The Economic Consequences of Accounting in the English and Welsh Water Industry: A non-shareholder perspective

Magda Abou-Seada
Christine Cooper
Firoozeh Ghaffari
Richard Jones
Orthodoxia Kyriacou
Mary Simpson
In recent years a plethora of academic studies have emerged which focus upon varying themes relating to the UK water industry since it was privatized in 1989. (For a selection see, Shaoul, 1997a, 1997b; Ogden, 1995; Ogden and Anderson, 1999; Letza and Smallman, 2001). Since 1989, the UK water industry has been under much scrutiny both in terms of its financial operations and structure (in particular pricing policies and investment practices), and its treatment of both the environment and its customers. Some research has suggested that the water industry has poorly managed both its operations and its social responsibility (See for example, the work of Lobina and Hall, 2001; Howarth, nd). Furthermore, there have been claims that the regulators of the industry, notably OFWAT (The Office of Water Services) and the Environment Agency themselves need to be regulated. This is due to the occurrence of a catalogue of serious disasters including compromises in water quality, which have jeopardized public safety (Lobina and Hall, 2001). Those water companies concerned, in turn have faced insignificant fines and inadequate punishment by the regulators.

Taken together, these issues cast serious doubt over the Thatcher Government’s claim that privatization would increase efficiency and thus in turn the public and all those involved in the industry would benefit (Shaoul, 1997a; 1997b). Recent studies have shown that many employed in the water industry have taken redundancies or have lost their jobs through the pursuit of increased efficiency (Hall & Lobina, 1999). Taken together, these studies provide valuable insights into the significant problems of the water industry at various levels; structurally, regulatory and operationally.

The paper is concerned with the economic consequences of the accounting choices made by the Thatcher government with respect to the economic model of regulation. While most research into the economic consequences takes a shareholder perspective, this paper considers the economic consequences for the consumer of those choices. We demonstrate that the accounting choices have meant that water has been significantly overpriced since privatization and that they make it more profitable for water companies to invest in new infrastructure and/or sweat existing assets, rather than repair or maintain their infrastructure.
Aside from the arguments surrounding the efficiency of the private sectors, it has also been argued in many quarters that the government decided to privatise water in order to provide a mechanism through which new investment could be made in the water infrastructure without financing this investment through taxation or borrowing. There is little doubt that some of the Victorian infrastructure needed renewing. But this is only part of the story, privatisation can be seen as part of an effort by the state to disengage from investment while stimulating capital accumulation (Kerr, 1998).¹ We would argue that the stimulation of capital accumulation was the more forceful driver behind water (and other) privatisation. As a consequence of this, average household water bills have increased by almost 40% in real terms in the first decade under privatisation (Smith, 2003).

Thus the purpose of the paper is to add to the growing body of literature which suggests that it would problematic to accept the claim that water privatization was primarily introduced to enhance the efficiency (what ever that may mean) of the water industry and to transfer the “risk” of investing in new infrastructure to the private sector. Instead we interrogate the history and functioning of the regulatory accounting model to demonstrate that it “stacked the cards in favour” of shareholders over consumers ad thus enhanced the capital accumulation process.

The paper is structured as follows. The next section considers the accounting literature on the economic consequences of accounting choice generally as well as the economic consequences of regulatory accounting. This section also considers the specific form that the economic regulation of privatized industries has taken and how this form is systematically biased in favour of shareholders. It then briefly moves on to outline the regulation of privatized water companies in England and Wales. The following section looks at the historical development of the regulatory accounting model which is used to determine prices. For this we go back to the Thatcher era and the birth of privatization. The following two sections then deal with the details of the pricing model and the risk/return tradeoff. Finally, we present our conclusions. It might seem surprising that the majority of private companies have eschewed current cost accounts, yet the regulators still use them. Here we explain that the use of current cost accounting in regulatory accounts is welcomed by private

¹ Kerr, D., (1998), The PFI Miracle, Capital and Class, 64 (spring) pp 17 - 28
water companies and their merchant bankers because it leads to legitimated excessive charging.

