THE PROFITABILITY OF BT'S REGULATED SERVICES

A report for Vodafone

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CONTENTS

EXECUTIVE SUMMARY

Ofcom is currently conducting its Digital Communications Review, considering the future framework for regulating fixed and mobile markets. Ofcom considered evidence on the high profitability of BT in regulated markets in the period to 2015 as part of this review[1].

The latest information published by BT in October 2016[2] covering FY2015/2016 shows the true level of BT's excess profits in the last two years. These financial statements were produced taking account of Ofcom's cost allocation decision of 2015.[3] As a result the level of profits reported by BT for its regulated business was previously understated by approximately £250 million a year. Even before this correction, BT was reporting large excess profits due to a number of factors identified by Ofcom. Under the new corrected basis, comparison of the level of profits for the last two years shows that the level of excess profits has increased significantly, indicating that regulation has not been effective in moving BT's regulated charges towards costs in the period to March 2016.

Ofcom has taken action to reduce the prices that corporate customers pay for connectivity from May 2016, in part correcting for BT's mis-reporting of costs in the past. However, delays by Ofcom in conducting forward looking market reviews for those services consumed by residential customers could result in consumers continuing to pay inflated charges until new charge controls are introduced, potentially as late as 2018.

In the eleven years from 2006 - 2016, BT's excess profits before any consideration of Ofcom's cost allocation corrections were reported at **£6.8 billion**. If Ofcom's appropriate cost base had been applied throughout this period, we estimate that the reported level of excess profits would have been around **£9.7 billion**. This is in addition to the **£13.8 billion** allowed profit[4] BT has earned over the same period through the sale of regulated services. Excess profit in 2016 was **£1.1 billion**, an increase of 28% from the previous year. There is no indication that the trend is for prices to move closer in line with costs since we began reporting on BT's profitability in 2013.

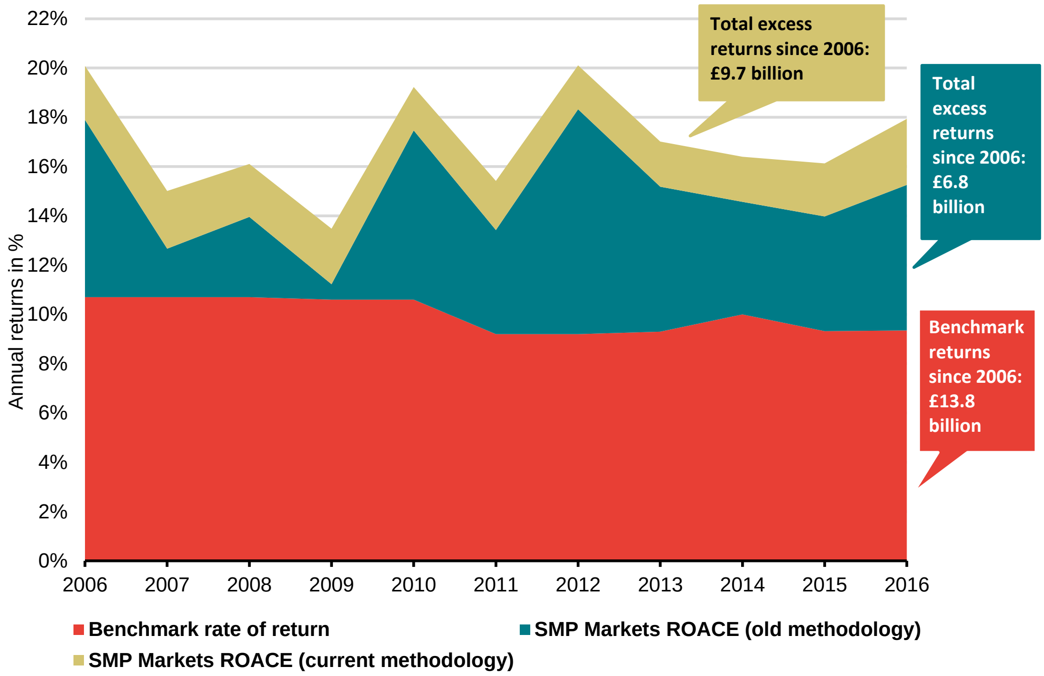
[1] https://www.ofcom.org.uk/phones-telecoms-and-internet/information-for-industry/policy/digital-comms-review

[2] http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/2016/index.htm

[3] https://www.ofcom.org.uk/__data/assets/pdf_file/0025/84814/bt_cost_attribution_review_second_consultation.pdf

[4] Up to BT's allowed WACC as determined by Ofcom

Figure 1 BT's profitability since FY2005/6, adjusted to reflect current cost allocation rules



Source: Frontier Analysis of BT Regulatory Financial Statements

Assessing the current effectiveness of Ofcom's price regulation on a market by market basis shows a number of areas where regulation does not appear to be effective in constraining BT's prices to cost:

- Returns on BT's wholesale fibre service (Virtual Unbundled Local Access – VULA, used to supply superfast broadband over BT's fibre to the cabinet network), have increased from 14% in 2015 to 22% in 2016 as residential customers migrate to these services. Ofcom does not currently cap the level of these prices. Given the upward trajectory of returns, Ofcom needs to determine whether high future returns on these services are required given the risk incurred by BT investing in these networks;
- In the Business Connectivity Market (Ethernet and traditional leased lines), returns on capital employed were 23.2% in FY 2015/2016. Ofcom has introduced a new charge control requiring BT to make annual price reductions in the order of £250 million from April 2016. However, even under Ofcom's forecasts, BT will continue to make profits until 2019 well above the cost of capital on regulated services. In addition, the market segments where BT was earning highest profits up to 2015/2016 (the provision of Ethernet services in London) has now been partially de-regulated; and
- Returns on the provision of Wholesale Broadband Access in those parts of the country where BT faces little or no network based competition, typically in rural areas, are 70%. This suggests that the current combination of a charge control on legacy services and a 'fair and reasonable pricing' condition on current services in these markets is not protecting end users.

Ofcom needs to consider whether this evidence on current profitability is consistent with the regulatory judgement applied when regulating prices, in particular:

- Whether the high returns earned on BT's Fibre to the Cabinet investments[5] to date are appropriate to compensate BT for the risk in investing in this network, i.e. would BT have deferred or foregone investment in FTTC had it known that Ofcom would regulate the level of prices for these services towards costs on a forward looking basis;
- Whether Ofcom's approach to the regulation of residential broadband has been proportionate, with BT earning returns of 70% on services delivered to the sizeable minority of consumers who mostly reside in rural areas and who are reliant on BT's network; and
- Whether the fact that, despite consistently high returns in recent years, competition has been sufficient to constrain BT's prices in central London for business customers purchasing leased lines and if this outcome is consistent with the view that BT does not have significant market power in these markets.

The remainder of the report is structured as follows:

- Section 1 looks at the previous reporting of BT's profitability and excess returns by both Frontier Economics and Ofcom and the issues now identified with the cost data underlying those analyses;
- Section 2 focuses on the figures provided within BT's 2016 Regulatory Financial Statements, providing an assessment of BT's profitability from regulated services in 2015/16 as well as providing an assessment of what BT's regulated returns would be from 2006 onwards, if appropriate cost allocation rules has been used;
- Section 3 sets out implications for forward looking regulation, providing a market by market assessment of profitability and presenting conclusions on the key questions that need to be addressed when considering regulation going forward; and
- Annex A provides an overview of the how the UK fixed communication market is regulated and the background to recent policy developments in Ofcom's approach to BT's Regulatory Financial Reporting.

[5] Through selling its VULA service in the wholesale market

1 INTRODUCTION

1.1 Frontier's previous reports

Frontier has produced three previous reports based on a review of BT's profitability:

- The Profitability of BT's Regulated Services: a report prepared for Vodafone, November 2013[6];
- The relationship between BT profitability and charge controls: a report prepared for Vodafone, November 2014[7]; and
- Assessment of BT's regulated profitability between FY 2006 and 2015. A report prepared for Vodafone. October 2015[8].

These reports were based on the Regulatory Financial Statements produced using cost allocations which Ofcom has now determined to be inappropriate, with inconsistencies between the cost base used in the Regulatory Financial Statements and that used for regulation (see the annex for details). For these reports we applied one adjustment to take account of a known material difference between the Regulatory Financial Statements as published and the cost base used for setting charge controls – the 'regulatory asset base' (RAB) adjustment.

The reports showed that BT consistently achieved returns across markets where it had been found to have Significant Market Power (SMP) materially in excess of its cost of capital.

