Valuing copper access

Part 2 – Proposals

BT’s response to
Ofcom consultation document
published 16th March 2005
and the Supplement
published 26th April 2005

Annex to main response

This document includes the following document referred to in BT's main response:

Annex 1: A rejoinder by Dr Eileen Marshall CBE

This document is available electronically at http://www.btplc.com/responses.

VALUING COPPER ACCESS: A CONSULTATION ON PRINCIPLES

Rejoinder by Dr Eileen Marshall CBE

1. Introduction

BT asked me to provide an independent expert opinion in response to Ofcom`s consultation on the principles that it should adopt in valuing BT`s copper access network. BT annexed my opinion to its own response, as a contribution to the debate, although BT believes that Ofcom should continue to use CCA-based asset valuations for all copper assets, whatever their vintage. Ofcom has now published its initial proposals and, at BT`s invitation, I comment further on some key aspects.

The RV approach

The approach I suggested to value BT`s natural monopoly copper access network involves the one-off establishment of a regulatory value (RV) representing shareholders` reasonable interests and expectations. Shareholders could then expect, over time, to be repaid the capital sum represented by the RV (by way of depreciation) and to earn an adequate return on the outstanding capital balance.

All subsequent new investment (including replacement), representing additional capital investment by shareholders in the regulated business, is added to the RV at cost and all depreciation, representing a repayment of capital, is deducted from it. In this way the RV can be rolled forward year-by-year and incorporated in periodic (RPI-X) price control reviews, when return *of* the RV (via depreciation allowances) and return *on* the RV (at the appropriate cost of capital) would be included in the allowed revenue.

The periodic price control reviews, based on standard forward-looking cash flow analysis, would include ex ante regulatory scrutiny of proposed capital investment, alongside the review of proposed operating expenditure. This would reassure network users (and their customers) that the level and cost of proposed investment are efficient and provide assurance for shareholders by avoiding, at a later date, possible disallowance of capital already invested through ex post regulatory action. All shareholders` capital (both the initial RV and subsequent net new investment) is maintained in real terms by RPI indexing.

This regulatory approach, which has been widely adopted by other UK utility regulators and the Monopolies and Mergers Commission (MMC)[1], was also proposed by other respondents to Ofcom`s consultation.

Ofcom`s Initial Proposals

Setting the RV: In its initial proposals, Ofcom said that the establishment of a RV by the regulator had merit and proposed setting such a RV for BT`s pre-1997 assets on the basis of BT`s historic cost accounts

[1] Now the Competition Commission (CC)

Indexation: Ofcom in its supplementary proposals (April 2005) accepted the case for using the general RPI to adjust the RV of pre-1997 assets. However, Ofcom proposed treating new investment (defined as post-1997 assets) differently, by retaining CC indexation.

Treatment of new investment: Ofcom said it believes that the approach of rolling forward the regulatory asset base (RAB) by adding new investment and subtracting depreciation, as I suggested, is in principle correct. However, it went on to say that detailed analysis of BT`s future investment needs in relation to its access network would be intrusive and resource-intensive for the regulator and regulated company. It argued that the approach might be less appropriate for vertically-integrated BT than for other network companies where the network operator and service providers are separate companies.

2. Rejoinder

RV or RAB?

The regulatory framework outlined in my previous paper is based on maintaining shareholders` capital investment in the business in real terms, and ensuring an adequate return on that investment. It is therefore somewhat confusing (although fairly common) to describe the RV in this approach as a regulatory asset base (RAB). The MMC has in the past (for example, in its report on BAA in 2002) referred to the RV as the regulatory capital value (RCV) which more accurately reflects what it represents, that is the recording and upgrading of shareholders` investment in the regulated business, and not that business`s investment in real assets.