**The economic consequences of accounting and the impact of regulators**

Arnold and Cheng (2000)² note that accounting choices are said to have economic consequences if these choices alter the distribution of firm’s cash flows or the wealth of parties that use accounting numbers for contracting and decision making (Holthausen and Leftwich, 1983). They further note that by calling attention to the conflicts of economic interest inherent in the choice of accounting methods, the economic consequences literature has helped to dispel any myths that accounting choices are neutral or disinterested. Although some (eg Ghosh and Alvis, 2003) see accounting as neutral (and therefore helpful in making social decisions). Others (Hal, 2003) recognise that while accounting choices can be made which produce “interested” consequences they suggest that this is not a concern so long as everyone follows the rules. This fails to address the problem which this paper attempts to address which is that those who set the rules are neither disinterested nor neutral. Hodder et al, (2002)⁴ suggest that rules (especially accounting standards) are a problem, seeing SFASs as (regulatory) risk factors.

The accounting literature is replete with studies that explore how and why firms manage their earnings (eg managerial compensation, risk aversion, debt covenants and signalling) (Hodder et al, 2002). The vast majority of economic consequences papers recognise the cash flow consequences of accounting policy choices and look at the market responses to accounting changes (Ball and Smith, 1992⁵; Burgstahler

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and Dichev, 1997⁶; DeAngelo et al., 1994⁷; Hand and Skantz, 1997⁸; Healy, 1985⁹; Muller, 1999 and Soo, 1999¹⁰). Some are self-conscious about this (eg Morana and Sawkins, 2002) while others fail to explicitly recognise that there are other stakeholders aside from market participants.

There are less papers which look at the economic consequences of regulatory accounting. Notable exceptions include Arnold and Cheng (2000), Chen et al (1987¹¹), and (Callihan, 1994¹²). Arnold and Cheng (2000) look at the US Nuclear Power Industry. They argue that accounting methods adopted by state utility rate setting commissions determined how billions of dollars invested in cancelled nuclear projects were allocated between financial stakeholders, including utility stockholders, ratepayers and federal tax payers. While Arnold and Cheng takes a market perspective, it clearly recognises that regulatory accounting plays a large part in the distribution of wealth and costs between different groups within society. Presenting a more nuanced view of society, the paper takes extant power-relations into consideration more explicitly than earlier work which tended to see regulators as being pro-producer or pro-consumer. This view can add to our understanding of the relationship between the state, capitalism and the non-capitalist classes (or the relative autonomy of the state).


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three ways. First, consumer protection theories, in which regulators protect consumers by bearing down on monopolists, lowering prices and controlling for the externalities, which drive a wedge between private and social costs and benefits. In this case regulation has a negative effect on company value by increasing the cost of equity capital. Second, producer protection theories, in which regulators are "captured" by incumbents. Potential entrants are effectively excluded leading to decreases in the cost of equity capital implying a positive effect on share prices. Finally, regulatory utility maximization theories, in which regulators seek to protect their own position at the expense of consumers and producers. The effect of this on equity returns is unpredictable. It is interesting that none of these seems to be able to see the synergistic relationship between the state (and the regulators) and the private utility companies. There are substantial debates surrounding the relative autonomy of the state from capital (see Cooper et al, 2004). It is too simplistic simply to show a crude correspondence between the activities of the state as simply serving the needs of the ruling or capitalist class. What is required is an explanation of how the very form of the activity is inscribed with the traces and priorities of the capitalist system, with the result that it is so distorted and limited, and so systematically biased in its working, that it is inadequate as a means of creating a truly liberated human social order.

Clearly, regulators impose some kind of “cost” to regulated companies, not least since regulators impose on companies the additional burden of producing regulatory accounts. However, in the case of the English and Welsh water companies, the regulator is specifically concerned to ensure that the water companies earn a decent rate of return. Thus as a guarantor of profits, it would also be possible to characterise the water regulator as bringing significant benefits to water companies which arguably outweigh the costs. This explains how the regulatory system is inscribed with the traces and priorities of the capitalist system.

