A QUESTION OF TRUST: REGULATORS AND THE REGULATORY REGIME FOR PRIVATISED UTILITIES

written by Irvine Lapsley*
with Kenneth Kilpatrick**

*Professor of Accounting, Department of Accountancy and Business Method, University of Edinburgh
**Research Associate at the Institute of Public Sector Accounting Research at the University of Edinburgh

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FOREWORD

The introduction of a regulatory framework for the privatised utilities is one of the most profound changes in UK public policy in recent years. At the centre of this framework is the regulator, an individual who has significant responsibilities for overseeing these industries, for fostering competition and taking account of the interests of the consumer.

The importance of the issue of regulation can be seen from several standpoints: the regulators influence a significant proportion of the UK economy through the privatised utilities; these utilities provide essential services which reach all parts of the community; and the regulator has a daunting task in securing financial arrangements which aim to satisfy all conflicting interests. The conduct and regulation of these industries has generated considerable public and media interest.

This research report is published by the Research Committee of The Institute of Chartered Accountants of Scotland to offer a constructive contribution to the intensifying debate surrounding the regulation of the utilities. The Research Committee considers this report will be of interest to all those involved in the development of that debate.

Professor John Baillie
Convener
Research Committee

May 1997
ACKNOWLEDGMENTS

During this research we have had cause to be grateful to numerous persons - the regulators whom we interviewed: Sir Bryan Carsberg, formerly of the Office of Fair Trading and OFTEL; Don Cruickshank (OFTEL); Alan Booker (OFWAT); Geoff Horton (OFFER); and Clare Spottiswoode (OFGAS); and the regulatees, who will remain confidential. We are also grateful to the anonymous reviewers and all those who commented on earlier drafts of this report for their constructive comments. Whilst we have benefited from our discussions with these various parties, the views presented in this report are our own.

We would also like to thank Professor Geoffrey Whittington, University of Cambridge and ICAS Professorial Research Fellow; Professor Pauline Weetman, Director of Research; Aileen Beattie, Director, Accounting and Auditing; and Ann Lamb, Assistant Director at The Institute of Chartered Accountants of Scotland for their assistance and comments throughout this project. Thanks also to Isobel Webber, Personal Secretary to the Director of Research, for her considerable care in typesetting this report.

Finally, we would wish to thank The Institute of Chartered Accountants of Scotland and the Research Committee for their financial support for this project which is one of a series being undertaken by the Institute of Public Sector Accounting Research (IPSAR) at the University of Edinburgh.

Irvine Lapsley

Kenneth Kilpatrick
 PREFACE

The privatisation of formerly state owned enterprises, particularly the utilities, over the last 15 years or so, has been, in my opinion, one of the most important economic developments in the United Kingdom in the last 50 years. It has created the potential for much more efficient operation and particularly more customer responsive service. Of course, privatisation alone cannot be expected to achieve this. It needs to be combined with effective regulation, providing incentives for good performance and, as part of this, the promotion of competition where it can be economic.

The government gave relatively little thought to the details of the arrangements for regulation. It preferred to appoint regulators guided only by rather general statements in Acts of Parliament and to leave the detailed developments to the regulators. The importance of these developments, combined with the extent of the detailed questions without authoritive answer, has led to vigorous and sometimes controversial debate and in turn to a considerable research interest. This is very much to be welcomed. This present volume sponsored by The Institute of Chartered Accountants of Scotland makes a distinguished contribution to the debate.

I have often thought that accounting lies at the heart of utility regulation. A key element is price control. This plays a very important part in protecting customers on the one hand but giving incentives to the organisation for improving efficiency on the other. Efficiency of performance is not always well captured in traditional accounting reports where assets are measured at historical prices, where some assets are not recorded, and there are other deficiencies for the purposes of incentive regulation. An accountant is needed to judge these matters and he or she
needs great skills of communication to explain to others that high accounting profits do not necessarily mean excessive profits in economic terms.

The promotion of competition draws on accounting skills in a similar way. Indeed the promotion of competition interacts importantly with price control because new entrants will be limited in their pricing by the prices allowed to the dominant incumbent and new entrants need to be able to earn a satisfactory return after making investments at current prices. Furthermore, competition among utilities is likely to involve the use of each other’s resources: access to the pipes of British Gas, or the telephone network of British Telecom. Assessing a fair price for these services is another area where the contribution of the accountant is likely to be important.

Most commentators today would say that the time is fast approaching when some of the details of our approaches to utility regulation need review even though the main elements of private ownership, competition and incentive based regulation should be retained and carefully nurtured. Opinion differs considerably about what the changes should be. The issues are complex and the arguments finely balanced. No prescription is likely to command universal agreement but it is vital that the debate is extensive and well argued at the present time. For that reason, particularly, I welcome this contribution to the debate.