1.2 Ofcom's Digital Communications Review

Ofcom itself has noted that excessive returns can indicate shortcomings of the regulatory framework as part of its Digital Communications Review:

"[…] evidence of systemic under or over-recovery of costs in regulated markets may be evidence of more fundamental problems in market structure or regulatory approach. These could inform longer term changes to market structure or regulatory strategy [...]."[9]

In the same document, Ofcom produced its own analysis of BT's profitability over the period 2006 to 2014, applying additional adjustments based on the greater information available to Ofcom. Ofcom also took account of over-payments by CPs for certain wholesale services which were set above a cost oriented price by BT. These overpayments were returned to the CPs following legal claims against BT and are not taken into account within its Regulatory Financial Statements, however some of these claims are still subject to ongoing appeals. Ofcom also adjusted results to take account of differences between the cost allocation methodology

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6 https://www.frontier-economics.com/documents/2013/11/the-profitability-of-bts-regulated-servicesfrontier-report.pdf

7 http://www.vodafone.com/content/dam/group/policy/downloads/the-relationship-between-BTprofitability-and-charge-controls.pdf

8 https://www.ofcom.org.uk/__data/assets/pdf_file/0033/57894/vodafone_annex_2.pdf

9 Ofcom Strategic Review of Digital Communications Discussion document, July 2015. Paragraph 4.41

used to set charge controls and that used in the Regulatory Financial Statements (for example, when BT changed the cost allocation approach in the Regulatory Financial Statements in such a way to increase reported costs in markets prior to a charge control being set in that market).

Ofcom's analysis indicated that the excess profits over the period 2006 to 2014 were of the order of £4 billion (compared to Frontier's estimate of £5.5 billion). However, neither of these two estimates takes account of the impact of the past deficiencies in the cost allocation methods used to produce the Regulatory Financial Statements (discussed below) which additionally resulted in the cost base for regulated services being overstated and hence profits under-recorded.

In the DCR discussion document, Ofcom sets out a number of reasons why BT may show returns which differ from the cost of capital.

- incentive effects;
- balancing policy objectives;
- price control design;
- inherent forecasting challenges;
- changes in the way costs are recorded; and
- 'outperformance' by BT.

Of these factors, 'incentive effects', 'price control design' and 'inherent forecasting challenges' in part explain why BT's profitability may temporarily depart from the cost of capital but do not explain why this departure is consistently favourable to BT. For example, in most of the key charge controls, Ofcom attempts to set prices so that they will converge to a central estimate of costs. It is inevitable that the out-turn level of costs will be different from the central forecast of costs, but there is no reason why BT should consistently 'outperform' against this central forecast (with Ofcom estimating that this outperformance accounts for a third of the excess profitability).

There are policy objectives which explain why Ofcom may deliberately set price regulation in specific markets which is expected to lead to prices above costs, for example:

- In contestable markets where this is likely to stimulate long term competition whose benefits in the long run will outweigh any short term losses from elevated prices; and
- In innovative services where Ofcom seeks to encourage investment by BT which could be deferred and where the benefits of this investment being made again outweigh any short term losses from prices above cost.

However, these factors only apply to a small proportion of services and, as such, do not explain why BT has consistently generated excess profits across a wide range of markets, including those which do not appear to be contestable and where there is little innovation.

Changes in the way costs are recorded will impact on recorded profitability, but this in itself does not explain excess profits, unless BT managed to inflate costs used to set charge controls and then later changed the recording of costs to reflect a more appropriate level of costs.

A further explanation for this consistent excess profitability is that the information asymmetry between BT and Ofcom (and other stakeholders) means that even where Ofcom endeavours to set prices to reflect costs, prices are set above cost. For example, during the regulatory process to set forward looking charge controls, stakeholders have the opportunity to comment on Ofcom's forecasts. Where BT has internal evidence that elements of Ofcom's forecasts are not soundly based then it need only submit that evidence which results in changes to the forecast which will tend to increase the level of prices. This will lead to BT appearing to 'outperform' charge controls, even when the real issue is the process used to set charge controls.

1.3 BT's historic under-reporting of profitability

In the DCR, Ofcom identified changes in the recording of costs as one reasons for the excess profits generated by BT.

Due to concerns about the reliability of BT's reported costs, Ofcom engaged consultants, Cartesian, to review the cost attribution methodologies used by BT in compiling the Regulatory Financial Statements. Cartesian found:

'[…] many apparent deviations from the RAP[10], most notably in accuracy, causality, objectivity (including transparency) and consistency of the RFS.'[11]

In its assessment of the findings of the Cartesian report, Ofcom identified 'attribution rules which were clearly inappropriate'. The aggregate effect of correcting for these inappropriate rules and other errors identified by Cartesian was estimated by Ofcom to have resulted in BT inappropriately allocating £255 million in costs to regulated services[12] in 2013/14, resulting in BT's reported profits being understated by a similar amount.

This means that the profits BT has reported in the past, and on which the Frontier and Ofcom analyses of excess profitability were based, were under-reported compared to an appropriate cost base. This issue is in addition to the factors identified by Frontier in its previous reports which led to the excess profits as then reported.

[10] The Regulatory Accounting Principles: The principles against which BT were obliged to product the Regulatory Financial Statements

[11] Cartesian. BT Cost Attribution Review 08 June 2015

[12] Review of BT's cost attribution methodologies Second consultation: 13 November 2015

2 2016 REGULATORY FINANCIAL STATEMENTS

2.1 Overview

The 2016 Regulatory Financial Statements are the first that were fully produced with Ofcom's corrected cost allocations and with Ofcom approving any changes as set out in the 2014 Statement on cost accounting. The underlying methodology also reflects the cost allocation issues identified in the Cartesian report.

Each Regulatory Financial Statement contains accounts for both the current year and the previous year. The 2016 Regulatory Financial Statements show the company's performance for the 12 months ending March 2015 and March 2016. The new guidelines oblige BT to set out changes in regulatory accounting methodologies and how they affect the company's performance.

Therefore it is possible to exactly identify the impact of the change in cost attribution. In this section we look at the overall performance of BT in 2015 and 2016 before we turn to a more detailed analysis of how the methodology changes impact on 2015 and 2016 performance in section 2.2. In section 2.3 we estimate the effect of these changes in the costs in previous years and hence the effect on BT's historical profits, i.e. back-casting the methodology changes on historical performances.

Figure 2 shows the Return on Average Capital Employed (ROACE) for FY 2014/15 and FY 2015/2016 as stated in BT's 2016 Regulatory Financial Statements. The general level of returns is above the cost of capital for all markets except the Narrowband markets[13]. In particular, there seems to be high returns in Fixed Access Markets, Business Connectivity Markets and in the WBA – Market A. The returns across all SMP Markets indicate profitability significantly above the Weighted Cost of Capital[14] (WACC) in both years, with a 1.8 percentage point increase in 2016 compared to 2015.

[13] This market included call origination and call termination services used to deliver voice calls. The prices in this market are set based on a model of a hypothetical efficient network operator. BT's low returns across this market suggest that its actual costs are higher than the hypothetical efficient network.

[14] Estimated as a weighted average across all SMP markets.

Figure 2 Return on Mean Capital Employed (ROACE) by market and for all SMP markets (current methodology)

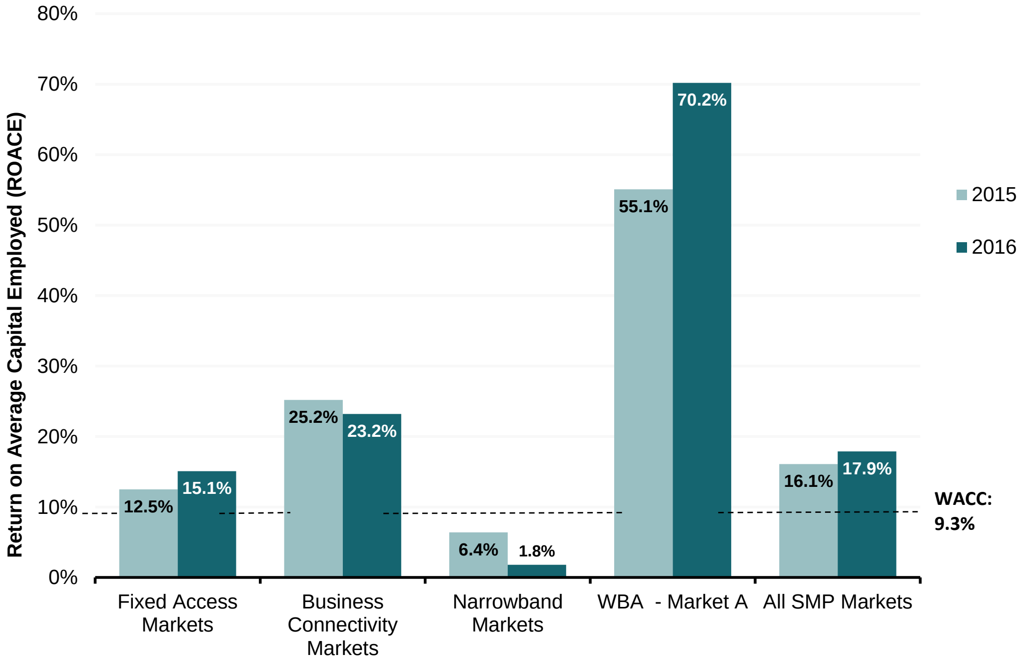
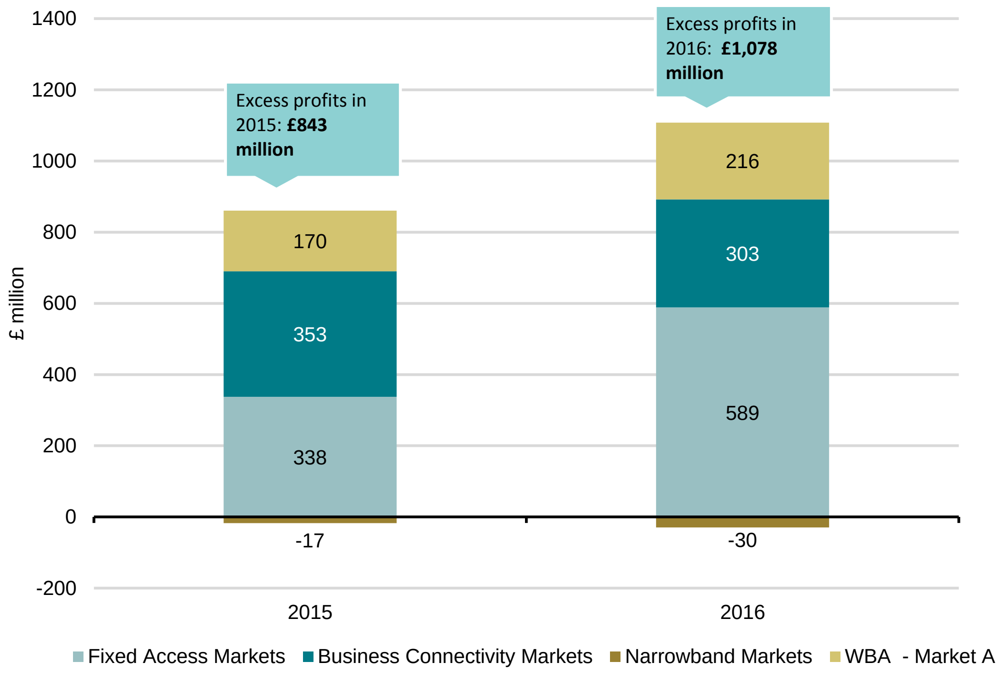