The economic regulatory model that was used in one of the first privatisations (BT) in the UK was designed to ensure that the rate of return earned would be enough to guarantee a high initial share price. As we shall see later the UK government

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13 Capitalism, States and Accounting, (with L Catchpowle and A Wright), Critical Perspectives on Accounting, Volume 15, Issue 8, November 2004, Pages 1037-1058
specifically decided not to follow the then dominant US economic model for utility regulation which set a limit on the rate of returns earned by utility companies. Instead, the preferred model in the UK was a cap on prices. On the surface it may appear that a price cap regulatory model is more socially progressive, as we will see later in the paper, the regulatory model adopted in the UK water industry in fact meant that water prices were excessively high.

Although it is clear that in both countries, the regulator has large control over the distribution of wealth between consumers and shareholders. With respect to the US nuclear power industry, Arnold and Cheng (2000) write that “because utility rates are set by state commissions, the nuclear power industry represents a sector of the US economy where distributions of economic wealth depend extensively on state actions and institutions, as well as market forces.”

Another similarity between the US and the UK is that in both countries the technical complexity of the rate setting process allows for deviations between stated policies and practical consequences. In the US although rate setting commissions often adopted the policy objective of allocating costs equitably between ratepayers, taxpayers, and utility owners, slight variations in elected accounting methods could skew the distributions of cash flows in favour of one group or another. Later we will explain how in the UK, the regulatory accounting choices have ensured significant returns to the private water companies at the expense of customers.

Research in government accounting (Chen, 1994) has shown that, as with other public policy decisions, public sector accounting choices are the outcome of complex political processes involving interactions between individual actors (e.g., elected officials, regulatory agency administrators and staff, media, credit markets, taxpayers, and interest groups) constrained by socioeconomic conditions, technical capacity, and political and bureaucratic structures. As Arnold and Cheng (2000) demonstrate, hypotheses regarding the consequences of state interventions in the nuclear power industry require a concrete historical analysis of the regulatory rulings and the technical accounting choices that determined the cash flow consequences of nuclear plant abandonment decisions.
An exceptional paper which looks at the economic consequences of economic regulation in the UK water industry is Morana and Sawkins (2002)\textsuperscript{14}. This paper correctly notes (as we will discuss later) that in the case of early UK privatisations, like telecommunications it was anticipated, that rapid technological progress would promote the development of a competitive product market, obviating the need for close economic regulation in the long run (Littlechild 1983). Later privatisations like water and railways where private companies enjoyed long-run natural monopoly status by virtue of their control of the supply networks, were at the other extreme, and it was foreseen that economic regulation would be a permanent feature (Littlechild 1986). As in the US, the UK regulatory bodies were subject to intense scrutiny and lobbying by various stakeholder groups: politicians, the media, consumers and, not least, the regulated companies themselves. An important aspect of the work of the regulatory offices, therefore, was the balancing of, often conflicting, interests in pursuit of their various statutory duties.

However, Morana and Sawkins (2002) also note that the cards were staked against consumers from the outset. Under the privatization legislation-the Water Act 1989-one of the primary duties of the economic regulator was to ensure that appointed companies could finance their functions by securing a reasonable rate of return on their capital. Consumer protection, a reason much vaunted by politicians for establishing the regulatory offices, was in fact only a secondary duty. The economic regulator was charged with ensuring that its activities would not undermine or threaten the financial sustainability of the industry. In other words regulatory initiatives should not prevent lenders and shareholders securing returns sufficient to induce them to make loans and hold shares.

Thus from the outset, the dominant role of the regulator was to ensure that newly privatised industries could make sufficient returns to guarantee investment. The next section briefly considers the regulation of the privatised water companies in England and Wales.

Regulation of the privatized water companies in England and Wales

With the introduction of the 1989 Water Act, the ten Water authorities in England and Wales, which had previously been created under the 1973 Water Act, became private limited companies (Amicus, August 2004; OFWAT, 2005). Previously, in 1973, the ten water authorities had responsibilities relating to pollution control, flood control supply of water and sewerage service.

