (average for 09/10 and 10/11) relate to 'one-off' improvements (e.g. Cumulo rates and accommodation[108]) and then argue that 'one-offs' are not relevant as the basis to forecasts future levels of efficiency improvements since 'they could not be replicated in the future' (§A7.33).

276 Openreach's claims are nonsense. Even it were true that (say) a particular accommodation cost reduction was not possible in future (so might be classified as a one-off), one-offs might arise in other areas – say through use of new technology or in lower overhead – that cannot be foreseen now. The CC agreed that this was the nature of efficiency gains, it said: "*We agree with Mr Heaney that future savings are likely to be made in places where savings did not previously seem possible*"[109].

277 Cumulo rates are a good example of how 'one-offs' arise unpredictably. In the May 2009 LLU charge control statement Ofcom said that zero efficiency gain was possible in Cumulo rates (since it was considered 'non-compressible') and Ofcom said:

> *"We continue to believe that some costs* [including Cumulo rates] *cannot be targeted for future efficiency gains within the four year period under review"*[110]

278 Yet within 12 months Openreach had managed to achieve an efficiency gain of almost 50%.

279 The same claim that they were not compressible was said of accommodation costs in 2009 yet they fell by 27% in 2010/11[111].

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[107] 07/08 and 08/09 calculated as follows. Efficiency gain on compressible costs excluding fault rate reduction is 4% 07/08 and 4-5.8% (mid-case 4.9%) 08/09 (LLU Appeal Defence §A75). Of all costs efficiency gain is 3% (07/08) and 3.7% (08/09). Fault rates improvements in this period were at least 10% a year which equates to 2.5% efficiency gain. Thus the total efficiency gain was 5.5% (07/08) and 6.2% (08/09)

Regarding fault rates, in the 07/08, 08/09 and 09/10 BT claimed to have reduced rates by 40% and the reduction in 2009/10 was 11%. From 2010 annual report page 32: *In 2010 Openreach made significant improvements in the quality of service delivery of its products. Faults due to the access network reduced by 11% compared with the previous year as a result of our focused network investment and quality programmes. Over the past three years, fault rates have reduced from one fault every nine years to one fault every 15 years*. See also 2009 Review Second Consultation A14.51 which shows faults fell by 10% in 07/08

[108] The description of other 'one-offs' have been redacted but we suspect that accommodation is included given the large reduction in it

[109] LLU Determination §2.184

[110] 2009 LLU Charge Control Statement §A9.24

[111] See Consultation Fig 8.3

280 Of course, Ofcom must be very wary of accepting any of Openreach's claims in respect of potential efficiency since they have been shown to have mislead or lied to Ofcom in the last regarding potential efficiency gains by wilfully under-estimating what was possible (see §33 above).

281 We also note that what BT has achieved historically will if anything tend to underestimate what is achievable by an efficient company since BT are restricted in the improvements they can make by their outdated labour practices (see §287 below). These practices are (a) not what an efficient firm could achieve (because an efficient firm would not have such practices) and (b) of BT's own making since they have had years to address this problem (but have failed to do so).

282 It is also worth considering the BT Group performance – in the last two years BT Group has achieved an efficiency gain of about 7%. The chart below shows annual cost saving – cost saving is effectively the combined impact of efficiency improvements, unit price changes due to volume changes and price inflation. Given in 2009/10 and 2010/11 saw roughly flat volume and 1%-2% average price inflation (conservatively) it can be assumed that the efficiency gain was about 7%. Notably these figures are net savings[112] so the gross efficiency gain may have been around 7.5%.

283 Openreach may be able to achieve greater efficiency savings as it likely to face less competition than the rest of BT Group. Ofcom expressed a similar view in its recent statement on the wholesale broadband access charge control.[113]

[112] See BT Q4 11 slides p41 which says cost savings are net of investment.

[113] See §5.197

BT Group cost reductions[114]

284 Thus in summary, we consider that historic benchmarks are a good indicator of future efficiency gains:

- It is a very relevant benchmark since it is specific to Openreach
- it is a sound rebuttable presumption that future rate of efficiency improvements will be the same as historic ones
- The CC supports the case that historic benchmarks a good indicator of future efficiency gain
- Openreach's claims that historic levels of efficiency improvement are not repeatable is roundly contradicted by BT's own management's public statements. Further, Openreach have a track record of saying that they cannot achieve the same efficiency gain levels as in the past but then going on to achieve efficiency gains *greater* than they achieved in the past
- The relevant measure of historic efficiency gains must include 'one-offs' since other (unknown) one-offs will arise in the future i.e. the relevant benchmark is over 6%.
- The historic efficiency improvements that Openreach has achieved will under-estimate what an efficient company could achieve since Openreach is constrained in its ability to achieve efficiency gains by its outdated employment practices

[114] Note the 2010/11 figure excludes the impact of an increase in pension charges of £104m (see Analyst presentation Q4 slides p41). This is not a relevant cost in this efficiency analysis since this was an pension scheme valuation adjustment rather than a change in underlying costs. As BT said in its 2011 Annual Report (p48) "*The increase in the pension cost in 2011 reflects the lower discount rate and higher inflation assumptions at the start of the year*"

- In the case of BT there is a plausible case to believe that future efficiency gain will increase since there has been an upward trend and BT's management say there is plenty more opportunity for efficiency gains

OPENREACH BUDGET

285 Another possible source for the future efficiency gain is BT's Medium Term Plan ('MTP'). The costs and efficiency gains in this are set by means of 'negotiation' between BT Group and each line of business (including Openreach). The assumed improvement in the MTP for Openreach is 4% per year in the next 3 years – we are waiting for Ofcom to confirm whether the 4% is a cost saving figure or efficiency gain.

286 Though this is a relevant benchmark (in particular it is Openreach specific) it is likely to be an underestimate of the realistic level of efficiency that could be gained. Openreach have claimed that the MTP sets 'aggressive efficiency' targets i.e. implying that these levels will be difficult to achieve (§A7.36). However, this claim is implausible:

- Openreach would have known that Ofcom may have sought evidence of Openreach's plans as part of its charge control work (particularly since similar documentation was sought in the last charge control[115]). Therefore, Openreach had an incentive to underestimate the efficiency gain (in order to attempt to dissuade Ofcom from assuming a high efficiency improvement)
- Even absent any charge setting procedure, Openreach's management would have a strong incentive to set lower targets so that they could reach their performance targets more easily and gain higher bonuses. That this type of behaviour goes on is implicit from the description of the process as being a 'negotiation'
- BT tends to outperform its forecasts. For example, documents disclosed by BT as part of the LLU Appeal show that between 2007/08 and 2008/09 Openreach made efficiency improvements that exceeded its own internal projections[116]. Similarly the out-turn reduction in fault levels in both of these years was more than predicted[117]
- BT's claims regarding efficiency have been shown in the past to be false and knowingly misleading

[115] For example, 2009 LLU Charge Control Statement §A9.83 "*Since the Second Consultation, we have also obtained – through formal powers – further information on Openreach's expectations for future cost savings. This information supports Openreach's statement that it is likely to deliver efficiency gains equal to around 4% of its compressible costs in 2008/09.*"

[116] LLU Appeal CPW Reply VI §13. The actual numbers were redacted and therefore TTG are not aware of them.

[117] LLU Appeal CPW Reply VI §116(a)

287 It is important to recognise that Openreach, by its own admission, is constrained in achieving high levels of efficiency gains by its choice of employment practices. Openreach has said:

> *… it is important to understand that it is extremely difficult for Openreach to actually realise significant cost reductions in this area* [reduced headcount] *given inherent difficulties in unpicking legacy structures. In particular, natural attrition rates within the Openreach workforce are low and slowing, largely as a result of the current difficult economic circumstances, making headcount reductions even more challenging. The costs associated with making redundancy and leavers' payments necessary to enable FTE reductions therefore need to be factored into any assessment of the scope for cost reductions. Because of the payback on the redundancy and leavers' payments, it currently takes on average over 2 years before potential cost savings for engineers leaving on certain terms might actually be realised.* [118]

288 These hindrances are of BT's own making since they have over the last ten years failed to tackle the causes of them e.g. non-compulsory redundancy policy, inflexible working practices. Any impact these might have on slowing down efficiency gains must be ignored since an efficient firm would not face these barriers. If Ofcom takes account of these impediments in its assessment of Openreach's efficiency target it will in effect be setting costs at a level much higher than that of an efficient operator.

289 Therefore, though Openreach's MTP may be a relevant benchmark, its reliability is highly questionable and it will significantly underestimate what is realistically achievable by an efficient firm.

SPECIFIC EVIDENCE OF BT INEFFICEINCY

290 The benchmarks discussed above provide a range of figures for Openreach future efficiency gains. Alongside these it is also worth considering some specific and more anecdotal examples that add further evidence of whether BT is operating efficiently. We provide some examples of these below.

291 One of the major sources of BT's inefficiency is its '<u>non compulsory redundancy</u>' scheme ('NCR scheme'). It has a wide range of damaging effects. These type of schemes were common in the private sector in the 1960s and 1970s but they have become increasingly rare and are now becoming much less common in the public sector.

292 In the case of BT we understand that the scheme works as follows.

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[118] 2009 Review BT second consultation response §115. This approach is further reinforced by BT's approach of reducing contractor numbers before permanent staff – for instance from Q3 2011 analyst transcript "*Within this, the non BT labour cost reduced by 9%, a further reflection of our desire to protect BT permanent jobs wherever possible*"

- In the case where a role no longer exists and/or an individual's performance is inadequate the individual is offered a redundancy package.
- However, if they so wish they can reject this offer and instead be placed in the Career Transition Centre to look for another suitable role in BT.
- Individuals can opt to exit the NCR scheme (and leave BT) with compensation of 6-12 months of salary (in addition to the standard redundancy package)
- There are (we understand) about 3,500 people in this Career Transition Centre currently
- When roles arise recruiters in BT are required to go through the Career Transition Centre and if there is an individual with a 50% match of skills they have to recruit that individual unless they get very senior sign-off
- If the individual subsequently get another role in BT (but at a lower grade) they retain their previous pay level / grade (i.e. grandfathering)

293 The NCR scheme has very wide ranging and damaging impacts on Openreach. It increases costs significantly above the efficient level and makes it more difficult for Openreach to innovate and improve performance and efficiency.

- It is costly to reduce staff levels since there are few natural leavers – natural attrition rates are 2.4%[119] (i.e. the average 'natural' working life of a BT employee is over 40 years) which compares to best practice of 10-15%. This means that the redundancy cost per leaver is excessive (redundancy costs are above 'market rates' since BT cannot make its staff leave so has to entice them to leave with high payments). This both adds unnecessary cost but it also deters the company from making efficiency improvements that involve staff losses since the cost to achieve them is so high. BT itself recognises this impact of the non compulsory redundancy scheme (and other employment practices) in making it more difficult to achieve improvements:

  > *"… it is important to understand that it is extremely difficult for Openreach to actually realise significant cost reductions in this area* [reduced headcount] *given inherent difficulties in unpicking legacy structures. In particular, natural attrition rates within the Openreach workforce are low and slowing, largely as a result of the current difficult economic circumstances, making headcount reductions even more challenging. The costs associated with making redundancy and leavers' payments necessary to enable FTE reductions therefore need to be factored into any assessment of the scope for cost reductions. Because of the payback on the redundancy and leavers' payments, it currently takes on average over 2 years before potential cost savings for engineers leaving on certain terms might actually be realised."*[120]

[119] This figure was provided in the LLU Appeal. There is no reason to assume that it has changed significantly since then

[120] 2009 Review BT second consultation response §115. This approach is further reinforced by BT's approach of reducing contractor numbers before permanent staff – for instance

- When roles arise recruiters are unable to recruit the most able talent from the open market and refresh the skill-set (or have to battle the bureaucracy to be allowed to do so)
- Wage rates rise above the market rate since there is no effective competitive process to bid down wage rates (e.g. by influx of new employees accepting lower wages)
- Higher performing staff will tend to leave with the large redundancy package (since they are able to find roles elsewhere) whilst poorer performing staff will tend to stay
- The lack of risk of being made compulsorily redundant and high redundancy package reduces the incentive for individuals to improve their performance. It is also more difficult to 'shed' lower performing staff
- Generally the NCR scheme reduces the level of staff turnover and employee refresh which is critical to the well-being of all firms. BT's natural staff attrition rate is 2.4% but 'best practice' is between 15% and 20% – BT recognise that this is a problem[121]
- Some individuals are paid above the appropriate level since their salaries are grandfathered
- BT bear the cost of non-productive staff in the Career Transition Centre[122]

294 In summary, the NCR scheme is a millstone around BT's neck creating in significant inefficiencies today and also making it difficult to achieve future efficiency gains.

295 We understand from [✂] that a major source of inefficiency is the low productivity of the engineering force particularly when compared to 'better practice' operations such as KPN. This has many causes such as control exerted by the unions resisting improved efficiency, inflexibility to new working arrangements and lack of compulsory redundancy to incentivise better performance as well as higher redundancy costs making it excessively costly and so deterring efficiency improvements.

296 Benchmarking versus best practice shows that BT's fault rates[123] are higher than best practice. We do not have up to date data but in the 2009 Review we provided evidence[124] that showed that Openreach's fault level was about 0.12[125] per line per year compared to the then best practice level of 0.06.

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from Q3 2011 analyst transcript "*Within this, the non BT labour cost reduced by 9%, a further reflection of our desire to protect BT permanent jobs wherever possible*"

[121] See CPW Reply VI §25

[122] We note that the cost of staff in the Career Transition Centre must be a non-allowable cost and Ofcom must verify that the cost of these staff does not find its way into wholesale charges (see §223 above).

[123] We note that simply as a result of the MPF base maturing MPF faults will fall by 12% (see §171). This will result in an efficiency gain of about 2.5%

[124] 2009 Review TTG second consultation response

297 There is strong evidence that Openreach's pay levels are excessive.

298 First, a comparison of engineering charges indicates that costs are significantly above efficient practice. Ofcom / Openreach will not reveal the average engineering pay levels. However, the overall cost can be implied from the hourly price for 'time related charges' (TRCs). These prices are (according to Ofcom[126]) reflective of cost (since Ofcom claims that BT do not make excessive returns on non-regulated services such as TRCs[127]).

299 TRC services are to provide services that are outside BT's network e.g. on the customer premise. The charges are £50 / £105 (first hour / per subsequent hour) in 'normal working hours', £85 /£130 all other times except Sundays/Bank Holidays, £100 /£150 Sundays/Bank Holidays. The average cost is about £75 per hour[128] of time worked (including time in home and travel time). By contrast TTG pay Qube engineers[129] [✂] per worked hour (including in-home and travel time). This indicates that Openreach needs to reduce costs by over [✂ - more than half] to be efficient. Arguably Qube engineers need to be better qualified than BT engineers since the work is related to computers and IT networks.

300 The £75 cost per hour of Openreach time is corroborated by the 'aborted visit' charge which is also supposedly cost orientated. The charge is £85 even though the time involved is probably less than an hour.

301 Second, employment practices (particularly non compulsory redundancy) which results in low attrition, means that there is little market pressure on wage levels.

302 Third, it seems that even though BT's pay levels are high they are actually increasing versus industry levels. BT have recently agreed a pay settlement of 3% a year for Jan 10, Jan 11 and Jan 12 when other companies had in this period wage freezes (2010) or 1-2% increases (2011, 2012) (see §326). Thus over this 3 year period BT's average wages rose by 9% but industry rose by about 4%.

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[125] Assumes 2.85m pa – averages BT's quoted figure of 2.75m faults per year and Chart A10.1 (in 2009 LLU Charge Control review second consultation) which implies 2.95m per year. Since then BT claimed to have reduced fault rates to about 7%

[126] Answer to question TTG 40 regarding cost allocation to services such as TRC: "*At this stage we have not found any need to reallocate costs from non regulated copper products as BT amended its RFS allocations for the major items*." This clearly implies that Ofcom consider the prices to be close to the cost.

[127] The alternative scenario is that (contrary to what Ofcom say) costs are lower than price/revenue. If this is the case then costs need to be allocated away from LLU/WLR rental and onto TRCs

[128] Assumes length of visit between 15mins and 3 hours (evenly distributed). Travel time 30 minutes. Assumes 90% normal working hours, 5% all other times except Sundays/Bank Holidays, 5% Sundays/Bank Holidays.

[129] [✂] (which excludes materials) per [✂] minute visit and [✂] minute travel time. This effectively includes all overhead costs since it is outsourced.

303 Fourth, the large differential between normal hours and out of hours (for TRCs) suggests much higher rates are paid for these other hours. By contrast we pay Qube [✂].

304 BT have a very high pension contribution. BT's overall company pension contribution (defined contribution and defined benefits) is around 10% of salary whilst for a representation sample of other FTSE 100 it is about 7%[130].

305 BT is also unusual in that it operates a defined benefits pension scheme that is open to new contributions from existing members. As well as leading to high pension contributions, this has a negative effect on efficiency since it creates particularly high disincentives to leave BT (since later in a career the effective pension contribution is very high). It also increases leaver costs (since large pension settlements need to be made on top of redundancy costs) and so deters efficiency programmes that result in redundancies. Unusually, though the scheme is closed to new entrants, pension members who leave BT and then rejoin have (we understand) the right to rejoin the defined benefits scheme.

