

# **Review of BT's cost calculations for Openreach local access services**

## **Report for Carphone Warehouse**

**March 2009**

## 1 Summary

1.1.1 In support of its response to Ofcom's consultation, *A New Pricing Framework for Openreach – second consultation*, RGL has been asked by Carphone Warehouse to review cost calculations and estimates for local access services used by Ofcom in the consultation.

### 1.2 2007/8 Base Year Costs

1.2.1 Ofcom's overall approach to its cost calculations is described in the consultation document, and Ofcom were willing to provide further explanations where requested. However, our review identified a number of outstanding concerns with the reliability of Ofcom's cost calculations. In particular:

- The starting point for BT's cost calculations for its model was stated to be data from its 2007/8 management accounts. It is not clear how this data relates to BT's costs in its Regulatory Accounts. The basis for calculating costs in the two systems is different and it is not clear whether or not these differences have been properly taken into account.
- BT has prepared a reconciliation between the costs and revenues in its model and those in the 2007/8 Regulatory Accounts. However, the reconciliation includes significant unexplained items and inconsistencies.
- The costs for individual local loop services contained in the Regulatory Accounts themselves contain a number of inconsistencies which may mean they do not provide a reasonable basis on which to estimate future costs.

1.2.2 As a result of these outstanding issues, we are unable to conclude whether or not the 2007/8 costs and revenues, used as the starting point in BT and Ofcom's models, are reasonable.

### 1.3 Projected costs and revenues

1.3.1 Unit costs for unbundled local loop services in Ofcom's forecasts increase significantly from the 2007/8 starting point to 2012/13. Whilst the consultation document provides some explanations for these increases, others remain unexplained.

1.3.2 Further, we have not been able to review Ofcom's model and so cannot conclude on the reasonableness or otherwise of its calculations.

1.3.3 As a result, we are not in a position to draw conclusions about whether or not Ofcom's forecasts of future cost increases are reasonable.

### 1.4 Regulatory Accounting cost allocation issues

1.4.1 We have identified a number of issues relating to the cost allocation methodologies used in BT's regulatory accounting process, which are likely to have led to an overstatement of the costs allocated to local loop services.

1.4.2 In particular, BT's approach to allocating 'corporate overheads' appears to have resulted in a disproportionate amount of costs being allocated to Openreach.

- 1.4.3 Also, despite previous suggestions that BT should consider changing its methodology for allocating the costs of duct across different services, as far as we can make out, BT has not done this. As a result, local loop access services would appear to be also carrying a disproportionate share of the costs of duct, especially relative to fibre-based backhaul and core services.

## **1.5 Accounting for internal SMPF and MPF services**

- 1.5.1 BT's Regulatory Accounts statements for for LLU services do not include revenues or costs for BT's internal use of similar services. It is not clear on what basis relevant costs are allocated to internal services, but it does seem that, contrary to previous Ofcom decisions, certain LLU costs, such as Local Loop Systems Development costs, have not been allocated to internal services. This would result in an overstatement of the costs of providing these services to external customers.
- 1.5.2 It is not at all clear how costs for internal services have been treated in BT's and Ofcom's models used in the consultation.

## **1.6 Fixed asset costs**

- 1.6.1 The consultation document provides little detail on the costs relating to fixed assets. In our view, neither the RAV adjustment, holding gains and losses nor depreciation were sufficiently transparent. For example, depreciation costs increase significantly during the charge control period but we have not been able to determine the reasons for this.

## **2 Introduction**

- 2.1.1 In support of its response to Ofcom's consultation, A New Pricing Framework for Openreach – second consultation, RGL has been asked by Carphone Warehouse to review Ofcom's calculations relating to the costs of LLU services as calculated by Ofcom in the consultation.
- 2.1.2 In addition to reviewing the material in the consultation document and other published information (such as BT's published Regulatory Accounts), we had a number of meetings and discussions with Ofcom relating to their calculations.
- 2.1.3 This note sets out the results of RGL's analysis of the methods used to allocate costs to BT's LLU and related services. In particular, the note details our analysis of the available evidence on two key questions, namely:
- Whether the way BT allocates costs to LLU services in the Regulatory Accounts appears reasonable; and
  - Whether the way BT and Ofcom have allocated costs to LLU services in their cost models used for the current Openreach consultation appears reasonable.

### 3 Approach

3.1.1 We have reviewed publicly available information from a number of sources. In particular we have considered:

- A KPMG report on cost allocation methodologies prepared for Ofcom.
- The review of cost allocations detailed in the consultation document.
- The basis for cost allocations within BT's Regulatory Accounts as set out in its Detailed Attribution Methods document.

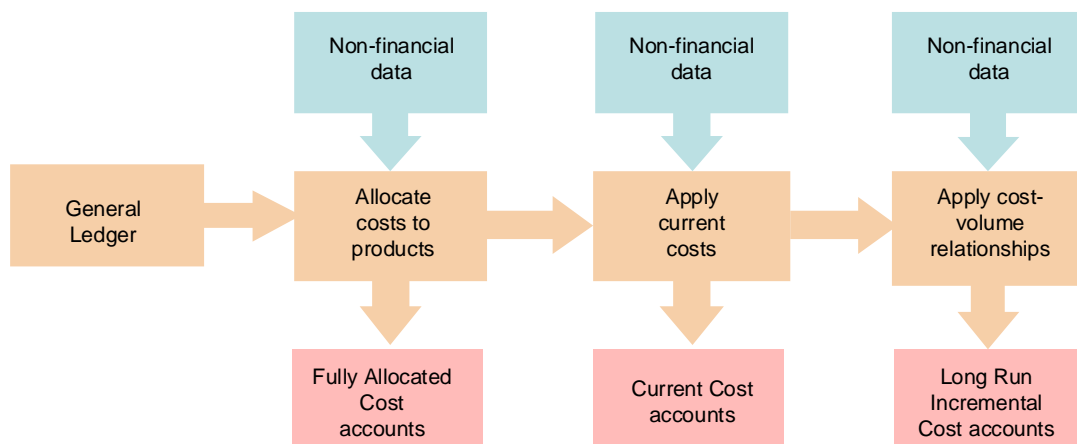
### 4 The limitations of BT's regulatory accounting system

4.1.1 Ofcom's proposals to increase prices for LLU services are based on an adjusted set of cost data obtained from BT's regulatory accounting system. When considering the output of BT's regulatory accounting process, it is important to understand the system that is required to produce the published numbers as well as the robustness of the outputs.