Privatisation presented the government with the issue of regulation. As the water companies are regarded as natural monopolies and because of the essential nature of the goods and services which the industry produces, the water authorities could not be subject to the ultimate sanctions of the market-bankruptcy. Moreover, the government also needed to ensure that it would attract buyers for the new companies. For the purpose of “economic regulation”, the government followed previous privatisations and set up The Water Services Regulation Authority (OFWAT).

While OFWAT could be described as a regulator, it also serves to legitimate current practices. OFWAT legitimates a monopoly water industry using regulation, targets and performance standards (Ogden and Clarke 2005). These regulations, targets and standards provide the individual companies with the framework within which they operate, set their prices and generally “manage” their performance using each other as “yardsticks” (Ogden, 1995). Arguably, OFWAT’s main legitimating tool is its setting of caps on price rises which the water companies can charge, with limits lasting for 5+ years at a time. During each capped period individual companies can increase their profits through “efficiency savings” perhaps at the expense of jobs and customer satisfaction.

Following Arnold and Cheng (2000) the next section sets out a brief historical analysis of the technical (interested) accounting choices that have determined and still determine both the cash flows to the water industry companies and the amount of profits which the companies can make from consumers. Thus, the next section considers the genesis of the pricing model which is used by the economic regulator. It was derived from a report by Stephen Littlechild.
Littlechild and RPI - X

In terms of worldwide privatisation arguably one of the most influential reports ever written was the 1983 Littlechild Report which was commissioned by the Thatcher government to design an economic regulatory model to prevent a newly privatised monopoly - British Telecommunications (BT) from acting as a monopoly supplier of essential services. Like another influential report of the Thatcher era which led to the introduction of the Poll Tax (Butler et al, 1994), the Littlechild Report was drawn up with serious haste and no public consultation. Indeed just as in the case of the poll tax, the Littlechild Report had the mark of neo-liberal ideology at its core. Its findings were considered to be attractive by a cabal of right wing politicians, their advisors and BT’s merchant bankers. Littlechild himself reminiscing at a conference, recalls that

...It was commissioned on 28 October 1982 for delivery on 14 January 1983, which allowed 10 working weeks (allowing for Christmas!), but a draft report was required by 17 December, after only six weeks. In view of this conference, I have looked again at the notes I made as I carried out this work. In fact, the timing was even tighter, and RPI-X never made it into the draft report.... RPI-X as a scheme of control in its own right, as an alternative to schemes involving maximum rate of return, output-related profit levy or profit ceiling, was “invented” between 5 and 7 January 1983. That left one week in which to write it up in a plausible way, test it against the specified criteria, conclude that it was the best available option, and make some further recommendations. An even more hairy timetable than originally envisaged. Of course, it left no time to explain to all the interested parties what had happened to the draft report and what RPI-X was all about. Fortunately, Alan Walters and BT’s merchant bankers considered it better than a profit ceiling, the department’s merchant bankers considered it workable, it was politically defensible and indeed attractive, and it carried the day.

Thus, the economic model which was presented by the government as the means to prevent BT from acting as a monopoly supplier of its services was RPI-X. In other words, BT would be allowed to increase its prices by the retail price index less x per cent. The Littlechild Report (1983, para 13.5) stated that “This idea [of an RPI-X price-cap] could be adapted to present circumstances, by incorporating a condition in

16 Professor Sir Alan Arthur Walters was the Chief Economic Adviser to Margaret Thatcher.
BT’s licence requiring it not to increase tariffs on monopoly services by more than RPI-X per cent, ie to reduce these tariffs by X per cent in real terms."

Whether or not Littlechild “invented” RPI-X or not is open to some debate. What is more important is that the Littlechild Report was intended to act a guide for the regulation of only one company -- British Telecommunications (BT). However, its influence became much wider. It was adopted by the UK government, not only for the privatisation of BT but also for the privatisation of all subsequent utilities in the UK. A similar form of regulation has been adopted in many other countries including the US.