306 In terms of corporate overhead it is evident that Openreach is operating highly inefficiently. Openreach's cost of corporate activities e.g. finance, HR, strategy, legal is excessive[131]. The costs of these activities accounts for about 8.4% of their total cost base[132]. TalkTalk Group[133] provide the same activities for 2.5% of total cost

[130] In 2007/08, BT's pension cost was 14.6% of wages. In 2008/09, it reduced to 11.2% but most of this reduction was due to a higher discount rate. Thus the 'true' cost may lie between 14.6% and 11.2%. In 2009 BT negotiated a reduction in DB entitlement of about one-fifth (which will come into effect in 2009/10). This suggests an true rate in future of 9% to 12%. In 2011 pension charge was £406m on salary costs of £3,947 (BT Annual report 2011, p48)

The representative sample is 50 of the largest FTSE100 companies. The average contribution was 7.0%. Excluding 8 companies with no substantial UK employees the % amount was 7.4%

[131] Based on analysis of 07/08 costs (since equivalent data not available for more recent years). However, the substantial difference is unlikely to have reduced. In fact it is likely to have widened since following acquisition of Tiscali, TTG rationalised its corporate costs and also completed a organisational redesign programme that resulted in a further 12% reduction in staff

[132] Total corporate overhead as % of Total Costs = 8.4% (for Core Rental Services and Ancillary and Non-Regulated Services). This includes corporate overhead allocated from Group as well as corporate overhead incurred directly by Openreach. The corporate overhead incurred directly by Openreach is not explicit (though was known by KPMG but redacted) but Ofcom orally agreed during the course of the Second Consultation that an assumption of 10% of pay was reasonable. The % is derived from the First and Second Consultations and for 2007/08 since more data was available - Tables A7.5 – A7.9 (pages 67,68,74) of Ofcom's first consultation document 'A New Pricing Framework For Openreach').

CRS Pay (10%)	£44m
CRS Corporate Overhead (recharged by Group)	£95m
Ancillary + Non Regulated Pay (10%)	£36m
Ancillary + Non Regulated Corporate Overheads (recharged)	£74m
Total Corporate Overhead costs	£249m
Total Cost Base (CRS, Ancillary, Non Reg)	£2960m

even though TTG have a smaller operation[134] than Openreach and therefore should enjoy fewer scale economies.

307 The inefficiency is corroborated when comparing headcount levels:

- In the legal area BT Group have about 400 lawyers in the UK[135]. TTG have about 10
- In the regulatory and policy area BT have (we estimate) around 50 to 100 staff. TTG have less than 2 FTE
- In the strategy, product development / commercial and regulation areas Openreach have more than 130 people whereas TTG have about 50 even though the retail products that TTG provides are necessarily more complex than wholesale products (e.g. diverse customer needs – business and residential, range of features, different pricing packages etc)

308 All of these examples support the conclusion that Openreach is a highly inefficient business and has very significant potential for efficiency improvements. BT and Openreach have working and employment practices that are several decades out of date which create low incentives to perform and increase productivity, create barriers to and discourage efficiency improvements, encourages/allows poor performers to stay and encourages high performers to leave. This is manifested in excessive pay levels, low productivity and profligate levels of overhead. The BT Group CFO Tony Chanmugam summed it up when he said of opportunities for efficiency that: "*this is not about finding opportunities; it's our ability to action and implement them*"[136].

CONCLUSION OF EFFICIENCY GAINS

309 There are various sources of evidence that Ofcom could draw on in setting the assumption for efficiency gain for Openreach. The relevance and reliability of each is summarised below.

310 We understand that all of these sources except MTP (4%) are effectively 'gross' efficiency gains (and so exclude the costs of achieving efficiency gains). We can

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Openreach corporate overhead as % total costs 8.4%

[133] Based on TTG actuals/budget for 2008/09. Overhead includes: Finance, Legal, Regulatory, Strategy, HR (Admin, Training, Group Services), MDs, Exec, some central commercial functions, revenue assurance, and allocations of Property Management, Group Legal, Corporation Tax, Group Finance, Corporate Treasury, M&A, Group Risk, Group Continuity, Group Marketing, Banking and Information Security

[134] TTG revenue in 07/08 was £1.4bn versus £5.2bn for Openreach

[135] BT Group lawyers globally 500. About 20% of BT Group is non-UK suggesting about 400 lawyers in UK. See http://www.thelawyer.com/dial-m-for-moir-gordon-moir-bt-retail/1001209.article

[136] BT Q2 / H1 2011 analyst call transcript

convert the MTP to a gross figure by adding likely costs assumed to achieve the efficiency gains. Given BT's approach before these are probably about 0.5%. Therefore, the gross MTP efficiency figure is 4.5%. All the figures given below are for gross efficiency figures.

NERA / Deloitte benchmarking studies (gross efficiency: 2%)

- Significant comparability issues since benchmarks to US LECs
- Benchmarks versus monopolies rather than competitive companies
- Historically has significantly underestimated Openreach's actual efficiency gains
- Is not used by BT as basis for assessing potential improvements
- *Conclusion: of very little use*

Oliver Wyman benchmarking study (7.5%)

- Suffers from some comparability issues but to lesser extent than NERA study since, for example, benchmarks to European operators who have more similar regulatory / accounting environment
- Has been running for 10 years and used by BT in its budgeting and by the 40 other operators
- *Conclusion: much more relevant/reliable than the NERA / Deloitte studies, likely to underestimate gain (since benchmark versus monopolies). Relevant benchmark is 7.5% figure which includes frontier movement to reach the level of the most efficient companies*

KMPG price comparison (2.3% to 2.6%)

- Only includes minority of sources of efficiency gains since (knowingly) excludes improvements from labour productivity and fault rate reductions which account for majority of future gains (by BT's own admission)
- Is not used by BT as basis for assessing potential improvements
- *Conclusion: though may be reliable within its very limited scope will significantly under-estimate potential gain since excludes most sources of efficiency improvement*

Historic Openreach efficiency improvements (>6%)

- Historic efficiency gains are a good indicator of future efficiency gains
- The Openreach argument that historic efficiency improvement levels cannot be repeated is illogical, is disagreed with by the CC, is not the publically stated view of BT's senior management and is inconsistent. BT has made similar claims previously that have been proven to be wildly wrong
- Benchmark figure must include gains from 'one-offs' (i.e. >6%) – there is no good reason to exclude historic 'one-offs' from benchmark since other one-offs will arise

- Plausible that realistic efficiency improvements will be above historic levels given upward trend, management seeing large potential and Openreach constrained from achieving what an efficient operator could achieve
- *Conclusion: relevant and reliable indicator*

Openreach budget MTP (4% net, 4.5% gross)

- Relevant since specific to Openreach
- Openreach's medium term plan will systemically underestimate likely efficiency gains. There is no motivation for Openreach to overestimate efficiency gains but strong and clear incentives to underestimate what is achievable (which is indeed what they have done in the past). Further history shows that internal budgets underestimate outturn efficiency gains
- BT claims that budget is 'aggressive' cannot be trusted since BT have frequently mislead and knowingly under-estimated potential efficiency gains
- *Conclusion: relevant but will certainly underestimate what could reasonably be achieved*

Anecdotal

- Wealth of evidence and indicators that BT has highly inefficient employment and working practices which are manifested in high wage levels, low productivity and excessive overhead.

311 Given these points we consider that most weight should be given to the Oliver Wyman report, to history and the anecdotal evidence. On this basis we believe that the appropriate range for the gross efficiency gain is 6% to 8%[137] a year over the next three years. This compares to Ofcom's assumption of 4% to 6% gross (and 3.5% to 5.5% net).

312 We believe that in reality Openreach could achieve as much as 10% a year (TTG recently reduced staff by 12%) – however, we recognise that repeating this level of efficiency gain in three consecutive years would be difficult for a company to manage effectively.

COST OF ACHIEVING EFFICEINCY GAINS

313 We have given our view above on the appropriate gross efficiency gain. It is then appropriate to consider any costs required to achieve these efficiency gains.

[137] We think it useful to highlight that TTG have a good track record of forecasting Openreach's cost efficiency gains. In our second consultation response we estimated that Openreach's efficiency gain would be 5% to 6% over all costs and 5% to 10% on faults which equates to 6% to 8% in total. Openreach achieved 6.5%

314 We understand that Ofcom considers that the cost of achieving its projected efficiency gains in 2013/14 will equate to 0.5% of annual costs i.e. about £11m or 50p per MPF / WLR line rental. We understand that this is broadly calculated as follows:

- Total reduction in staff required (A)
- Redundancies (C) = A – natural attrition rate (B) [2.4%]
- Leaver cost (D) = redundancies (C) x cost per leaver (E)

315 We believe that Ofcom's cost estimate is excessive.

316 First, we have a number of concerns regarding the overall approach and principles:

- as a matter of principle we consider that the costs of moving from an inefficient position to an efficient one is not a cost that consumers should bear since these do not reflect the forward looking cost of an efficient operator[138]. Such an approach would effectively allow an operator to recover some of the costs of being inefficient which is inconsistent with Ofcom's stated approach and would reduce incentives to reduce costs.
- Ofcom's modelling method implicitly assumes that all efficiency gains are achieved through reducing staff numbers rather than for instance reducing supplier costs, reducing the unit cost per staff or deploying better IT. This is unrealistic – some efficiency gains would not require reductions in staff and redundancies[139]
- there is a high degree of volatility in staff required and we consider that it is not sensible to rely on such volatile numbers as the basis to calculate leaver costs. An efficient operator would manage staff numbers based on medium term trends rather than year-to-year and would mix in non-permanent staff and overtime to reduce volatility in the number of permanent staff required (to avoid say recruiting staff in one year and making staff redundant in the next)
- it appears that the large reduction in staff (and the higher leaver costs) in 2013/14 is driven by the ending of the NGA roll-out in 2013/14. It would seem appropriate then that the 2013/14 leaver costs are allocated to NGA
- the timing in which leavers' costs are recognised does not reflect either the BT's accounting treatment[140] or cost causality. For example in the case that leavers' are generated due to the winding down of an activity, such as NGA roll out, in the Ofcom model the costs will be recognised when the staff actually leave

[138] It would though be reasonable for consumers to bear the cost of remaining at the efficiency frontier (i.e. moving from an efficient position to an efficient one) since even an efficient operator will become more efficient over time.

[139] These other efficiency gains may require say IT changes – however, there adequate provision in the costs to over this cost and/or the necessary changes can be made within existing plans

[140] *The group recognises termination benefits when it is demonstrably committed to the affected employees leaving the group*. BT Group plc ANNUAL REPORT & FORM 20-F 2011

317 Second, though we have not seen the specific assumptions we imagine that the assumptions are not reasonable:

- The number of staff that may need to be made redundant should be reduced since some can be re-assigned to other activities within Openreach (e.g. NGA) or BT Group. We understand that NGA provisioning activities have not been modelled so the number of staff needed for this has not been reflected
- The natural attrition rate is extremely low (2.4%). An efficient operator would have a natural attrition rate of 10% or more
- The cost per leaver is very high. BT has said: "*It currently takes on average over two years before cost savings accrue for engineers leaving on voluntary redundancy terms*"[141] which implies that redundancy costs are over 24 months of salary[142]. Most private sector companies have typical levels of 3-4 months of salary in redundancy pay (which is more than statutory[143]).

318 Therefore, overall we think that the cost of achieving efficiency gains is far too high and a sensible figure is probably less than 10% of what Ofcom has modelled. For instance:

- assuming that half of the efficiency gains do not result in staff reductions will reduce the redundancy cost by more than half
- assuming 10% natural attrition rate might eliminate the need for non-natural staff reductions at all (and so no redundancy will be required)
- assuming 4 months redundancy pay would reduce costs by over 80%

IMPLEMENTATION OF EFFICIENCY ASSUMPTIONS IN THE MODEL

319 Frontier Economics have assessed how the efficiency assumptions are implemented in the model. We have a number of concerns:

- There are a large number of line items that appear not to be adjusted by the claimed efficiency assumption at all (20 of 58). The lack of real data in the model mean it is not clear what the impact of this is
- The three-stage method[144] for achieving a 4.5% net efficiency assumptions is unnecessarily complex and unreliable. Further though it means that a 4.5%

[141] 2009 Review BT first consultation response p37. Repeated in BT second consultation response §115

[142] Since when an individual leaves there will be a saving on related costs (as well as salary) this suggest that if the payback is two years then the redundancy cost is equivalent to more than two years of salary

[143] The months salary is typically calculated as tenure in post (typically 5-7 years) multiplied by weeks of redundancy pay per year employed (typically 2-3). Statutory is about 0.5 to 1.5 week per year employed (but weekly pay is capped at £400)

[144] described in answer to Question FE5: "*1. Net efficiency was calculated by inputting our efficiency assumption as a gross number and recording the redundancy impact. 2. We then ran the model with no redundancy payments (i.e. net efficiency = gross) using our*

efficiency assumption is applied to MPF the effective efficiency assumption for other services (e.g. WLR and SMPF) will be different

- Generally the method is unreliable and not transparent
- It appears that the actual redundancy cost is to some degree hardwired and so does not reduce in response to, say, changes in volumes (or it is not clear how it is modelled)

320 We have provided a paper to Ofcom by Frontier Economics that expands on these points and suggests an alternative simpler and more reliable method. Whatever changes are made we consider that Ofcom should be clearer and explicit about its approach since currently the description of the approach in the consultation document and what is done in the model are inconsistent. This should be done prior to the publication of the Statement so that operators can comment on it.

321 On Group HQ cost Ofcom say that the efficiency gain (and inflation impact) was included in numbers provided by BT and that Ofcom have used this number (§A8.12). However, the actual efficiency and inflation assumptions are not transparent.

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efficiency assumption and recoded the resultant unit costs for MPF. 3. Next hardcoded our redundancy payments from 1) in the model and flexed our efficiency assumption to arrive at the 2012/13 unit cost we calculated at 2)"

INFLATION ASSUMPTIONS

322 Ofcom have used the following inflation assumptions to forecast costs[145]:

- RPI + 3% pa in each of 2011/12, 2012/13 and 2013/14 (although the actual RPI has no direct impact on the costs)
- Inflation for pay 3%
- Inflation for other 'non-pay' costs 2.5%

323 Regarding the RPI rate we have the following comments:

- The 3% RPI rate is reasonable based on HMG forecasts. However, analysis of index-linked bond prices shows that the implied RPI is 2.3% over the next 3 years (see Consultation Figure 12.6, 3 year period).
- The RPI rate in 2010/11 is increased due to the impact of VAT and mortgage interest rate increases. Excluding these impacts the underlying average inflation rate is about 2.5% pa (see Consultation §7.57).

324 On the basis of these benchmarks we consider that reasonable ranges for RPI are as follow:

- RPI (standard): 2.5% to 3.0%
- RPI (excluding VAT and mortgage interest): 2.0% to 2.5%

325 Regarding pay inflation we think that the 3% estimate is excessive as the basis for an efficient company – we think that 2% is more realistic. We explain our reasoning below.

326 First, BT have recently agreed with the trade unions a pay deal for 3 years worth 9.3%[146] on the following basis: 1st Jan 2010 – 3%; 1st Jan 2011 – 3%; 1st Jan 2012 – 3%. In contrast, given to the recent economic challenges, most organisations have implemented pay freezes over the last two years and have only recently started to pay increases which are typically in the range of 1% - 2% (telecoms is 1.8% average[147]). We expect future salary growth over next two years to be about [✂] per year.

327 Thus over this 3 year period BT's average wages rose by 9% but industry rose by about 4%. There is no reason for BT's pay to increase at 3% a year through the charge control period – for instance they do not need to increase pay to avoid staff leaving. The assumption that Ofcom uses to forecast pay costs should not reflect what BT is planning to do but rather what an efficient operator would do – BT's deal is not efficient.

[145] Certain 'bespoke' or unspecified rates appear to apply to other costs (e.g. Group HQ, accommodation)

[146] this pay increase flows through to all pay related allowances

[147] Source: telco forum and Towers Watson data

328 Second, In November 2010, BT changed the basis for calculating its pension payments from RPI to CPI. This reduces the pension income (and pension cost to BT) by about 10% or more[148]. This equates to a reduction in salary costs of about 1% on average[149] .

329 Third, we also note that in the 2009 Review BT argued (and Ofcom adopted the argument) that BT experience 'grade inflation' where average pay levels increase at a faster rate that pay inflation since employees become on average more senior[150]. Grade inflation is an inherently inefficient way in which to operate a company, since it implies that the balance of the company gets consistently more 'top heavy' every year. Grade inflation is not an inevitable result of staff becoming more senior but a management decision driven by recruitment, retention and promotion policies. In any normal and efficient company, as individuals get promoted (or get grade increments), this would be offset by senior (more expensive) employees leaving the company and junior (less expensive) people joining to maintain a consistent balance. If Openreach is allowing this grade inflation phenomena to occur, then the cost impact of it should be disallowed, since it is clearly not efficient or the behaviour of an efficient operator.

330 The CC in its LLU determination agreed that there was no evidence to support a 1% increase in pay to account for grade inflation. It said:

> *… Ofcom sought to justify its application of 1 per cent wage inflation for 2009/10 on the basis that this was reasonable given grade inflation. We are not satisfied that Ofcom has provided any persuasive evidence to support its case that this assumption can be justified by grade inflation. In particular, Ofcom has not provided any evidence to show that the magnitude of grade inflation, to the extent that it would exist, would have as large an effect on salary costs as +1 per cent.*[151]

331 Given this evidence (particularly market rates) we consider a pay inflation rate for 11/12, 12/13 and 13/14 of 2% would be reasonable. Furthermore, the 10/11 base year that Ofcom uses in its model will also be excessive since it will include the excessive pay increase in Jan 2010 (backdated) and Jan 2011. Given pay represents

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[148] For example: "*Accountant KPMG said shifting from RPI to CPI could reduce companies' pension liabilities by 10%, but experts warn that pensioners' retirement income could be reduced by up to 25% as a result.*" http://www.guardian.co.uk/money/2010/nov/04/bt-pension-changes-retirement-incomes. Also the impact of the change was to reduce pension liabilities by £2.9bn on total liabilities of £14bn (i.e. 8%) (same article)

[149] Assuming (1) 2/3 of Openreach employees are on defined benefits scheme (BT Group has 51,000 contributing members); (2) defined benefit scheme costs are 15% of salary; and, (3) 10% reduction in defined benefit contribution. Though BT might maintain the same annual pension charge and use the change to CPI to reduce the deficit contribution in reality the effect is to reduce the annual pension charge for new promises

[150] LLU Defence §E24.1: "*In Ofcom's submission, 1% would not be an unreasonable allowance for the effect of such employee grade inflation on Openreach's wage costs.*"

[151] LLU Determination §2.803

about 30% of the cost base and wages should have been held flat the costs in 10/11 will be overstated by about 1%[152] and so is a material adjustment to make.