Sir Bryan Carsberg
London
SUMMARY

This study examines one of the most profound changes in UK public policy in recent years, the introduction of a new regulatory framework for the privatised utilities. At the centre of this framework is the regulator, an individual who has significant responsibilities for overseeing these industries, for fostering competition and taking account of the interests of the consumer. This challenging task, in an arena where there is considerable public and media interest, has generated considerable controversy. In this study, we seek to present an impartial analysis which contributes to this debate. In doing so, we examine pressures for change, the failure of the public corporations and the emergence of new ideas, primarily economic, on how utilities should be regulated. We then examine regulation in action. One aspect of this is the operation of the system of regulation, which we describe as 'regulatory processes'. This was investigated by interviewing regulators and regulatees for their views on how this works, in practice. Another aspect of this is the work of the regulator in deciding on price caps for regulatees and setting quality standards for the provision of services. Analysis of this data informs this assessment of the effectiveness of the regulators. As discussed within the text, this demonstrates that regulators have had a significant impact on these industries. However, given the dramatic nature of this change and the high profile nature of the task of the regulator and of the regulated industries themselves, there has been considerable discussion of alternative models of regulation, and we evaluate these in our concluding chapter.
Pressures for change

This study begins by examining the pressures for change which led to the current system of regulating UK privatised utilities. In chapter 3, we examine the conduct of the former public corporations. We document the problems associated with the creation of organisations which were intended to operate in a fashion comparable to commercial enterprises, but which were prevented from doing so by government intervention. This particular tension is discussed here, not merely from the perspective of establishing the facts of the conduct and management of these industries, but also as a means of identifying their part in the pressures for change. Reactions to the difficulties of managing state owned corporations and the dilemma of achieving increased efficiency fuelled the emergence of ideas, primarily economic, on how this might be achieved. An insight into these ideas, contestable market theory and property rights theory, is set out in chapter 3. While this has prompted a new direction for the control and regulation of these industries, these ideas, of themselves, have not resolved all of the problems of achieving effective regulation. The incomplete nature of these ideas is shown in chapter 4. This sets out, briefly, the rise of a new regulatory economics but, more importantly, identifies issues arising, particularly those of providing incentives, adequate systems of monitoring for hidden advantages within regulated firms, the possibility of regulators being swayed excessively 'captured' by regulatees and the need for 'trust' relationships to make the system work.

Regulation in action

How effective has UK regulatory policy been? This question is examined in a number of ways. In the first instance, and in the light of the previous discussion of the demise of the public corporation, the emergence of new strategies for the regulation of such industries and new ideas, essentially economic, on their implementation, we examine UK regulatory policy (in chapter 5) to consider the extent to which it has overcome the issues and problems raised in the transition to regulated
industries. We then examine regulation in practice in two, distinct ways. Firstly, the interactions of regulators and regulatees, what we call 'regulatory processes', are examined in chapter 6. This analysis is based on our interviews with regulators and regulatees. It draws on, and highlights the importance of, the concepts identified in chapters 3 and 4, notably incentives, monitoring, information asymmetry, regulatory capture and, fundamentally, the position of trust in regulatory relationships. However, this is an important, but incomplete, measure of the effectiveness of UK regulatory policy. To complete this analysis we examine outcomes of the regulatory policy. We define outcomes in two ways:

- the decision by the regulator on the size of the price cap, as part of the periodic price review (in chapter 7); and
- the performance of the regulated industries, as measured by an analysis of their financial results and their compliance with non financial standards of performance set by the regulator (in chapter 8).

UK regulatory policy has been innovative particularly in the use of price caps, benchmarking and the extension to non financial measures of performance. These chapters show that there remain issues to be resolved. In particular, the extent to which regulator discretion compensates for informational advantages held by regulated firms (see chapter 6), and the diversity of approaches to setting price caps taken by different regulators. Finally, our analysis of the financial and non financial performance of the regulated industries again reveals diversity. This is suggestive of different impacts, in terms of the tightness of the regulatory regime, for these utilities.

**Alternative models of regulation**

The issues surrounding the regulation of the privatised utilities have resulted in proposals to change the regulatory regime. Much of the criticism of the privatised utilities has been of boardroom 'excess' in executive remuneration and in share price gains, but these are criticisms
which should not be attributed to regulators and the UK system of regulation. However, such pressures have fuelled speculation for a variety of reforms of these utilities, some radical, some less so. In this study we examine a spectrum of alternatives, ranging across:

- reversion to public corporations;
- refinements to the existing regulatory regime, notably the creation of a single regulatory authority; and
- radical alternatives to the existing regime, specifically the stakeholder approach to governance and the social citizenship model.

Of these alternatives, option 2 offers the greatest potential, option 3 is, as yet, ill defined, and the social citizenship variant is close to a reversion to the former nationalised industries model which has failed to operate successfully. A major dimension of any evaluation of these different models of regulation should be the relative infancy of the status quo, just over a decade for the oldest established regulatory office, with others considerably less. In this sense, regulation is not one well defined, static model, but a continually developing form of governance.
THE NATURE AND

METHOD OF INVESTIGATION
CHAPTER 1

INTRODUCTION

In the past decade, the rise in the importance of 'the regulator' has been marked. From the initial appointment of Sir Bryan Carsberg as the regulator of OFTEL on its privatisation in 1984, we now have a raft of such regulators (see Table 1.1) and this concept is extending beyond these basic utilities to other aspects of public interest, such as the national lottery. At first sight this growth would appear to be supportive of the concept of 'the regulator' and 'regulation', but there is conflicting evidence. The system of regulating the privatised utilities in the UK has aroused considerable controversy.