Politically the RPI-X model is undeniably attractive. It would be difficult to argue that consumers would be opposed to real price reductions. However, BT (as with other privatised industries) was treated to significant new investment prior to privatisation alongside massive debt write-off\textsuperscript{17}. This meant that it would have been difficult not to be able to produce real price reductions after privatisation. These were to a greater or lesser extent achieved through reductions in services\textsuperscript{18} and redundancies. It is not surprising that this was the economic regulatory model favoured by Margaret Thatcher, her senior advisors and a group of merchant bankers.

The RPI-X model was designed for telecom privatisation which had a competitor (Mercury) and it was envisaged at the time that sufficient competition could emerge in telecoms within five year or so to allow for the abolition of the price cap at that point (Stern, 2003). Littlechild (1983) never saw regulation as a panacea to deal with the problems of privatising natural monopolies. He argued that (1983, para 4.11)

\begin{quote}
Regulation is essentially the means of preventing the worst excesses of monopoly; it is not a substitute for competition. It is a means of ‘holding the fort’ until competition arrives.
\end{quote}

It is also worth noting at this point that one of the evaluation criteria used by Littlechild in his report was the maximisation of floatation proceeds. Perhaps it was

\textsuperscript{17} At the start of the privatisation of water the government wrote off existing industry debt of £5bn and injected a green dowry of £1.5bn.

\textsuperscript{18} At the time there were many complaints for example about out of order call boxes and the fact that engineers could only be called out during “office hours”.
partly for this reason that Littlechild consciously chose not to adopt a “maximum rate of return” model as was used in the US. He argued that putting a cap on returns would be the same as a “100% tax rate” on returns over the maximum amount allowed. Littlechild believed companies would work hard make sure that they earned this rate of return but would not bother to improve efficiency to maximize returns after this point. Relatedly, he also felt that rate of return regulation would mean that companies might tend to over-invest in fixed assets since once the maximum return was achieved, the only way to increase the size of returns would be to increase the asset base. There was little doubt that the UK water infrastructure was and is in dire need of investment. In order to encourage this investment, it might have been shrewd to use a rate of return model to regulate the water industry to encourage investment. As we will see a hybrid model which has a “price-cap” and a “rate of return” element in it is now used by OFWAT.

Although in 1983, Littlechild put forward price-cap regulation as a superior substitute to rate of return regulation, in his 1986 report he took a rather different view (Stern, p 22, 2003). The 1986 report recognising that it would not be possible to create competition for water in the same way as for telecommunications discusses RPI-X in the context of the permanent regulation of a localised natural monopoly water industry rather than the hoped-for temporary price-cap regulation of BT. Stern (2003) points to the key passage in paragraph 10.20 of Littlechild’s 1986 report, which reads as follows:

In deciding how far to revise X...the economic regulator needs to examine the company’s production methods and investment programme. He must ascertain the scope for cost and price reductions through increased productivity and efficiency, and the need for capital expenditure. He needs to predict the consequences of X on what the company will do, how it will do it, how consumers will be affected and how others will react... so permanent regulation is more complex than temporary regulation.

Similarly, Stern points to the first sentence of paragraph 10.21 which reads “It should now be evident that rate of return considerations are necessary implicit in setting and resetting X”. Stephen Littlechild (2003) on reflection, pointed out that this sentence and the rest of paragraph 10.21 were written to make it clear that the

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chosen level of X must allow investors in utilities an expected, risk adjusted rate of return comparable to what they could expect from other investments. Yet once rates of return are brought into the picture, as was deemed necessary in the case of water privatisation, then the two regulatory models (RPI-X and rate of return) have much in common, in terms of the types of information required (eg regulatory asset base definition and measurement) and in terms of the debates entered into during price reviews. Indeed, Stern argues that price cap regulation and rate of return are opposite sides of the same coin – at least for utilities (or elements of utility service) which face regular periodic reviews eg every three or five years. ......At the limit, (eg with annual reviews as occur in many transitional and developing countries) both price cap and rate of return collapse to being simple cost-plus pricing. (Stern p 21)

Littlechild himself (2003) acted as the regulator of electricity (Offer). He admitted that the electricity regulatory model had developed away from his simple RPI-X one. He stated that (p 47)—

........My regulation and business affairs director (at Offer) sought to marry as much as possible of the “forward-looking” thinking with a more conventional – or at least more explicable and defensible – approach incorporating a return in existing capital (we did not call it regulatory asset base while I was there!). Over time, this has led to the kinds of explicit (“building block”) calculations that nowadays accompany the resetting of X in the utilities’ sector.)