332 We consider Ofcom's non-pay inflation estimate (2.5%) to be more reasonable than the pay inflation figure but possibly a little high – 2% is more reasonable.

333 We note that Ofcom have assumed a 3% inflation rate for accommodation[153]. Whilst we accept that 3% is the appropriate rate for the Telereal portion (60%) of accommodation (since we understand that there is a contractual 3% annual increase provision in the contract) we think that the non-pay inflation rate is appropriate for the remaining proportion of the accommodation cost. This simple correction will reduce Openreach's costs by £1m to £2m[154].

[152] Average actual pay increase (versus flat wages) 3% in Q1, Q2, Q3 of 2010/11 and 6% in Q4 is an average of 4% above flat. Given 30% of costs are pay means cost are 1.2% above an efficient level. This assumes that pay rates do not affect ROCE

[153] Consultation A8.25: "*For future accommodation costs we have used the contractual 3% per annum inflation rate*"

[154] Average inflation rate should be 2.8% (60% x 3% + 40% x 2.5%) or 2.6% (60% x 3% + 40% x 2.0%) rather than 3%. Difference over three years is 0.6% which will reduce the total costs (of £127m) by about £1m to £2m

INFLATION MEASURE – RPI OR CPI ?

334 An important assumption is what inflation measure should be used in the charge control – the two most common options are RPI (which Ofcom and other regulators use) and CPI (though there are others). There has recently been a trend towards using CPI for a number of purposes. CPI is the measure adopted by the Government for its UK inflation target. In the June 2010 Budget, the Chancellor announced the Government's intention to also use the CPI for the price indexation of benefits, tax credits and public sector pensions from April 2011. It is also now used in private sector defined benefits pension schemes (e.g. BT) and will possibly be used for index-linked bonds.

335 CPI tends to be lower due to a combination of having different components (e.g. excludes mortgage interest) and the methodology used which is based on a geometric mean[155]. This results in a temptation to use CPI rather than RPI by those seeking to drive wholesale prices down – this is, as we explain below, misplaced.

336 There are two roles for the inflation measure in charge controls. Firstly, it is used as the basis for forecasting future costs e.g. pay costs will rise at 1% less than (forecast) RPI. Secondly, it is used as the basis for the indexation of prices in the charge control whereby price can change by (actual) RPI – X% each year. These are two different roles and often get conflated though they have common issues.

337 Ultimately which inflation measure is used should not impact the actual cost forecast. For example:

- If historically wages have increased at 2% pa and CPI has been 3% and RPI 4% then wages can be said to grow at 1% less than CPI and 2% less than RPI
- If in future CPI is forecast at 2% and RPI at 3% then the increases in wages will be 1% whether it is calculated as CPI (2%) less 1% or as RPI (3%) less 2%

338 Thus the actual cost forecast should not depend on which measure is used (provided that the difference between the two measures stays constant). The appropriate measure to use should be that which is best correlated with the cost item. If wages and other costs tend to move in step with CPI (rather than RPI) then it is better to use CPI as the inflation measure (or visa-versa).

339 Regarding the inflation measure to use in the charge control formula (i.e. RPI – X or CPI – X) the point is the same. The actual price rise that will be set by the formula will not depend on the inflation measure used. For example:

- Say nominal (unit) costs are forecast to rise at – 1% and in future CPI is forecast at 2% and RPI at 3%
- Then the charge control formula could be expressed as CPI – 3% or RPI – 4%

[155] Impact of using geometric rather than arithmetic mean by itself results in a CPI inflation rate that is 0.5% to 1% lower than RPI. Good explanation contained in http://www.statistics.gov.uk/downloads/theme_economy/cpi-rpi-information-note.pdf

340 Again provided that the difference between the two measures stays constant there will be no difference in the allowed price rise. The question of which measure to use again turns on whether (BT's) cost changes are correlated to CPI or RPI.

341 Therefore, the appropriate inflation measure should be the one that most closely correlates with the costs that are being forecast.

342 Ofcom considers that VAT and mortgage interest rate price changes do not drive Openreach's costs. For instance it says:

> *However, while the effect in 2009 was that short term RPI forecasts were likely to understate Openreach's input cost inflation (due to recent reductions in mortgage interest rates and VAT rates), current RPI forecasts are now likely to overstate Openreach's input cost inflation (as they include the effect of the increase in the VAT rate in January 2011 and longer term forecasts reflect an expectation that mortgage interest rates will rise).*(Consultation §7.56)

343 On this basis we consider CPI (which excludes mortgage interest) to be more appropriate that RPI (which includes mortgage interest) both as the basis for cost forecasts and for use in the glidepath. Another reason for moving to CPI is that index-linked bonds may be moved to being linked to CPI rather than RPI. Given the role of index-linked bonds in setting the cost of capital in effect the cost of capital will be increasingly linked to CPI movements.

PRICE DIFFERENCE

344 Setting the appropriate price difference as between MPF and WLR+SMPF and as between MPF and WLR is important to ensure overall economic efficiency. Though relatively less important, the MPF vs WLR price difference will become increasingly relevant with the uptake of NGA since MPF is likely to be used to provide voice-only services alongside GEA (particularly for an existing customer who is already served using MPF). BT forecast that 20% of its lines taking broadband will use NGA.

345 Ofcom's overall method to setting price differences is to set prices based on FAC costs but then to 'cross-check' the resulting prices to verify that the price difference is greater than (but not 'significantly greater'[156]) than the LRIC cost differences. The purpose of the cross-check is to ensure that prices are not distortional. Though in theory either constraint could be binding in this case (using Ofcom's LRIC assumptions) the FAC cost estimates are greater than the LRIC cost estimates and the binding constraint on the costs / prices happens to be the FAC costs.

346 We agree with this overall framework i.e. set prices based on FAC and cross-check. However, we disagree with a number of the aspects of the implementation of this method:

- WLR costs should be based on the use of efficient technology (rather than legacy technology) both in assessing CCA FAC costs and (for slightly different reasons) in assessing forward looking LRIC ('FL-LRIC') costs
- some of the FAC cost differences are incorrect
- the cross-check should be conducted using LRIC+EPMU cost (not LRIC)
- the LRIC costs Ofcom has used are underestimates of the true FL-LRIC cost differences (in part because they do not reflect efficient technology use)

347 We discuss each of these four points below.

348 Though the discussion here focuses on the MPF/SMPF/WLR rental services the same principles apply for the ancillary services (e.g. connection).

USE OF MEA AND ANCHOR PRICING

349 Ofcom's 'preferred approach' to setting charges is based on the CCA FAC costs of the most efficient available technology which is sometimes referred to as the MEA ('modern equivalent asset'). Ofcom said:

[156] see consultation §8.14. Ofcom is not specific about how it defines 'not significantly greater than'. Without further expansion and reasoning (and an opportunity for stakeholders to comment on it) we do not believe that Ofcom can rely on this constraint (i.e. not significantly greater than) as a means to determine prices

In general, our preferred approach to setting charges is to base costs on what is believed to be the most efficient available technology. This is sometimes described as the "Modern Equivalent Asset" (MEA) approach to pricing. [157]

350 However, in this case Ofcom use what they call an 'anchor pricing' approach to prevent prices of regulated services being higher in cases of technology transition. Ofcom say:

During a period of major technological change, we generally adopt an approach to charge control setting which we refer to as "anchor product pricing" approach. Under this approach we do not allow prices to rise above the level implied by the hypothetical continuation of the existing technology. This prevents the introduction of new technology increasing pricing for the same services. (§3.22)

… Essentially, this methodology sets price ceilings with reference to existing technology by assuming no investment or migration to the new technology network. (§3.28)

351 In this case the anchor based pricing approach assumes the continued use of legacy PSTN/DSLAM technology rather than MSAN technology. In legacy networks voice access is provided using PSTN equipment and broadband is provided using DSLAM equipment. In an NGN network both these are provided using a single MSAN. An NGN also involves integration (and savings) in the core network due to the deployment of a single IP network rather than multiple legacy networks.

352 BT have started using MSAN technology for voice (as part of its 21CN programme) though the large scale migration to it is has been suspended (though not indefinitely). All major LLU based competitors to BT for voice services use MSAN technology (i.e. TTG and Sky).

353 BT plans a slow transition to MSAN technology over a number of years[158]. It is not clear whether the anchor pricing principle is appropriate in this case or how it would be applied. An assumption that existing equipment can be used indefinitely is clearly unreasonable. For example as the PSTN line cards reach the end of their operational life they will need to be replaced and given the PSTN line cards can no longer be purchased it is likely that MSANs will be used as the replacement. In this case it would be particularly unreasonable to, in our view, base costs solely on the use of legacy technology since this does not reflect what BT is actually installing. Instead it would be reasonable to include both the full costs of the new line cards in WLR costs as well as the costs of disconnecting the failed PSTN line card and connecting the replacement MSAN.

354 There is little clarity in how Ofcom have modelled line card costs in the FAC model as the relevant part of the model has not been disclosed. It is not clear: to what extent BT/Ofcom have assumed some migration to MSANs; how the unit costs of any MSAN

[157] Consultation §3.21

[158] BT have indicated that it will continue to operate existing PSTN equipment until at least the end of the decade (i.e. 2019)

equipment have been estimated; how the costs of replacing PSTN cards which have reached the end of their life are included; and how the current cost valuations of PSTN cards have been projected.

355 Use of the anchor pricing approach (i.e. assuming use of only legacy technology) in determining FL-LRIC costs is particularly inappropriate since, by definition, LRIC costs should be based on long run forward looking costs. Basing LRIC costs on use of a legacy technology is clearly inconsistent with this – it is in effect backwards looking.

356 The practical effect of the anchor pricing approach in this case is to set WLR prices lower than they would be under a situation where the MEA (MSANs) would be assumed[159]. In effect WLR prices are held artificially low.

357 Though limiting price rises is a laudable aim, the anchor pricing approach has some severely negative consequences that prejudice consumers' interests. Ofcom seems to have effectively ignored these consequences in deciding to adopt the anchor pricing approach – its approach does not appear to be balanced. In fact, in its consultation document Ofcom does not even refer to the negative consequences. We discuss below the negative consequences of using an anchor based approach.

358 First, though anchor pricing will reduce prices paid by consumers who only purchase line rental services it will result in higher overall prices for consumers who buy line rental, calls and broadband services (since the overall cost of delivery of line rental, calls and broadband is higher using legacy technology). Over 70% of consumers purchase voice and broadband. Thus a minority of consumers will actually benefit from lower prices as a result of using the anchor pricing approach. The majority of consumers will experience higher prices.

359 Second, the main consideration when deciding what approach to use for setting prices should be economic efficiency and particularly productive, allocative and dynamic efficiency[160]. Notably against each one of these factors the anchor pricing approach is inferior versus using the MEA approach. This is predominantly because the costs used in anchor pricing are based on the costs of legacy technology and not based on forward looking efficient costs – setting prices using forward looking efficient costs is at the heart of ensuring efficiency.

360 In terms of productive efficiency, BT's incentives to move to the lowest cost technology are unequivocally diluted by the use of the anchor pricing approach. This

[159] The increase in cost is due to (a) the MSAN cost per line is higher than the PSTN cost per line even though overall the costs of an MSAN based network are much lower due to a combination of significantly reduced costs in the traffic sensitive part of the network (switching and transmission) and economies of scope with a single network providing both voice and broadband services and (b) moving to an MSAN will involve one off migration costs which have in the recent past been at a cyclically low level due to the longer than expected operating life of PSTN line cards.

[160] These factors also are typically the most important factors in the six principles of cost recovery which are: Cost minimisation (productive efficiency); Cost causation (allocative efficiency); Effective competition (dynamic efficiency); distribution of benefits; reciprocity; and, practicability.

is because BT know that if they do not migrate to modern technology then they can still fully recover the higher legacy technology costs and if they do migrate then prices will be set at the cost of the new technology. This means that BT will not fully benefit from reductions in cost that they achieve. This reduces their incentive to reduce costs. The CC accepted this point when it said: "*… we agree with CPW that, generally, incentives are strongest when price controls are set independently of actual behaviour or performance …*"[161].

361 In fact there is now empirical evidence that may corroborate this theoretical point. BT has delayed migration to MSANs (i.e. 21CN). This suggests *ceteris paribus* that this disincentive to be efficient is now being played out in real life – now that BT knows Ofcom will revise prices when it moves to the new technology it has less incentive to move[162].

362 Allocative efficiency will also be reduced by anchor pricing because there would be less demand than if prices were set at the level of efficiently incurred costs[163].

363 In terms of dynamic efficiency, setting prices based on legacy technology limits competitive entry so reducing the extent of the benefits of competition. This is because all new entrants use MEA technology (i.e. MSANs) and the lower WLR prices deter voice-only entry. In particular, anchor based pricing will deter the efficient use of MPF to provide voice-only services alongside GEA. As GEA rolls out and is taken up MPF-based operators will be faced with the decision of whether to use MPF or WLR to provide the voice component of the service. If the anchor based approach is used it will encourage inefficient behaviour because the WLR price will be set artificially low and will deter entry by efficient competitors.

364 In summary, whilst the considerations Ofcom raises – lower short term prices for (a minority of) consumers and ease of making reliable cost calculations[164] – are relevant Ofcom must properly consider in a balanced and evidenced manner the full consequences of its proposed anchor pricing approach. Ofcom has, in our submission, not done this. Further, we contend that if Ofcom were to have conducted a proper balancing exercise that it would have properly concluded that the disadvantages of its anchor pricing (productive, allocative and dynamic inefficiencies) are far greater than the advantages (lower prices for a minority of consumers).

[161] WLR Determination §3.41

[162] By moving to MSAN/NGN technology WLR costs will rise though other costs will fall (notably wholesale broadband and certain voice conveyance). Overall the costs will be lower

[163] From consultation §8.6: "'*Allocative efficiency*' *is achieved when prices are close to cost. This ensures that all consumers who value a product at more than its cost are able to purchase it*". The 'cost' referred to here is the forward looking efficient cost (see §A5.31)

[164] See consultation §3.24

FAC ESTIMATES

365 We regard a number of estimates of the FAC cost differences as between MPF and WLR/SMPF as being too low. The main areas are discussed and/or summarised below (in some cases these issues are discussed in more detail elsewhere). We focus here on questions of relative usage factors / cost levels (rather than absolute cost levels).

366 Duct/copper use: As we discuss above (§140) we think that MPF lines have a materially lower duct/copper cost than WLR lines (since *inter alia* they are about 30% shorter) and an adjustment must be made for this. We consider that a very conservative difference in line length / cost is 10%. Further, we think that no cost adjustments should be made for DACS lines – by 2013/14 the use of DACS is likely to be trivial and the DACS costs Ofcom is using are inaccurate and unreliable.

367 Duct/copper repairs: Ofcom have assumed that fault repair costs for MPF will be 4% higher than WLR (based on 2009 and 2010 data). As we describe above (§§166-173) the MPF fault level is inflated by the high proportion of 'young' lines (compared to WLR) and by 2013/14 this effect will have largely reversed out. If this is properly corrected for MPF lines (of equal length to WLR lines) will have a lower duct/copper repair cost. In addition we consider that MPF lines will have a lower fault repair cost since they are shorter than WLR lines

368 We consider that the appropriate duct/copper use and fault repair usage factors (for FAC costs) are as follows:

Duct/copper use / fault repair FAC usage factors (2013/14)

	Duct/copper use		Duct/copper repair	
	Ofcom	TTG	Ofcom	TTG
MPF	1.006	0.90	1.04	~0.80
WLR	1.00	1.00	1.00	1.00
SMPF	0.00	0.00	0.15	0.15
ISDN30	0.004	Tbd	0.01	tbd

369 Frame use / frame repair: MPF is engineered in an inefficient way using double jumpering which has a highly detrimental impact in terms of increasing costs to consumers, reducing competition and creating distortions (particularly since BT does not use MPF itself). The FAC costs / cost difference must be based on the efficient approach in order to incentivise efficient behaviour.

370 The effect of assuming single jumpering would be to reduce the MPF frame use and frame repair costs to be the same as WLR. It will also result in less use of tie cables.

371 As we describe above (§§166-173) the MPF fault level is inflated by the high proportion of 'young' lines (compared to WLR) and by 2013/14 this effect will have

largely reversed out. If this is properly corrected for MPF lines (of equal length to WLR lines) will have a lower frame repair cost (per jumper).