4.1.2 A key function of BT's Regulatory Accounts (the 'Regulatory Accounts') is to provide a 'first order' test of compliance with BT's cost orientation obligations that arise from Ofcom's SMP findings under the Communications Act.

4.1.3 The accounting system which prepares the Regulatory Accounts is complex. A summary of the system is set out in Figure 1 below.

**Figure 1 BT's Regulatory Accounting system**



Source: RGL

- 4.1.4 As shown in Figure 1, there are three key stages in BT's regulatory accounting system. First is an activity based costing system which allocates all costs of the business down to individual products to provide 'fully allocated costs' ('FAC'). In the second stage, assets are revalued to reflect current cost. The third stage is concerned with further adjustments to calculate long run 'incremental' costs. The diversity of BT's business and the large number of individual services it sells means that this process is extremely complex.
- 4.1.5 In addition to preparing costs for a very large number of diverse services, the cost allocation process itself is very complex, involving 10 stages. Specifically, BT's Detailed Attribution Methods document, which describes the process, runs to 1,258 pages and includes over 300 different cost allocation bases.
- 4.1.6 Where costs are not directly attributable to a single product, there are typically a variety of methods which can be used to allocate costs. For some overhead type costs, any allocation methodology will be to an extent arbitrary, as BT notes:

"There are certain types of cost (e.g. the costs of the Chairman's Office) which do not have a causal relationship with any Products. Additionally, at very detailed levels of reporting, cost attribution may not be possible on a strictly cost causal basis (e.g. attribution of common marketing costs to a series of similar Products). In such cases, a reasonable method is used."<sup>1</sup>

- 4.1.7 The second stage of the regulatory accounting process is to adjust asset values to a current cost basis to provide what are generally regarded as more relevant forward looking costs than the historic cost of assets recorded in the company's statutory financial statements. The revaluation process uses a variety of methodologies to revalue the assets of the business (including over 30 different cost indices), some of which are inevitably relatively subjective. For example, in revaluing the cost of the local loop network, the costs of digging ducts are estimated using BT's current labour contract rates. These are then discounted to reflect the economies of scale that would be obtained from building a network from scratch:

"Contract costs were discounted to represent the impact of the benefits that might be gained from a total platform replacement over a short period of time, including economies of scale, revisions in working practices and the effects of competitive tendering. The degree of discount applied at 45% is necessarily a matter of judgement which was supported by the views of a number of senior managers within BT."<sup>2</sup>

- 4.1.8 The final stage of the regulatory accounting process is to estimate incremental and stand-alone cost floors and ceilings often applied in setting regulated prices.

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<sup>1</sup> BT's 2008 DAM p21

<sup>2</sup> Detailed Valuation Methodology, BT p19

4.1.9 The reliability of BT's accounting process for estimating incremental costs and ceilings has in recent years been a cause for concern for Ofcom:

"BT's ability to generate robust LRIC data for some regulated products is, for the time being at least, constrained by changing technology, yet the regulatory report includes over 50 pages of detailed calculations to support these estimates. In Ofcom's view, this infers a status on the figures that is not justified and is potentially misleading"<sup>3</sup>

4.1.10 In 2007 Ofcom dropped the requirement for LRIC costs to be audited on the basis that:

"the demise of traditional PSTN technologies makes the outputs from top-down LRIC models unreliable and less relevant as good indicators of forward looking costs."<sup>4</sup>

"Audit requirements have been removed on all LRIC data whether indicative or not. Given the inherent limitations on the robustness of any LRIC estimates described above, Ofcom considers that the audit of these estimates adds little additional assurance"<sup>5</sup>

"Ofcom recognise that LRIC remains an important economic concept within regulatory analysis however Ofcom believe that the practical application of LRIC models to top down accounting data whilst legacy PSTN networks are operational should be treated cautiously. Ofcom will keep this position under review as next generation networks are rolled out."<sup>6</sup>

4.1.11 Unaudited incremental cost floors and ceilings are, however, still presented in the Regulatory Accounts for certain services as they are used for assessing compliance with underlying cost orientation obligations and compliance with charge controls.

4.1.12 A final feature of the regulatory accounting process to note is that the cost allocation calculations may not give reliable results in certain circumstances. In particular results for services where volumes are changing rapidly, or are very small, may not be reliable.

4.1.13 A number of allocation calculations are based on samples, or data from a particular month that may, when volumes are changing, not be representative of volumes or costs during the year.

4.1.14 For services with relatively low volumes, the system may not be sufficiently accurate to provide reliable results. In 2006, Ofcom found that the audit of BT's Regulatory Accounts at the individual market level had typically been qualified, not because the statements were not fairly presented, but because the assurance that could be achieved through the audit was limited for a number of reasons including:

<sup>3</sup> Regulatory financial reporting obligations on BT Ofcom consultation January 2007

<sup>4</sup> Para 4.51 Changes to BT's regulatory financial reporting and audit Requirements Explanatory statement and notification Ofcom 30 May 2007

<sup>5</sup> Ibid para 4.53

<sup>6</sup> Ibid para 4.55

“Qualifications of the types summarised below are not opining that the statements are not fairly presented, only that the assurance that can be achieved through the audit is limited:

- “Limitation of scope of opinions over markets with the assurance reduced to “properly prepared in accordance with...”;
- Disclaimer of opinions in respect of markets due to the very small size of the markets in the context of BT;
- Disclaimer of opinions in respect of services due to the very small size of the services in the context of BT; and
- Emphasis of matter, highlighting areas where the granularity of the statements results in anomalies in costing methodologies having a material effect on the results of markets and services.”<sup>7</sup>