Establishing the RV

As Ofcom recognises, the key to establishing the initial RV is that all concerned need to have confidence that it reasonably reflects a legitimate balance between the interests of shareholders and consumers. Thus it needs to be high enough to allow an adequate return to reward shareholders` investment and encourage further investment, but not so high as to represent unearned excess profits. It is all the more important to take extra care in determining the initial RV because every regulator who has used the approach recognises it is essential that the establishment of the RV is a one-off, not-to-be-repeated exercise.

If an appropriate balance is struck, the RV can form a key component of a sustainable and predictable regulatory system, which is particularly suited to capital-intensive regulated businesses. However, if the initial RV is clearly set too high it could risk downward adjustment in the future and hence prove unsustainable. Similarly, if set too low to represent a satisfactory settlement when the monopoly network business is viewed on a "stand-alone" basis, it could also be unsustainable, especially if the company is facing the prospect of increasing competition in its retail market. Keener competition will encourage incumbents and potential entrants alike to discover new ways of serving customers, leading to a tendency towards lower costs, higher standards of service and prices more closely aligned with costs. For effective competition, the regulatory regime will need to ensure that the network owner does not cross-subsidise its own retail business from its network business. But also the incumbent`s retail business could not compete effectively

if it was required to subsidise its competitors by keeping network charges lower, with BT`s retail prices consequently higher than they would otherwise be.

Examining the way in which other regulators have addressed the matter reveals a variety of approaches to setting the initial RV, depending on the particular circumstances. In general, the initial valuation has been based on capital market valuations. Even where the RV has been established on the basis of an accounting valuation, the discussion of the appropriateness of such a figure has taken place by reference to capital market information.

In the case of water, electricity and gas, where on flotation the market value was substantially lower than the current cost net book value, the initial RVs were all calculated from market information. For the water companies and regional electricity companies, the initial RV was set at the market value (defined as the sum of market capitalisation and net debt) at, or over a period close to, flotation[2]. Thus, for regulatory purposes, the pre-privatisation assets were effectively revalued at their stock market value.

When dealing with British Gas, the MMC in its 1993 report approached the same issue differently in that the initial market valuation was struck by using the share price in December 1991, around five years after privatisation and immediately before that

[2] Although in respect of Scottish Hydro, the MMC in its 1995 report set the initial RV on the basis of CCA value in 1991 rolled forward on the usual basis of taking away depreciation and adding new investment and indexing by RPI. The CCA value was adopted on the assumption that the market value discount against CCA asset value at privatisation was totally focussed on Scottish Hydro`s generation business.

particular MMC Inquiry was initiated. This represented a relatively generous settlement compared with the adoption of share prices at or close to flotation (the ratio of market value to CCA asset value, which was about 0.4 on privatisation, had risen to about 0.6 by 1991). The MMC justified the uplift on flotation value on the basis that the increase in market value up to that time represented the initial discount on privatisation and subsequent efficiency improvements obtained by the company, which the MMC considered could reasonably be expected to benefit shareholders.

In setting British Gas`s network price control from April 1997, Ofgas was pressed by network users to take the initial market valuation at or close to flotation. However, Ofgas considered that the principle of regulatory consistency suggested it was appropriate to continue to use the 1991 initial valuation established by the MMC in its 1993 report, though this date was much further from privatisation than the comparable dates used by other regulators and gave shareholders considerable advantage compared with market values close to privatisation.

Among the regulated industries only BT and the British Airports Authority (BAA) had market valuations on flotation which were close to or above their CCA net asset values. In respect of BAA, the MMC in its 1996 report took a somewhat different approach to setting the initial RV. Prior to that report, BAA had not had a RV similar to that of the other regulated companies, the previous price caps being based on asset values from the accounts. However, in determining the maximum level of airport charges for the five years beginning April 1997, the MMC established an initial regulatory capital value