372 We see no good reason as to why the SMPF fault repair cost is not 1.00

373 It is not clear why ISDN30 has zero frame repair costs.

374 Our view of the correct frame fault repair usage factors are given in the table below.

Frame repair usage factors (2013/14)

	Ofcom model	TTG under double jumpering	TTG under single jumpering
MPF	2.13	1.94	0.97
WLR	1.00	1.00	1.00
SMPF	0.71	1.00	1.00
ISDN30	0.00	Tbd	Tbd

375 Cumulo rates: As we describe above (§126) the Cumulo rates costs are in our view excessive. It also appears that the relative levels of Cumulo rates costs for MPF and WLR are wrong. MPF has lower revenue/profit than WLR and so should have less Cumulo rates allocation. Yet Ofcom have assumed that MPF has a (slightly) higher allocation of Cumulo rates than WLR.

376 TAMs / testing: We agree with Ofcom's approach of spreading TAM costs across MPF and SMPF lines which was first implemented in 2004 (see §7.123 *et seq*). Ofcom's approach will avoid distortions.

377 Line card: We have several areas of concern in relation to line card costs.

378 First, the assumed FAC of £11.08 looks low for a PSTN linecard (and all associated facilities). It may be that the depreciation reflects that some assets are fully depreciated.

379 Second, we consider that the costs should be based on the MEA since using MEA better meets consumers interests (as discussed above §349). We estimate that the cost for the MEA (i.e. an MSAN line card including all associated costs e.g. chassis, linecards, accommodation, power, maintenance, repair) is about £20 per year[165]. This is significantly more than Ofcom's assumed FAC of £11.08.[166]

380 Third, we think that even using Ofcom's anchor pricing framework that the FAC cost estimate it has made is incorrect since Ofcom has set the FAC price using a mix of

[165] See LLU Appeal WS Heaney III §14. This costs was calculated in 2009/2010. It is still reliable as a cost estimate of a MSAN line card (and associated facilities)

[166] If Ofcom calculates FAC costs are based on the use of MSANs (either since using MEA approach or because it reflects BT's actual/planned MSAN deployment) then it needs to decide on how to allocate costs as between voice and broadband. We consider that it is appropriate to have some form of per service allocation. This is appropriate for FAC costs but is not appropriate for LRIC costs

normal principles and anchor pricing principles. As Ofcom describe its anchor pricing approach, the method to derive FAC costs is based on expected technology used (i.e. with expected 21CN) and then at the end cross-check that this FAC cost / price is less that the price implied by the scenario assuming only legacy technology.

381 Yet it appears that Ofcom has not done this and instead Ofcom has derived the FAC costs on the basis that no MSAN deployment. We say 'appears' since what Ofcom has done is rather vague (see §§A9.16-9.20). We would appreciate Ofcom explaining how it has derived the FAC cost.

382 Fourth, the line card cost should be calculated as though BT used the same co-mingling products as other operators. Ofcom adopts this approach in other areas – for instance, the cost of IPStream (in WBA Charge Control) includes the cost of SMPF as an input. Notably in that case, the cost that is used is not the actual 'internal' SMPF cost but rather then external SMPF price. This same principle should be applied here – the accommodation cost should be based on the external prices rather than the internal cost. This will avoid competitive distortions. We do not consider that the fact that from a process perspective there is no equivalence of input on accommodation should alter the approach on this.

383 Maintenance migration: the normal on-going operation of the PSTN/TDM network will involve some migration of WLR lines. For instance, if a PSTN switch needs replacing then the lines will need to be migrated from the old switch to the new PSTN switch or MSAN (i.e. manual jumpering). We have not been able to identify any cost involved in this activity. It may be that the cost is spread across all services (e.g. including MPF). Ofcom must confirm what cost is included and how it is recovered and then ensure that the allocation approach is correct.

384 Migration to new technology: In the case that a migration to the MEA is assumed this will involve replacing PSTN switches with an MSANs. This will require the disconnection of copper loops from the current TDM line cards and connecting them to the corresponding MSAN line cards which incurs a migration cost (of around £30 per line). The cost is about £6 per line per year[167].

385 We consider that this migration cost should be recovered since cost of migration between technologies in the fixed access network is largely the result of finite equipment lifetimes rather than the introduction of new capabilities. In the case of the existing PSTN line cards, the main driver to move to new technology appears to be the desire to minimise overall forward looking costs rather than to offer additional capability over those offered currently. In the recent past this cost has been relatively low because PSTN line cards have continued to operate for longer than their assumed asset life of 10 years.

386 BT and Ofcom have previously suggested that this migration cost should be recovered from usage charges (e.g. CPS charges). This is completely contrary to both regulatory precedent and cost causality. One of the fundamental principles of UK

[167] 2009 Review TTG Second Consultation Response

and EU regulation over the past two decades is that costs which vary with the number of subscribers ('subscriber sensitive') should be recovered from per user charges such as line rental, rather than from usage charges. A migration cost is clearly incremental to a single customer (if that customer was not on the network, the cost would not be incurred) and the cost is independent of the traffic generated by the customers. As migration costs are incremental to users efficient allocative efficiency indicates this cost should be recovered across all customers rather than recovering the cost disproportionately from one or other groups of customers based on some unrelated variable such as minutes. The recovery of a subscriber driven cost from usage charges would imply that relatively heavier users would be required to indirectly fund the migration of relatively less heavy users.

CROSS CHECK NEEDS TO INCLUDE SOME MARK-UP

387 With regard to the cross-check we believe that the check should be made against LRIC+EPMU costs and not LRIC costs. There are a number of reasons for this:

388 First, though there may be some merit in using LRIC the identified LRIC (as for instance in BT's LRIC statements) is often less than the true LRIC due to inherent estimation errors.

389 In cost modelling, many costs are classified as fixed and common (and so excluded from LRIC costs) when simply there is insufficient information to be able to allocate them to end products. However, in reality if the volume of BT's business was to increase then these costs would be expected to increase (in the long run). The CEO cost is a good example – this will have been identified as fixed and common whereas in reality some of the CEO's remuneration will vary with size of the business. This suggests that the identified LRIC is an underestimate of the true LRIC. Some mark up on the identified LRIC would be appropriate to seek to arrive at a better estimate of true LRIC. LRIC + EPMU would be one way of achieving this.

390 Second, though a price difference equal to (true) LRIC would maximise productive efficiency, setting the price difference to LRIC implies that proportionately more fixed and common costs are recovered from MPF than WLR. This would be inefficient in other ways.

391 If (as is likely) voice and broadband customers are more price sensitive than voice-only customers, allocating proportionally more costs to MPF would be allocatively inefficient. Ofcom have previously argued that any allocative efficiency benefit would be eroded by arbitrage. However, such arbitrage will not be fully effective since switching costs (between MPF and WLR) are high (£30 to £40) per line.

392 Dynamic efficiency would also be improved by a price difference greater than (true) LRIC since it will allow 'deeper' competition which will deliver more innovation and

pressure on costs[168]. Ofcom seems to have disregarded dynamic consideration for two reasons. We do not think that these are valid

- First, Ofcom seem to suggest that TTG have argued that a 'significantly higher' price difference is required to deliver dynamic efficiency gains through MPF providing voice only services (§§8.10, 8.11). This is not the case, dynamic efficiencies from MPF providing voice-only services will be achieved by marginally increasing the cost / price difference above true LRIC particularly since, with the advent of GEA, MPF providers will effectively be providing voice-only services
- Second, setting the cost / price difference above LRIC would not, as Ofcom suggest, constitute 'entry assistance' (§8.11). It would merely reflect (to a limited extent) that certain models of competition are preferable for consumers than others

393 Including a mark-up on LRIC would also be consistent with Ofcom's approach in all other charge setting situations where it sets costs based on FAC (which implicitly includes an allocation for common costs/mark-up). Ofcom's approach to the cross-check seems to be suggest that all costs/prices above LRIC (and below DSAC) are equally valid and Ofcom is indifferent as between any of them. This cannot be true – there must be an optimal cost/price that is greater than true LRIC (but below DSAC).

394 If some form of mark-up on the cost differences is warranted then we consider that EPMU is a sensible approach. We note that in the recent draft determination of the SLU dispute[169], Ofcom outlined only one approach for allocating mark-ups on LRIC costs and that was EPMU.

LRIC COST DIFFERENCE ESTIMATES TOO LOW

395 For many of the same reasons that we consider the FAC cost differences to be too low we also regard that the LRIC cost difference estimates are too low. We comment here on areas where the our estimate of the appropriate LRIC cost difference differs from our estimate of the appropriate FAC cost difference. Our figures generally reflect that we consider that Ofcom's estimates of LRIC costs underestimates true LRIC.

396 We consider that the appropriate FL-LRIC cost differences should be based on the use of single jumpering. Clearly if single jumpering is the efficient wiring approach then the FL-LRIC cost differences should be based on single jumpering else it will cause inefficiencies. Single jumpering should be assumed irrespective of which implementation option is assumed – e.g. option 1, 2 or 3 (see §95). As we have

[168] For example, more of the value chain / more costs are exposed to competitive pressure and additional innovation is possible e.g. in voice features such as SMS, voicemail, ring back etc

[169] Final Determination to resolve a dispute between DRL/Thales and BT relating to Sub Loop Unbundling charges 14 June 2011. §3.44

noted previously the use of single jumpering will affect the frame use cost, frame repair cost and tie cable cost.

397 Duct/copper use: we agree with Ofcom's implicit assumption that given the purpose of the cross-check it is inappropriate to include any line length/cost difference as between MPF and WLR or any DACS adjustment.

398 Duct/copper repair. Consistent with assuming no line length/cost difference it would also be inappropriate to reflect any duct/copper repair cost that results from a difference in line length / cost.

399 Ofcom has made the following assumptions as regards LRIC cost differences on fault repair (excluding standard of care impact)

- Comparing MPF vs WLR, Ofcom assumes assumed no fault rate difference (§8.74). This appears to be inconsistent with the fault rate data that shows that by 2013/14 if the reducing proportion of younger lines is corrected for then the cost of MPF duct/copper repair cost will be less than WLR
- Comparing MPF versus WLR+SMPF the FAC costs difference is £3.11. Ofcom assume that the LRIC cost difference is £1 to £3 (mid-point £2). We disagree. Firstly, most of the cost of fault repairs is highly variable in the long run (e.g. cost of engineer, service management centre). Second this does not reflect that in 2013/14 MPF will have a lower fault repair cost than WLR

400 Regarding the impact of the different standard of care for MPF and WLR, we consider that true LRIC cost difference resulting from a higher standard of care is likely to be small. This is because the cost (from a LRIC perspective) of actually fixing the fault will not differ significantly whether the fault is repaired the day after it is reported (as with MPF) or the day after that (as with WLR) since the same engineering effort is required. Probably the only difference will be in slightly more complex systems that allow suitable job prioritisation and a very small increase in levels of staff to allow this slightly higher level of responsiveness. Ofcom estimate the LRIC cost difference as £1 to £3 (mid-point £2) though Ofcom has provided no particular evidence to support its view given the nature of the cost differences. We think £0.50 is a reasonable estimate of the maximum LRIC cost difference resulting from the difference in standard of care. This is consistent with the analysis Ofcom provided in the WLR Charge Control Statement in 2009 that the incremental cost differences were 51p[170].

401 Frame use and frame repair: Ofcom has (in its LRIC estimates) unhelpfully aggregated these two costs together. Given the use of single jumpering the frame use for MPF and WLR should be the same. The fault rate analysis we provided above (§§166-173) shows that (under a single jumpering scenario) MPF has lower frame fault repair costs than WLR in 2013/14. This should be reflected in the LRIC costs.

[170] http://stakeholders.ofcom.org.uk/binaries/consultations/wlr/summary/wlrcondoc.pdf §7.77

The LR~IC cost should also reflect that SMPF should have the same fault repair cost as WLR

402 The impact on frame repair costs resulting from the difference in standard of care is covered in the assumption made for the impact of the standard of care difference for duct/copper.

403 Use of single jumpering will also result in less use of tie cables than is used under double jumpering.

404 Cumulo rates: The Cumulo rates cost for WLR and WLR+SMPF should be higher than MPF given they generate more profit for BT. The LRIC cost difference should equal the FAC cost difference since the cost is fully incremental.

405 TAMs / testing: the TAM / testing LRIC costs should properly reflect forward looking costs which should include the use of evoTAMs for SMPF and WLR.

406 Line card. As we described above we believe that the appropriate approach to assessing FL-LRIC costs is to assume full adoption of NGN/MSAN technology. Use of the anchor pricing approach (i.e. assuming use of only legacy technology as Ofcom have done) in determining FL-LRIC costs is particularly inappropriate since, by definition, LRIC costs should be based on long run forward looking costs. Basing LRIC costs on use of a legacy technology is clearly inconsistent with this – it is in effect backwards looking.

407 The FAC costs of an MSAN linecard is £20 and thus the LRIC cost about £18 (assuming 90% of FAC costs are incremental). It would be appropriate to allocate the full cost of the linecard to WLR since it is the provision of WLR (not broadband) that causes the cost to be incurred – this is the same approach as Ofcom takes to the recovery of duct/copper costs as between WLR and SMPF.

408 However, even if full NGN adoption is not assumed then we see that Ofcom's approach (which appears to assume no use of MSAN[171]) is flawed. It would be incorrect in assessing forward looking LRIC costs to assume a technology approach (no use of MSANs) that is essentially backwards looking. This cost excludes costs that should properly be included in FL-LRIC such as equipment replacement (due to end of lifetime effects), adjustments for fully depreciated equipment and (maintenance) migration.

409 Maintenance migration: as we describe above (in respect of linecards) maintenance migration should be properly included in FL-LRIC costs even if full adoption of MSAN technology is not assumed. We consider than LRIC costs will be close to FAC costs (i.e. LRIC >95% of FAC) given that the majority of the effort is engineering time.

410 Migration to new technology: we consider that the correct FL-LRIC costs should be based on full adoption of MSAN technology. We consider than LRIC costs will be

[171] It is unclear what Ofcom have assumed – see consultation §8.30 *et seq*

close to FAC costs (i.e. LRIC >95% of FAC) given that the majority of the effort is engineering time. This suggest a cost of about £5 per line.

ANCILLARY SERVICES

411 This section relates to the controls applied to the non-core rental services (i.e. not MPF rental, WLR rental and SMPF rental).

412 There are several types of controls that could apply to these services:

- A service could be charge controlled to its individual 2013/14 FAC (i.e. as per rental services)
- A service could be charge controlled to equal the 2013/14 FAC of itself and other similar services (i.e. alignment)
- A service could be part of a basket (as well as being in a basket a charge could have an alignment obligation)
- A service might (for 'policy' reasons) have a charge set below FAC (or even at zero)
- A service could have no control applied
- Particularly in relation to baskets a number of other measures (safeguards) such as sub-caps, inertia caps or current year weighting could be applied to prevent gaming

413 Because of the complex nature it is difficult to look at the approach to each service in isolation and the approach to one element will affect the approach on others. For instance, imposition of an inertia clause may be harmful if services with prices misaligned with costs are included in the basket. The nature of safeguards depends on constituents of a basket.

414 We firstly explain the general principles that lie behind the approach we adopted (e.g. need for alignment and consistent approach to WLR and MPF). We then discuss the more detailed justification for the approach to each service or group of services. At the end we discuss other safeguards that are needed and summarise our proposed approach to the major ancillary services. We contrast our approach with that of Ofcom[172]

415 In developing these proposals we have been cognisant of the need to avoid many individual charge controls and therefore, have only suggested these in a few cases

[172] We should say that we may have misinterpreted Ofcom's approach since in several places Ofcom's approach was not clear (for instance, the 'LLU migration basket' (see Fig 7.24) which it transpires covers MPF connection and SMPF connection is not in fact a basket but two separate charged controls that are aligned.

where they are clearly necessary and in consumers' interests. Generally we consider our proposals proportionate both individually and in the round.

GENERAL PRINCIPLES

416 We discuss below a number of general principles that have guided how we have developed these proposals. These principles are:

- Whether there is a need for controls
- The need for alignment
- General approach to WLR ancillary services
- Approach to alignment

NEED FOR CHARGE CONTROLS

417 Broadly, we consider that when a service is provided in an SMP market then it should have some form of charge control applied unless the service is of trivial revenue and/or there is a clear and compelling justification as to why a charge control would be harmful. Thus the rebuttable presumption should be that a charge control should apply. There are two key reasons for this:

418 First, BT clearly have the incentive in markets where they have SMP to abuse their market power by charging excess price levels. Without a charge controls BT there will be little to constrain this. Cost orientation obligations are (as the CC agrees) insufficient to prevent abuse since it allows a wide range of prices and *ex post* enforcement is ineffective. For example the CC said[173]:

> *We agree with CPW's contention that the* [cost orientation] *obligation allows Openreach wide leeway in pricing (see paragraph 3.83(a) above) that in this instance the cost orientation obligation allows for a very wide range of possible prices. We also agree that ex post enforcement may not be effective because it relies upon problems being identified and the costs of enforcement to Ofcom and affected parties may be disproportionate to the benefits such that it is not worth pursuing a claim. In addition, with regard to the non- discrimination obligation, we consider that the lack of directly comparable products would also present an additional difficulty for enforcement.*

419 Second, without charge controls, BT has the incentive to game the cost allocation by allocating few costs to services which are not price regulated and so over-allocating costs to regulated services such as rentals. BT did this in the 2009 Review (see §205) and may have done in this review. By doing this they can increase the cost (and so price) of regulated services but with no offsetting reduction in price of the unregulated services. If services are charge controlled (and prices are set to trend to

[173] LLU Determination §3.199

FAC) then the problem of BT under-allocating costs would reduce since they will not be able to profit from gaming the allocation.