- 4.1.15 Given these limitations, it is typically necessary to make a number of adjustments to the costs, revenues or volumes used in BT’s Regulatory Accounts in order to obtain a reasonable estimate of actual costs for a particular service. However, note that, in most cases, regulatory accounting costs will provide the best starting point to calculate actual costs.
- 4.1.16 Costs calculated from an accounting system, either the regulatory accounting system or some other accounting system (such as the management or statutory accounts) are typically referred to as ‘top-down’, reflecting the fact that they are based on using the total costs for the firm as a whole, allocated down to individual services.
- 4.1.17 In contrast, ‘bottom-up’ models are calculated for individual services, or groups of services, using inputs from a number of sources, including, where available, cost data from an accounting process.
- 4.1.18 Bottom-up calculations are often used where the top-down approach is not feasible (for example because the service being costed is a new one and accounting data is not available) or where the accounting information is insufficiently reliable or detailed to calculate the costs of an individual service. Also bottom-up models are used where costs of the existing network may not sufficiently reflect the efficient network that the regulator is attempting to model.
- 4.1.19 It is generally regarded as best practice that, wherever possible, cost estimates are reconciled back to the most relevant accounts of the company.

<sup>7</sup> Regulatory financial reporting obligations on BT Ofcom - Taking a fresh view Consultation Ofcom May 2006 para 4.19 [http://www.ofcom.org.uk/consult/condocs/reg\\_bt/](http://www.ofcom.org.uk/consult/condocs/reg_bt/)

4.1.20 In a different context, this point was recognised by the Competition Act Tribunal:

“Whichever approach [bottom-up or top-down] sufficient cross-checks should be made to ensure that any cost information supplied by a company under investigation is capable of being reconciled back to its management or statutory accounts”<sup>8</sup>

4.1.21 The limitations of data produced from the regulatory accounting system and the need to undertake thorough reconciliations between different data sources (as discussed above) are relevant to our assessment of Ofcom's modelling of local access services in the Openreach consultation document.

## 4.2 Limitation of the audit opinion

4.2.1 Whilst the audit of the Regulatory Accounts can provide some assurances about the robustness of the overall systems used to generate the accounts, it is important to note the limitations of the audit.

4.2.2 BT provides two levels of audit assurance on different parts of the Regulatory Accounts - a ‘fairly presents’ opinion, and a ‘properly prepared in accordance with’ opinion.

4.2.3 The ‘fairly presents’ opinion is provided on the profit and market summary statements for each reported market and on the summary group statements, and states that:

“we planned and performed our examination of the Financial Statements so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the Market Financial Statements, each of the Market Group Statements and the Openreach Information are **fairly presented in accordance with the relevant Primary Accounting Documents and, on that basis, are free from material misstatement**, whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the Financial Statements,”<sup>9</sup> [emphasis added]

4.2.4 The ‘properly prepared’ opinion states that:

“we planned and performed our examination of the Selected PPIA Market Statements so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the Selected PPIA Market Statements **are properly prepared in accordance with the procedures, defined in the relevant Primary and Secondary Accounting Documents**. However, as explained in the introduction to the Primary Accounting Documents, the Primary Accounting Documents contain only the high level principles of attribution. The Secondary Accounting Documents contain only the procedures describing how these high level principles are applied. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the Selected PPIA Market Statements”<sup>10</sup> [emphasis added]

<sup>8</sup> CAT judgment Claymore para 228

<sup>9</sup> BT's 2007/8 Regulatory Accounts p113

<sup>10</sup> BT's 2007/8 Regulatory Accounts p113



4.2.5 BT's Regulatory Accounts include details on the provision of external local loop services in a market summary statement for the Wholesale Local Access Market. Both the 'fairly presents' and the 'properly prepared in accordance with' opinions are provided on this market statement.

4.2.6 The following limitations on these opinions should be noted:

- The opinion is given on the statement as a whole and not for individual services.
- The opinion is restricted to 'material misstatement' and falls short of the assurance levels provided in statutory accounts, that is, that the results are 'true and fair'.
- The Wholesale Local Access market statement is for external services only and does not include the costs of similar internal services. Therefore, no opinion is provided on the costs associated with internal use of LLU equivalent services (which in BT's model comprise 83% of LLU rental services in 2007/8)<sup>11,12</sup>

## 5 **Queries arising from review of the Detailed Attribution Methods document supporting BT's Regulatory Accounts**

### 5.1 **Mapping of plant groups to components used in MPF services**

5.1.1 We have reviewed the DAM to see if there were any obvious costs being included which were not relevant. The use of very general descriptions makes this difficult, but we did identify one potential error – for TPON costs.

#### **Plant Group PG119A Telephony Over Passive Optical Network (TPON)**

"TPON is a technology which uses fibre from the exchange to the street cabinet and copper from the cabinet to the customer. It is now in the process of being removed as it does not support broadband.

100% apportionment to CL173 D Side Copper Capital."

5.1.2 This voice technology which does not support broadband is wholly allocated to the copper loop which is then allocated to MPF services. Presumably, this should only be allocated to WLR. No details of amounts were provided.

### 5.2 **Allocation of overheads from BT Group**

5.2.1 BT's fully allocated costing system drives down every cost in the company to individual services.

5.2.2 Group overheads ("Corporate Costs") are allocated pro rata to the sum of the net book value of assets and payroll costs previously apportioned to services in the regulatory accounting process.

<sup>11</sup> Calculated from Second Condoc Table A11.1

<sup>12</sup> The costs of internal services are included in the Asymmetric Broadband Origination Market statement (p63 of Regulatory Accounts) which do not include costs for individual services as there are no cost orientation obligations on these services – only a non-discrimination requirement

5.2.3 The following extract from the DAM explains:<sup>13</sup>

**Apportionment**

The costs allocated to AG112 relate to head office type expenses e.g. the Chairman's office and the Group secretariat. The purpose of these head office activities is generally seen as being two-fold:

- Management of the employees within the company.
- Management of the assets of the company to create a return.

The base to apportion these costs must reflect these activities if it is to reflect cost causality.