(RCV) based on the book value of assets at the time of its previous (1991) report, adjusted for new investment less depreciation and revalued by the RPI. In so doing, it showed a comparison of capital value based on rolling forward the asset value in the 1991 MMC report with rolling forward the market value of BAA at or soon after privatisation. Although the rolled-forward privatisation value would have been somewhat lower, the MMC did not base the RCV on rolling forward the privatisation value. It said that doing so would imply a different value for the end 1990/91 assets from that in the 1991 MMC report, which in turn would raise the possibility that future regulators would again use different values for the existing assets. Such a possibility, the MMC said, would tend to increase uncertainty and might act as a deterrent to BAA investing. The RCV approach proposed by the MMC in 1996 was accepted by the Civil Aviation Authority (CAA) which said that it gave a robust basis for that and future price reviews. The RCV was subsequently rolled forward and used in the following review (see the MMC`s 2002 report on BAA).

In summarising these different approaches to establishing the initial RV, I have sought to show not only the variety of approaches, but also that the approach taken by each regulator was carefully compared with alternatives and explained and justified in considerable detail. So far, Ofcom has not provided a plausible range of possible RVs based on alternative methods of calculation nor provided a detailed explanation of and justification for its chosen method. To demonstrate that the proposed RV does indeed represent a fair balance between the interests of network users/consumers and shareholders warrants further analysis and explanation.

Indexation

The initial RV needs to be adjusted for price changes when it is carried forward. Though regulators and the MMC have used different methods to establish the RV, once determined, all have used RPI indexation with the exception of the MMC in its 1993 report on British Gas when current cost indexation was used. However, Ofgas subsequently used RPI and that position was later endorsed by the MMC in its 1997 gas report.

The adoption of RPI indexation is consistent with the fact that the RV represents shareholders` investment in the regulated business rather that the specific real investments made by the regulated business. The RPI-X form of price regulation is defined in real terms and the method of calculating the appropriate cost of capital similarly produces estimates of the appropriate real return. Thus to adjust the RV to ensure a value which is constant in real terms requires the same RPI indexation. Furthermore, the general retail price index is objective in the sense that it is calculated independently of either the regulated firm or the regulator. RPI indexation thus removes the inflationary risk for shareholders, whilst avoiding the considerable disbenefits of using CC indexation.

I set out in detail some of the disadvantages of using CCA for regulatory purposes in my previous paper. The MMC, in its 1997 gas report, provided a succinct summary of the problems of CCA indexation. It said changes in replacement costs are themselves

difficult to calculate and forecast, thereby providing an uncertain basis for regulation (and noted that in its 1996 BAA report, for example, the MMC adopted the rolling forward of RV by changes in the RPI to avoid the problems arising from the unpredictability of construction prices). It went on to say that, more particularly, using CCA replacement cost for regulatory values could create problems in ensuring that investment by the regulated company in new assets earned adequate returns, thereby potentially jeopardising the company`s ability to finance its functions. And, perversely, the more successful the company is in reducing the costs of new investment, the lower the valuation of existing assets, contrary to the objectives of incentive regulation. The MMC argued that use of replacement costs in deriving a regulatory value can therefore be expected to reduce the incentives on the regulated company to reduce unit costs.

In its supplemental proposals, Ofcom put forward a hybrid approach whereby the RV established for pre-1997 assets is indexed by RPI, and subsequent new investment is indexed by CCA. Since all other regulators and the MMC/CC prefer the use of RPI indexation over CCA, there is a powerful case for Ofcom to review again its position to satisfy itself and others that telecoms is so different as to justify such a divergence in approach.

The Treatment of New Investment

In all the regulated industries, where a RV has been put in place it has been rolled forward to include net new investment. New investment represents additional funds provided by shareholders in the regulated company. It is important, therefore, that both

existing funds and the new funds attract an adequate return, as will occur when the two are combined in one RV.