NEED FOR ALIGNMENT

420 We strongly agree with the need to align the price of similar services where the activities are similar. It will:

- Reduce competitive distortions / ensure competitive neutrality and so ensure economic efficiency[174]. Ofcom accept that differential ancillary prices affect and can distort behaviour (e.g. §4.90)
- Reduce ability and incentive for BT to discriminate by (relatively) reducing the price of downstream services that BT uses
- Reduce BT's incentive to game cost allocation between services

421 We note that Ofcom considers these important factors and even where the impact is relatively small (e.g. jumper removal) it considers that the benefits of alignment outweigh the potential disadvantages of prices being misaligned with cost.

422 Ofcom argue that cost orientation and non-discrimination obligations are sufficient to prevent discrimination[175]. However, the CC considers (and we agree) that cost orientation and non-discrimination obligations are insufficient to prevent gaming of baskets since they allows a wide range of prices and *ex post* enforcement is ineffective. For example the CC said[176]:

> *We agree with CPW's contention that the* [cost orientation] *obligation allows Openreach wide leeway in pricing (see paragraph 3.83(a) above) that in this instance the cost orientation obligation allows for a very wide range of possible prices. We also agree that ex post enforcement may not be effective ….*

423 The recent experience on SLU and PIA are apposite examples of how cost orientation obligations are insufficient to ensure that fair charges are set in a timely manner. In SLU BT inflated prices by including costs that were wholly inappropriate and in PIA they have refused to divulge the basis of deriving costs meaning that Ofcom will now have to set charges by means of a dispute or charge control.

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[174] See §344 regarding inefficiencies resulting from inappropriate price differences

[175] We note that Ofcom seem (incorrectly in our view) to think that cost orientation and non-discrimination obligations are sufficient to prevent inconsistency/discrimination. In the WLA Market Review §6.42 it said: "*We consider that these existing remedies are sufficient to enable us to adequately control BT's prices for LLU products and services, and where appropriate, to ensure consistency with other products or parts thereof. If stakeholders come forward with specific allegations of pricing behaviour which they consider may be in breach of these obligations, they will be considered in accordance with our established procedures.*"

[176] LLU Determination §3.199

GENERAL APPROACH FOR WLR ANCILLARY SERVICES

424 Ofcom's approach to ancillary services seems to address MPF and SMPF services separately and differently from WLR services. For example:

- Ofcom suggest alignment of MPF services with comparable SMPF services (e.g. MPF connection and SMPF connection) but do not suggest that the comparable WLR service (MPF to WLR transfer) is aligned with MPF connection
- Ofcom suggest that certain key ancillary WLR services are not charge controlled (e.g. MPF to WLR transfer) even though the equivalent MPF and SMPF charges are charge controlled (e.g. WLR to MPF)
- Ofcom suggest that the WLR-WLR transfer price is set below FAC and even below DLRIC in order to encourage no minimum contract period offers but do not make any similar adjustment for any similar MPF service

425 As a starting principle we believe that WLR ancillary services and the related activities should be treated in the same way to MPF/SMPF ancillary services and activities (unless there is a compelling reason as to why not). We see no good reason as to why WLR should be afforded different treatment. In many respects MPF has more in common with WLR than MPF has with SMPF (which is an overlay service) – for example SMPF does not have a new provide service but WLR and MPF do. Treating WLR in a similar way is key to avoiding discrimination and reducing distortions and inefficiencies between MPF and WLR such as:

- Inconsistent pricing as between MPF and WLR can result in competitive distortion since MPF is used as an alternative input to WLR to compete in the same downstream markets (as Ofcom have recognised §5.11)[177]. For instance, if WLR connection charges are set to be lower than FAC (in order to encourage no minimum contract period offers) but MPF connection charges are set at FAC then there will be distortions and inefficiencies
- Because BT Retail use WLR (plus SMPF) rather than MPF there is an incentive on BT to discriminate against MPF. Imposing price alignment obligations will address (to some degree) this discrimination incentive both in terms of allocating excessive levels of cost to MPF and also in terms of operating MPF inefficiently (as they have done by not moving to single jumpering)

426 Ofcom accept that MPF and WLR are analogous and that inappropriate price differences can result in inefficiencies and distortions – that was the underlying logic to setting the right price difference as between MPF rental and WLR rental (see Consultation Section 8).

427 More generally Ofcom should aim to be simplifying the overall pricing structure. Having different rules and frameworks for MPF/SMPF and WLR adds unnecessary complexity (and risks).

[177] According to Ofcom's volume forecasts 57% (9.2m of 16.1m) of WLR lines in 2013/14 will be used to provide broadband and voice which is the core market for MPF. Further, MPF will be used to compete against WLR for voice-only when used alongside GEA

428 Ofcom should also ensure that the treatment of ancillary services / activities such as connections, migrations and ceases in the cost modelling are as consistent as possible. In the model used for the consultation there appear to be a number of inconsistencies including:

- The apparent mis-allocation WLR cease costs across all customers rather than the recovery of these costs from WLR customer only;
- Differences in the treatment of computing costs between WLR and LLU services; and
- The apparent mis-allocation of the costs of migrating between line cards (for example from PSTN to MSANs, or due to line card failures) in the cost allocation model.

APPROACH TO ALIGNMENT

429 Where alignment is required Ofcom identified a number of options as to how this could be implemented.

430 Ofcom seems to prefer option 1 (§§4.94, 4.95) – in this option similar charges are aligned at the beginning of the period (we assume by this Ofcom means 2011/12) but thereafter no alignment obligation is imposed.

431 We do not think this is a sensible or justifiable approach. Surely, if it is justifiable to align prices in the first year then it is equally (or more) justifiable that prices are aligned prices in subsequent years. None of the reasons for requiring alignment weaken over time.

432 Ofcom also seem to raise a concern (§4.94) that having an alignment obligation on services that fall within different baskets may cause difficulties. We do not consider that this will in fact present any material difficulties. The alignment obligation will merely present another (small) constraint on prices (as do inertia clauses or overall basket average price increase). It is a fairly simple modelling task to revise prices with such additional constraints.

433 We see alignment obligations working in one of two ways:

- Either the services (such as MPF / SMPF / WLR connection) will have specific charge controls imposed which include an adjustment in the first year of the charge control (i.e. 2011/12)[178] to align each individual price and then the same RPI – X% control to trend each individual price to average FAC in 2013/14. This means no specific alignment obligation is required

[178] the price for the each aligned services in the first year will be that which delivers the same revenue as if each service trended in 2013/14 to its own 2013/14 FAC (using a glidepath)

- In other cases (for services that are not individually charge controlled) alignment can be imposed by means of an obligation that the prices for the specified individual services are aligned at all times. It is then for BT to set the actual price level within the bounds of the other constraints (e.g. basket controls)

434 We are not quite sure how these compare to Ofcom's three options though they seem most similar to option 2 (§4.94).

435 In addition to specific alignment obligations of certain groups of products, there should be a more general alignment obligation (particularly in relation to new services) that requires that where product pairs are similar the prices should differ by about the FAC cost difference.

APPROACH TO SPECIFIC SERVICES

436 We discuss below the specific proposals for the main ancillary services.

MPF TO WLR TRANSFER (AND MPF CONNECTION / SMPF CONNECTION)

437 We consider that the MPF to WLR transfer charge should be aligned with the MPF connection and SMPF connection charges and also that it should be charge controlled. We explain our justification of this below.

438 We consider that the MPF-WLR transfer charge (it is better described as WLR connection) should be aligned with the MPF connection charge and the SMPF connection charge for a number of reasons:

- Price alignment between MPF connection and MPF to WLR connection will reduce BT's incentives to discriminate against MPF by operating it inefficiently (e.g. use of double jumpering) and/or by allocating excessive levels of cost to it
- It is important that MPF connection and MPF-WLR transfer charges are aligned to avoid economic distortions and inefficiencies (and so achieve competitive neutrality) and also reduce BT's incentive and ability to discriminate
- The activities for each are broadly similar: order handling, jumpering and routing/records activity (plus an allocation of product management and systems cost)
- Though the activities / costs are slightly different these differences are either unexplained (and so are not credible) or inefficient (and so are not relevant):
    - MPF connection has a £7 higher order handling cost than SMPF connection though Ofcom has provided no credible reason has been provided to explain this
    - MPF and SMPF both involve double jumpering though in the case of MPF this is inefficient and unnecessary

439 Ofcom have suggested in §5.36 that a differential in charges (as between MPF connection and MPF-WLR transfer) will not cause a distortion since when a customer broadband and voice migrates from MPF to WLR+SMPF BT will incur two connection charges. It is wholly appropriate that two connection charges are levied in this case since twice the level of work is required since two orders are required requiring two sets of jumpering. If these costs are not reflected then there will be distortions and inefficiencies.

440 Regarding the MPF to WLR transfer Ofcom is currently proposing that this is not charge controlled. We consider that it else there is a risk of excessive pricing and/or misallocation of costs. We do not consider its relatively small (current) size as a justification to not impose a charge control:

- Though it is relatively small in comparison to some other ancillary charges (£3.5m in 2009/10) the amount will increase (with the increasing size of the MPF base)
- There is little administrative burden on Ofcom or BT involved in imposing this charge control

441 In line with the suggestion above that MPF-WLR transfer should be treated the same as MPF connection and SMPF connection we believe that these connection charges should be treated as follows:

- An adjusted starting price (notionally at 30 March 2011) is set for each service as the average pr mice in 2010/11 (using 2010/11 weightings)
- Each of the three services trends to the 2013/14 average FAC (based on 2013/14 FAC for each service and 2013/14 weightings)

442 Further, in line with the points made regarding single jumpering (see §82 above) the costs for MPF Connection should be based on single jumpering.

WLR TO WLR TRANSFER

443 In respect of WLR to WLR transfer Ofcom is proposing a charge control. However, this charge control is based on setting the price to equal a cost level that is less than LRIC – it appears that the proposal is for the price (currently £3.09) to increase at RPI + 0% which will leave the price below LRIC. The rationale for this seems to be to encourage no minimum contract period offers (§5.19). We consider Ofcom's approach is inappropriate for several reasons:

- This is evidently inconsistent with the approach for all other connection services where prices are set to align with FAC costs
- It is inconsistent with the treatment of MPF-WLR transfer and MPF connection services and therefore risks distortions and inefficiencies as between WLR and MPF. If it is appropriate to manipulate the WLR to WLR transfer price to encourage no minimum contract period offers then the argument equally applies to MPF-WLR transfer and MPF connection (though we believe that none of the charges should be manipulated in this way)

- We do not consider that wholesale charges should be artificially manipulated in order to engineer a particular outcome in the market (i.e. no minimum term contracts). It is better to let the market decide whether certain pricing structures are required and for operators to respond to that demand unless there is compelling evidence of a market failure (Ofcom have presented no such evidence)
- Because the cost recovery is less than DLRIC it risks inefficient behaviour by wholesale customers
- It creates increased risk for BT of under- or over-recovery of cost if volumes deviate from forecast (due to the significant misalignment of price and cost)

444 We consider that ideally the WLR-WLR transfer price should recover FAC. If Ofcom considers that such a rapid price change would cause undue disruption then the right approach is to increase the price as quickly as reasonably possible rather than, as Ofcom have suggested, not increase the price at all – Ofcom's approach will make an inefficient situation worse. We suggest that a £2 - £3 increase in price each year is certainly manageable given the overall cost of using WLR. Evidently the under-recovery versus FAC during this period should be recovered from WLR rental.

MPF AND WLR NEW PROVIDE

445 Ofcom has proposed that these two services are charge controlled but not proposed that MPF new provide and WLR new provide services are aligned. We believe that they should be aligned since:

- The activities involved are very similar
- the costs are similar
    - MPF FAC 2013/14: £48.53
    - WLR FAC 2013/14: £51.53
- Without alignment there is the potential for distortions and inefficiencies and the ability and incentive for BT to discriminate

446 The alignment should be achieved in the same way as for MPF/SMPF/WLR connection (see §441 above).

EXPEDITE CONNECTION

447 Ofcom's approach to alignment of expedite services seems to be based on a misunderstanding of the MPF connection activity. It appears (given the activity described) that the expedite service refers to connection activity (e.g. MPF connection or SMPF connection) not a new provide activity i.e. the provision of a new line. This is confirmed by the Openreach price list which describes at Note 3

"*The Expedite charge* [of £158.40] *is payable in addition to the MPF connection charge*"[179].

448 However, in the comparison of prices (Figure 4.4) the MPF figure given for the non-expedited service is £62.11 which is the price for a new provide.

449 The SMPF charges are though correct. The expedite service refers to expediting an SMPF Connection and the charge shown for the non-expedited service is the SMPF Connection.

450 Therefore, the correct comparison is

	Standard connection	Expedited connection
MPF	£38.64	£158.40
SMPF	£38.64	£103.20
MPF/SMPF price difference	£0.00	£55.20

451 The standard (non-expedited) connection charges for MPF and SMPF are currently aligned and Ofcom is proposing (and we agree) that they should be aligned in future. It follows that if the standard connection prices are aligned the additional charge for an expedited should be also aligned.

452 Thus, in answer to Qu 4.6 MPF and SMPF expedite charges should be aligned. We agree with Ofcom that these two services should be part of the respective MPF and SMPF ancillary services baskets and no separate charge control should apply to these services. Accordingly, the FAC cost that is included in the MPF ancillary basket cost should be based on the average MPF/SMPF FAC per connection and not the MPF FAC cost.

453 We note that there is no expedite service for a WLR connection (on Openreach's price list). If a service did exist then its price should be aligned with those for MPF and SMPF connection expedite.

454 If other expedite services are introduced (e.g. for new provides) then these should be aligned.

OTHER NON-KEY MPF AND SMPF CONNECTION SERVICES

455 There are a number of other MPF and SMPF connection services that Ofcom proposes to include in baskets:

- MPF ancillary basket: MPF Mass Migrations, MPF Jumper Removals, MPF Single Reterminations, MPF Bulk Reterminations and MPF Expedite Connections

179 http://www.openreach.co.uk/orpg/home/products/pricing/loadProductPriceDetails.do?data=totid5BwFmkf9vLcBITRyZF9loRxWIbIKK6V7YWmlYAlMnGHsqdC0vzO163bJmh34D91D7M0q8u%2F%0AIlSgtIFAKw%3D%3D

- SMPF ancillary basket: SMPF Bulk Migrations, SMPF Jumper Removals, SMPF Single Reterminations, SMPF Bulk Migrations, and SMPF Expedite Connections

456 We agree that these services should be controlled by means of a basket. We agree that the MPF and SMPF baskets are separate and (as we explain below) should have separate charge controls. This will reduce discrimination in favour of SMPF.

457 We note however that Ofcom say that these baskets 'include' the services mentioned. We presume that the full list is as per Annex to Condition FAA4(A) Part 1 and Part 2.

CEASE CHARGES

458 Ofcom is proposing setting MPF and SMPF cease charges to zero. This is a 'policy' decision aimed at reducing barriers to switching.

459 We agree with the sentiment of reducing switching barriers. However, setting prices that are misaligned with costs (particularly if they are below DLRIC) risks inefficient behaviour by customers of the service and under or over-recovery of costs if volumes deviate from those forecast.

460 Therefore we would only support Ofcom's approach if the DLRIC of cease charges was very low e.g. less than £1.

461 Obviously if the cease charge is set to be less than FAC then the FAC cost will need to be recovered from the rental charge for MPF and SMPF by means of an adjustment. Ofcom calculation of the adjustment is shown in Figure 7.21. This uses the different cost estimates for MPF cease cost and SMPF cease cost (as provided in Figure 4.9).

462 As Ofcom has noted the FAC cost difference between MPF cease and SMPF cease is implausible[180]. Ofcom noted:

> *However, there are doubts about this cost information as it forecasts substantially different costs for the MPF and SMPF variants of the same service. This seems unlikely to reflect the true underlying costs of the service because, as explained above, it is essentially the same activity for MPF and SMP* (§4.113)

463 Therefore, we consider that the same cease cost (per line) should be recovered from MPF rental and SMPF rental. This 'cost equalisation' will address the risks of distortion and discrimination since if the MPF cease cost (recovered from MPF rental) is greater than the SMPF cease cost (recovered from SMPF rental) then it will unduly favour SMPF.

464 For avoidance of doubt we think the algorithm should be as follows:

- Ofcom appears to have calculated the adjustment to rentals as[181]:

[180] Ofcom have subsequently explained that the reason for the cease cost difference is that the service management costs (SMC) are higher though no reason for this is given. This does not make the difference any more plausible.

MPF rentals: £4.64 per cease x 808k ceases / 6,660k rentals = £0.56

SMPF rentals: £2.53 x 1,123k / 9,160k = £0.31

- The appropriate adjustment to rentals is as follows using equalised cease costs[182]:

  MPF: £3.41 (average cease cost) x 810k / 6,660k = £0.41

  SMPF: £3.41 x 1,120k / 9,160k = £0.42

465 We have also noted that there is no cease charge for WLR. It seems likely that there are significant costs associated with WLR ceases[183]. Ofcom must investigate where/how these costs are recovered. If Ofcom is unable to identify the cost precisely then we think that the following method should be adopted to correct for the error in the model (leaving this error uncorrected would be evidently incorrect):

- assume that WLR cease rate / costs for WLR are the same per rental as for MPF/SMPF (i.e. £0.42)
- make two adjustments to apply this cost correctly:
  - remove this cost from MPF, SMPF and WLR rentals[184] (since it is likely that this cost has 'landed' in rental charges) by deducting 22p[185] from each rental charge
  - add in recovery of this cost into WLR rental at £0.42

JUMPER REMOVAL

466 We agree that MPF and SMPF jumper removal prices should be aligned since though slightly different activities there are benefits from alignment. We also agree that they should be included in the MPF ancillary basket and SMPF ancillary basket (respectively).