The ASPIRE system is given instruction to take the following costs to generate an apportionment allocation:

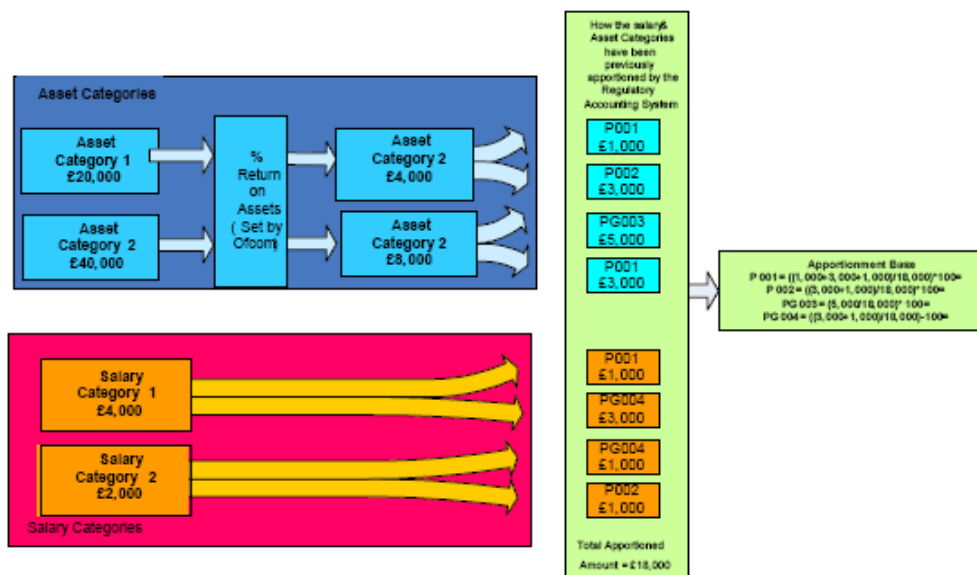
- Salary expenses for the whole of BT (current account).
- Net book value of assets for the whole of BT.

The AG112 base draws on the result of the previously attributed pay costs within the ASPIRE system following the base reference and Plant Group (PG) apportionment stages.

The 'return on assets' percentage is then applied to the net book value of each asset class identified by the Regulatory Accounting system. This percentage is determined by Ofcom. This is applied to ensure that the driver reflects the corporate activities of 'managing the assets of the company to create a return'.

The base excludes Non Core products in the driver as these are overseas activities and the AG112 costs are being attributed to Core activities.

By weighting the previously attributed pay costs together with the Net book asset values (taking into account the fact that the asset amounts have already had the return on assets and investments percentages applied to them), an apportionment base for AG112 can be derived. This is illustrated in the diagram below:



<sup>13</sup> BT's Detailed Attribution Methods 2008 p327/8

5.2.4 It is not clear why corporate overheads should not be allocated to overseas services on the basis that they are Non Core products. Inclusion of overseas activities would decrease the amount of corporate overheads allocated to 'core' activities in the UK by 30%.<sup>14</sup>

5.2.5 We recommend that Ofcom investigates whether or not corporate overheads are only allocated to UK activities and, if so, the justification for this.

5.2.6 Also, Ofcom should determine whether or not there are any other costs that should, but are not currently, allocated to non-UK activities. For example, it appears that all costs allocated on the basis of pay use the 'base' FTQ which:

"is compiled from the previously allocated Capital and Current pay F8 codes (excluding non-core pay and exceptional OUC pay)".<sup>15</sup>

5.2.7 This exclusion of 'non-core' activities in at least part of the cost allocation process suggests a systematic over-allocation to the UK parts of the business, which of course includes Openreach.

5.2.8 Table 1 below sets out an estimate of the allocation base used to allocate corporate costs on the basis of previously allocated MCE and payroll costs.

**Table 1 Corporate Costs allocation to business units**

		BT Global Services	BT Retail	BT Wholesale	Openreach
Total assets	£m	8131	2999	3870	9150
Average Employees	'000	30.3	20.7	3.1	33.8
Allocation base total	'000	34%	24%	4%	38%
Total staff costs	£m				
Staff costs allocated to business units	£m				
Allocated pro rata staff numbers	£m	1,496	1,022	153	1,669
Total allocation base - Assets & Staff Costs	£m	9,627	4,021	4,023	10,819
Proportion of total		34%	14%	14%	38%

Source: RGL calculations

5.2.9 Table 1 shows that on the current basis, Openreach is allocated in the region of 38% of BT group costs, BT Global Services 34% of those costs, BT wholesale 14% and BT Retail 14%.

5.2.10 It is not obvious that such an allocation is reasonable. In particular:

- The assumed cost drivers are staff costs and assets. The different cost structures of BT's different business units mean that the allocation base is not comparing like for like businesses and therefore the allocation may be biased towards individual business units.
- The use of assets generates a significant distortion of costs towards Openreach because of the asset intense nature of its business, compared to say BT retail, a relatively low asset intensity business, but with greater revenues.
- Also Openreach has the highest proportion of staff costs to operating costs – 41% compared to 3% for BT wholesale.

<sup>14</sup> Assuming allocation is based on assets only. Based on segmental analysis in BT's 2008 annual report page 103

<sup>15</sup> 2008 DAM page 36

5.2.11 In RGL's view, a more reasonable approach to allocating group overheads would be to take account of the management time likely to be associated with all parts of the business – revenues, costs, assets and liabilities.

5.2.12 Table 2 below compares the current allocation basis with alternative bases. The current allocation basis, Assets and Staff cost, combines those two bases which are most weighted against Openreach. We have highlighted an alternative methodology: Operating Costs plus Revenues plus Assets plus Liabilities which, in our view better reflects the spread of activities of BT's group business and which provides a fairer allocation of corporate overheads.