Table 1.1 The regulated industries

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<tr>
<th>Industry</th>
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<th>Regulator</th>
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<tr>
<td>British Telecom (BT)</td>
<td>OFTEL</td>
<td>Don Cruickshank</td>
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<td>British Gas (BG)</td>
<td>OFGAS</td>
<td>Clare Spottiswoode</td>
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<td>BAA (airports)</td>
<td>CAA</td>
<td>Sir Christopher Chataway</td>
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<td>Water services</td>
<td>OFWAT</td>
<td>Ian Byatt</td>
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<td>(England/Wales)</td>
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<tr>
<td>Electricity industry</td>
<td>OFFER (GB)</td>
<td>Stephen Littlechild</td>
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<td>Rail infrastructure</td>
<td>OFFER (NI)</td>
<td>Douglas McIlloone</td>
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<td>- franchising</td>
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The National Audit Office has initiated a major review of the entire process of UK regulation of utilities. There are constant and continuing references to the (in)effectiveness of the regulatory regime in the media (see Table 1.2). Doubts have been expressed over the appropriateness of the initial valuation of utilities for privatisation; over the effectiveness of the regulatory system in overseeing key policies, such as pricing, and in promoting competition; the attenuation of control over management; the efficiency of the privatised utilities; and the promotion of shareholders' interests at the expense of consumers. These criticisms highlight both the high level of public interest in the conduct and the regulation of these industries and the need for research to inform the continuing debate on the future of UK regulatory policy.

**Table 1.2 Selected media comments on utility regulation**

- Clearly the industry was sold off too cheaply. *At South Western Electricity if they accept the American take over they will have quadrupled the value of their shares in five years.* The balance of benefits since privatisation has gone entirely to the shareholders and not to the consumer. (Peter Weston Deputy Chairman, Electricity Consumers' Committees 3 September 1995).

- Regulators must be given well-defined policy objectives to pursue by the politicians who appoint them. Their decisions must be open to challenge by those who feel aggrieved by them, and not just through the MMC. (Brian Wilson, Labour MP for Cunninghame North, The Scotsman, 19 January 1995).

- Labour's ideas for a 'windfall profits' tax looks a serious prospect, as does its ideas for redistributing excess profits to consumers. (Alex Brummner, The Guardian, 15 July 1995).

- BT is unhappy about Oftel's suggestion that its licence should contain a general condition banning unfair competition and giving the regulator power to issue orders prohibiting action pending further investigation. Oftel wants the change because it believes BT is spending too much time and energy on finding ways to circumvent its specific licence prohibitions. (Gail Counsell, City Editor, The Scotsman, 26 July 1995).
Table 1.2 Selected media comments on utility regulation (continued)

The big days of cost cutting and the big profits from cost cutting haven’t got many years to run. (John Deane, Finance Director, Southern Electric, quoted in The Scotsman, 30 June 1995).

Devaney rejects the argument accepted by some of his counter-parts in other regions, that the incidence shows that there are serious flaws in the whole regulatory system and in Littlechild’s stewardship of it. People do not always appreciate that this is a complex industry. I am not sure that any of the commentators could do any better. Moving an industry successfully from the state to private sectors doesn’t happen overnight. (Michael Smith, Financial Times, 11 March 1995 interviewing John Devaney, Chief Executive, Eastern Group plc).

... regulation based on hindsight removes the combination of assurance of long-term reasonable profitability with incentive to efficiency which has led to such dramatic improvements in the productivity of all the privatised utilities. (Dermot Glynn, Managing Director, National Economic Research Associates, Letters to the Editor, The Times).

Combined profits of Britain’s public utilities, electricity, gas and water, have soared by 40% to a record level estimated at £7.7 billion in the past year ... Dr Jack Cunningham, Labour’s trade and industry spokesman, said: These figures confirm my view that the privatisation programme, far from benefiting consumers by providing more efficient services and fairer prices, has led to huge monopoly profits and boardroom excess. (Michael Smith, Business Editor, The Observer, 2 April 1995).

For all their protestations of innocence, the simple truth is that the utilities have generated such high profits by selling a monopoly service to the public in a climate of liberal price control. That climate has now changed. The electricity and water companies, in particular, have virtually admitted that the game is up by suddenly announcing a series of price reductions to customers. (Michael Smith, Business Editor, The Observer, 2 April 1995).

This study addresses four research questions:

Q1 Why did the former public corporations fail, and what role did this play in the development of the current system of regulation?

Q2 What were the key ideas which underpinned the development of the current regulatory regime?

Q3 How effective has UK regulatory policy been?
Q4 *Should the current UK model of regulation be modified, and if so, how?*

The implications of question one are evaluated in chapter 3. This demonstrates the weaknesses of the former nationalised industries. It also traces the ideas which shaped the new policy of privatised utilities. This discussion is also highly pertinent to the overview in chapter 9 which is an overall appraisal of current and future directions of UK regulatory policy.

In answering question 2, we examine briefly the ideas which underpinned the old regime of nationalised industries. We also examine the key ideas which have influenced the current system of regulation.

Question 3 on the effectiveness of the current UK regulatory system, represents the central thrust of this study. This is analysed in a three stage process:

- an examination of UK regulatory policy;
- a study of regulator and regulatee relationships; and
- a scrutiny of outturns for regulated industries, financial and non financial.

Of these an examination of UK regulatory policy is considered in chapter 5; a study of regulator and regulatee relationships is examined in chapter 6; and a scrutiny of outturns for regulated industries, financial and non financial is discussed in chapters 7 and 8. We undertake this analysis by focusing on four regulated industries: gas, electricity, water and telecommunications.