467 We have also noted that there is no jumper removal charge for WLR. It seems likely that there are costs associated with WLR jumper removal. Ofcom must investigate whether and where these costs are recovered. The would be as over £20m (if similar cost to SMPF jumper removal[186]).

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[181] Ofcom's figures are slightly different 51p versus 56p and 28p versus 31p

[182] the difference in the price is probably due to rounding errors is, as is likely the cease per rental are assumed to be the same for MPF and SMPF

[183] MPF/SMPF cease cost per MPF/SMPF rental is 42p. Assuming the same cost per rental line then the total cost across 17m WLR lines will be £7m

[184] the cost may also be recovered across ancillary service as well

[185] £7m divided by 33m MPF, SMPF and WLR rentals in 2013/14

[186] SMPF 609,000 jumper removals costing £28.94 each = £1.51 per line. Assuming 16m WLR lines (2013/14) results in a cost of £24m

TRC AND SFI

468 Ofcom proposes that these two charges / services (TRC, SFI) have no charge control imposed. We have provided our response on these charges together since they present very similar issues.

469 Ofcom's reasoning for its approach on these services is a little vague though it seems to include the following factors:

- No charge control would be a continuation of the status quo
- Some TRC and SFI services are non-SMP services and / or possibly contestable (§4.121, §4.127)
- These services will be subject to cost orientation requirements and these combined with improved (but unspecified and unknown) transparency and cost orientation guidance will be sufficient to identify / prevent excessive charging (§§4.122, 4.125, 4.129). Further, the fact that TRC charges are transparent and can be benchmarked to other providers will also help to identify excessive charging (§4.124)
- BT is innovating in its pricing structures for SFI services (§4.129)
- Charges are aligned (for TRCs) or have proposed alignment obligation (for SFIs) charges for MPF and SMPF and therefore the incentive for discrimination / distortion is reduced (§4.130)
- Cost orientation is the most appropriate and proportionate form of price regulation (§§4.122). No reasoning is provided to support this statement
- If a charge control was imposed there would be accounting separation reporting requirements which, in the case of TRCs, would be difficult to do since would require dividing SMP TRCs from non-SMP TRCs (§4.124)

470 We very strongly disagree that TRCs and SFIs should not have a charge control applied to them. We describe below why a charge control is justified and proportionate and also we outline the form of charge control that should be applied.

471 First, these charges are very material. TRC revenue is around £100m[187] and SFI is similarly significant probably £10s millions – as Ofcom stated: "*we recognise that these services represent a considerable cost item for some of Openreach's customers*" (§4.129)[188].

472 Second, and as Ofcom accept themselves (§§4.121, 4.127), in reality most of these charges are non-contestable since in most cases wholesale customers have to

[187] Revenue was disclosed in 2009 LLU at £40m – see LLU Charge Control Statement Table A6.6

[188] It is notable that TRC by itself is larger than the sum of the MPF ancillary and SMPF ancillary baskets (£34m in 2013/14) which include over 30 services. In other words, each of the services in these baskets whose average revenue is about £1m are charge controlled (by means of a basket) but TRC which is £100m is not. Ofcom's proposals for TRC/SFI are plainly inconsistent with other parts of its proposals.

purchase these services from Openreach. Therefore there is no effective constraint to prevent excessive charges.

473 Third, it appears these charges are set significantly above efficient cost. This is not surprising given BT's SMP and its incentives to excessively price.

- The current TRC charge is equivalent to £75 per hour worked which is substantially higher than underlying costs (TTG's cost per hour of a Qube engineer is about [✂])[189]. The only plausible explanations for this are either BT is significantly inefficient and/or TRC is charged substantially above cost
- BT has the incentive and track record of overcharging for other services e.g. MPF RWT, electricity, MPF new provide

474 The fact that BT has, we understand, refused to allow disclosure of the FAC of these services compounds the suspicion that they are pricing above cost. Ofcom, who presumably does have access to the data has made no statement regarding alignment to FAC.

475 Fourth, we do not believe that cost orientation obligations even if combined with the scheduled cost orientation guidance and other obligations will help in ensuring that charges align to FAC and/or are not discriminatory.

476 The ineffectiveness of cost orientation in achieving fair prices is accepted by the CC. For example:

> *We agree with CPW's contention that the* [cost orientation] *obligation allows Openreach wide leeway in pricing (see paragraph 3.83(a) above) that in this instance the cost orientation obligation allows for a very wide range of possible prices. We also agree that ex post enforcement may not be effective because it relies upon problems being identified and the costs of enforcement to Ofcom and affected parties may be disproportionate to the benefits such that it is not worth pursuing a claim*[190]

477 The scheduled guidance is unlikely to improve things much:

- As Ofcom themselves highlight it is scheduled and not committed and, for understandable reasons, it may not happen
- Even if the project is commenced the guidance may not actually provide useful guidance because Ofcom may not be able to be sufficiently prescriptive
- The guidance may indicate that the appropriate cost ceiling standard for cost orientated services such as these is DSAC. This would be insufficient to prevent excessive charges since the charges need to be set at FAC to meet consumers interests

[189] Though the charge alignment requirement on SFIs is welcome it is insufficient to prevent excessive charges

[190] LLU Determination §3.199

- Ofcom have suggested that operators have (in the case of TRC) transparency of the prices and combined with new guidance could submit a dispute. However, this is unrealistic and mounting an effective challenge will be difficult. Even if there is a large difference between benchmark costs and BT charges (as there are for TRCs) this will be insufficient to prove that BT has breached cost orientation obligation since the cost orientation might be based on whether BT's charges are consistent with BT's incurred costs (not those of an efficient operator) and will reflect BT's allocation methods
- In relation to enforcement we are, in any case, somewhat puzzled as to why Ofcom seems to think that enforcement of a cost orientation obligation is preferable to setting a charge control. Ofcom could now with a few days work set a charge control for these services. Alternatively, if enforcement is required it will require weeks and months of effort by Ofcom and other stakeholders. As a simple matter of administrative efficiency it is clearly more preferable to set a charge control.

478 Fifth, though some TRC/SFI services are non-SMP it is not 'beyond wit of man' to develop a simple system to distinguish services that are SMP services and those which are not (since they might depend on where the work is done e.g. network or in-home wiring) and then record/allocate the cost and revenue accordingly. Given the materiality of these services such a (small) burden on BT would be wholly proportionate. Alternatively, given that non-SMP services represent a small proportion all services, one approach could be to make all TRC/SFI services subject to the charge control. Such *de facto* regulation of non-SMP services would not be significantly harmful since the charges would be set at FAC cost which is reasonably consistent with what would happen in a competitive market.

479 Sixth, flexibility to change or restructure charges can be achieved through the use of a basket.

480 Seventh, cost orientation obligations are less effective than charge controls at encouraging cost minimisation (i.e. productive efficiency) since they are based on (relevant) incurred costs and so do not penalise inefficiency.

481 Eighth, a charge control provides more regulatory certainty than a cost orientation obligation for BT and for operators.

482 Ninth, the charge alignment requirement on SFIs though welcome will not prevent excessive charges. Also, since SFIs in particular are not used for WLR, BT is a proportionately lower user of these services which gives BT an incentive to discriminate by raising these prices

483 Tenth, it reduces the significant problem that arises from BT's incentive to game the allocation of costs[191]. If costs are 'under-allocated' to SFI/TRC (with rental service costs say being over-allocated costs) then the overall amount consumers pay is

[191] For example, in the 2009 charge control BT proposed that no cost should be allocated to enhanced services. See final statement Table A6.6 and §6.158

broadly unchanged and BT's incentive to game the allocation of costs between TRC/SFI and other services is much weakened

484 Lastly, we consider that even if robust evidence was provided (which it has not been) that there has been no abuse to date then this should not mean that stricter controls are not imposed since (as the CC pointed out[192]) the need for controls should not depend on evidence of abuse but rather the *potential* for abuse.

485 Instead of Ofcom's weak and inappropriate proposals, we think that the following obligations should be applied to SFI and TRC

- Create a separate basket that includes SFI services and TRC services
- The charge control basket should be set so that the 2013/14 revenue for the basket aligns with forecast 2013/14 FAC. Ofcom may wish to review the allocation of cost to TRC and SFI (though since these will be charge controlled this is less important). BT may want to review the allocation too
- There should be an alignment obligation on each of SFI variant and TRC variant that for each of MPF, SMPF and WLR. The SFI alignment obligation is proposed (see §4.130) but only extends to SMPF and MPF. TRC charges are currently aligned across SMPF and MPF though there is no obligation to maintain this

486 We consider this proposal both appropriate and proportionate:

- It prevents excessive charging (by the end of the charge control)
- It avoids discrimination as between SMPF and/or MPF and/or WLR
- It allows BT reasonable flexibility to restructure / rebalance charges
- Given the materiality of the revenues involved (more than £100m) it is wholly proportionate
- it reduces the significant problem that arises from BT's incentive to game the allocation of costs

ELECTRICITY

487 Ofcom proposes that electricity charges[193] have no charge control imposed. Ofcom's reasoning appears to be: "*a prescriptive price control* [specific charge control or in a basket] *could limit Openreach's flexibility to set prices and efficiently recover common costs. Furthermore, given the relatively low revenues associated with this part of the charge (✂), we do not think it is appropriate or proportionate to set a specific control on this service.*" Ofcom go on to say that they will 'explore with BT' options to provide CPs more transparency (separate reporting of electricity revenue

[192] The approach of the CC that based the need for safeguards on the basis of potential for abuse is implicit form the framework they used which is based on whether BT had the incentive and ability to discriminate not on whether they had been shown to discriminate (see LU Determination §3.152 *et seq*)

[193] This is the separate electricity charge as against the electricity costs that is, for example, included in the cost of line cards

and cost in RFS) and will provide cost orientation guidance which will create more reassurance that the charges are reasonable.

488 We respectfully disagree. As Ofcom is aware TTG have had serious concerns with BT's charges for electricity over the last two years. BT increased charges significantly when raw electricity costs rose but did not bring them down when the costs fell. It was only through persistent lobbying that prices fell and we are in little doubt that without TTG's/Ofcom's intervention prices would have been higher than they were. Throughout this painful and unnecessary process BT continually refused to provide basic information and even the little information they did provide was changed on several occasions to fit their story. We have little doubt that BT will remain obstinate in any effort by Ofcom to (voluntarily) 'explore' alternative options and so meaningful progress is unlikely. Our concern on this issue is magnified since (a) BT do not use this service themselves and so the incentive to excessively price is magnified since it allows BT to discriminate and (b) there is no RFS disclosure to be able to identify abuse.

489 The lack of protection against abuse on this charge is a wholly unacceptable position for a significant charge that totals around £30m.

490 We accept that charge controlling the totality of the electricity charge (either as a separate charge or within a basket) is problematic since the underlying raw electricity cost is volatile. However, the same volatility problem does not apply to the 'mark-up' (i.e. the total charge less the raw electricity cost). This can be easily forecast and needs to be controlled since it is a material amount[194]. Therefore we suggest the following approach:

- The electricity mark-up charge is part of the co-mingling basket and its charge is set in accordance with the regulation of that basket. Openreach should also explain the activities/asset that are included in this cost
- The raw electricity cost and revenue is reported in the RFS. The cost of this should be reported excluding any allocation of fixed and common cost

491 Technically, this might be most easily achieved by creating two separate services which together comprise the electricity charge: (1) the raw electricity cost and (2) the electricity mark-up or management charge.

ENCHANCED CARE

492 Ofcom has outlined four options for the regulation of enhanced care services and has indicated a preference for option 4 which is to only impose an alignment requirement as between care levels for WLR and MPF / SMPF. Though we accept some of Ofcom's points regarding the advantages of certain options, on balance specific we disagree with Ofcom's proposal that option 4 is the best.

[194] The mark-up is about £25 per kWh (or 40% of the total electricity charge) and the total costs is probably about £10-15m which incidentally is larger than the whole MPF ancillary basket cost in 2013/14

493 Enhanced care levels are very material (about £40m in 2009[195]). MPF (and to some degree SMPF) is being increasingly used to offer high end broadband services to business. In TTG's case, care level 4 (6 hour repair) is being supplied as standard on a number of our core products such as EFM, broadband pro and the forthcoming ISDN30 products (which are all based on LLU). These are promoted (and used) as business grade products as an alternative to leased lines / Ethernet services so having a fast fix is essential if we are to meet business needs and compete effectively with BT. Notably, using copper technology for data service delivery is perceived by the market as less reliable than optical fibre which increases the need for high care levels.

494 Therefore, good quality and reasonably priced care levels are essential for TTG to meet consumer interests and for effective competition. We consider that BT has a significant incentive to increase prices on LLU enhanced care services not only to maximise profits but also to discriminate to reduce cannibalisation of its leased line portfolio by LLU based products.

495 We note the reference to BT Wholesale's view in §4.155. We think that this view should be regarded as that of BT Group (the regulatory functions of each operating unit appear to collaborate to some degree). It is in BT Group's interest to argue that care levels are discretionary and thus BT Wholesale's view cannot carry much weight as that of an independent Openreach customer.

496 In light of the increasing need for LLU care levels to support consumer interests and competition, we consider that option 4 is an insufficient constraint on abusive behaviour particularly since care levels are not so critical for WLR and BT's increasing incentive to hinder the development of LLU based products to compete with leased lines. Unlike Ofcom's view we do not consider that there is an effective chain of substitution (§4.160) and therefore that the regulated core product (which includes care level 2 for LLU) is a sufficient constraint on prices for care levels 3 and particularly 4. We do not consider that care level 2 and care level 3/4 are substitutable particularly given BT's desire to avoid cannibalisation. As part of option 4, Ofcom has suggested the possibility of a safeguard cap. However, we believe this will be ineffective since it will do little to address existing overcharging.

497 Instead we believe that MPF and SMPF care levels should be regulated within a basket. They could be within:

- the MPF and SMPF ancillary baskets (respectively)
- or, the (proposed) SFI / TRC basket
- or, in their own basket

498 The first and third options are similar to Ofcom's option 3.

499 One advantage of this approach is that it reduces the problem that arises of identifying the cost of these services and BT's incentive to game the allocation of

[195] See final LLU Charge Control final statement Table A6.6

costs. If costs are 'over-allocated' to care levels (from the rental service) then overall the amount consumers pay is broadly unchanged. Also BT will have little or no incentive to game the allocation of costs between enhanced care and other services.

500 In addition we consider that charges for each of MPF, SMPF and WLR enhanced care levels should be aligned. Ofcom highlighted that the combination of a basket control and an alignment obligation may create difficulties (§4.158). We do not think this is likely given the Xs for the MPF ancillary basket and the SMPF ancillary baskets are likely to be similar (3% difference in consultation).

ACCOMODATION / TIE CABLES

501 Accommodation services (e.g. B-BUSS and MCU products, space surveys, cooling, power facilities etc) and tie cables are proposed to be included in a single co-mingling services basket consistent with the approach under the previous charge control.

502 We think that one amendment to this would provide a clear improvement – namely tie cables should be in their own basket.

503 The reason for this is that tie cables are, we understand, purchased by BT and by other operators whereas accommodation services are only purchased by other operators (this is because there is no equivalence of input requirement on accommodation). This basket scope, as Ofcom recognises (see §4.25), creates an incentive for BT to exploit the flexibility in the basket control by increasing the prices of accommodation products above FAC and so reduce the cost of tie cables below FAC. The impact of such discrimination is material since both tie cables (£50m[196]) and accommodation (£45m) are material items.

504 Putting these products in different baskets will also reduce the potential volume growth differential gaming that can happen under a prior year weighting regime (see §509 below) since creating the two baskets will remove the ability for BT to game the differential growth rate between accommodation (lower growth) and tie cables (higher growth[197]).

505 We do not see any difficulty that would be presented in distinguishing the FAC cost of accommodation services from tie cables.

[196] These are estimated revenues. We are awaiting confirmation of the amounts. Internal 100 pair Tie Cable - HDF connected (1) for Co-Location and Co-Mingling Install £548.78 and rental £22.20 pa (plus HDF licence fee £22.59 MDF licence fee £24.60). Assuming 8.6% cost of capital, 7 year life, 90% utilisation annual cost per MPF line is about £1.60. Given SMPF requires two tie cable the cost is £3.20 per SMPF line. Assuming 6.7m MPF lines and 9.2m SMPF lines the total tie cable revenue is about £40m. Given co-mingling basket cost in 2013/14 is £95m this implies that accommodation revenue is around £55m.

[197] tie cable volumes risk in proportion to number of MPF/SMPF lines whereas accommodation volumes are relatively lower growth

BASKET SAFEGUARD MEASURES

506 As accepted by both Ofcom (at least in theory e.g. §4.23) and the CC, baskets allow BT to game the flexibility that baskets allow for their own objectives and to the detriment of consumers' interests. In particular:

- They can decrease prices of services used by BT's downstream operations and increase the prices of those not used by BT's downstream operations to discriminate in favour of BT and distort competition
- The can increase the prices of products growing in volume and reduce the prices of product declining in volume to outperform the price cap and recover more than FAC (see §4.34) – we refer to this as 'volume growth differential gaming'[198]

507 Some of these risks can be addressed by basket design and alignment requirements. For example:

- Putting tie cables into a separate basket from accommodation will reduce risk of discrimination
- Alignment requirements limit ability to favour BT's downstream operations and reduce competitive distortions that would result from unwarranted price differentials
- Alignment requirements reduce (but do not eliminate) the incentive of BT to engineer the MPF product inefficiently since they gain less competitive advantage from such behaviour

508 However, these measures cannot fully overcome all the risks and therefore it is worth considering other safeguards to prevent abuse. The safeguards fall into two categories:

- Use of current year weights (CYW) rather than prior year weight (PYW) as a mechanism to prevent volume growth differential gaming (only)
- Measures such as inertia clauses and sub-caps which limit the rate of change of prices and so can reduce discrimination in favour of BT's downstream operations as well as limiting volume growth differential gaming

509 We firstly discuss and conclude on the question of CYW or PYW. We then discuss the need for other safeguards such as inertia clauses and sub-caps.