The point I want to note here is the pressure on regulators to explain their calculations. Quite apart from any personal preferences of my own (and later statutory obligations), there were substantial pressures from investors and other leading in the direction of a more explicit rate of return approach in the electricity and water sectors.

......we could not have an informal unexplained basis for resetting X in the electricity and water sectors. We had to have an explicit method, and it had to be uniform across companies. A regulatory asset base seems to have become the most straightforward method. At the first price control reviews, of the distribution companies, Offer may not have explained the setting of X in as much detail as some would have liked...

What is particularly interesting about these comments is Littlechild’s insistence on the fact that extreme pressure was put on the regulator from investors and that this pressure led to action on the part of the regulatory authority.

20 Except for countries with annual rates of inflation of around 20% or more.
In any case, the government wanted the water industry to invest in new infrastructure and a potential problem with RPI-X is that would in all likelihood lead to asset sweating. Littlechild also envisaged a single X (in the simple RPI-X price cap) for all water and sewerage services per company, and a single X for all ten water companies. In practice, there are different price caps for different water services and different Xs for each of the regulated companies leading to very complex formulae. Stern (2003, p 10) notes that “current price cap formulae now tend to be multi-parameter, have intercept adjustments, glide paths, etc.” The financial model which OFWAT uses, Aquarius 3 software, which was developed by Cap Gemini Ernst and Young. Its operating manual amounts to over 60 pages.

In the UK, the basic water price cap formula is sometimes expressed as RPI-X+K. The K is a number determined by OFWAT every five year for each company to reflect what it needs above inflation in order to finance the provision of services to customers. As part of the process of setting “K”, there needs to be “forward thinking”. This means drawing up future spending plans. Water companies have to prepare a Final Business Plan. At each round of price determinations, a water company describes the company’s strategy for the next five year period and how it has evolved, its commitment to drinking water quality and environmental improvement and service to customers. Once the price limits are set by OFWAT then the monitoring plan has to be prepared by each company to set out its commitments to deliver the required levels of drinking water and environmental quality outputs and standard of services. The company’s monitoring plan builds upon the final business plan. Prices are used to pay for the ongoing operating expenditure, cover capital maintenance charges and taxation and to provide returns to investors and lenders. The returns are calculated based upon what is described as the Regulatory Capital Value (RCV).

In the next section, we consider the water pricing model and its relationship to Regulatory Capital Value more closely. Once constructed, the RCV is used as the starting point to work out a guaranteed return (or profit) for each water company. There can be few examples of other private companies throughout the world which have a regulator to ensure that they receive a set rate of return on
their investment. This could be described as a prime example of corporate welfare.

**RCV and Water pricing**

The first RCV was a direct measure of value placed on each company’s capital and debt by the financial markets following privatisation. The initial RCV was calculated as the average of the market value of each newly privatised water company for the first 200 days for which the shares were listed plus the total debt at privatisation. An essential feature of RCV is that it is adjusted by the increase in the RPI. It is the use of indexation of RCV, or current rather than historical costs, which is one of the slight variations in elected accounting methods which skews the distribution of cash flows in favour of one group rather than another (Arnold and Cheng, 2000).

It is important to understand that prices are set to ensure that water companies receive a rate of return for their previous investment (and these are index linked) and for any investment which they plan to make in the coming period. Suppose that the regulator has allowed £10m in the revenue requirement for infrastructure expenditure. If the company actually spends £12m there may be a case for allowing the company to recover a further £2m. The regulator can do this by adding £2m to the RCV. The company will then recover £12m, £10m through the IRC and £2m through the RCV. Suppose that the regulator has allowed £10m but the company has actually spent only £8m. The regulator must claw back £2m to ensure that customers are not paying for investment that has not been made. The regulator can do this by deducting £2m from the RCV.