Figure 3 shows excess returns for all SMP Markets. Excess returns were calculated as the amount by which profits exceeded costs, including a return on capital in line with the WACC. Fixed Access Markets, Business Connectivity Markets and the WBA Market all show returns above the benchmark rate for both 2015 and 2016. BT was able to increase *excess* returns in Fixed Access Markets by 74% in one year (from £338 million in 2015 to £589 million in 2016) and significantly increase its returns in the WBA Market (from £170 million in 2015 to £216 million in 2016, a 27% increase). These increases more than offset the decrease in returns in Business Connectivity markets and Narrowband markets, leading to a 28% increase of excess returns in 2016.

Figure 3 Excess returns above the benchmark rate (WACC) for SMP Markets (current methodology)



2.2 Impact of cost allocation changes

A number of methodological changes were introduced in the 2016 Regulatory Financial Statements to align the accounts to the appropriate cost base, rather than the inappropriate approach used by BT previously. As described in the Annex, Ofcom has imposed some changes in the allocation of costs and in other cases BT made a number of other methodological changes that were then approved by Ofcom. These changes have further brought into focus the excess profits, as Ofcom had based regulation on inappropriate estimates of BT's costs which are in addition to the excess profits and corresponding issues identified in our previous reports and in Ofcom's DCR document. This means that even if Ofcom introduces regulations based on the corrected cost data, there is still a need to address the challenges previously identified, such as BT's consistent 'outperformance' compared to forecasts.

BT was required to provide data for 2016 with the allocation changes 'reversed', i.e. a report of what the accounts would have been had these changes not been made. While there were changes to the level of revenues, we focus on changes in cost attribution because these are the most material changes and provide useful information on the cost based level of prices if similar cost allocations had been used in the past.

In this section we will examine the methodology changes and how they have impacted BT's reported performance in 2016. In particular, we will:

- Show the impact of the revised methodology on BT's allocation of operating costs on SMP markets. Here we differentiate between changes driven by Ofcom and changes driven by BT; and

- See how this change in methodology therefore impacts the overall profitability of BT in 2015 and 2016.

Figure 4 shows the impact of the changes in cost allocation on total CCA operating costs across all SMP markets. The most significant were driven by changes required by Ofcom which reduced the allocation of costs to SMP Markets. There were some offsetting changes driven by BT. Overall. there was a significant decrease in costs allocated to SMP Markets (£237 million in 2015/16). This means that if Ofcom had not required these methodology changes, BT would have inappropriately attributed an additional £237 million to SMP Markets in 2016/16. In section 2.3 we will examine the impact of this inappropriate allocation of costs on BT's historical performance[15].

Figure 4 Comparison of total CCA operating costs for all SMP markets when using the old and the current cost attribution methodology in 2016

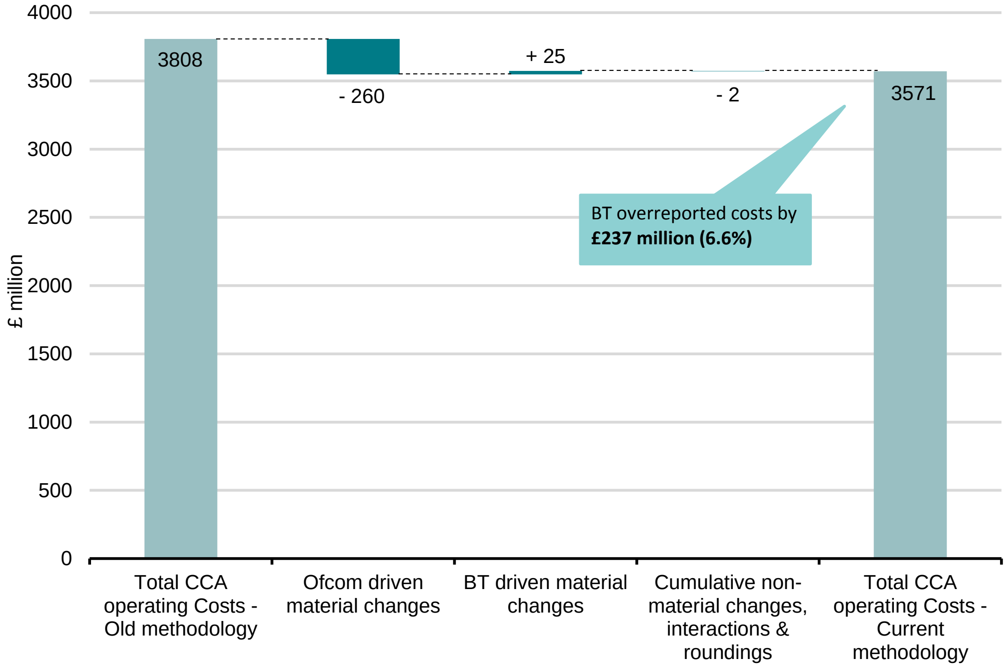
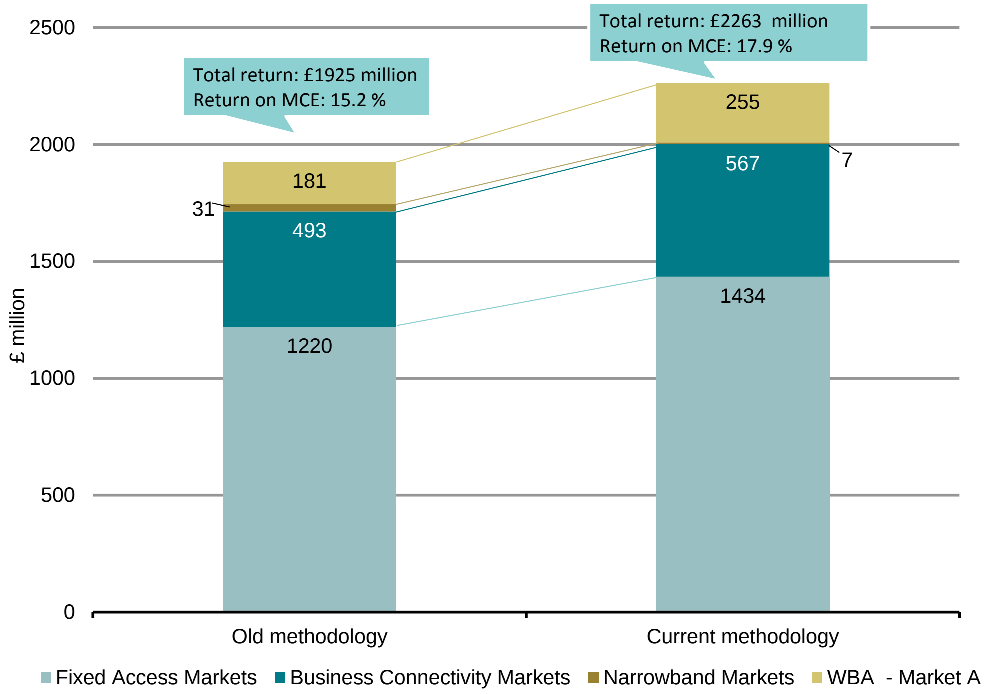


Figure 5 illustrates that the change in cost attribution has a material impact on the profitability of SMP Markets in 2016. The current cost attribution allocates fewer costs to all of the SMP Markets, except for Narrowband Markets. Since the current methodology only results in minor changes in reported revenues[16], the changes in cost allocation have a direct impact on BT's returns in SMP Markets. While the current methodology shows a return on MCE of 17.9%, the old methodology would have reported an overall return on MCE of 15.2%.