510 There are clear advantages with use of CYW. In particular:

- It eliminates the ability (and so incentive) to out-perform the price cap and charge (on average) prices above estimated FAC
- It reduces the risk of under-/over-recovery BT experiences from changes in volume. Under a PYW scheme any changes in volume mix between one year

[198] This is similar to the flip-flopping technique that mobile operators used to game the mobile termination rate regime

and the next will result in under- / over-recovery if service costs and prices are not perfectly aligned (which is the situation in most cases)[199].

511 To be clear we anticipate CYW working as follows (which is similar to the description provided by Ofcom in §5.43):

- BT will set prices for a particular year (say 'year 1') based on its view of forecast volumes in year 1 and to be compliant with the allowed charge control ceiling (e.g. average price increase of, say, 1.4%)
- At the end of the year 1 BT will assess the actual average price increase based on actual volume mix in year 1. Any price rise above/below the allowed 1.4% increase will be corrected by means of an adjustment in the following year. This 'carry-over' / 'error correction' mechanism is already present in the PYW charge control[200]
- Compliance would be monitored annually as now
- In the final year of the charge control since it may not be legal to carry-over into the following year (see §4.53 bullet 3) any error will be corrected by means of a rebate

512 This system does not require Ofcom to audit or verify the forecasts since any gain or loss BT make by gaming the forecast will be redressed by means of the carry-over / rebate. Ofcom suggestions that it needs to audit forecasts (§§4.46, 4.53) are misplaced.

513 We accept that there are some disadvantages of a CYW scheme. However, Ofcom review of these is, we feel, exaggerated and in some cases incorrect and/or misleading. We comment on a number of these below:

- Ofcom argues that to be able to game a PYW regime BT would 'have to accurately predict' growth (§4.41). This is not the case. It is true that to manipulate a PYW regime to the *fullest* extent, accurate growth forecasts would be required but nonetheless a PYW mechanism can be gamed to the detriment of consumers with even moderately accurate forecasts. In any case it is not difficult to predict growth and relative growth rates (for example of MPF bulk migrations versus MPF single jumpering)
- Ofcom implies that the risk of such abuse must be small since 'the CC does not cite any evidence of BT engaging in such behaviour' (§4.42). This is not surprising since, as far as we are aware, the CC never sought such information from BT or Ofcom as part of the appeal. Further, if Ofcom thought that

[199] For instance, if prices are set to meet the price cap based on PYW and then in the following year volumes on products that under-recover grow more than those that over-recover BT will under-recover versus what the price-cap intended. This risk is particularly important in relation to services who's volume is volatile e.g. bulk migrations

[200] This covers situations where BT has to rely on estimates of the prior year weights since the actual prior year volumes will not be fully available at the point BT set prices for the next year (see §§9.22-9.23)

previous behaviour was relevant surely Ofcom could and should have completed this analysis as part of this review (as TTG has suggested)

- Ofcom argue that BT might exploit the system by manipulating the forecasts to over-recover and that (if interest is not charged on the over-recovery the carry-over / rebate) will be insufficient to disincentivise such gaming. The simple approach is to charge interest on any over-/under-recovery. This type of mechanism is used widely elsewhere both in contract and in regulation to address similar situation and works perfectly well.
- Ofcom suggests that such an approach would be administratively burdensome on Openreach (§4.53) – for instance since it requires BT to make forecasts. Ofcom exaggerates the burden. Openreach should already have forecasts (since these are necessary to operate their business and indeed it made four year forecasts for this charge control) and where it does not have forecasts on smaller products it can, if it so wishes, merely uses the prior year volume as a proxy. The modelling of the allowed increases would be exactly the same process as done under PYW (but using forecast volume to weight). Subsequently there will then be a calculation of carry-over which is a simple calculation relying on actual data which BT has. This carry-over calculation is anyway done under a PYW system.
- That the charges can be corrected in the next charge control imposed to 2014/15 (§4.44) is clearly no answer to the risk of gaming in this charge control
- Ofcom argue that a CYW regime will create incentive for wholesale customers to manipulate the forecasts they provide to BT for their own gain. This is highly unlikely since:
    - wholesale customers do not have the information (e.g. likely relative volume growths) or the sophistication to engage successfully in such behaviour or the ability to coordinate with other customers
    - any such behaviour would be 'punished' by a carry-over or rebate (including interest) to correct the mis-forecast
- A CYW regime would result in price volatility (unpredictability) as a result of carry-over / rebates. This is true but such forward-looking corrections are a good thing since:
    - it is fairer to wholesale customers who pay a fair and 'ungamed' price
    - it means that BT does not bear the risk of inaccurate forecast (by its customers or by itself)
    - Ofcom allows for such correction in the current regime (see §9.22) and at no point has suggested that they are in any way problematic
    - there is not any uncertainty as is associated with retrospective corrections
    - if the same argument was applied to Ofcom decisions then one would argue that appeals should not be allowed to correct erroneous decisions

- Ofcom notes (§4.37) that the CC did not impose a CYW remedy on the co-mingling basket to address the problem of volume growth differential gaming implying that this means that such protection was not necessary. This is not the case, the CC determined that Ofcom erred in not providing sufficient safeguards to prevent gaming. The CC's actual remedy was a practical and pragmatic approach in the particular case of the appeal where there was little time (6 months) remaining in the charge control and sub-caps applied

514 While some of Ofcom's points may have some validity they are not reasons as to why PYW is superior to CYW but merely why CYW might not be as superior to PYW as it might appear at first glance.

515 We remain unconvinced of Ofcom's arguments and it remains strongly our view that consumers' interests will be best met by a CYW regime which prevents BT gaming volume growth differentials. We are puzzled as to why Ofcom is so strongly against the use of CYW – it is so clearly in consumers interests. We think that CYW is a well targeted mechanism to prevent volume growth differential gaming that is superior to other means to prevent such gaming such as inertia clauses and sub-caps. These are blunt, crude and ineffective instruments – they do not prevent gaming (but merely reduce the extent of the gaming) and they have other harmful consequences such as preventing legitimate and beneficial price rebalancing.

516 Assuming that a CYW mechanism is introduced it is then appropriate to consider whether other safeguards are required to address BT's ability to game baskets. This question must be considered in light of the other recommendations regarding ancillary services such as:

- Charge controls slightly more extensive: MPF-WLR transfer charge controlled
- Basket structure: separate tie cable basket[201], new basket for TRC / SFI
- Alignment: alignment requirements imposed across WLR as well as across MPF / SMPF products
- Separate X for each basket (see below)

517 If this package of recommendations (including CYW) are adopted by Ofcom (in full) then we see little need for any significant further safeguards since BT's ability to game the baskets against consumers' interests will be severely restricted. Perhaps the only area where BT might use the flexibility is to make large price changes which will cause undue disruption. This could be addressed by means of a combination of a light inertia clause (e.g. +/- 10% versus the average) and/or a requirement to notify further in advance (e.g. 180 days) when a price increase is large e.g. more than 10%. To make such a requirement proportionate it might be appropriate to not apply it to truly immaterial services e.g. with revenue less than £50,000 a year.

[201] We note that using smaller baskets which do not combine high growth and low growth products will reduce the potential detriment from volume growth differential gaming. Thus, for example, putting accommodation and tie cables in different baskets will reduce the potential for volume growth differential gaming since tie cables are higher growth that accommodation.

518 If Ofcom does not impose a CYW regime and/or does not adopt in full the other proposals we have made it will then be necessary to impose much stricter inertia clauses and sub-caps. Though these will restrict gaming (but to a limited degree) they have harmful consequences.

519 Irrespective of whether a CYW regime is applied or not we think that there are benefits from a added transparency in relation to baskets. In particular, we think that BT should publish the actual average price increase (based on current year and/or prior year weightings) that results from the price increases it makes. This is particularly important if a PYW approach is used since it will demonstrate whether BT is gaming the system.

520 We note that at §§4.63-4.65 Ofcom describes another possible safeguard to prevent volume growth gaming. We are not quite sure how this might work though on the face of it, it does not appear to be sensible.

X FOR BASKETS

521 We agree with Ofcom (§4.28) that each basket should have its own X. There is no need to justify this since it is so obviously superior to applying the same X across some or all baskets. In fact we were rather surprised that Ofcom raised that as a possibility in its consultation.

522 This approach (of separate Xs) should apply to the additional/modified baskets we have suggested (e.g. SFI/TRC basket).

NEW SERVICES / PRODUCTS

523 Ofcom proposes that Ofcom has the ability to make a Direction in respect of the price of a new service or product that partially or fully replaces an existing service. We are unclear exactly how this would work and whether it would be effective. For example:

- If a service falls within a market in which BT has SMP but it does not replace an existing service (e.g. a new repair service, additional care level) will the Direction not apply?
- Ofcom talks about the new service being part of the appropriate basket. What would happen if, for whatever reason, the new product should have a separate charge control and not be part of a basket?
- Would the Direction include the setting of an initial starting price (which is obviously necessary if it were part of a basket)? On what basis would a starting price be set

524 We would suggest that in reality it is difficult at this stage to design a regime for the treatment of new services that appropriately covers all eventualities. Instead we would suggest that Ofcom retains discretion and powers to (say) 'regulate as appropriate new services in line with Ofcom's duties'. It might also wish to provide some (non-binding) guidance as part of the Statement.

525 Our suggested approach described above does not apply to any new MPF products that include single jumpering. We reserve our position on this issue pending more information from Ofcom.

OTHER ISSUES

526 There are other services that are not discussed in the consultation and do not appear to have any controls applied. Abortive visit charge and right when tested are two examples.

527 In both these cases, we consider that the charge should be regulated (within an appropriate basket). This will ensure that (a) charges are not excessive and (b) will remove BT's incentive to game the allocation system by under-allocating costs to unregulated services.

528 It would be useful to know from Ofcom what other charges are not covered (perhaps those with annual revenue or cost above, say, £200,000).

529 We have no comment on the charge control arrangements for calling and network features, pre-validation, ISDN to WLR conversion or cancellation charges.

CONCLUSION ON ANCILLARY CHARGES

530 We have proposed a range of changes to the approach to ancillary charges. This approach will better meet consumers interests that the approach proposed by Ofcom. In particular, it will

- Reduce competitive distortions / ensure competitive neutrality as between MPF, SMPF and WLR services and so ensure economic efficiency
- Reduces ability and incentive for BT to discrimination by (relatively) reducing the price of downstream services that BT uses
- Reduces BT's incentive to game cost allocation between services

531 It is also, in our view, consistent and coherent and allows BT reasonable flexibility to adjust prices to meet demand.

532 A summary of the main proposals are provided in the table below.

SUMMARY OF APPROACH TO ANCILLARY SERVICES

	Ofcom proposal	TTG suggestion (underlined indicates different to Ofcom)
MPF connection	Separate charge control ('CC') Trend to MPF/SMPF FAC	Separate CC Trend to MPF/SMPF/WLR FAC
SMPF connection	Separate CC Trend to MPF/SMPF FAC	Separate CC Trend to MPF/SMPF/WLR FAC
MPF–WLR transfer (i.e. WLR connection)	• No CC	Separate CC Trend to MPF/SMPF/WLR FAC
WLR-WLR transfer	• Separate CC • Trend to less than LRIC	• Separate CC • Trend to FAC (or close)
MPF New Provide	• Separate CC • Trend to MPF FAC	• Separate CC • Trend to MPF/WLR FAC
WLR New provide	• Separate CC • Trend to WLR FAC	• Separate CC • Trend to MPF/WLR FAC
MPF connection expedite	• Part of MPF ancillary basket	• Part of MPF ancillary basket • Align with SMPF/WLR expedite
SMPF connection expedite	• Part of SMPF ancillary basket	• Part of MPF ancillary basket • Align with MPF/WLR expedite
MPF cease	• Set to zero • Recover MPF cease cost from MPF rental	• Set to zero • Equalise MPF / SMPF cease costs that are recovered from rentals
SMPF cease	• Set to zero • Recover SMPF cease cost from SMPF rental	• Set to zero • Equalise MPF / SMPF cease costs that are recovered from rentals
MPF jumper removal	• Part of MPF ancillary basket • Align with SMPF JR	• Part of MPF ancillary basket • Align with SMPF JR
SMPF jumper removal	• Part of SMPF ancillary basket • Align with MPF JR	• Part of SMPF ancillary basket • Align with MPF JR
TRC (MPF, SMPF and WLR)	• No CC	• Part of (new) SFI / TRC basket • Alignment of MPF, SMPF and WLR versions of TRC
SFI (MPF, SMPF and WLR)	• No CC	• Part of (new) SFI / TRC basket • Alignment of MPF, SMPF and WLR versions of SFI
Electricity	• No CC	• Raw electricity cost / revenue reported in RFS • Electricity management charge part of co-mingling basket
Enhanced care	• Alignment of MPF, SMPF and WLR	• MPF / SMPF part of MPF / SMPF

	versions of enhanced care • (Possibly) safeguard cap	ancillary basket • Alignment of MPF, SMPF and WLR versions of enhanced care • No safeguard cap
Accommodation	• Part of co-mingling basket	• Part of (modified) co-mingling basket
Tie cables	• Part of co-mingling basket	• Part of (new) tie cable basket
Other	• Where charges are aligned they shall be aligned at all points through charge control (not just the start) irrespective of whether the service(s) is in a basket or not • Current year weighting mechanisms should apply to baskets (and if not tight inertia controls are needed) • Separate X for each basket • Light inertia clause (if other proposals are accepted) • Ofcom should retain discretion to price regulate new services as it considers fit (in line with its duties) • WLR cease and WLR jumper removal costs need to be identified and treated consistently with MPF/SMPF cease and MPF/SMPF jumper removal • We note that there is no expedite service for a WLR connection (on Openreach's price list). If a service did exist then its price should be aligned with those for MPF and SMPF connection expedite.	

PATH OF PRICES

533 The general approach to setting prices is for prices to trend between the starting price (at 30 March 2011) and the target price in 2013/14 (which is based on FAC costs normally). The intent is that prices move steadily in line with costs across the charge control period. The change in each year is linked to an inflation index (RPI is proposed by Ofcom) in order that if general inflation is higher or lower than forecast (and so costs are higher or lower than forecast) then the prices can rise or fall accordingly. We agree with this general approach with two exceptions: certain one-off changes (up and/or down) may be required to meet alignment obligations; and, the comments we make below §540 regarding BT's prior behaviour.

534 Ofcom forecasts that costs will change steadily across the period in 2011/12, 2012/13 and 2013/14. This is evident from the fact that Ofcom assumes the same RPI, pay inflation rate and non-pay inflation rate in each year. However, though costs are forecast to change steadily, the prices (in nominal terms) do not change steadily.

535 A clear example of this bizarre effect is the price of MPF rental:

- The starting price (30 March 2011) is £89.10 and the estimated cost in 2013/14 is £89.10[202]
- The proposed charge control to align prices with costs in 2013/14 is RPI –3.5%
- Based on this charge control, the forecast price trend is:
    - 2010/11: £89.10
    - 2011/12: £90.00
    - 2012/13: £89.55
    - 2013/14: £89.10

536 In other words, even though the forecast 2013/14 cost of £89.10 is the same as the current price (£89.10) and cost trends are steady (and so one would expect prices to remain flat), prices are set to rise in between.

537 The reason for this is that for pragmatic/administrative reasons the RPI figure used in the RIP – X formula is a lagged RPI figure (from the prior October). In this case, the lagged RPI figure for 2011/12 is 4.5% (from October 2010) which is much higher than RPI figure for 2011/12 (which is 3%). Though this effect does not result in prices being higher than estimated costs in 2013/14 it does produce this strange trend in prices.

538 We consider that this effect sets prices above the appropriate level and therefore it should be addressed. We think a preferable approach to overcome this unwanted effect would be as follows:

[202] The cost is derived is derived from the charge control of RPI – 3.5%

- Derive the 2011/12[203] price as an amount of £ based on a smooth nominal cost change between the starting price (in 30 March 2011) and the cost in 2013/14
- Set the X for 2012/13 and 2013/14 based on that required to achieve the target price in 2013/14 and using the likely lagged RPI figures (currently 3%)

539 Adopting this approach will result in two other benefits:

- It addresses the problem that the high level of RPI (in the lagged figure) is driven to a large extent by the VAT increase and mortgage interests rises which Ofcom says are not relevant to Openreach's costs (§7.56)
- Provides additional transparency since the actual price is known for 2011/12 (rather than being based on an RPI – X formula).

540 Though in general we do not consider that starting adjustments are appropriate we consider that in this case there may be some justification for downwards adjustments. It appears to be the case that in the previous charge control (2009 Review) BT mislead Ofcom in a number of respects with the impact that the starting price for this charge control is higher than it should be. In particular:

- BT knowingly under-estimated its likely efficiency gains
- Allocated excessive amounts of Cumulo rates to LLU/WLR
- Acted knowingly inefficiently in not providing MPF based on single jumpering

541 It this case, we consider that the starting price in year 1 of the charge control (i.e. 2011/12) should be modified downwards to reflect what the price would have been if BT had not mislead Ofcom in this way. This will partly (but not fully) restitute for the excessive prices that results from BT's prior behaviour.