The RCV is computed as follows

Closing RCV (previous year) 
+ 
Indexation 
+ 
Capital expenditure (excluding IRE)
It was argued earlier that it is the current cost version of RCV (CCRCV) which makes the water industry so lucrative to shareholders. Cuthbert and Cuthbert (2006, 2007) have produced a model to calculate the excess returns due to the use of CCRCV over HCRCV. They begin by assuming that a utility is entirely debt funded. They then assume that if the utility charges historic cost depreciation of the assets plus interest on the outstanding debt, then enough revenue will be generated to repay the capital which has been borrowed and give lenders a return on their loans. In this case, the excess return generated by CCRCV pricing once the industry has settled down to a steady state is--

\[
\left[ 1 + \frac{i(n+1)}{2} \right] (1 + r)^{-1} - \left[ \frac{1 - (1 + r)^n}{nr} \right] - i \left[ 1 - \frac{1}{nr} (1 - (1 + r)^n) \right] / r
\]

where

\[
\begin{align*}
  r & = \text{rate of inflation} \\
  i & = \text{interest rate} \\
  n & = \text{life of asset}
\end{align*}
\]

The surpluses produced by the RCV assuming a modest five per cent rate of interest are calculated in able 1a.
Table 1a here

What table 1a demonstrates is that without using the assets acquired at all, the act of capital investment will yield large financial surpluses. If an asset life is 40 years, the rate of interest is 5%, and the rate of inflation is 3%, then the financial surplus on the capital investment will be 68.5%. In an industry like water, such long lived assets are the norm.

If there was an equity stake in the company of 50%, then under CCRCV pricing, the capital charge on this 50% of CCRCV, (plus the difference between current and historic cost depreciation), would be available to be taken as a dividend return on the initial investment. As Cuthbert and Cuthbert (2007) succinctly explain, “for an asset of 30 years, then our base case utility will be operating with a capital stock which is, on average, several years old: so the interest and depreciation charges it has to pay reflect the lower prices than current. BUT CCRCV pricing sets prices as if interest and depreciation were worked out at today's prices: and the difference is available to be taken as a dividend reward by equity holders.”

A total of 10 regional water companies were created and today there are still 10 major organizations in these regions. While the companies themselves have not merged, some have been taken over by other companies, or have expanded their business opportunities. There is little doubt about the profitability of the water companies and Cuthbert and Cuthbert’s analysis helps to explain why where an original water company is now part of a larger merged company, the bulk of its profits come from water activity and not from its other business activities.

Anglian Water is a wholly owned subsidiary of AWG Plc. AWG Plc is an FTSE 250 company employing over 10,000 staff in the UK and with a turnover of £1.7 billion in 2004/5. In the last published accounts of AWG, the original Anglian water accounted for 49.6% of turnover and 93.4% of operating profits before exceptional items and amortization of goodwill.

21 http://www.awg.com
22 http://www.awg.com
Northumbrian Water Ltd is part of Northumbrian Water Group which was incorporated in 2003. The new company is the result of the consolidation of a number of smaller companies. Water services remain the core activity but now include an international arm. Northumbrian Water group was able to increase water prices during 2004/2005 resulting in pre-tax profit, before exceptional items, increasing to £108.8 million compared to £56.5 million a year earlier. Its dividend has risen by 20%. \(^{(3)}\)

Severn Trent Water Ltd is owned by Severn Trent Plc, an FTSE 100 environmental services group. The group also includes, Biffa and Severn Trent Laboratories. It generates revenues of £2.015 billion and employs more than 15,000 people around the world \(^{(4)}\). Severn Trent Water accounts for approximately 47% of turnover and 77% of profits\(^{(5)}\). Yorkshire water services Ltd is now part of Kelda Group Plc but Yorkshire water still represents 80% of the business’s turnover and 88% of its profits \(^{(6)}\).