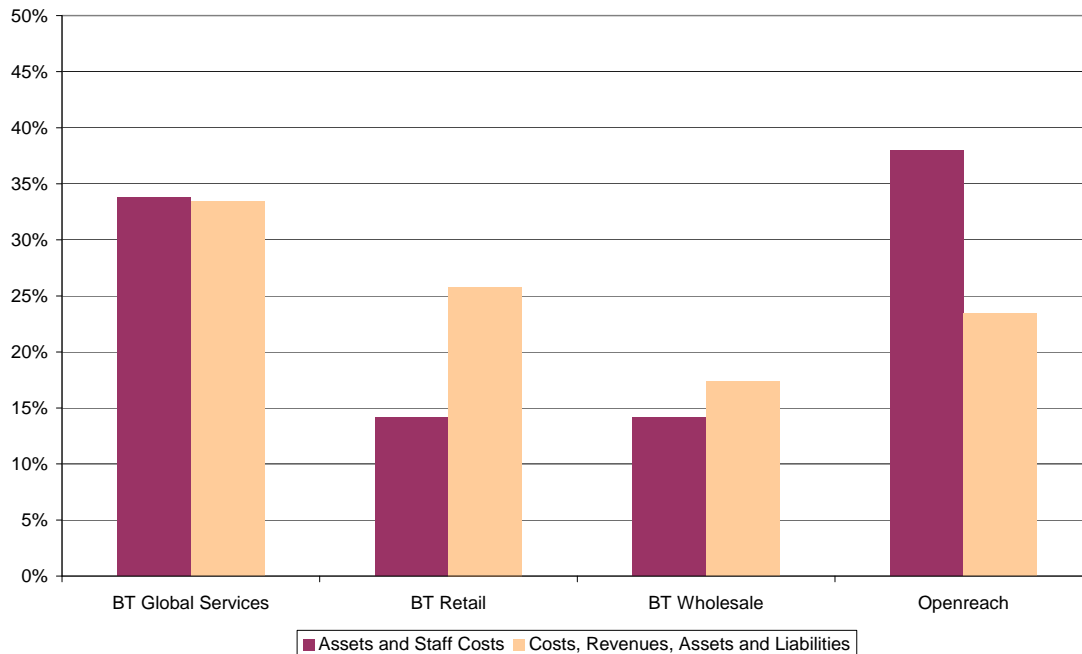
**Table 2 Impact of applying different allocation bases for Group Costs**

2007/8	Openreach	Rest of BT
<i>Allocation Base</i>		
Total assets	38%	62%
Salary expense	38%	62%
<b>Total assets + salary expense</b>	<b>38%</b>	<b>62%</b>
Total assets	38%	62%
Total liabilities	11%	89%
Total revenue	20%	80%
Total costs	17%	83%
<b>Assets + costs + revenue + liabilities</b>	<b>23%</b>	<b>77%</b>

Source: RGL

5.2.13 Figure 2 shows how our suggested allocation methodology would affect other BT businesses. The increased allocation to BT Wholesale and BT Retail reflects the inclusion of revenues and non-staff costs into the allocation base which, in our view, is reasonable.

**Figure 2 Impact of applying different allocation bases for Group Costs (Initial calculations subject to checking)**



Source: RGL calculations

5.2.14 Figure 2 shows how our suggested allocation methodology would affect other BT businesses. The increased allocation to BT Wholesale and BT Retail reflects the inclusion of revenues and non-staff costs into the allocation base which, in our view, is reasonable.

5.2.15

5.2.16 Figure 2 suggests that a change in the allocation base that takes a more balanced view of the different aspects of the business would generate a significant reduction in the account of group overheads allocated to Openreach.

**5.3 Does the structure of Openreach require a change in BT’s cost allocation methodologies?**

5.3.1 Within the Regulatory Accounts a significant proportion of ‘overhead’ type costs, such as IT, finance, systems development, human resources, and general support functions, are allocated on the basis of ‘previously incurred staff costs’.

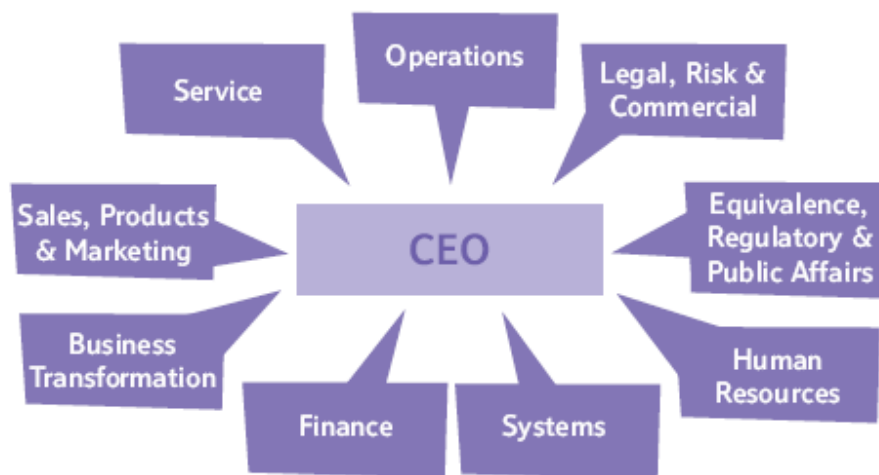
5.3.2 However, the creation of Openreach led to the establishment of a new separate management function with responsibility for carrying out many of these overhead functions directly. In particular, it provides most ‘overhead’ services itself including:

- Finance
- Systems
- Human resources
- Regulation

- Public Affairs
- Legal

5.3.3 This is illustrated in an extract from Openreach’s corporate brochure as shown in Figure 3 below.

**Figure 3 Openreach function**



Source: BT

5.3.4 Costs for these services are also incurred at BT Group level and allocated down to individual services. It is not at all clear whether Openreach is being charged twice for these functions. An overcharging could arise in two ways. Firstly, because Openreach carries out the function directly itself, and does not benefit from the corporate function to the same extent as other parts of BT. Secondly, because the staffing costs used as a basis for cost allocation will include the additional layer of management costs at Openreach, leading to a higher proportion of costs being allocated to Openreach than would be the case if it was not undertaking these functions directly.