At the heart of the issue of the effective regulation of utilities sits the question of trust: the extent to which consumers, employees and the government can trust the individuals selected to act as regulators. In particular the extent to which they can be trusted to discharge their discretionary powers effectively and the extent to which the regulator can trust the regulatee to act in a manner which may not exploit any advantage, eg informational, actual or perceived, which it has over the regulator.
The final research question of this study, recognises that, not only is there considerable debate over the effectiveness of the current regulatory regime, but there are also numerous proposed modifications of that regime. An indication of the nature of this problem can be obtained by scrutinising two recently reported pronouncements by regulators which highlight the twin dilemmas of holding regulators accountable for the discretion which they possess and the extent to which they see the need to extend these powers, further:

*What is our accountability? ... In truth very little. Ms. Spottiswoode said that the annual report she supplied to Parliament was ‘not worth the paper it is written on’ and went ‘virtually unread’. She also said that she was ‘not really’ accountable to MPs, even through the select committee system. ‘I have given evidence to four select committees in the past year. Two have come up with diametrically opposite conclusions ... The committees are a snapshot, they are not representative of Parliament.’ There was further scrutiny by the National Audit Office and, ultimately, by judicial review, but Ms. Spottiswoode questioned whether that was adequate ... ‘The system does work well but it is very dependent on an individual. It needs to be debated. We cannot assume the current system is right’. (Nigel Williamson, Whitehall Correspondent, The Times, 15 March 1995).*

*In an effort to improve transparency Don Cruickshank, director-general of Oftel, said that in future he wanted BT to give a detailed breakdown of its costs. He is also proposing greater investigatory powers for himself to look into BT’s accounting procedures and how it cross-subsidises its services ... ‘Wide discretionary powers by their nature, introduce uncertainty and unpredictability into the regulatory regime. This is not in the interest of customers, shareholders or competitors’ a spokesman for BT said (Gail Counsell, City Editor, The Scotsman, 10 February 1995).*
Research question 4 is explored in chapters 9 and 10, in which the *status quo*, in the light of the appraisal set out in chapters 5 to 8, is assessed against the alternatives of:

- a reversion to public corporations;
- refinements to the current regime; and
- radical alternatives to the current system of regulation.

The discussion of a reversion to public corporations is a basic benchmark on whether the current system of regulation has been a success or a failure. This begs the question of whether the current regulatory system could be improved or not. This is assessed by considering refinements to the current regime, principally the ‘Baker’ model, after the chief executive of National Power, who proposed it, and radical alternatives to the current system. This examines both the stakeholder model and the social citizenship model. These are more radical alternatives which would reshape, fundamentally, the practice of regulating these privatised utilities. We conclude that there have been significant gains from the regulatory process as it is implemented, currently, but these alternatives identify possible means of enhancing the quality of regulation, particularly over issues of risk/reward structures, sectional interests and the tightness of the regulatory regime.
CHAPTER 2

RESEARCH METHOD

This study addresses four research questions:

Q1 Why did the former public corporations fail, and what role did this play in the development of the current system of regulation?
Q2 What were the key ideas which underpinned the development of the current regulatory regime?
Q3 How effective has UK regulatory policy been?
Q4 Should the current UK model of regulation be modified, and if so, how?

Answers to the four research questions are obtained in a variety of ways. For question 1, on the failure of the former public corporations, we examine publicly available reports, studies and information on the conduct and management of the nationalised industries. This question is also examined in the context of the fundamental theories which have challenged the continued existence of the public corporations. For question 2, we examine the literature which has shaped the policies towards the regulated industries. These ideas are primarily economic, and this literature is vast. We seek to present the key ideas, in an accessible fashion, rather than produce an exhaustive account of this literature.

In answering question 3, which represents the central part of this investigation, we examine ‘effectiveness’ from a variety of perspectives: first, we examine, briefly, UK regulatory policy; secondly, a series of interviews was undertaken and, finally, publicly available data and statistics were collated and analysed. Part of this study is informed by the research of Pettigrew (1992) on managerial elites. This work
demonstrates the merits of tracking the influence of top management and key actors, in this instance, regulators and regulatees, in evaluating processes of service delivery. The design of the research instrument and the conduct of the field studies are explained below. In studying regulator and regulatee relationships, the methods of investigation employed throughout this study have followed Denzin’s (1978) tripartite research methodology. Following Denzin, the study sought to achieve a triangulation of evidence by gathering it from three sources:

- interviews with regulators;
- interviews with regulated utilities (particularly with those responsible for regulatory matters); and
- by the use of publicly available data, such as annual reports, reports of public bodies, and reports on performance of utilities.

In these investigations we adopted the following methods of: questionnaire design and construction; field visits; and analysis of data.

**Questionnaire design and construction**

Semi-structured questionnaires, available from the authors, were developed which drew upon issues identified by the literature review, and formed the basis of our discussions with regulators and regulated firms. Questionnaires were divided into three sections and dealt with general regulatory matters, contracts and commitment to the regulatory bargain and issues of price capping. Regulators’ questionnaires reflected situational differences; whether the individual was the regulatory institution’s initial incumbent or had been a successor appointment. This influenced a regulator’s ability to comment upon regulatory matters since privatisation, changes of emphasis in the regulatory regime set in train by the predecessor director general and questions on tariff review processes. Interviews were first conducted with regulators and then with regulated firms. The questionnaire fielded to regulated firms mirrored the issues contained in the regulator directed questionnaire, but took cognisance of regulators’ responses. This further refined the research instrument by
eliminating questions which had yielded only marginally informative answers, and permitted regulated firms to respond directly to specific issues raised by regulators.