[15] The methodology changes did not have a material impact on mean capital employed (0.06%). We will therefore not consider this further in our analysis

[16] The only major change was an increase in revenue for the WBA Market – Market A of £84 million due to the inclusion of fibre based services.

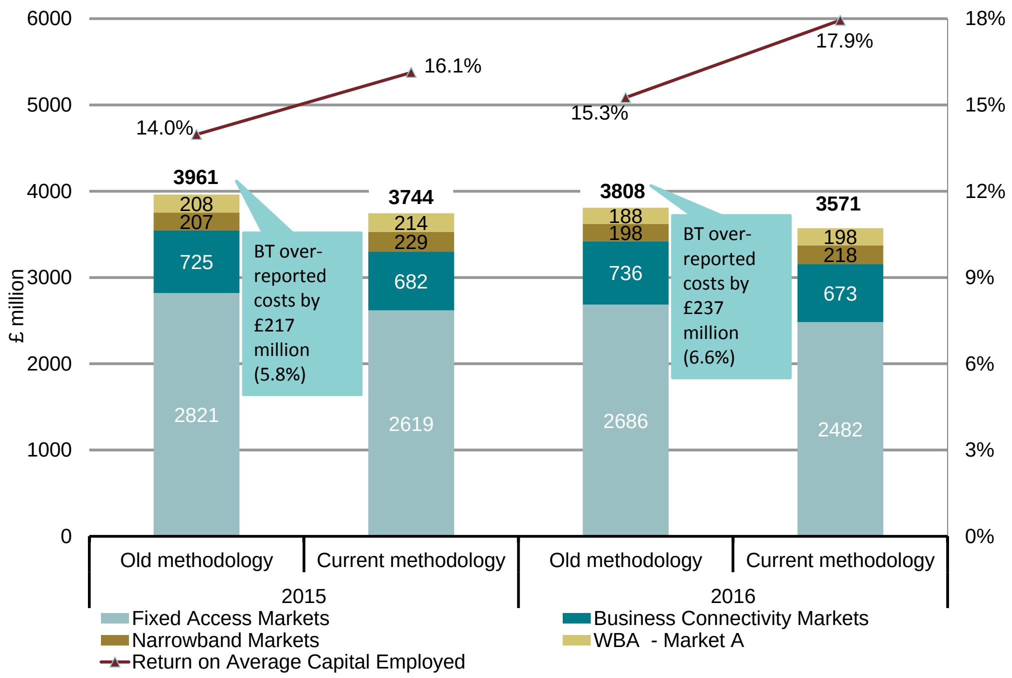
Figure 5 Previous versus current methodology: Total return for SMP markets in 2016



The Regulatory Financial Statements also presents data for 2015, reflecting how BT would have reported their regulated costs had Ofcom not corrected their cost allocation methodology to exclude wholly inappropriately allocated costs.

The following figure shows the total CCA cost allocated to SMP markets for the old and the revised methodology, for both 2015 and 2016. In 2015, under the old methodology, BT over-reported its costs allocated to SMP market by 5.8%, compared to 6.6% in 2016. This overstatement directly affects the ROACE and in 2015 the corrected value is 2.1 percentage points higher than under the old methodology. The impact is even larger for BT in 2016, with the old methodology resulting in ROACE value which is 2.6 percentage points lower than reported under the current attribution rules.

Figure 6 Impact of the revised methodology on cost allocation and ROACE for 2015 and 2016



2.3 Impact on historical profits

Clearly, if past Regulatory Financial Statements had been produced using the corrected allocation bases which Ofcom determined to be appropriate, the reported level of costs for SMP markets would have been lower. This has two implications:

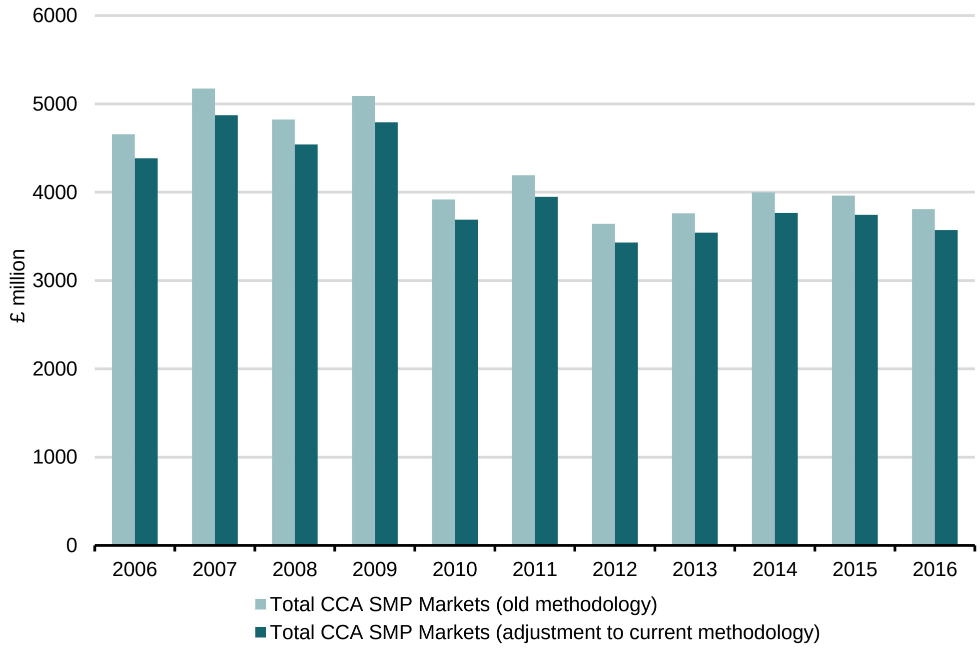
- The level of profits reported by BT for SMP markets in previous Regulatory Financial Statements were understated compared to an appropriate cost base; and
- If BT had used appropriate cost allocations in the past, Ofcom would have set charge controls at a lower level.

Some of the issues identified by Ofcom in its review of cost attribution were based on cost allocation methods which had been used by BT consistently over the past decade, such as the allocation of overheads. For 2013/14, Ofcom estimated that the result of inappropriate and erroneous allocations had broadly the same impact on SMP markets as shown in the 2016 Regulatory Financial Statements.

On the basis of the above we have estimated BT's previous performance if appropriate cost allocations had been used by 'back-casting' the effect of the cost allocation methodology changes on historical costs. We have applied a constant percentage adjustment calculated by comparing allocated costs to SMP markets under the old and revised methodology for 2015 and 2016. We applied the average reduction of 6.2% (an average of 5.8% in 2015 and 6.6% in 2016) to the costs allocated to SMP markets in all earlier years, i.e. we restated total CCA operating costs for SMP markets as originally reported in BT's Regulatory Financial Statements.

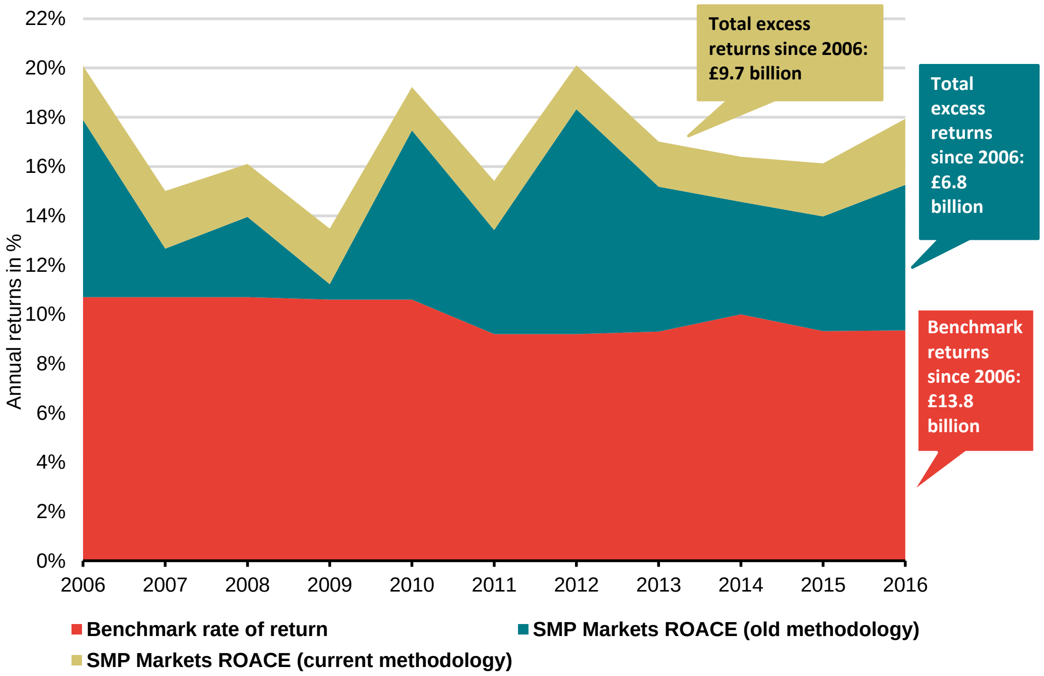
The impact of these downward adjustments on total CCA operating costs for all SMP markets can be seen in Figure 7.