5.3.5 An example of this is the CFO of Openreach, who has responsibility for investor relations – also a group activity. As Openreach itself comments:

“While Openreach remains part of the BT Group, we are a separate business with our own headquarters, identity, financial reporting and commercial principles”<sup>16</sup>

5.3.6 A number of BT Group overheads are allocated on the basis of numbers of employees. Openreach is responsible for undertaking a significant number of central management activities itself which are not undertaken by other lines of business.

<sup>16</sup> Openreach brochure <http://www.openreach.co.uk/orp/aboutus/businessinfo.do>

#### 5.4 Should Openreach be allocated a proportion of all BT Group overheads?

5.4.1 Whilst it has not been possible to undertake a detailed review of the corporate overheads allocated to Openreach, the separate nature of Openreach and its autonomous management structure should mean that certain BT Group level activities are regarded as separate from Openreach and, therefore, excluded from the overheads allocated to Openreach services.

5.4.2 Our limited review of the DAM suggests that the following 'corporate' costs may not be relevant to Openreach. This list should not be regarded as exhaustive, and we would recommend a more detailed review by Ofcom. We have not been able to identify the amounts of cost allocated to Openreach under these headings.

- B8 207160 Market Research
- B8 207172 Other publicity
- B8 207182 Consultancy
- B8 207183 Hospitality
- B9 206400 Finance & Billing Other Finance Expenses
- BE 203664 Reward & recognition incl conferences
- H7 517446 Provn Unaccred Litigtn Claim
- H8 3545TA Creditor Provisions -Litigation

#### 5.5 Allocation of duct costs

5.5.1 The costs of duct that is used to carry both copper and fibre is currently allocated by BT to copper and fibre services based on estimated cross sectional areas used by both types of cable. The effect of this is to allocate a high proportion to copper, compared to fibre.

5.5.2 Ofcom has previously commented that this approach may not be appropriate and that an alternative approach (such as only applying the incremental cost to copper or allocating capacity based on bandwidth) might be more appropriate. In particular:

"Ofcom notes, however, that 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"<sup>17</sup>

Also:

"Also, Ofcom expects that as BT establishes its Access Services Division – as outlined in Ofcom's recent Notice under Section 155(1) of the Enterprise Act 2002 – it will need to look again at the sharing of costs between access and core and Ofcom will be involved in this process."<sup>18</sup>

<sup>17</sup> Valuing Copper Access Statement 18 August 2005, Ofcom para 4.52 p28

<sup>18</sup> Valuing Copper Access Statement 18 August 2005, Ofcom para 1.11 p3

5.5.3 As far as we are aware, BT has not amended its methodology for allocation of duct costs as suggested by Ofcom. In other words, BT still allocates shared duct usage based on cross sectional areas, as explained in the DAM:

“Apportionment to Core and Access AGs is done based upon data from the 1996 Absolute Duct Study (ADS). The ADS was a point in time study of the duct within the network using a sample of 384 of the 5,586 exchange areas. From this survey, the proportion of duct that is solely used\shared between access and core transmission was determined. This proportion is then used to apportion the 1996/97 Gross Replacement Cost (GRC), and to this the indexed capital spend, from 1996/97 to the current year, is added for access and Backhaul/Inner Core Duct. The apportionment is then determined based upon the ratio of (1996/7 Access Gross Replacement Cost (GRC) plus Access duct capital spend) and (1996/7 Core Gross Replacement Cost (GRC) plus Core capital Duct spend).”<sup>19</sup>

And

**“Duct Space Records Survey**

The Duct Space Records Survey (DSR) is a standard record of the utilisation of ducts. The DSR provides a record of cables within a duct section (i.e. between two manholes). The high cost of providing ducts demands that this record is kept up-to-date. The DSR is used in-conjunction with the Duct plan. Each length of duct on the Duct Plan is given a serial number. The DSR shows a cross-section of the duct on a particular length (or a number of lengths with the same formation). This is a survey based on DSRs paper records, held at drawing offices. The survey splits duct into:

- Access Fibre.
- Access Copper.
- Core Transmission.”<sup>20</sup>

5.5.4 A change in allocation methodologies for shared duct could be significant, as illustrated in Table 3 below.

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<sup>19</sup> DAM p277

<sup>20</sup> DAM p641



**Table 3 The impact of changing the basis for allocating shared duct costs**

Estimate of Shared Duct Costs												
		MCE	ROCE	£	£ per line							
	Duct	25,000,000	10%	2,500,000								
	Total lines			871,652								
	MCE per line				2.87							
				£/line	Proportion of duct shared with core/backhaul	Duct component of copper loop	Grossed up duct cost (ie to include b/haul, core)	Shared duct	Local loop only duct	Shared duct Cost allocated to local loop on benefits basis	Duct Cost allocated to b/haul, core on benefits basis	Total Benefits based allocation of shared duct - local loop
Assumed allocation of duct to core/backhaul under current methodology							5%					
Assumed allocation of shared duct on benefits basis										70%	30%	
<b>Op Costs</b>	Copper	E Cap		4.47								
		E Curr		3.92								
	Total E side			8.39	50%	2.77	2.91	1.46	1.46	1.02	0.44	2.48
		D Cap		39.99								
		D Curr		12.8	40%	17.41	18.33	7.33	11.00	5.13	2.20	16.13
	Total D side			61.18								
	Total copper cost per line											
	Proportion for duct											
	Copper	Duct										
	191	94	33%									
<b>Total duct cost per line</b>						<b>20.18</b>	<b>21.24</b>	<b>8.79</b>	<b>12.45</b>	<b>6.15</b>	<b>2.64</b>	<b>18.60</b>
						20.18						
						-18.60						
<b>Reduction in duct cost per local loop line</b>						<b>1.57</b>						

Source: RGL calculation

5.5.5 Whilst illustrative, the calculation set out in Table 3 suggests that a change in the basis of how shared duct space is allocated from a cross sectional areas survey to a bandwidth based basis could lead to a significant reduction of £1.57 per local loop line in the cost of duct allocated to local loop services.

## 5.6 Exclusion of internal MPF and SMPF services in Wholesale Local Access Statements

5.6.1 The Regulatory Accounts for the Wholesale Local Access market do not include internal SMPF or MPF equivalent internal services for rentals or connections.