Field visits

The majority of regulators, past and present, proved extremely cooperative and readily agreed to our request to participate in a short questionnaire based interview. We interviewed regulators of gas, water, electricity and telecommunications, including the current and a previous regulator. One regulator who was unavailable for interview substituted a deputy. The regulatees interviewed covered all the utilities and included British Gas, BT, a major regional electricity company and a major water company. The electricity and water companies were selected for inclusion on the basis that these were significant firms, as measured by comparative levels of turnover, capital expenditure and other scale effects, manpower levels and the size of the population which they served. All the regulated firms which participated with this project had personnel, and in most cases an entire department, dedicated to regulatory matters, often importing staff from other departments and employing consultants on an *ad hoc* basis to work on issues relating to regulation. The firms contacted to participate in this study responded positively to our request for an interview and, after receiving a copy of the questionnaire, identified and fielded personnel within the organisation who dealt with the regulator and were therefore best placed to respond to it.

Both sets of interviewees, *ie* regulators and regulatees, received the questions in advance. The interviews with regulators and regulatees were held in the period October 1994–June 1995. These interviews varied in length from one to three hours. In general, the interviews with regulators were of 1-1½ hours duration. The interviewees with regulatees were often with regulatory teams and these lasted from 2-3 hours. After conducting interviews, participants received sight of the text of the discussions, giving them an opportunity to confirm the interview results. All replies remain confidential and non attributable. To this end, we do not identify specific companies or individuals in our analyses. Also, for
that reason all those interviewed, regulatees or regulators, are referred to as male.

**Analysis of data**

The interviews produced a large volume of mainly qualitative data, from which regulator and regulatee interview responses are analysed to reveal key issues. It was anticipated that collating regulator and regulatee responses on a question by question basis would reveal areas of convergence and divergence in attitude to regulatory issues between similar sets of respondees. Comparing responses supplied by regulators with those of their regulated firms has highlighted specific issues and controversies between regulators and their regulated firms, and has captured the inherently interactive nature of utility regulation. These findings add a richness to our understanding of regulatory practice which is not evident from the published reports and statistics of regulation. Nevertheless, we draw on that latter source of data to illuminate our other findings on the regulation of the privatised utilities. Before we examine the findings of these field studies, we discuss in greater depth the theoretical background which has informed this research.

Finally, question 4, on the future of the current system of regulating utilities, is addressed by drawing on the analyses presented in answering questions 1, 2 and 3 and by evaluating a variety of policy options for change, in the light of the literature identified earlier on the issues and problems of achieving effective regulation.
PRESSURES FOR CHANGE
CHAPTER 3

THE WEAKNESSES

OF PUBLIC CORPORATIONS

The first pressure for change identified is the conduct of the former public corporations. This chapter therefore explores research question 1: Why did the former public corporations fail, and what role did this play in the development of the current system of regulation? There are two dimensions to this research question: the difficulties (failures?) of control and accountability with the nationalised industries as public corporations; and the emergence of new economic ideas on how those industries might best be regulated and operated.

The regulation of public corporations

Of major importance is the nature of the problems encountered with the regulation of the previous regime of nationalised industries as public corporations, here is a fundamental yardstick by which the success of the new regulatory systems can be gauged.

The concept of the public corporation which is generally attributed to Herbert Morrison (Morrison, 1933) rested on two premises: (a) the nationalised industry concerned was intended to operate similarly to private sector corporations; and (b) a constraint on its commercial activities was imposed by the powers of direction given to the Minister of State responsible for a given nationalised industry. As regards (a), these
large state corporations were intended to operate as autonomous corporations. They were responsible for the appointment of their own staff, they prepared annual accounts which complied with best commercial practice and they had the status of an independent legal entity. Furthermore, these corporations had staff who were not civil servants. This distinguished them from commercial activities run as government departments as, for example, the Post Office was for many years. Their boards of directors were to enjoy autonomy in their spending plans, were not directly accountable to the electorate or to Parliament and delivered the programme of activities at arms length from the Minister. An illustration of the kind of powers granted to Ministers over public corporations is contained in Table 3.1. The kinds of powers which were delegated to Ministers of State responsible for state industries were significant. They included powers over the appointment and remuneration of the members of the boards of directors of such corporations. More importantly, these Ministers typically had a series of financial and wider powers. On financial matters, this extended to the power to direct or approve the following activities of these corporations: the approval of investment programmes; levels of borrowing; the management of reserves, surpluses or grants, if in deficit; the form of its annual accounts; and the appointment of auditors. In the case of the annual accounts of state industries, these were presented to Parliament by the relevant Minister, but the Minister was no mere conduit.

In addition to the above powers, the nationalisation statutes gave Ministers the right to make directives in matters 'affecting the national interest'. This latter power is of particular importance because it raises a number of issues of direct relevance to the current system in the UK of regulation of these industries. These include the degree of discretion which can or should be delegated to a regulator; the need for trust in the face of complex relationships between regulator and regulatee which cannot be fully specified in contractual format; the extent to which the regulator should have powers as opposed to influence; the scope of such powers, *ie* both financial and general; the accountability of the regulator; and the qualities required of the effective regulator. These issues are discussed below in an appraisal of the accountability of the public
corporations, they are also taken up in later discussions of the present day regulatory framework.

Table 3.1 The duties and responsibilities of Ministers of State: the case of the British Transport Commission

1 The British Transport Commission

... The Commission shall consist of a chairman ... and other members appointed by the Minister (S1(2), Part 1, Transport Act, 1947) and ... a person shall be disqualified from being appointed ... so long as he is a member of the Commons House of Parliament ... (S.1(4)), Part 1, Transport Act, 1947).

2 The powers of the Commission

... the Commission should have the power ... to carry goods and passengers by rail, road and inland motorway, within Great Britain ... (S.2(1), Part 1, Transport Act, 1947).

3 General duty

... to provide ... an efficient, adequate, economical system of public inland transport ... with due regard to safety of operation ... (S.3(1), Part 1, Transport Act, 1947).

4 Financial objective

... shall levy such fares ... as to secure that the revenue of the Commission is not less than sufficient for making provision for the meeting of charges properly chargeable to revenue, taking one year with another (S.3(4), Transport Act, 1947).

5 Powers of the Minister

(i) The Minister may ... give ... directions of a general character as to the exercise and performance by the Commission of their functions in relation to matters which appear to him to affect the national interest ... (S.4(1), Part 1, 1947 Act).
(ii) In framing programmes of reorganisation or development involving substantial outlay on capital account, the Commission shall act in lines settled from time to time with the approval of the Minister (S.4(2), 1947 Act).
Table 3.1 The duties and responsibilities of Ministers of State: the case of the British Transport Commission (continued)

(iii) The Commission shall not, without the consent of the Minister acquire by agreement (whether absolutely or for any period) the whole or any part of any undertaking ... (S.4(4), 1947 Act).

(iv) The Minister may ... direct the Commission to discontinue any of their activities, dispose of any part of their undertaking, dispose of any securities held by them, call in any loan made by them ... (S.4(5), 1947 Act).

(v) The Commission shall furnish the Minister with such returns, accounts and other information with respect to their property and activities as he may from time to time require (S.4(6), 1947 Act).

(vi) The Commission shall, as soon as possible after the end of each financial year ... make to the Minister a report on the exercise and performance by them of their functions during that year and on their policy and programme, and the Minister shall lay a copy of every such report before each House of Parliament ... The Report for any year shall set out any direction given by the Minister ... unless (in the Minister’s opinion) it is against the interests of national security to do so ... (S.4(7), 1947 Act).

Note: The British Transport Commission was formed in the first wave of nationalisations in 1947. It was subsequently broken up into separate organisations: British Rail; Inland Waterways; Road Transport; and the London Underground by the 1962 Transport Act.

From the above description it can be seen that the role of the regulator, ie the Minister, was a crucial one. The potential for tension between the Minister, in his interpretation of general policy for a specific industry, and the responsibility of the state corporation’s board for day to day management is evident. This subject was the matter of detailed scrutiny by the then Select Committee for the Nationalised Industries (SCNI) which amassed the most substantive, available data on this issue and which told a complex story. This Committee reported that there were three main criticisms of the concept and practice of Ministerial control of the nationalised industries:

(i) a lack of clarity of purposes, policies, methods and responsibilities;
(ii) a confusion over the division of responsibilities, which exacerbated (i) above; and
concern over the detailed extent of ministerial control.

If we consider (i) and (ii) of the above criticisms together, we find evidence within the reports of the SCNI of a recurring pattern of confusion between the chairman of state corporations and the Ministers of State about the nature and purposes of government policies, the preparation of such policies and even about the most appropriate means of Ministerial control being exercised. This led to the SCNI (1968, para 13, pp.32–33) concluding that:

... the most serious criticism of Ministerial control as at present operated is that regarding lack of clarity about purposes and responsibility. There appears to be a danger of a proliferation of the responsibilities of management that threatens to produce duplication of effort and a stifling of initiative. Misdirection of effort of this kind impedes the achievement of the twin purposes of Ministerial control, namely securing the public interest and ensuring efficiency. (We) question whether Ministerial control is not fundamentally out of balance. Are Ministers doing enough to lay down and clarify broad policy and duties for the industries? Are Ministers and their departments becoming too closely involved in the details of the execution of those policies?

The major finding which we should draw from this, other than the pervasiveness of the 'control' problem, is the need to consider the context in which such controls are exercised. This means the institutional arrangements, the structural relationships and the settings, the key figures and their interactions. Light is shed on these issues by closer scrutiny of the findings of the SCNI on the exercise of ministerial control.

The SCNI expressed serious concerns about the extent to which there was excessive intervention in the management of state corporations, in the name of Ministerial control (1968, para 133, p.32):

The Committee are disturbed ... by the increasing extent of Government intervention in the detailed management of these industries. For it is on the increase and has now reached the point which some
chairmen considered the limit of tolerability. The Committee question the purpose and the efficiency of this general increase in control. If intervention is pressed too far, the whole concept of a public corporation is brought under strain.

There are two forms of such interventions: statutory controls, as outlined earlier; and other informal means of control, based on the interpretation of the Minister’s duties and powers. As regards interventions by the Minister under statutory controls, the main complaints related to the detailed nature of the control of capital investments of both specific projects and whole programmes, and the resulting delays. An example of this is the interest shown in railway investments (SCNI, 1968, para 564, p.124):

The emphasis appears to have been on the ad hoc examination, often by formal questionnaires and correspondence, of the merits of a wide range of separate projects. Inevitably this had the Ministry (of Transport) deep into the areas of management. The Ministry officials are now attempting to examine projects in almost as much detail, and with much the same material before them and with the same questions in mind, as the industrial managers themselves. And indeed the Ministry now wish to have exactly the same detailed case for projects submitted to them as is submitted to the Boards.

In part, this degree of interest might be attributed to the persistent financial deficits of the railways. It could be argued that this degree of intervention in a persistent, loss making public corporation meant that de facto, it had become a part of a government department and should have been reclassified as such. The general tone of intervention is also echoed within the evidence from other state industries.

The informal means of control are described by the SCNI as ‘extra statutory control’. An ambiguous position was reported on this by the SCNI. On the one hand, they stated that such control ‘appears to be accepted’ by the industries, but on the other hand, they found that there was ‘anxiety about the purposes and the extent to which it was applied.’
A number of examples were cited: intervention by Ministers with regard to prices; anxieties about informal influence over staff and wages questions; pressures in relation to reduction of productive capacity; directions on which raw materials to purchase; and intervention on advertising.

Such extra statutory controls were not exercised through formal channels of accountability. In other words, it was not exercised in response to a Parliamentary question nor in the explicit pursuit of some objective contained within other legislation not directed specifically at nationalised industries, e.g. prices and incomes policies. Instead this control was exercised by the completely informal, and usually unpublished, exercise of influence through what the SCNI (op.cit., para 82) described as the 'lunch table directive'.

Most of the industries which gave evidence to the SCNI accepted this form of control as 'inevitable'. A variety of experiences of state corporations was reported upon. The Chairman of the Electricity Council stated that there were 'very few' occasions when they had been 'pressed hard' to accept a policy privately for which the Minister was not prepared to accept public responsibility, and had never 'subordinated' themselves to the 'wishes of a Minister'. The Chairman of the London Transport Board stated that his relations with his Minister had always been open and that he had never been subject to an 'unofficial, hinted, covert, non accountable directive' (SCNI, op.cit., para 83).

The SCNI did report on instances of 'strained relations' between state corporations and their Ministers (SCNI, op.cit., para 132). A contrary view was expressed by Ministers: they were happy with informal arrangements; the dangers of the 'lunch table directive' were overstated; and these exchanges (of information, ideas and pressures) were two way (SCNI, op.cit., para 84). The SCNI was 'particularly disturbed' (SCNI, op.cit., para 137) by evidence that there was a lack of willingness on the part of the Boards of the nationalised industries to put their own criticisms to Ministers and to discuss them openly. This is indirect evidence of Ministers having the upper hand.

All of this raises the possibilities of 'capture', in this instance, of the regulatee being excessively swayed by the regulator, the converse of the
situation predicted (see Stigler, 1971) for UK regulation of privatised industries by an independent regulator. This matter is taken up further in our discussion of the new regulatory process, but clearly these kind of arrangements may result in tacit agreements between producer and regulator which are not in the best interests of the consumer.

Towards an alternative framework

The scenario depicted above of confusion over responsibilities between management and the Minister ('the regulator'). A lack of clarity of objectives and excessive Ministerial control brought forth a series of stinging attacks on the effectiveness of this system of regulating the utilities and other nationalised industries. A typical example of this is the critique by Redwood (1976), subsequently a government minister, but at that time an academic, in which he lays the blame for what he regarded as the poor economic performance of the nationalised industries on central government. This he saw as a necessary result of the style of British nationalisation, excessive government interference and a lack of financial discipline. As Redwood (1976, p.34) stated:

*How can industries be expected to operate successfully and in the public interest when their capital programmes are constantly disrupted by government in the name of demand management policies that often prove to be more destabilising than helpful in their general economic effects? How can chairmen of nationalised boards function properly when they are aware that if they question civil service and government opinions too strongly they are likely to be sacked? How can an industry pursue a sensible policy of providing goods and services to the public at a reasonable price when its pricing policies are continuously disrupted by short-sighted anti-inflation policies followed by governments keen to attack symptoms and not causes? Why should nationalised industry unions be attacked for hierarchical shop floor procedures and other symptoms of poor pay and conditions created by persistent government intervention?*
This is a particular view, not only of the regulation of these nationalised industries, but also of the conduct of economic policy by the government of that time. This wider context can also be seen as part of the trigger which led to the search for theories of how best to deal with regulatory processes.

Policy makers had two main options, the theory of property rights and the theory of contestable markets, which have both proved to be of enduring significance for government policy in this area. We outline the key ideas underpinning these theoretical frameworks, both as a demonstration of the economic rationale for government policy in this area for the past decade and a half, but also as additional insights to be brought to bear in assessing the effectiveness of the current UK regulatory framework.

The theory of property rights

Alchian (1965) and Demsetz (1967) describe property rights as relating to the rights of individuals or organisations to the use of resources: they help such individuals or organisations form those expectations which can reasonably be held in dealings with others. An owner of property rights has the consent of other members of society to act in particular ways. These rights are established by formally enacted laws of Parliament. They are also supported by social custom and practice. Using the property rights framework, Wiseman (1978) set out seven facets of economic behaviour which he regards as inherent in the nationalised industry as a form of economic organisation:

(1) There is no one who has a direct interest in the fruitful use of the assets of a nationalised corporation;
(2) The responsibilities of ownership inhere in the relevant Minister, but he is constrained, severely by the political process;
(3) Because of (1) and (2) above, there can be no efficient market for the relevant assets;
(4) The management of a nationalised corporation will find itself with considerable discretion, but nevertheless frustrated by arbitrary intervention in the decision process;

(5) It is an implication of (4) that the scope for divergence between the objectives of the individual members of the management group, the group as a whole, and the responsible minister, is much wider than in the case of the private firm;

(6) Managers will attach less significance to innovative activity than they would in the private market environment, since they have less to gain from it: there is an incentive to substitute bureaucratic for entrepreneurial behaviour; and

(7) Any obligation to meet financial losses may be regarded as an entitlement conferred by nationalisation by workers and unions.