Under the RV regime, the amount of depreciation allowed need not be kept in line with the normal accounting convention of straight line depreciation of assets. The key requirement is that all investment adds to the RV and all depreciation is deducted from it. If the RV regime is adopted, the new "regulatory contract" can be recorded in the regulatory accounts. When operating such a regime, how the company accounts for asset values and depreciation in its statutory accounts is a separate matter.

Ofcom appears reluctant to examine critically BT`s proposed investment plans for its regulated natural monopoly network at the time of its periodic control reviews. However, the forward business plans of companies need to be regulated either indirectly by actual market outcomes or directly by the regulator if competition is not effective. To make such an examination retrospectively creates regulatory risks of "clawback" which can be avoided by an ex ante approach. Such an approach should add little to BT`s workload, since it can be expected that BT already carries out careful appraisal of its forward plans. And whilst, according to Ofcom, it would add to the regulator`s workload as compared with its present practice, it is difficult to see how it can be avoided as an essential part of the regulator`s task, if consumers are to be protected from the potential costs of unnecessary and/or inefficient investment.

Ofcom implies that such regulatory scrutiny is unnecessary because of the integrated nature of BT. Even if this were the case (and Ofcom provides no in-depth discussion of the point), it has already decided that to ensure truly equal network access by all users, including BT`s retail business, the monopoly network should be effectively separated by BT from its retail business. On this basis, Ofcom also needs to evaluate future investment on the assumption that the access business is "stand-alone".

Overall Evaluation

Ofcom, in its initial proposals, is suggesting a hybrid approach to the valuation of BT`s copper access network. A RV would be determined for "old", pre-1997 assets, using HCA values, thereafter indexed by RPI. "New", post-1997 assets would be treated differently with CCA indexation.

This arrangement would provide neither the proxy for competitive infrastructure prices which a CCA regime purports to do, nor the transparency, stability and durability of the RV approach. Moreover, the hybrid nature of the system proposed by Ofcom has an additional disadvantage, potentially distorting BT`s incentives in its choices as between operating its existing network and/or extending and replacing it.

Ofcom continues to favour CCA indexation on the grounds that it claims network prices, once the pre-1997 assets have been depreciated, will eventually be consistent with competitive levels, thus facilitating efficient infrastructure competition. However, the objective of setting prices to encourage efficient entry by infrastructure competitors can

be achieved in a different and more immediate way. Once the regulated allowed revenue is determined, then a carefully structured set of network prices needs to be established which could include a longer-term price signal (based, for example, on forward-looking attributable prices from a longer term business plan).

Similarly service competition using BT`s network is best secured, as Ofcom has already observed in its strategic review, by ensuring fully equal access by BT retail and its competitors, which in my opinion can only be achieved through the careful regulation of the network on a "stand-alone" basis, including with respect to its price control. In these circumstances the level of wholesale prices will not of itself play a direct part in determining the effectiveness of service competition, since all competitors will face the same wholesale choices, at the same prices.

3. Conclusion

As a natural monopoly, it is essential for all concerned that BT`s copper access network is regulated in a way that encourages efficiency whilst at the same time providing a reasonable rate of return on shareholders` existing investment and new investment.

In my opinion, an initial market value that demonstrably balances the interests of shareholders and customers is an absolutely crucial starting point. If there were to be no agreement on this so that a dispute arose, the many precedents that have already been set in relation to the calculation of a RV would have to be taken into account. An initial market value derived in a manner consistent with that used by the MMC/CC and other

sector regulators should therefore be considered if Ofcom intends to set a RV for BT`s copper assets.

Thereafter, since BT needs to be able to earn a fair return on both existing investment and efficient new investment, it is logical for the two to be combined by adding net new investment to the previous RV. Finally, as UK incentive regulation is based on a price cap linked to the RPI, again the logically consistent way to index the combined RV is using the RPI, not a CCA index. More generally, the prospect of a newly-created “stand-alone” network price control provides the opportunity to put the regulation of this natural monopoly on to a firmer, more transparent and more stable foundation by adopting the regulatory framework I have described.