Figure 7 Impact of back-casting the methodology changes on historical total CCA costs



This has a direct impact on the profitability in SMP Markets, resulting in consistently higher excess returns as illustrated in Figure 8.

Figure 8 The impact of back-casting the methodology changes on the historical ROACE



Since 2006, returns (ROACE) have been clearly above the benchmark rate of return (WACC) in each year (after applying the regulatory asset base adjustment), indicating excess profits. If the corrected allocation methodology had been used, either BT would have made even higher excess returns than reported in their Regulatory Financial Statements or prices for consumers would have been lower. The total estimate of excess returns since 2006 is £9.7 billion.

3 IMPLICATIONS FOR FORWARD LOOKING REGULATION

3.1 Overall results

It is helpful to understand the root causes of BT's high returns. Three of the possible causes identified by Ofcom for consistent excess profits:

- 'changes in the way costs are recorded' - the inappropriate cost allocations BT used prior to 2016 were the basis of price regulation in this period (i.e. price controls were aiming at the wrong target). While Ofcom has now identified this issue and should address it in future regulation, this will still show up in excess profits where past charge controls are still in place;
- Consistent 'outperformance' driven by biases introduced in the charge controls setting process, which have resulted in BT being able to lower costs faster than forecast by Ofcom (i.e. price controls missed the target), which should inform the process that Ofcom uses to set these forecasts in the future; and
- 'balancing policy objectives' - where Ofcom has chosen to deliberately target prices above costs (i.e. 'aiming up' by Ofcom) or allowed BT to set the level of prices, with an analysis of whether the degree by which prices exceed costs is proportionate, which may feed into future decisions.

The introduction to the 2016 Regulatory Financial Statements attempts a partial decomposition of the overall SMP returns. Adjusting for charge controls where Ofcom has set the cost base higher than BT's actually incurred costs and excluding products where Ofcom has chosen not to cap BT's prices (i.e. 'balancing policy objectives'), the returns on charge controlled services are still 13.3%, significantly above the WACC.

Below, we attempt a more granular analysis of the degree to which excess profits for some of the key regulated markets are driven by each of these three factors and conclude on the potential implications for forward looking regulation.

3.2 Business Connectivity Market Review

The BCMR reviews and sets regulation for wholesale connectivity services used by competitive providers to serve their end corporate customers and to provide connectivity within their networks (for example, mobile operators using these services to 'backhaul' traffic from the radio base stations to their core network).

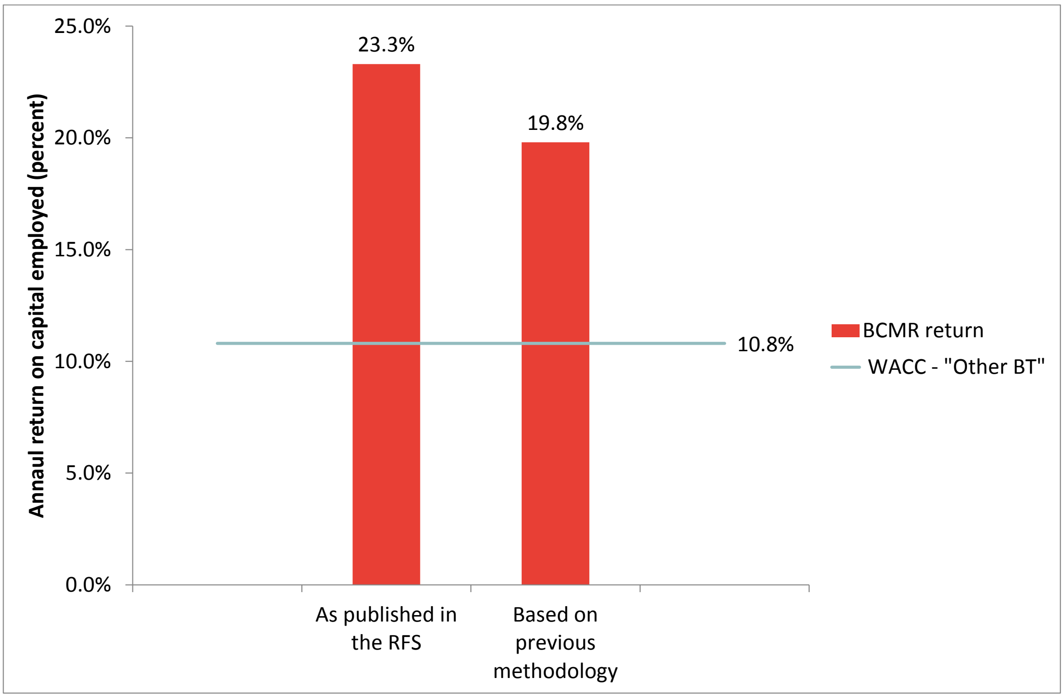
3.2.1 2013 review

The 2016 Regulatory Financial Statements reports on the period before the latest charge control was introduced, i.e. covering two years of the three year control which commenced in April 2013. As Ofcom has noted[17], the adjustments made to cost allocation and hence prices from May 2016 (the current charge control) are

[17] Ofcom. Statement regarding BT's regulatory accounts for 2015/16 31 October 2016

not included in the prices and revenues for the 2016 Regulatory Financial Statements; but the cost methodology does reflect these changes. This inconsistency means that the 2016 Regulatory Financial Statements, as published are less helpful in providing an accurate measure of the effectiveness of the 2013 BCMR in constraining BT's prices to the cost base used to set the charge control (i.e. before clearly inappropriate cost allocations were corrected). However, the Regulatory Financial Statements also give estimates of returns with the methodological changes reversed, which are shown in the chart below. This indicates, in addition to the excess profits resulting from BT mis-reporting of costs, the remedies introduced in 2013 performed poorly in constraining BT's prices in this market to the level of costs consistent with those reported in 2013.

Figure 9 Returns in the Business Connectivity Market on 2015/16



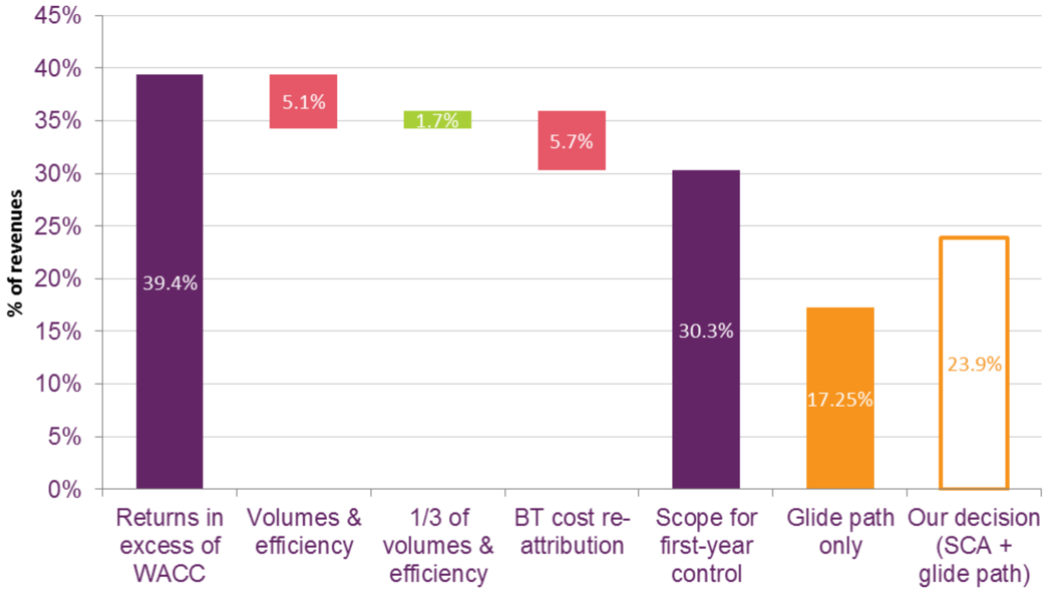
Source: 2016 Regulatory Financial Statements

3.2.2 The 2016 review

Ofcom recently completed the 2016 BCMR, finding BT dominant in a number of markets and introduced a charge control which came into force in April 2016. As noted above, this charge control took into account the results of the Cartesian report on BT's cost allocations. Ofcom does not routinely implement one off price changes at the beginning of charge controls (so called P0 adjustments) as setting a glide path from the current level of prices can provide better incentives to reduce costs over time. However, in this case allowing BT to maintain the benefit of disproportionately allocating costs would have no positive incentive effects and could even be argued would provide increased incentive for BT to attempt to 'game' the regulatory process in the future, as it would enjoy the fruits of this gaming over a longer period. As such, Ofcom introduced one off price reduction to take account of the results of the Cartesian review.