Aside from the excess returns being paid to shareholders there are several other consequences of the CCRCV model. The most significant of these is that it encourages companies to invest in new infrastructure rather than repair leaks. Revenue expenditure (repairs and maintenance) is not added into RCV whereas capital expenditure is. Even in the case of capital expenditure, in the absence of costly audit and controls, it would be possible for water companies to invest in Picassos to hang on the directors’ office walls and add them into RCV to enable the company to make excess returns. MARY THIS IS WHERE THE INFORMATION THAT YOU GOT ABOUT ENGINEERING “CONSULTANTS” WHO HAD TO CHECK THAT MONEY WAS BEING SPENT ON THE RIGHT THINGS COMES IN IF I REMEMBER CORRECTLY.

The water companies generally consist of a group of companies. Price capping only applies to core activities and does not apply to any other subsidiary activity. In reality many of the subsidiaries are service companies which sell their output to the core business (Shaoul 1997) thus giving these companies the ability to manipulate their input prices.
Use of the CCRCV model would predict that water companies will become increasingly highly geared. Intuitively, if a company is guaranteed high virtually riskless profit margins then shareholder returns would be magnified by taking on more debt. This is indeed happening. Five of the regional water and sewerage companies have changed ownership and the industry has shifted towards much greater reliance on debt finance. The average level of gearing in the industry has risen from 41% in 1989/99 to 57% in 2002/2003. New funding models have been developed based on highly leveraged structured finance with strong covenant protection for creditors, which have allowed levels of gearing to reach 85% for companies such as Anglian and Southern. DEFRA and OFWAT in consultation with HM treasury and DTI have sought advice on reasons for and implications of recent trends in the pattern of ownership and financing of water companies for the industry’s ability to meet the Government objectives for the sector.

In interview with the Scottish Water economic regulator, he stated that one of OFWAT’s concerns was to make sure that the ten water companies maintained AAA bond rating status. One way of doing this was to ensure that the Water companies maintained the required accounting ratios. If this is indeed the case then there is an even greater incentive for water companies to become more highly geared.

The question of risk is always an issue which surrounds privatisation. In many privatisations, there is an argument that risk is being transferred from the public to the private sector and that the private sector “should be compensated for that risk.” Although, Froud (2003) observes that it is “widely recognised that without quantification of risk transfer there will be no PFI as it is unlikely that the private sector bid will otherwise be lower than the public sector comparator.” In the next section we briefly look at the issue of risk and return in the water industry.

Risk and Return

So far we have simply stated that the water companies are allowed by the regulator through the pricing mechanism to earn a “rate of return”. Who determines what this rate should be? One parameter which is factored into the rate of return determination is risk. Yet, the state sanctioned guarantee of a certain margin of
profitability on all investments minimizes the risk to the private water companies. The transfer of risk to the private sector appears to be rhetorical rather than real.

This is certainly the case with water industry infrastructure investment. Smith (2003) notes that at the initial privatisation phase there was considerable industry concern about the risks associated with implementing large capital programmes and the availability of resources in a tight construction market (as seemed likely from a late 1980s perspective). So the water company licence contained a number of provisions to limit the risk to investors. These included the “relevant change of circumstances provisions”, and the so-called “shipwreck” clause for “substantial adverse effects” which allowed companies to seek interim reviews of K factors.

Yet the returns of water companies are relatively high. Indeed the social risk of the failure to have a cheap plentiful supply of water is borne by the state. If there is (for example) E. coli contamination of drinking water, the subsequent health care and other costs would be borne by the state and not the private water company concerned. Moreover, if any of the quality regulators changed their standards, this imposes expenditure on the companies which may then apply to OFWAT for an adjustment to their price cap. Price capping is only applied to the core activities of the companies despite the fact that the parent company typically has a number of other subsidiaries some of which sell the bulk of their output to the core business. For example Kelda started off as the privatised Yorkshire water. It has since added other parts to the business including a US operation, a service business which provides waste water services in Wales, a call centre venture and a property arm.

Conclusion

References:

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Table 1a. First scenario: The Surplus Generated by RCV, in Excess of the Historic Cost Requirement, as a Percentage of Capital Investment, for Interest = 5%, and for Varying Lengths of Asset Life and Inflation Rates.

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<td>10.4</td>
<td>15.4</td>
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References:


