CRI
CENTRE FOR THE STUDY OF REGULATED INDUSTRIES

ACCOUNTING FOR REGULATION IN UK UTILITIES

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List of abbreviations

ASB	Accounting Standards Board
ASC	Accounting Standards Committee
CAA	Civil Aviation Authority
CAPM	capital asset pricing model
CCA	Current Cost Accounts
CPP	constant purchasing power
DGM	dividend growth model
FASB	Financial Accounting Standards Board (USA)
FCM	financial capital maintenance
HCA	Historical Cost Accounts
LRMC	long run marginal costs
MAR	market to asset ratio
MEA	modern equivalent asset
MMC	Monopolies and Mergers Commission
MWCA	monetary working capital adjustments
NGC	National Grid Company
OCM	operating capital maintenance
OFFER	Office of Electricity Regulation
OFGAS	Office of Gas Supply
OFTEL	Office of Telecommunications
OFWAT	Office of Water Services
REC	regional electricity company
RRR	required rate of return
SORP	statement of recommended practice
SSAP	Standard Statement of Accounting Practice

Preface

This report contains the results of a study funded by the Research Board of the Institute of Chartered Accountants of England and Wales into the relationship between regulation and accounting in five recently privatised industries in the United Kingdom – airports, electricity supply, gas, telecommunications and water.

In writing this report we have benefited extensively from information provided to us by officials of the regulatory agencies, members of the finance and regulatory departments of regulated firms and users of financial information, notably analysts specialising in utilities. We have visited all the regulatory agencies and more than half of the firms whose accounts are described in the report. Although we do not name individually those who have helped us, the extent of our obligation will be clear to anyone reading the report. *However, the views expressed here are the authors' alone, and do not reflect those of the organisations to which we have spoken or of the organisations with which we are ourselves associated.*

We are also greatly indebted to a number of people, including, especially, members of the project's Advisory Panel, for comments and advice. Particular thanks are due to Charles Jenne, Professor Irvine Lapsley and Peter Vass for their helpful comments. Any remaining deficiencies in the study are entirely the responsibility of the authors. Lastly, but by no means least, we would like to thank Sally Harris of Brunel University for typing the manuscript.

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Executive Summary

Introduction

How does the existence of industry regulators with price-setting powers affect accounting practices in the telecommunications, gas, airports, electricity and water industries in the United Kingdom? This executive summary firstly sets out the results of our research on this issue and against this background highlights the need for the terms of the implicit regulatory contract between the regulated companies and their respective regulators to be specified in greater detail than is the case at present. The way in which this might be achieved is discussed next. Finally, we consider how the requirements governing the regulatory accounts of the various industries could be improved so as to increase the usefulness of the information provided and, again, to enhance the transparency of the regulatory process.

Principal research findings

The approach of the regulators

The regulatory accounting requirements vary significantly between the regulated industries. Whilst this may be partly explained by differences in their circumstances, for example, the major capital investment programme in the water and sewerage industry justifying a more rigorous approach than elsewhere, other factors also seem to be involved. Firstly, the regulatory accounting requirements relating to the more recently privatised industries (water and electricity) are more comprehensive than those applicable to industries that were privatised earlier. Secondly, the interests of the individual regulators appear to have influenced both the shape of the accounting requirements for the various industries and the extent to which use is made of accounting information.

The use of discretion by regulated companies

In addition to the regulatory or supplementary accounts prepared by the regulated companies, the regulators appear to keep their own sets of books which seem, at least in some instances, to unravel the effects of certain accounting choices made by the companies. This is not altogether surprising since the regulatory accounts do not necessarily reflect the relevant regulator's perceptions of the terms of the regulatory contract. The assets acquired at privatisation, for example, are normally recorded in current cost accounts prepared by regulated companies at their replacement cost, but it is not clear that all the regulators will allow the companies to earn a cumulative return on these assets equivalent to this amount. Furthermore, whilst the water and sewerage companies have, in accordance with regulatory requirements, prepared their current cost accounts by applying modified financial capital maintenance principles, the electricity companies continue to apply the operating capital maintenance concept which in the present authors' opinion leads to a less satisfactory measure of shareholders' returns.

Companies have also used their discretion in accounting matters immediately before and after privatisation to change some of their accounting policies and practices. In certain cases, particularly some of those in where there have been changes in asset lives and the basis for charging depreciation, the primary motivation would appear to have been to bring policies more in line with those of other private sector companies. Looking at the overall impact of changes made on the results of individual companies, it appears that in some industries, such as airports, the primary focus when reporting has been on the capital markets, whereas in others, especially the electricity supply industry, it has been on regulatory and public perceptions of the level of profitability. The difference in approach can be attributed to the different regulatory structures in the various industries, the different degree of media and public interest in them and the particular circumstances experienced by the industries during the period covered by our research.

Increasing the accountability of the regulators and the regulated

Serving the public interest

We believe that the public interest would best be served by the terms of the regulatory contract being more explicitly stated and by as much as possible of the accounting information used to determine the price-setting formula being made publicly available. A clear regulatory contract should be fully reflected in the accounts of regulated companies. The quality of regulatory accounting information should be further improved by the introduction of regulatory standards.

A more transparent regulatory contract

Specifying the terms of the regulatory contract would be expected to yield a number of benefits:

(a) the decisions taken by the regulator would be more open to scrutiny by interested parties and by independent observers;

(b) the role of the accounts as the public memory of the regulatory system would be enhanced: if the relevant information were in the public domain it would be less likely that a regulator would overturn a commitment of his or her predecessor, for example, regarding the claw-back of revenue advances; and

(c) with less uncertainty about the future level of earnings, the cost to regulated companies of raising debt and equity capital should be reduced, all other things being equal.

We do not attempt in our study to set out in detail the proposed terms of the regulatory contract for each industry, rather we advocate that such a contract should be formulated as transparently as possible. The following are among the issues on which it would be helpful for the regulators to state their approach with regard to the fixing of the pricing formula:

(a) *the tilting of revenues* – relevant regulator(s) should indicate the amount involved in individual cases, the period over which the advances are to be made and the length of the subsequent claw-back period;

(b) *the rate of return to be allowed on assets held at privatisation* – each regulator should indicate the return that the regulated companies will be allowed on these assets; and

(c) *the treatment of efficiency gains* – each regulator should indicate how they are to be measured, the proportion of the surplus profits the companies will be allowed to retain and the length of time over which this apportionment is to apply.

The regulatory accounts and regulatory standards

The core information for regulatory decision-making should be that published in audited regulatory accounts and all such accounts should be required to show a true and fair view. Moreover, they should be prepared on a current cost basis applying financial capital maintenance principles. Regulators will need to continue to receive some information on a confidential basis but a cost-benefit test should be applied to check that non-publication is justified. Regulatory standards should deal with issues arising from the regulatory process which are applicable to the generality of regulated companies, though they could contain application guidance relevant to individual industries. Differences in the accounting requirements for individual industries should be able to be justified by reference to differences in circumstances.

It would be expected that regulatory standards would at least cover:

(a) the determination of the capital maintenance concept to be applied (if not dealt with in the licence conditions);

(b) accounting for fixed assets, including issues related to recognition; the use of indices; the determination of the carrying amount at privatisation; depreciation; and the use of renewals accounting;

(c) accounting for revenue advances (tilting);

(d) accounting for over and under-recoveries; and

(e) articulation between the regulatory accounts and the statutory accounts of the regulated entity, if listed, or alternatively its listed parent.

Regulatory standards should be issued by a body under the joint auspices of the Accounting Standards Board (ASB) and the industry regulators or by a body established by the regulators in which case the standards should be franked by the ASB. There should be industry representation on the standard-setting body. Regulatory accounts should be brought within the aegis of the Financial Reporting Review Panel.

Concluding Remarks

Our study has addressed the question 'what is distinctive about accounting for regulated industries?' The principal features that we have identified in this report include the impact of privatisation on the accounts, the relative lack of conventions and standards surrounding current cost accounting and the special significance of accounts for price-setting purposes. Our proposed reforms aim to ensure that full account is taken of these features in the design of financial reporting systems for regulated companies.

Chapter 6 • Accounting by the Water and Sewerage Companies

Water offers the best example of a regulated industry where accounting information is intended to play an important role in the regulatory process. Coming as it did after the privatisation of British Telecom, British Gas and BAA, water privatisation benefited from the accumulated knowledge of RPI–X regulation in practice. Even with these advantages it is apparent that much of the regulatory accounting information produced to date has been unsatisfactory and that there are areas where information continues to offer confusing results. The accounting problems faced by the regulator have arisen in the main from the implementation of previously agreed policies and practices rather than from the introduction of new policies by the regulated companies.

6.1 Water and regulation

The water industry has several key features which influence the accounting policies of the business and the nature of regulation. It is an industry with a large asset base and a high level of continuing capital expenditure. Many of its assets have long lives and many are below ground. There is little prospect of rapid technical progress or of direct competition. The water industry has the least prospect of competition of all the regulated industries.

The regulation of water requires a far higher level of information than in any other industry. This results from the number of regulated bodies, the lack of competition possible within the industry and the necessity to monitor the capital expenditure programme. Moreover, the present Director-General of Water Services is committed to a policy of openness in regulation.

As well as the disclosures in the regulatory accounts and related unpublished information, OFWAT require detailed annual financial and engineering information in the July return. Much of the information is now submitted to OFWAT on floppy disc. The industry is somewhat sceptical about whether all the data are thoroughly scrutinised and used by OFWAT. The opinions of our interviewees were divided between those who feel that OFWAT's requirements will diminish as the regulator becomes more familiar with the information available and is able to filter out what is most useful and those who believe that the content of the reporting requirements may change but that the volume of information that has to be produced will remain the same. There appears to be remarkably little resentment of the reporting requirements and even a degree of sympathy with the task facing the regulator.

One of the striking features of regulatory accounting within the water industry in comparison to other regulated industries is the specific nature of the instructions issued by OFWAT. An example of this is the existence of pro forma accounting formats including historical and current cost profit and loss and balance sheet formats and pro formas for various notes. This level of instruction was not present at the outset of regulation. In the first few years of regulation there were certain areas of vagueness. For example, Regulatory Accounting Guideline 1 on Accounting for Current Costs was issued in March 1991 and was not fully implemented until the 1991/92 accounts. The learning process for both regulator and regulated should not be underestimated. The negative side of such regimentation for the casual user of the water and sewerage companies' accounts is that many items in regulatory accounts have very precise definitions the and reader must be aware of them if he or she is to fully understand the figures in the accounts. This could be described as a burden of transparency.

It should be remembered that OFWAT is not the only regulator operating in this industry. Other regulators are the National Rivers Authority, Her Majesty's Inspectorate of Pollution, the Drinking Water Inspectorate and the European Union. The environmental and quality regulators have no obligation to consider the financial implications of their requirements. OFWAT by contrast has an obligation under the Water Act to ensure that water and sewerage companies are able to finance the proper carrying out of their functions.

6.2 Public relations aspects of accounting results

During our interviews with the industry one of the major changes that our respondents identified was the additional interest in their results shown by the general public. Most water authorities had fairly low profiles and the areas of their operations that did attract public attention were those related to flood control and fisheries rather than to water and sewerage. Additional public interest in these latter two areas has been prompted by increasing water and sewerage bills, which conflict in the public mind with expectations of price regulation, and by small shareholder involvement following the sale of the ten water and sewerage companies.

One interviewee said to us:

> 'The presentation of information to the customer has become important. The company has realised that high profits and rising water bills require some comment and has started to explain to customers that profits are being spent on capital projects within the company and not on the acquisition of new subsidiaries by the plc.'

Several interviewees were worried that the public misunderstood the picture of their activities provided by the accounts:

> 'Diversification is not widely understood by customers. There is a widespread belief among customers that they paid for a recent large acquisition through their water bills'

There was a particular problem in relation to CCA accounts:

> 'Customers see huge reserves in CCA accounts and ask pointed questions about how the company has amassed what they see as piles of cash. The company has to explain that these accounts are not like the accounts of other companies.'

The water and sewerage companies' interest in the views of their customers is also linked to strategic regulatory considerations:

> 'This attention to customer views is part of a policy to marginalise the regulator. The company does not intend the regulator to be able to claim that he knows more about customers' opinions than the company does.'

Interviewees thought that one way of handling the challenge of presenting information to customers was through including more non-financial information on the company's achievements in the annual report.

6.3 Accounting policies within the industry

There has been little change in accounting policies of the water and sewerage companies since privatisation. The only significant change to have taken place is the adoption of a new policy on the treatment of government grants. Counsel's opinion indicated that although Statement of Standard Accounting Practice 4 (SSAP4), Accounting for Government Grants (ASC, 1990), allowed the netting off of capital grants against the assets they were intended to fund, this treatment was in conflict with the Companies Act 1985. Companies affected by the provisions of SSAP4 were therefore advised to treat grants as deferred income and to release them to the profit and loss account over the life of the asset. Water and sewerage companies adopted the recommended practice for all asset categories except infrastructure assets in respect of which they continued to deduct grants from cost. Since the network of infrastructure assets is expected to be maintained in perpetuity any deferred credit would be locked into the balance sheet and so it was felt appropriate to continue with the original policy. The water and sewerage companies adopted this policy in unison. They seem most reluctant to strike out on their own and adopt new accounting policies, probably because none has been willing to expose itself to scrutiny by adopting accounting policies that differ from those of the rest of the industry.

The Director General of Water Services has stated that yardstick competition will have a role in water regulation. For the companies, until the implications of this are fully known, there will be advantages in staying with the pack in terms of accounting treatments. For the regulator, applying yardstick measures will be more straightforward and arguably fairer if companies are preparing their accounts in the same way. It is also true to say that companies have little choice of treatment in the regulatory accounts and it is both simpler and conceptually more satisfactory to use the same treatments in the statutory accounts. It is a requirement of the licence that so far as reasonably practicable the regulatory accounts should have the same content as the statutory accounts of the company and should use the same formats and accounting policies. Since many of the treatments in the regulatory accounts are prescribed by the regulator this conformity feeds back into the statutory accounts.

6.4 Infrastructure renewals accounting

In the accounts for the year to 31 March 1989 all the then water authorities adopted renewals accounting for their infrastructure assets (mains and sewers, impounding and pumped raw water storage reservoirs and sludge pipelines). No depreciation was to be charged on infrastructure assets because they represented a network of systems which must be maintained in perpetuity and therefore had no finite economic life. The accounting treatment of the change was to write back depreciation charged on the assets since April 1984 and to replace it with past infrastructure renewals expenditure.

Renewals accounting is described in the licence as follows:

> 'Infrastructure renewals expenditure means expenditure on maintaining or restoring the original operating capability, qualitative performance and condition of infrastructure assets, other than expenditure which is capitalised and routine day-to-day maintenance expenditure which is charged as an operating cost to the profit and loss account.'

The infrastructure renewals charge represents an approximation to current cost accounting within the historical cost accounts. Infrastructure assets represent the largest asset category in both historical and current cost terms and any charge related to these assets will have a correspondingly large impact on the profit and loss account.

The annual renewals charge is supposed to represent a long run normative charge. If the network of assets has reached a steady condition then the expenditure to maintain this state should also be steady in real terms. The charge should only vary in real terms if the network itself changes. It follows from this that there should be a steady relationship between the value of the network and the renewals charge.

Figures 6.1 and 6.2 compare the renewals charge and the value of the infrastructure asset base in terms of implied asset life for both historical cost and current cost asset values. These charts are striking both because of the year-on-year fluctuations for individual companies and because of the differences between companies. Part of the discrepancy is related to the unreliability of the asset values carried in the historical cost and current cost accounts which is discussed elsewhere. One finance director put these differences down to gamesmanship during the privatisation process:

> 'The fundamental problem lies in the privatisation process where there was a tight deadline and a willing seller. Authorities were allowed a degree of manoeuvrability in the privatisation process, and they applied this in different areas, some in infrastructure assets.'

Figure 6.1: Implied infrastructure asset lives (HCA)

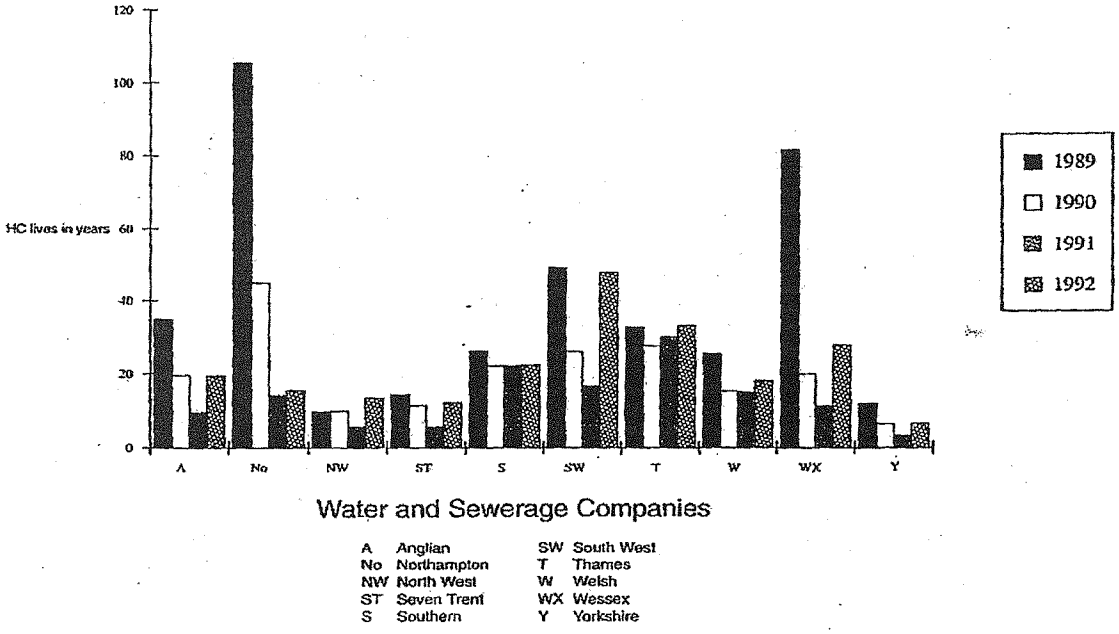
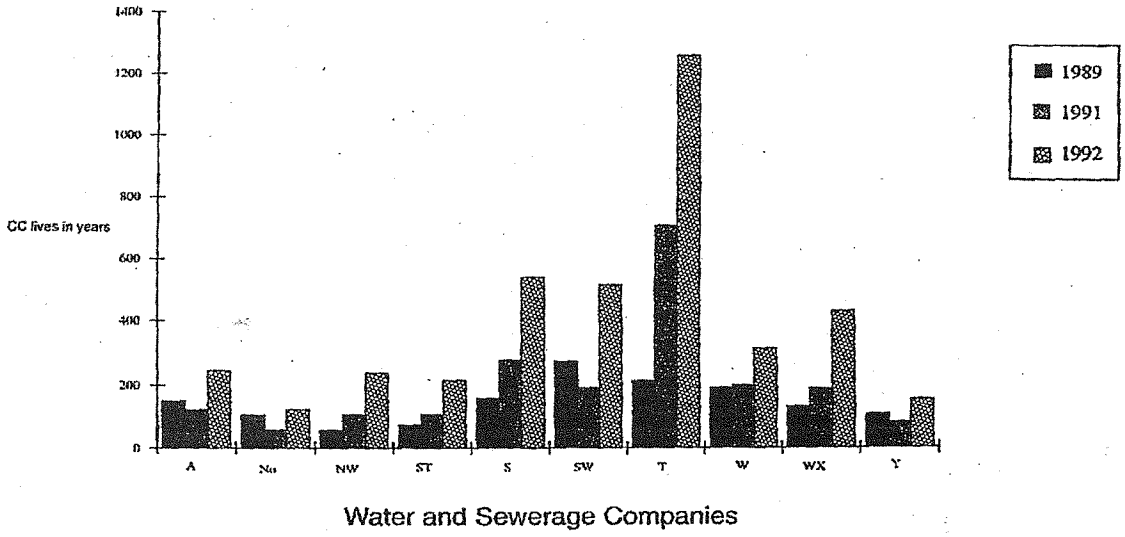


Figure 6.2: Implied infrastructure asset lives (CCA)



We know that there are differences in indexation of the charge. Initially all companies were to index the normal steady state renewals charge from year to year using a specific index. Some companies later switched to RPI and for the 1991/92 regulatory accounts onwards the Director General instructed that all companies should index their infrastructure renewals charge using average RPI, although the method by which this change should be implemented was not specified. This indicates that even with detailed requirements different interpretations are possible, with damaging consequences for consistency and comparability. The 1991/92 accounting year, when there should have been consistent application of renewals charge policies and when companies were producing regulatory accounts for the third time so that one would expect many teething troubles to have been ironed out, was affected by the introduction of standard indexing. Implied current cost infrastructure asset lives computed from figures in the companies' accounts ranged from 123 to 1,262 years. Even though one must acknowledge that it is reasonable for there to be variations between companies, as the Director General has accepted in his stated intention to use explanatory factors in his comparison of inter-company performance, the range of results seems somewhat implausible. OFWAT acknowledges that infrastructure accounting in the water industry still needs some refining and that this is an area under consideration in the run up to the periodic review.

6.5 Current cost accounting

Under the terms of the licence companies are required to produce current cost regulatory accounts based on a scheme of current cost accounting produced by the regulator. There are strong arguments for using current cost accounting in an industry with so many and such long-lived assets. The basis of these accounts differed from that used by the predecessor authorities from which the opening current cost balances were taken. The accounts for the year ended 31 March 1991, the first full year after privatisation, implemented RAG 1 Accounting for Current Costs. This guideline introduced a specialised form of FCM accounting termed modified real terms accounting. Profit is measured in real terms but initial assets are valued at replacement cost which is greater than their economic value.

Adjustments to the CCA asset values arising from the introduction of RAG 1 (£75.7bn) were greater than the opening asset values (£47 bn). Most of this adjustment, £74.2bn related to infrastructure assets whose opening value was £27.3bn. According to OFWAT's review of the 1990/91 current cost data this was largely due to the removal of the 40% abatement factor, originally intended to address issues such as redundancy, the extent to which replacement assets would be funded by third parties, the inclusion of certain sewers reinstatement costs and pre1984 depreciation.

Our interviews with the industry revealed a widespread disbelief in the merits of current cost accounting. Given the importance of current cost accounting data for the regulatory process this attitude is a cause for concern. None of our interviewees used current cost accounts for internal decision-making purposes and only one said that he would consider producing current cost accounts if they were not required by the regulator. One finance director indicated the two main reasons why current cost accounts are not liked:

> 'CCA accounts have never been understood ... The CCA accounts published by the water industry ought to carry a health warning to the extent that they can be seriously misleading. The problems of CCA asset valuations render the accounts meaningless.'

The industry perceives the accounts to be compiled on the basis of meaningless asset values and to have little use because historical cost accounts rather than current cost accounts are the currency of the business community. This second problem has several aspects. First, as we noted in an earlier section, users of water company accounts may not understand the differences between water company accounts prepared on a CCA basis and the HCA accounts of other companies. Second, managers commented that analysts and others did not know how to compare different sets of CCA accounts. Third, the lack of interest of others in the accounts probably diminishes their status in the eyes of management:

not produce them if they were not required by the regulator.'

Finally, the water and sewerage companies faced pressure to shake off the culture of their predecessor authorities and become more commercially aware and this metamorphosis may have reinforced their dislike of an accounting basis widely associated with nationalised industry and their aim to be like other private sector enterprises.

In spite of these objections the characteristics of the industry mean that historical cost accounts do not provide satisfactory information on the rate of return and current cost accounts are a more suitable alternative. Given that the current method of current cost accounting within the industry has not been in place for very long it will be interesting to see if longer experience produces greater support or whether even a tailor-made scheme of current cost accounting is still rejected.

6.6 Other issues arising from regulation

A further artificiality arises from the restrictions imposed by the licence on the amounts charged by water and sewerage companies for connecting customers to the water and sewerage networks known as infrastructure charges. The permitted level of initial infrastructure charges for each company is shown in Table 6.3.

Table 6.3: Initial infrastructure charges: limits in each licence

Company	*Water*	*Sewerage*
Anglian	£479	£597
Northumbrian	**£111**	**£240**
North West	£198	£338
Severn Trent	£498	£356
Southern	£365	£485
South West	**£654**	£557
Thames	£403	£337
Wessex	£551	**£983**
Welsh	£259	£332
Yorkshire	£529	£626

(Extremes in bold type)

The initial charge limit is indexed using the RPI but since the maximum charge is fixed it may distort water company results especially where a large number of connections are made.

We discuss elsewhere some of the accounting issues which arise if an attempt is made to record a regulatory contract in the accounts including those relating to the tilting of revenues, which probably affects the water and sewerage companies more than virtually any other regulated companies in view of the size of the present capital expenditure programme. Questions also arise concerning whether any adjustments should be made in respect of land sales that were anticipated at the time of privatisation but which, because of the decline in property values since the initial 'K' setting, have either not taken place or have realised less than the anticipated proceeds.

6.7 Conclusions

There are regulatory accounting issues that remain to be resolved even within the water industry which has a relatively detailed regulatory accounting framework. Possibly the most significant of these is the application of infrastructure renewals accounting, because the size of the renewals charge means that any variation will have a significant effect on profit. The revised asset management plans (AMP 2) being drawn up as part of the 1994 periodic review should provide better information on which to base the long-run normative charge. After the first periodic review a clearer picture of the amount recoverable from the companies' assets should emerge, whether or not based on acquisition costs. This could enable 'normal' current cost accounting to be adopted in lieu of the existing 'modified' form in the regulatory accounts and hence allow the rates of profit to be brought more in line with the expected real costs of capital.

Although there have been few changes to pre-privatisation accounting policies in the water and sewerage companies the Director General has demonstrated by his action in response to the adoption of differing indexation policies for infrastructure renewals charges that that he will only allow water companies limited leeway in their regulatory accounts.