5.6.2 These internal equivalent services are used for internal or external wholesale IPstream and Datastream services sold as wholesale products or for internal sales to BT retail.

5.6.3 The corresponding costs and revenues are however included in the Openreach P&L included in the Regulatory Accounts, and shown under 'Other Openreach Markets' (p115), and also in the Regulatory Accounts for the Asymmetric Broadband Origination market.

5.6.4 Table 4 below shows how BT's Regulatory Accounts allocate costs to the main key copper loop based services.

**Table 4 Allocation of cost components to BT's copper loop services**

Service	PSTN bus conn	PSTN res conn	PSTN res rentals	LLU Connections	LLU rentals	SMPF connections	SMPF rentals	Wholesale PSTN Conn	PSTN res rentals	Wholesale IPStream connections	Wholesale IPStream connections	Wholesale IPStream rental	Wholesale IPStream rental
	Internal SL111	Internal SL112	Internal SL122	External SL129	External SL130	External SL134	External SL135	External SL140	External SL151	Internal SL160	External SL161	Internal SL164	External SL165
CL139 LLU systems development				Y	Y	Y	Y						
CL160 Routing & records	Y	Y		Y				Y					
CL161 MDF hardware jumpering	Y	Y		Y		Y		Y					
CL162 Software jumpering	Y	Y		Y		Y		Y					
CX162 Software jumpering										Y	Y		
CL171 E Side Copper Capital			Y		Y				Y				
CX171 E Side Copper Capital													
CL172 E Side Copper Current			Y		Y		Y		Y				
CX172 E Side Copper Current													
CL173 D Side Copper Capital			Y		Y				Y			Y	Y
CX173 D Side Copper Capital													
CL174 D Side Copper Current			Y		Y		Y		Y				
CX174 D Side Copper Current												Y	Y
CL175 Local exchanges general frame capital			Y		Y		Y		Y				
CX175 Local exchanges general frame capital												Y	Y
CL176 Local exchanges general frame current			Y		Y		Y		Y				
CX176 Local exchanges general frame current												Y	Y
CL177 PSTN Line equipment			Y										
CL178 Dropwire capitia & PSTN NTE			Y		Y				Y				
CL180 Residential PSTN drop maintenance			Y		Y				Y				
CL501 Service Centres - Provision				Y				Y					
CL503 Services Centres - Assurance					Y		Y		Y				
CO187 Broadband Line Testing					Y		Y					Y	Y
CP502 Sales Product Management	Y	Y	Y	Y	Y	Y	Y	Y	Y				
CO118 ADSL Connections										Y	Y		

5.6.5 Table 4 raises a number of issues relating to BT's treatment of internal and external services:

- The use of different components for internal use of copper and 'general frame' means that it is not at all clear whether costs are allocated on a comparable basis between internal and external services.
- Internal use of copper for IPstream (and Datastream) are not allocated with the costs for local loop systems development, service centres and sales product management that are allocated to SMPF services, as required by Ofcom.

**Cost recovery on internal SMPF services**

5.6.6 The internal ADSL connection service is defined in the Dam as follows:

M16	Service – Internal IPstream End User Access Connection	SL160	<p><u>Outline of Service:</u></p> <p>Asymmetrical Digital Subscriber Line Connection for the access network. Enables Service Providers access to multiple End Users via Broadband enabled Local exchanges.</p> <p>Includes:</p> <ul style="list-style-type: none"> <li>a) Jumpering.</li> <li>b) Customer Services Management.</li> <li>c) Developments.</li> <li>d) Overheads.</li> <li>e) Field Engineering costs – e.g. "DeDac".</li> </ul>
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This compares to the external SMPF:

M29	Service - SMPF	SL134	<u>Outline of Service:</u>
	Connections (External)		Provision of access to non voice frequency spectrum of a metallic path over which analogue telephone service is then provided to the end user by BT allowing an operator to deploy technology such as ADSL over the same metallic pair.

- 5.6.7 It is clear from the above description that the ADSL connection service includes activities not included in the SMPF service. However, the average price for an ADSL connection in 2007/8 of £34.86 was exactly the same as that for an external SMPF connection (an MPF connection was slightly higher at £36.00).
- 5.6.8 Further, the Asymmetric Broadband Origination market significantly over recovered costs - ROCE 45.5%, ROT 40.5%).
- 5.6.9 The total unit cost of the components not allocated to SMPF connections is £4.58.<sup>21</sup> Applying this to the volume of wholesale IPStream and Datastream connections would generate an additional £3.2m of revenues.<sup>22</sup>
- 5.6.10 In the BT/Ofcom model, we have understood (based on our discussions with Ofcom) that all internal and external MPF and SMPF services are treated equally and that all costs are spread equally over internal and external services.
- 5.6.11 However, it is not clear whether or not adjustments have been made to the base year revenues to adjust for the additional 'revenues' that would have been earned had internal use been costed on the same basis as external customers.

**5.7 Review of working capital assumptions**

- 5.7.1 The cost of funding the working capital requirements of BT's services are included in charge control calculations through the allowed return on capital employed.
- 5.7.2 The Mean Capital Employed calculation typically includes internal and external debtors and creditors. This is an area of the Regulatory Accounts which, in the past, has been found to require adjustment for the purpose of calculating costs relevant for a charge control.
- 5.7.3 The Consultation Document makes no reference at all to working capital and no detailed breakdown of the assumptions for working capital is included in either the Base Year calculation or in the forecasts.
- 5.7.4 The working capital balances for the Wholesale Local Access Market included in the Regulatory Accounts are set out in Table 5 below.