[203] If the October 2011 RPI is known prior to the statement then the 2012/13 prices could also be set in actual £ terms rather than being set by means of an RPI – X formula

OTHER

542 We note that in setting the MPF rental price (and possibly other services) Openreach rounds-up the actual price that is required to meet the charge control. For instance:

- In 2010/11 the allowed MPF rental prices was £89.10 per year
- This equated to £7.425 per line per month
- Openreach set its charge at £7.43 and has billed on this basis
- Openreach has, as far as we are aware, always rounded up in these cases

543 Over the last several years rounding up has resulted in an overcharge to TTG of over £200,000. TTG are currently seeking repayment of this amount. However, it may be better that the regulatory regime discourages this happening going forward. We see a number of ways in which this could happen:

- Ofcom round-up / round-down the charge in the case where it sets a charge in £ terms (rather than by means of RPI-X formula). This is only generally possible in the first year of a charge control (when the relevant RPI figure is known)
- Allow any over-charging (or in the case of rounding down under-charging) to be recovered through a correction in the following year (see §9.22) and/or rebate
- BT set per line prices to (say) three decimal places i.e. the nearest 0.1 pence and then rounding-up / rounding-down is performed across the whole bill for all lines

544 We prefer the last option.

545 We note no allocation has been made to PIA services. Ofcom should consider whether any allocation is made to this service.

546 Currently duct costs are allocated on the basis of cross-sectional area. This results in a very high proportion of the cost being allocated to LLU/WLR since they use copper which takes up a far larger proportion of the duct that fibre. However, this allocation on the basis of cross-sectional areas is not the only allocation basis that could be used. Ofcom said in 2005 in its cost of copper work:

"BT's current proposals to establish an Access Services Division (ASD) will require it to re-examine the treatment of the costs of shared duct and should this indicate a more appropriate method can be implemented as part of this process Ofcom will consider at that time what alternatives are available".

547 Ofcom has not considered alternatives. We invited Ofcom to do so in the 2009 Review but it did not do so. Ofcom should review this issue, to ensure that costs are allocated in the most appropriate manner. Using a 'value based' allocation method

could reduce, we estimate, the cost allocated to WLR and MPF lines by around £1.60 per year[204].

[204] See 2009 Review TTG Second Consultation Response

ANNEX 1: RELEVANCE OF AUDIT OPINION OF RFS

In this annex we briefly discuss the level of assurance that the RFS audit provides particularly in respect of the allocation bases.

The approach to the preparation of the RFS and their audit is as follows:

- The RFS are initially prepared by BT in accordance with the Primary Accounting Documents ('PAD') and Secondary Accounting Documents ('SAD')
- These documents outline the principles on which the allocations are made. These principles are fairly high level: for example the PAD outline (correctly) that causality shall be the principle driver but where this is not possible the allocation basis shall be 'objective' which it describes as "The attribution shall be objective and not intended to benefit either BT or any other Operator, or any product, service or network component."[205]. As PWC note the PADs only contain 'high level principles' and the SADs only contain the procedures for applying the principles from the PADs[206]
- The audit is confined to:
    - providing reasonable assurance that the RFS are 'fairly prepared in accordance with' the PADs and SADs
    - that the SADs are 'appropriate to implement the principles contained in the PADs. [207]

Clearly the allocation bases are effectively decided by BT and the audit would only identify absurd allocations. In fact the audit is of even less relevance to this charge control since the model Ofcom developed has different allocation bases to those used in the RFS /DAM[208] (which is the approach that is audited).

Thus probably the best comfort that the audit can offer is that the allocation bases are *not unreasonable* – they cannot be taken to imply that the allocations are the most appropriate for the purposes of a charge control. Thus, we consider that it would be wrong for Ofcom to take comfort from the audit and that Ofcom should have no qualms about changing a BT decided allocation basis for one of its own if Ofcom considers it more appropriate. There should be no presumption that the RFS are sound or reasonable for the purposes of charge setting. That the RFS provides little comfort is clear from some of the things that it has allowed to pass previously

[205] Primary Accounting Documents July 2010 p18-19. http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2010/PrimaryAccountingDocuments2010.pdf

[206] For example, see RFS Audit Report §16(iii)

[207] For example, see RFS Audit Report §9 and §16(iii)

[208] In the 2009 consultation KPMG noted that the allocation bases were different to those in the DAM and this model was used as the basis for allocations in the 2011 review

- in respect of SLU charges, the audit passed that cease costs should be recoverable in provisioning charges and that e-side copper and MDF costs should be recoverable in SL-MPF charges (even though SL-MPF uses no e-side copper or MDF)
- in respect of LLU charges in 2009 the audit passed that no (or very little) common cost should be allocated to so called non-regulated services such as RedCare, SFI and TRC charges
- in respect of frame costs the audit passed that the 2007/08 and 2008/09 accounts were sound whereas in fact both were erroneous[209]
- Indeed in respect of duct valuation Ofcom specifically concludes that "*we do not consider that PwC's audit of the RFS means that we should accept BT's valuation for the purpose of setting the charge controls*" (§3.61)

We note (with a small hint of irony) that the intent of the DAM is stated as follows:

> *The principle of Transparency requires the attribution methods used to be transparent. The descriptions of the attribution methods should provide sufficient information such that a suitably informed reader can easily: … Make their own judgement as to the reasonableness of these methodologies and driver data and any changes to them.* (DAM p13)

[209] WLR Appeal WS Heaney VI §56

ANNEX 2: BACKGROUND ON SINGLE JUMPERING

BACKGROUND TO JUMPERING

- When MPF was introduced around 2000 it was designed using double jumpering
- BT starting using the single jumpering arrangement for itself in 2007 (for 21CN deployment).
- It was never made apparent to CPs what the cost impact of double jumpering was or indeed even if there was a cost difference whether/how this affected the price. BT generally allowed very little transparency of it processes and costs. Even in the first and second consultations of the 2009 LLU charge control review it was not clear what the cost impact of double jumpering was
- It was not until around January 2009 following TTG pressing during the 2009 Review for added transparency regarding reasons for the MPF/WLR price differences that it transpired that double jumpering was resulting in an extra cost for MPF (though the amount was not apparent). In TTG's response to the second consultation (March 2009) we argued that MPF costs should be based on single jumpering
- In the LLU Charge Control Statement in May 2009 the magnitude of the extra cost of double jumpering became more apparent. Ofcom did not properly consult in the 2009 LLU review on the costs of double jumpering and/or whether they should included in the MPF product cost
- The assumption of the use of double jumpering was part of TTG's appeal of the LLU and WLR charge controls. Through that process more information was disclosed that made the extra cost caused by double jumpering more transparent
- Through the LLU Appeal TTG argued (and we still believe) that Openreach have a regulatory obligation to act efficiently (by deploying single jumpering MPF). This obligation is effective irrespective of whether a CP has asked for such a product through the SOR process.
- Notwithstanding that view in spring 2010 we started discussing with Openreach an SOR for a single jumper MPF product[210]. We submitted an SOR in August 2010. This was rejected with very little reasoning given
- In this 2011 LLU/WLR charge control consultation more information was made transparent. This revealed that the higher fault repair cost of MPF was not in fact due to the use of broadband on MPF (as Ofcom had claimed in the 2009 Review) but due to the use of double jumpering. This effectively further increased the cost penalty caused by double jumpering

[210] In fact there are two variants of single jumpering: one that includes an evoTAM (referred to as 'single jumper MPF') and one that includes no TAM (referred to as TAMless MPF. In both cases they use single jumpering

DESCRIPTION OF SINGLE JUMPERING

This note provides was provided to the CC by CPW during the LLU Appeal in response to the question posed by the CC in 'Clarificatory Questions for CPW – 10 February 2010 Qu: 3' which asked "Please could you provide a diagram to illustrate wiring arrangements with current and single jumpering approaches and how this impacts on the frame and tie cable costs for WLR, MPF and SMPF."

At the end of this note are four diagrams showing the wiring arrangements for each of four scenarios

- (a) WLR only
- (b) WLR + SMPF
- (c) MPF (current jumpering)
- (d) MPF (single jumper) as referred to in W/S Heaney I §§243-245 and W/S Heaney III §§23-30

The current jumpering arrangement for MPF involves (compared to WLR) one extra jumper and two extra tie cables in order to connect in the TAM equipment. In the 'single jumper' arrangement the TAM is provided 'inline' in the tie cable that connects from the MDF to the HDF thus removing the need for the extra jumper and tie cables. The single jumper arrangement is more akin to the arrangement for WLR.

The table below provides an estimate of the cost difference as between MPF (current jumpering) and MPF (single jumpering). The costs for WLR and WLR+SMPF are also provided. For the purposes of illustration, the cost is shown assuming

- (a) the cost of the frame is assumed to be in proportion to the number of jumpers and is calculated as £4 per jumper
- (b) the cost of an 'internal' tie cable (i.e. one that is provided by Openreach part of the WLR / MPF product) is £2 per tie cable
- (c) these costs are broadly consistent with data from the Regulatory Financial Statements (RFS) though as I noted in W/S Heaney III §§26-27 it is difficult to identify the exact numbers from the RFS. I believe that these numbers are reasonably indicative

In the case of SMPF and MPF the tie cable(s) from the frame to the HDF is not included as part of the product but is purchased by the LLU operator separately (referred to as 'external' tie cable). Therefore, this cost is not relevant to the cost of the SMPF/MPF product. Other tie cables that are not 'external' tie cables are referred to as 'internal' tie cables. The cost of them is included as part of the product. There are two types of internal tie cables:

- (a) In the case of WLR the tie cable from the frame to the PSTN switch is part of the WLR product
- (b) In the case of MPF the tie cables to/from the TAM are effectively part of the MPF product

A summary of the number of jumpers / tie cables and cost for each scenario is given below. The cost provided is the frame and tie cable cost of each of the WLR/SMPF/MPF product assuming frame cost = £4 per jumper and tie cable cost = £2 per 'internal' tie cable

Assets used by different jumpering approaches and cost

	Jumper	Tie cables: Total	Tie cables: Internal	Tie cables: External	Cost (frame + tie cable)
WLR	1	1	1	0	£6
WLR + SMPF	2	3	1	2	£10
MPF (current)	2	3	2	1	£12
MPF (single jumper)	1	1	0	1	£4

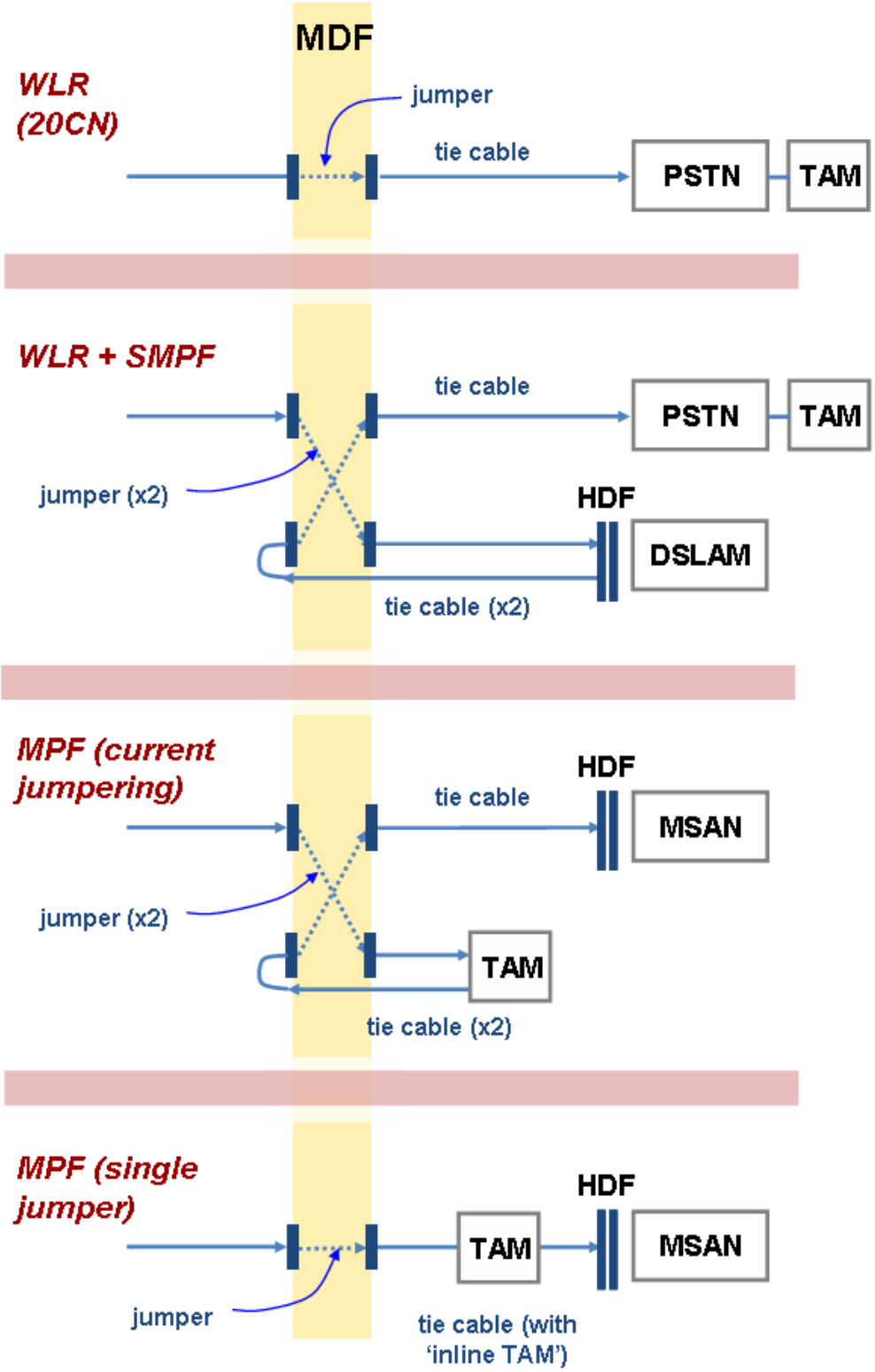
This shows that the cost reduction of the MPF product as a result of moving to a single jumper will be about £8 (£12 less £4). This will be offset to some degree by the need for the LLU operator to purchase a slightly more expensive inline tie cable.

For WLR under 21CN I understand that the wiring arrangement will be similar to the MPF (single jumper) arrangement, where an inline TAM is used .

Notes:

- MDF – main distribution frame
- HDF – handover distribution frame
- TAM – test access matrix (interface point or BT testing equipment)
- For WLR (20CN) the TAM is connected into the PSTN equipment rather than in the jumpering

Jumpering arrangements



ANNEX 3: SUGGESTED BT GROUP COST ALLOCATION APPROACH

	Ofcom allocation method			**Revised allocation method**				
	Group cost	% to Openreach	Openreach allocation	different basis	reduction for relevance, overseas	% to Openreach	Openreach allocation	Notes
Group HQ								
Legal	33.3	30%	10.0	25%	-5%	24%	7.9	operating cost better basis
Tax	28.3	30%	8.5	25%		25%	7.1	operating cost better basis
HR	24.1	30%	7.2		-5%	29%	6.9	some HR relvant overseas
Finance	20.5	30%	6.1	25%	-5%	24%	4.9	operating cost better basis, some finance useful for overseas
Marketing / sponsorship	17.4	30%	5.2		-50%	15%	2.6	sponsorship benefits retail activities
Treasury	14.8	30%	4.4	25%	-10%	23%	3.3	operating cost better basis
Strategy	12.6	30%	3.8		-20%	24%	3.0	most strategy on non-LLU/WLR (eg NGA), some used for overseas
Policy and regulation	10.7	30%	3.2		-20%	24%	2.6	most Group regulation/policy on non-LLU/WLR, some used for overseas
Public affairs	9.1	30%	2.7		-15%	26%	2.3	most PA on non-LLU/WLR (eg NGA), some used for overseas (Brussels)
Risk	7.7	30%	2.3		-17%	25%	1.9	will assess risk overseas
Product portfolio	6.6	30%	2.0		-20%	24%	1.6	some product portfolio for overseas
Audit	5.6	30%	1.7	25%	-20%	20%	1.1	operating cost better basis, some audit overseas
Insurance	4.7	30%	1.4	25%		25%	1.2	operating cost better basis
Comms, investor relations	10.0	30%	3.0	22%	-10%	20%	2.0	revenue better base, IR relevant to overseas
Procurement	8.5	30%	2.6	25%	-10%	23%	1.9	operating cost better base (ideally inc CAPEX), will procure for o'seas
Board, secretariat	7.2	30%	2.2	22%	-17%	18%	1.3	revenue better basis, is Board of overseas subsidiaries
Other	45.6	30%	13.7			30%	13.7	
Total	266.7		80.0			24%	65.3	
							-14.7	
CTO								
IT strategy	6.7	30%	2.0			30%	2.0	
Technology strategy	13.3	30%	4.0		-30%	21%	2.8	most technology development for non LLU/WLR
R&D	13.3	30%	4.0		-50%	15%	2.0	most technology development for non LLU/WLR
Total	33.3		10.0			20%	6.8	
							-3.2	
IT								
Applications Systems and Ma	233.3	30%	70.0		-17%	25%	58.3	used by overseas activities
Computing	200.0	30%	60.0		-17%	25%	50.0	used by overseas activities
Total	433.3		130.0			25%	108.3	
			65% of IT is Net development				*-21.7*	
TOTAL	**733.3**	**30%**	**220.0**			**25%**	**180.4**	
							-39.6	
							-18%	
% to LLU/WLR							80%	
Amount							***-31.7***	
Allocation bases								
FTE (UK)		30%						
Operatign costs		25%						
Revenue		22%						
Overseas subsidiaries		20%	of BTG					
% reduction in allocation if incl o'seas subs		17%						