Ofcom determined the extent of the one off adjustments at a level which did not fully bring BT's profitability into line with a reasonable level in the first year of the charge control. The chart below shows that for the Ethernet basket, to move BT prices into line with costs (including a reasonable return) would require a 39% reduction in prices.

Figure 10 Ofcom's analysis of the potential for starting charge adjustments



Source: Business Connectivity Market Review – Volume II Review of competition in the provision of leased lines Statement Published: 28 April 2016

Ofcom considered that some of this was due in part to BT outperformance in the 2013 charge control, which would be more appropriately dealt with through a 'glide path' approach to preserve efficiency incentives and some was due to changes in BT's allocation over time which Ofcom reversed in order to prevent BT over-recovering costs. Adjusting for these effects, prices could be reduced by 30% in the first year and still be consistent with incentive regulation. However, Ofcom set the charge control (a combination of the Starting Charge Adjustment and the CPI-X glidepath) to reduce prices by only 24%, leaving prices 25% above reported cost (and some 9% above a level consistent with incentive regulation).

Deregulation of the Central London Area

The returns in the 2016 RFS are particularly high for current generation (AISBO) services in the West, East and Central London Area (the 'WECLA'). Ofcom did not impose a charge control from 2013-2016 given the greater number of competing network providers. However this competition does not appear to have been sufficient to constrain BT's prices to cost, with BT showing returns of 50% in this market in 2016.

Despite this evidence that competition had not constrained prices to costs, in the 2016 BCMR, Ofcom fully deregulated the Central London Area, having determined that BT does not have SMP in this area. In making this determination Ofcom gave high weight to the existence of rival infrastructure in this market, with other factors that Ofcom is required to take account of, such as market share and profitability being consistent with BT continuing to have SMP. Ofcom's rationale was:

"[…] where we have strong evidence on rival infrastructure being significant enough to sustain effective competition, this can overcome evidence on high profitability as a potential indicator of SMP. In these circumstances, high current profits should act as a signal to encourage rivals to compete actively for customers"[18]

The sustained high returns in this market segment since prices were deregulated would appear to be inconsistent with entry and competition, effectively constraining BT's prices to a competitive level in the market. This suggests that despite the presence of infrastructure based competitors in the market, BT still has market power.

3.3 Fixed Access Market (LLU/WLR)

Local Loop Unbundling (LLU) and Wholesale Line Rental (WLR) services are used to offer line rental and broadband services to residential customers. Charge controls for WLR and LLU were set together in March 2014 to ensure not only that the level of charge controls was cost based but that the differentials between the main rental products (WLR, MPF and SMPF) were appropriate. As such, it is appropriate to look at these services together.

Ofcom also applied an upward adjustment to BT's reported costs for the cost base used to set the controls to take account of the fact that the line rental services used equipment that was largely fully depreciated, which would otherwise have resulted in zero capital charges (depreciation and a return on capital employed) for the use of the equipment. BT has estimated that if the cost base is adjusted to take account of this adjustment, then the return on capital employed for the fixed access markets in aggregate would be 0.3% lower[19].

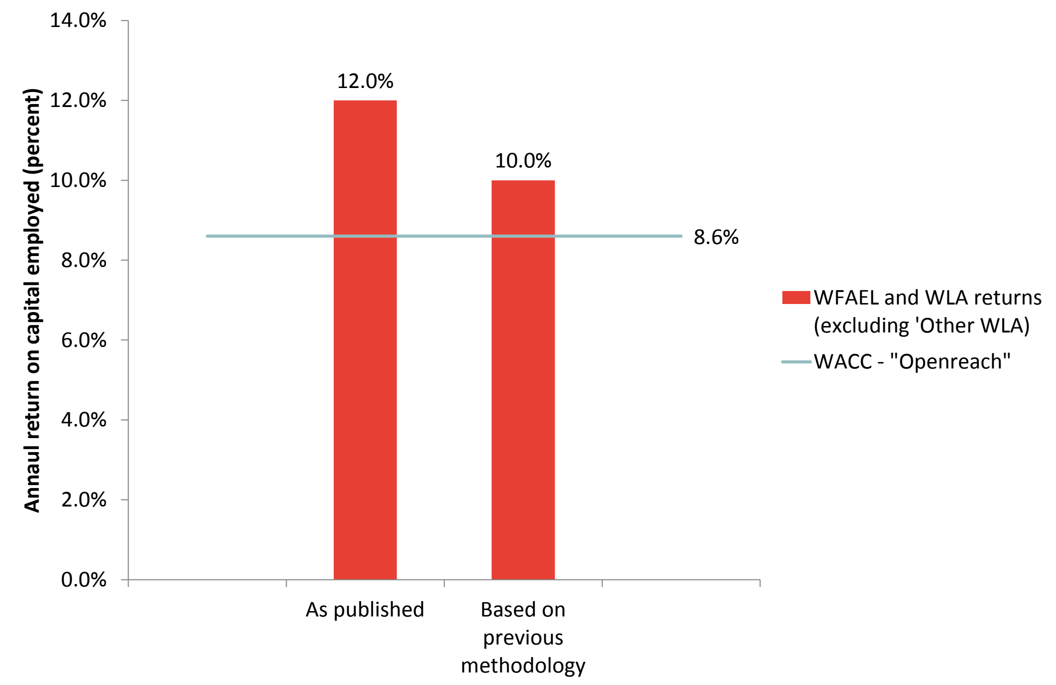
The chart below shows the returns for this market, adjusted to exclude the 'Other WLA' category[20] which is described in more detail below.

[18] A9.106

[19] BT Regulatory Financial Statements 2016 - Appendix 3.2 Adjusted Financial Performance Schedule 2015

[20] This category is included BT's fibre based 'VULA' services which were not subject to a charge control.

Figure 11 Returns in the WFAEL and WLA markets (excluding 'Other WLA) 2015/16



Source: BT Regulatory Financial Statements 2016

When calculated using the previous methodology, the returns across the market are only marginally above costs (without taking account of the HON adjustment applied by Ofcom). This may be consistent with a glide path to prices in 2016/17 (the final year of the charge control) in line with Ofcom's forecasts used to set the charge control. However, under the appropriate cost base as published in the 2016 Regulatory Financial Statements, the prices are well above costs and will presumably continue to be above costs for the final year of the charge control.

The current charge controls will end in March 2017. However, the WLA market review is ongoing and Ofcom has stated that it will not be completed by March 2017. As a result, there will be no charge control in place from April 2017 until the market review has been finalised and a charge control (if any) has been determined, i.e. there will be a 'lacuna' between successive charge controls.

Such lacunae have occurred at the end of the previous two charge controls (although the market review process in both cases was further advanced compared to this round and hence the lacuna this time is likely to have a longer duration). In these cases, Ofcom negotiated an agreement with BT to limit the relevant prices during the lacuna and Ofcom is proposing a similar arrangement this time, albeit having reserved its position on the time period.

One critical question is the degree to which the corrected cost allocations are reflected in the interim arrangements. If Ofcom had managed to complete the market review in time, presumably it could have introduced a one off P0, adjusted in the charge controls to address the wrong cost base being used, as it did for the BCMR. Simply 'rolling' the existing charge control (based on the wrong costs) forwards would lead to prices being set based on costs that were overstated by £177 million in 2013/14 in the Wholesale Local Access Market.

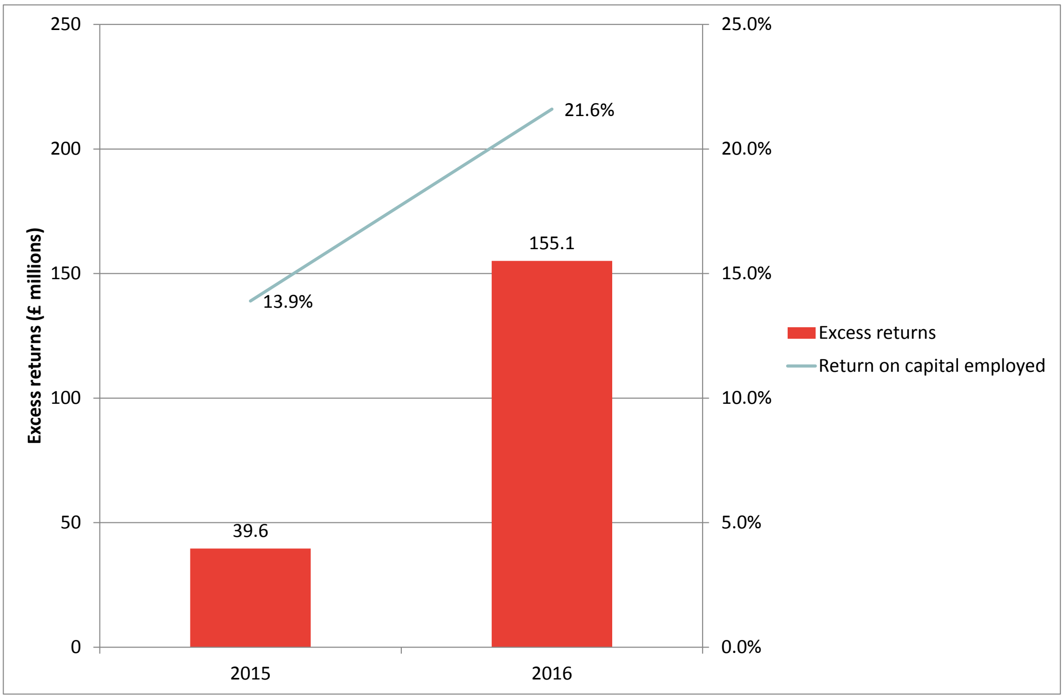
3.4 Virtual Unbundled Local Access

Virtual Unbundled Local Access (VULA) services provide access to BT's fibre to the cabinet service. BT was found to have SMP in the relevant market in the 2014 Wholesale Local Access market review and a series of remedies were applied. However, given that VULA services were considered to be relatively new, a charge control was not imposed. Instead, BT has to demonstrate that there is not a 'margin squeeze' between its VULA wholesale service and retail services (e.g. BT Infinity), with Ofcom defining how this test should be carried out. As such, regulation does not directly constrain the level of BT's wholesale prices.