<sup>21</sup> £1.83 + £2.30 +£0.45 = £4.58 (p79 of Reg Accounts)

<sup>22</sup> 3,00,963 + 172,962 (p63 of Reg Accounts)

**Table 5 Wholesale Local Access - Working Capital**

£m		2006/7	2007/8
Internal Revenue		0	0
External Revenue		244	316
<b>Total Revenue</b>		<b>244</b>	<b>316</b>
Internal Debtors		39	37
External Debtors		2	10
<b>Total Debtors</b>		<b>41</b>	<b>47</b>
Implied Debtor Days			
Internal Debtors		n/a	n/a
External Debtors		3	12
<b>Total Debtors</b>		<b>61</b>	<b>54</b>
Short term liabilities			
Internal		0	0
External		-55	-106
Total short term liabilities		<b>-55</b>	<b>-106</b>
<b>Net Current Assets</b>		<b>-14</b>	<b>-59</b>

Source: RGL analysis of BT's Regulatory Accounts

5.7.5 In 2007/8, BT changed some of its calculations relating to internal (notional) debtors:

"The calculation of notional debtors in the 2008 Current Cost Financial Statements have been changed to reflect equivalent settlement terms experienced by BT with its external customers. The comparatives have not been restated to reflect this change in calculation."<sup>23</sup>

5.7.6 The notes to the Regulatory Accounts also state:

#### **"Working Capital**

The figures for debtors and creditors include an approximation of the internal "notional" debtors and creditors that would be incurred if trades between BT's lines of business were undertaken to a third party and at arms length. They are based upon the average trading terms of BT Group's external trades. External debtors reflect BT's external debts being allocated to services and products."<sup>24</sup>

5.7.7 Our analysis of the working capital balances included in the Regulatory Accounts for wholesale local access raises a number of queries:

- Why are there internal debtors if there are no internal sales?

<sup>23</sup> BT's 2007/8 Regulatory Accounts Page 11

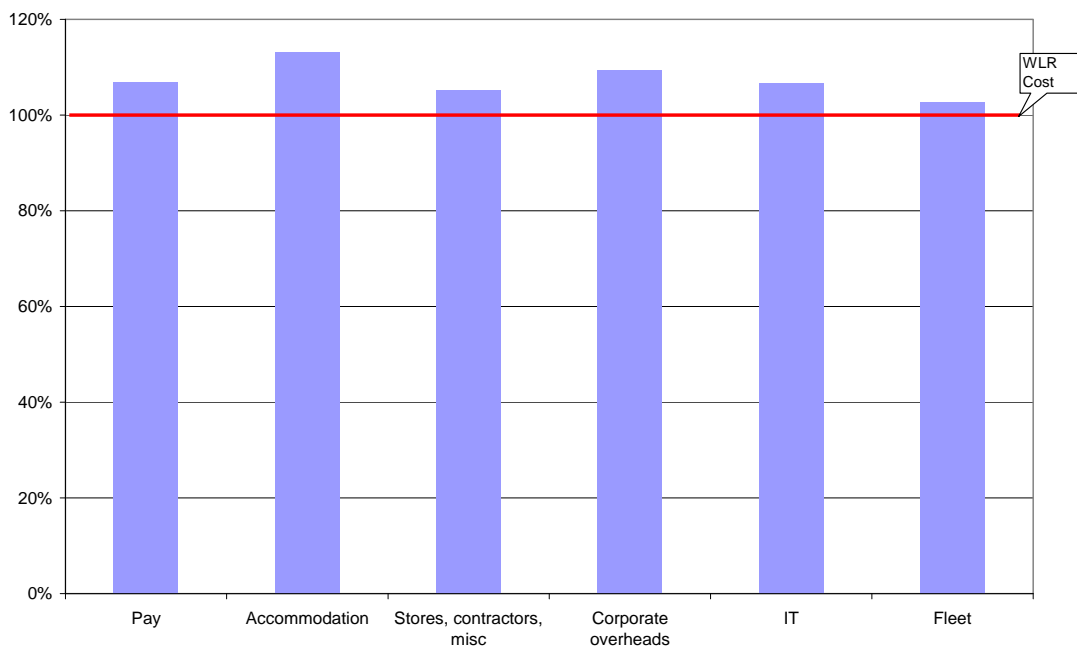
<sup>24</sup> BT's 2007/8 Regulatory Accounts Page 16

- On what basis have internal and external debtors been assumed?
- What are external short term liabilities?
- How have working capital balances been calculated in the Base Year in BT's model?
- What assumptions have been made for working capital balances in BT's estimates?
- How have working capital balances been allocated across difference services in BT's model?
- Do external debtor balances reflect actual working capital balances, contractual payment terms, or some other basis?

**5.8 Differences in allocation of costs to comparable services**

5.8.1 We note that the allocation of 'overhead' costs per line is significantly higher for MPF than for WLR services. Figure 4 below shows the cost per line allocated to MPF line rental compared to WLR.

**Figure 4 Difference between SMPF and WLR overhead allocations in consultation (Ofcom low case)**



5.8.2 In our view, there does not appear to be a valid justification for this systematic difference in costs allocated. This type of arbitrary difference in overhead allocations generated by the regulatory accounting system has previously been criticised by Ofcom. For example in a 2005 determination, Ofcom stated that:

" 20. BT's accounting system allocates certain overhead costs to different operational asset groups using a variety of apportionment methods which in some cases are complex and difficult to follow as they involve several stages of allocation. Typically these apportionment methods use the proportions in which direct costs have been allocated to plant groups to allocate the costs of overheads.

21. One of the results of this complex allocation methodology is that different products, such as PSTN and ISDN line rental which use very similar network elements have very different unit overhead cost allocations which do not necessarily reflect the actual activities or physical similarities and differences between the two services.

22. Ofcom suggested to BT that the **differences in per unit costs for a number of overhead cost categories (including "General Support", "General Management" and "Accommodation") between ISDN2 and business PSTN should be removed on the basis that there is no functional or operational rationale for a different allocation, but rather it is a by-product of the common cost apportionment calculations within the AS, which have created a disproportionate effect of individual product costs.**" (emphasis added)<sup>25</sup>

5.8.3 In our view, a similar approach may be justified in this case – in the absence of a good reason for a distorted allocation of overheads, a constant amount per line may be more reasonable than unexplained differences generated by the cost allocation process.

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<sup>25</sup> Draft resolution of a dispute between Energis and BT relating to BT's charges for WLR ISDN2 between 28 November 2003 and 1 October 2004, Ofcom, 2 February 2005