The 2014 WLA review also applied cost accounting remedies, requiring BT to include VULA services in the Regulatory Financial Statements, although the main GEA rental services are not separately identified but are included in the 'Other WLA' category (VULA rental revenues appear to account for the majority of the revenues in this category based on the volumes of fibre customers reported by BT and the associated wholesale prices).

This category shows excess profits (i.e. revenues exceed fully allocated costs including a return on capital employed equal to the WACC) and overall shows a return of 21%.

Figure 12 Returns in the 'Other WLA' category (primarily VULA)



Source: BT Regulatory Financial Statements 2016

The high returns and the trajectory of these returns for what is still a comparatively new investment[21], suggests that constraints from similar products such as ADSL are not sufficient to prevent BT pricing above costs, as calculated in the Regulatory Financial Statements. This is reflected in the rapid growth of fibre based broadband in recent years, with fibre making up a third of Openreach's broadband subscribers as at Q2 2016/17. To the degree that the current levels of return were predictable when investments were being made (i.e. there was limited down side risk and hence the option to defer investment had relatively low value), then constraining BT's future returns may not significantly impact BT's incentives to invest. If this were the case, there would be no need to allow BT to continue to earn high returns on these past investments in order set a precedent to incentivise new investments.

3.5 Wholesale Broadband Access

The Wholesale Broadband Access markets comprise of 'active' wholesale products used to deliver broadband services, in particular BT's 'bitstream' products. These products are delivered by BT Wholesale who buy in inputs from BT Openreach which are largely accounted for on an 'Equivalence of Inputs' basis. As such, the returns shown in the Regulatory Financial Statements for this market are for the assets and activities specific to these services and are in addition to returns generated by BT Openreach on the inputs. If the Openreach input prices are above costs, the excess profits shown for WBA in the Regulatory Financial Statements will understate the absolute end to end profits earned by BT in the supply of these products.

Ofcom has defined WBA markets on a geographic basis reflecting the different competitive dynamics in different areas, with competition from Virgin Media, TalkTalk and Sky (the latter two relying on BT's LLU services) in many areas of the UK.

The last WBA market review was carried out in 2013. Ofcom determined that there are three geographic markets:

- The Hull Area where KCOM is the incumbent operator (0.7% of UK premises);
- Market A: exchanges where there are no more than two Principal Operators[22] (POs) present or forecast to be (9.5% of UK premises);
- Market B: exchanges where there are three or more POs present or forecast to be present (89.8% of UK premises).

KCOM has SMP in the first market, BT has SMP in Market A and no operator has SMP in Market B.

The products supplied by BT Wholesale in this market include both legacy 'IPStream' services and current 'WBC' services. A charge control was placed on BT for the period April 2013 to March 2016 and covering only legacy IPStream

[21] Generally newer networks would be expected to have lower reported profitability than more mature networks due to demand being relatively low as take up is still increasing and the capital costs being relatively high due to the limited accumulated depreciation for newer assets.

[22] Virgin Media, TalkTalk or Sky.

products. Other WBA products, such as WBC (the current generation of ADSL and VDSL products) are subject to a 'fair and reasonable' price condition.

The IPStream charge control was set using a less complex model than that used to set other charge controls, with Ofcom stating:

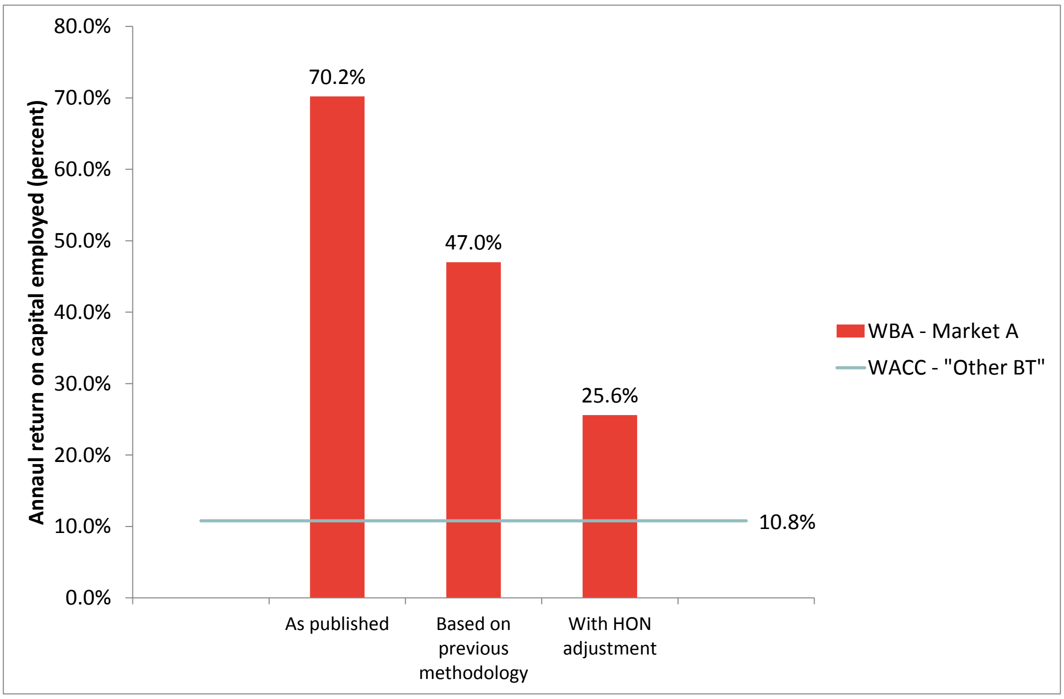
"[…] a simplified model is a more proportionate approach now that we are controlling prices in only a relatively small part of the overall WBA market."

Ofcom's model was based on BT's costs, including a hypothetical ongoing network (HON) adjustment similar to that applied to WLR. The HON adjustment increased costs by estimating 'the costs which BT would incur were it to continue to serve customers using only IPstream Connect'. Ofcom's rationale for the HON adjustment applied to legacy technology was that customers were migrating to new technologies and hence BT was reducing investments in the legacy technologies, with BT investing in current technologies[23] to which customers were migrating.

The following chart shows the returns for WBA market in 2016:

- as reported;
- with the old, uncorrected cost base; and
- on a basis consistent with the cost basis used to set the charge control for IPStream services (the HON adjustment applied).

Figure 13 Returns on WBA market A – 2015/16



Source: BT Regulatory Financial Statements

[23] The application of a HON adjustment to legacy services does raise distribution issues as the potential dynamic benefits from the inflated prices paid by those customers using a legacy service may not be available to the customers paying these inflated prices. For example, to the extent that some customers continue to take legacy ADSL based services due to lack of availability higher speed services in their area, they appear to be gaining little benefit from the inflated prices either through increased competition or increased investment by BT.

The price regulation applied to the WBA (the IPStream charge control plus a fair and reasonable condition applied to other services) does not appear to have been successful in constraining BT's prices to cost.

Prices for IPStream products in aggregate are 48% above fully allocated costs (including Openreach inputs and a return on capital employed). This may in part reflect the HON adjustment applied to the charge control for this legacy technology. However prices for the current generation WBC products, which make up 46% of the revenues in the market and for which a HON adjustment does not appear to be appropriate[24], are 55% above costs. While it is unclear what test should be applied, this level of WBC prices could be above a level considered 'fair and reasonable' as required in the remedy applied to these services.

3.6 Conclusion

Ofcom has identified deficiencies in BT's previous cost allocation methodology and the prices that corporate customers pay for connectivity have been adjusted from March 2016, However, due to delays by Ofcom in conducting market reviews for those services consumed by residential customers, there will be 'lacunae' in price regulation from April 2017 which may result in consumers paying higher charges until new charge controls are put in place (potentially as late as 2018 - a full 10 years after the issue of the inappropriate allocation of costs to Openreach was raised by TalkTalk[25]).

Even adjusting for this change in allocation methodology, it appears that past charge controls placed on both residential broadband and business services have not constrained BT's prices to cost as calculated under the previous methodology. Such an outcome results in costs to consumers, who pay higher prices than necessary, while having no benefits in terms of incentive regulation (which are a function of the charge control approach not level of the charge control).

Finally, there are groups of services where Ofcom has explicitly not attempted to constrain BT's prices to cost for dynamic reasons, for example to stimulate investment and/or competition. In these cases Ofcom needs to use regulatory judgement to consider whether the costs, in terms of a risk of higher prices, are justified by the benefits, in particular:

- Whether the high returns earned to date on its VULA investments, even if prices were brought into line with costs in the future, are sufficient to suggest that BT would not have deferred or foregone investment in FTTC had it known this;
- Whether Ofcom's approach to the regulation of residential broadband has been effective, with BT earning returns of 70% on services delivered to the sizeable minority of customers (in mainly rural areas) reliant on BT's network, with, by market definition, little or no competition from competitors' network; and

[24] Demand for these services will be growing as customers migrate from the IPStream services with BT investing in more capacity, meaning that it would not be appropriate to artificially increase the cost base to account for 'missing' investment.

[25] A New Pricing Framework for Openreach Second consultation TalkTalk Group response 10 March 2008 page 22

- Whether the fact that despite consistently high returns in recent years, competition has not been sufficient to constrain BT’s prices in central London is consistent with the view that BT does not have significant market power in these markets.

ANNEX

A.1 Regulation of BT

The economic regulation of the UK telecommunications market by Ofcom is based on the EU Electronic Communications framework, which has been transposed into UK law with the 2003 Communications Act being the key primary legislation.

The framework required Ofcom to regularly review ‘relevant markets’ which are at risk of market failure in the absence of ‘ex ante’ regulation, i.e. where general ex post competition law is not sufficient given the nature of the potential market failure.

The EU recommends the relevant markets at a broad level subject to review. Ofcom then conducts a formal market definition process, defining the market in terms of the services included and geographic scope of each of the relevant markets.

Ofcom then determines whether one or more operators have ‘significant market power’ (SMP) in each of the relevant markets. If an operator is determined to have SMP in a market then Ofcom can apply a package of remedies to the operator to attempt to prevent the operator exercising market power.

Typical remedies applied include:

- requirement to provide services on reasonable request;
- non-discrimination in the provision of services;
- requirement to publish a reference offer;
- price control of services; and
- accounting separation and cost accounting requirements

BT has been found to have SMP in a number of fixed telecommunications markets. The resulting accounting separation and cost accounting requirements placed include the requirement to publish regulatory cost accounts in a format determined by Ofcom on an annual basis. BT meets the requirement by publishing the Regulatory Financial Statements, which cover all of the markets where BT has been determined by Ofcom to have SMP.

A.2 Charge controls

Market power is, by definition, the ability to raise prices above a ‘competitive’ level. A determination of SMP in a relevant market means that there is a risk that in the absence of appropriate remedies, BT would be able to set prices at an excessive level. As such, Ofcom typically includes price regulation as one of the remedies, in order to prevent prices being set at too high a level, resulting in end users paying too much for services leading to reduced demand.

When determining the appropriate form and level of price control, Ofcom takes account of the need to encourage productive efficiency (i.e. to incentivise the delivery of services at as low a cost as possible) and dynamic efficiency (i.e. to encourage investment and innovation).

The type of price control applied varies between markets. For a number of the largest SMP markets, in terms of revenues, Ofcom applies three year charge controls (to cover the period until the remedies for the next market review comes into force). These charge controls cap prices of a ‘basket’ of services such that at the end of the period prices are forecast to be equal to an efficient level of costs including:

- The direct operational expenditure of providing the service;
- Depreciation of the fixed assets used to provide the service (return of capital);
- A return on capital employed in providing the service equal to the cost of capital; and
- A fair recovery of BT’s common costs.

The forecast level of BT’s costs can either be set based on BT’s reported costs adjusted to take account of changes in demand, input prices and efficiency gains (a ‘top down’ approach – used for the largest SMP markets by revenue) or based on an engineering model of a hypothetical efficient operator (a ‘bottom up’ approach).

A.3 BT’s Regulatory Financial Statements

A.3.1 Purpose

Production and publication of the Regulatory Financial Statements does not in itself directly constrain BT, but forms a vital part of the regulatory framework:

- The information can be used in the setting of charge controls;
- The information can be used to monitor compliance with price regulation such as ‘cost orientation’ requirements;
- The information can be used in ex post competition investigations;
- Publication provides more transparency in the regulatory process and allows stakeholders to have more meaningful input in the regulatory process and
- The Regulatory Financial Statements are an important aspect of regulation – highlighting where regulation has failed, or has delivered the expected outcomes for consumers.

A.3.2 Basis of the accounts

A key input for the Regulatory Financial Statements is the financial information underlying BT’s statutory accounts and one element of the Regulatory Financial Statements is a reconciliation to the data published in BT’s Annual Report and Accounts.

However, the basis of the Regulatory Financial Statements differs from the statutory accounts in a number of ways:

  - For regulatory purposes, costs must be attributed to individual services in the SMP markets (and then can be aggregated to the SMP markets). In general, BT uses a 'fully allocated cost' (FAC) approach in which all of BT's costs are allocated to one or other service[26].

- The basis under which annualised costs of assets are calculated differs from the depreciation approach used in statutory accounts. In particular, most assets are valued on a current cost accounting basis, where assets are revalued each year to take account of changes in their notional replacement cost and the annual costs of these assets includes depreciation, the effect of holding gains and losses from the revaluation and the cost of capital.
- To meet the accounting separation requirements, the Regulatory Financial Statements imputes 'internal' wholesale revenues when services for which BT has SMP are supplied within BT. The imputed revenues are estimated on an equivalent basis to the wholesale prices charged by BT to other operators.

A.3.3 Ofcom oversight of the Regulatory Financial Statements

BT has published the Regulatory Financial Statements since the 1990s, with the format changing over time to reflect changes in the market and in regulation of the market. By 2011, there were concerns by competing providers that the process through which the Regulatory Financial Statements were produced was not robust, in that it gave BT flexibility to determine or change the methodology used to produce the Regulatory Financial Statements to BT's advantage for example:

- A change to the valuation of BT's duct in 2009/10 which led to an increase of £1.9 billion in asset value[27], which would have led to a windfall gain to BT if it had been reflected in regulated prices;
- An approach to the recovery of corporate overheads which allocated a high proportion of these costs to capital intensive regulated services; and
- In 2012/13, BT introduced changes in allocation methodology which led to costs being shifted to WLA markets, which are currently being reviewed. Ofcom chose to adjust the cost data to reflect the previous cost allocation methodology when setting the charge controls in these markets[28].

Ofcom could address these issues by applying adjustments to the published Regulatory Financial Statements when setting charge controls and other price regulation. However, the resulting inconsistency between the Regulatory Financial Statements and price regulation meant the value of the Regulatory Financial Statements in terms of transparency to stakeholders was diminished

Ofcom launched the process to revise the Regulatory Financial Statements process with a Call for Inputs in November 2011, this was followed by consultations in 2012 and 2013 with a Statement in 2014.

The Statement sets out a number of key changes to the Regulatory Financial Statements process:

[26] The RFS also shows estimates on a long run incremental cost basis. However, these estimates are now unaudited and play a secondary role in the price regulation.

[27] BT RFS 2010 Statement by Ofcom

[28] See letter from Stuart McIntosh (Ofcom) to Mark Shurmer (Openreach) 19 November 2013

- A new set of high level Regulatory Accounting Principles which include the requirement for consistency with regulatory decisions;
- A set of more detailed Regulatory Accounting Guidelines, providing accounting rules to be followed when preparing the Regulatory Financial Statements, which would evolve over time reflecting regulatory decisions; and
- A change control process where BT must notify Ofcom about proposed changes and where Ofcom could block changes if necessary.

This new approach should provide for improved transparency for other stakeholders by aligning the Regulatory Financial Statements with regulatory decisions, a more objective valuation and allocation rules and prevent BT modifying these rules to attempt to secure financial advantage.

Ofcom also set out that they would review BT’s existing attribution rules against the new Regulatory Accounting Principles and consult on the findings from this review alongside the Business Connectivity Market Review. The intention was that any proposed changes to the attribution rules would be reflected in any consequent price control.

The review of cost attribution was based on a report commissioned by Ofcom from Cartesian. This report identified a number of errors and inappropriate allocations which overall were estimated (in 2013/14) to lead to the costs for SMP markets services being £262 million higher than if more appropriate cost allocations were used. One of the largest effects was a disproportionate allocation of ‘overheads’ to the Openreach division of BT, an issue first raised with Ofcom in 2008.

In the final BCMR decision, the estimates of the effect of the misallocation of costs were taken into account when setting the charge control, in particular there was a one off reduction in prices at the start of the charge control. In addition, BT was required to amend its accounts to take account of the review when publishing the 2016 Regulatory Financial Statements, with BT being given more time to produce these accounts than the norm.

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