A further development of these ideas by another property rights proponent (de Alessi, 1974) focuses on the relationship between the corporation and the government officials who act for the regulator. Alessi has argued that the economic interests of civil servants lead to basically interventionist policies and practices, because the salary of a civil servant is likely to be a function of the number of staff and the size of the budget controlled by that person. There is therefore an incentive to expand the set of activities under control. It may be that such relationships are pervasive, *ie* they may apply equally to the phenomenon of regulator and regulatee relationships in the new regulatory framework for privatised utilities. This issue is addressed further in chapter 4.

The above analysis focuses on the behaviour of the economic organisation in the provision of services and goods. Property rights theorists also point to the implications of theory for individuals and choice. Thus, property rights theorists favour market solutions rather than public ownership because of the theory's denial of the rights of individuals to choice in their use of resources. The theory also stresses the unique importance of the general public, as 'owners', of public undertakings being unable to sell their share of that public ownership, with the major consequence that individual risk bearing is reduced and there is greater dependence on state provision.
The Weaknesses of Public Corporations

The direct consequence of adopting both of these elements of the property rights approach is that it is desirable to convert public corporations into private ownership, particularly if a diffuse share ownership results. The privatisation programme of the 1980s and 1990s is consistent with this approach.

The theory of contestable markets

Aligned with this reversion to capital markets as instruments of economic efficiency is the theory of contestable markets. This theory is based on the notion that economic efficiency is best achieved by opening up markets for public services to potential entrants. The threat of new entrants into the market is seen as the single most effective means for ensuring maximum efficiency in service provision (see, for example, Bailey, 1981, and Baumol, Panzar and Willig, 1982). This is the thinking behind the introduction of compulsory competitive tendering and market testing for specific services, across the public sector. While the adoption of contestable markets does not lead to the outright privatisation of complete organisations, exposure of parts of organisations to market testing may lead to a gradual privatisation. This theory is of clear potential relevance to the operation of the regulatory process for the recently privatised industries. It is particularly important as an alternative to the property rights approach, because it recognises the need for incentives, but particularly because the privatisation of utilities, without consideration of the system of regulation, may leave consumers unprotected from monopoly forces.

Summary

This chapter has demonstrated the weaknesses of the former public corporations. A particular facet of this was their vulnerability to political intervention or interference. This took a number of forms, governmental intervention on pricing and investment decisions and detailed guidance which impacted on the day to day management of these corporations, despite the intention that discretion over such matters was intended to fall
within the province of the management of the nationalised industries. Such intervention was often opaque, rather than transparent, which weakened both the public accountability of such corporations and the commercial orientation which they were supposed to be pursuing. Ambiguity over objectives and performance resulted from such interventions.

A further pressure for change was the emergence of new ideas, contestable markets, property rights, which pointed towards new frameworks for the regulation of the nationalised industries. These new ideas, while offering broad frameworks within which these corporations could or should operate, were not sufficient to provide mechanisms for their effective regulation.
CHAPTER 4

NEW MODELS OF REGULATION

This chapter explores research question 2: *what were the key ideas which underpinned the development of the current regulatory regime?*

The previous chapter identified pressures for change within the sector of the economy, notably critics’ dissatisfaction with their operation and performance and emerging theories which supported a public policy of privatising such industries. It is important to note that, at the time of these privatisations, there was not a well defined, certain model of regulation. For example, the US system of public utility regulation (essentially by rate of return) had long attracted criticism on a number of counts. There were also new theories of the economic regulation of such industries coming to the fore, at this time. These included ideas of contestable markets, as mentioned above, but also theories which focused on the regulatory process.

The ‘new economics of regulation’ (Laffont, 1994) identifies key ideas underpinning the development of UK regulatory policy. It presents a theoretical framework by which the efficacy of regulatory processes can be assessed, but it is important to note that at the time of establishing the initial regulatory offices, and during the period for which regulatory offices have operated, these ideas presented an incomplete framework for the regulation of privatised utilities.

Before we examine the key concepts of the ‘new economics’ of regulation, however, we examine briefly the focus of the old regulatory economics. This comparison accentuates the contribution made by the
new theories and affords insights into the regulatory regimes employed in the former nationalised industries.

**The old regulatory economics**

The old regulatory economics derives from neoclassical approaches to the issue of the regulation of monopolies, particularly state monopolies. The nexus of the old regulatory economics was the price to be charged by the monopolist: here the interests of consumer, producer and (state) regulator converged. The particular aim of the pricing rule, *i.e.* the advocacy of marginal cost pricing, was to ensure allocative efficiency, *i.e.* a price which cannot be changed and simultaneously increase the welfare of producer and consumer. An example of the position adopted by such economists is Farrell, (1958, p.55):

> ... it is a necessary condition for a welfare optimum that no public utility (except in certain recognisable exceptional cases) set its price below marginal cost, and further, that a price equal to marginal cost is better than any lower price ... Apart from the problem of economies of scale, the only exceptions to this rule that are at all likely in practice occur when it is desirable to subsidise the utility's product, in order to increase the efficiency of the labour force, or for paternalistic reasons, or because social costs fall short of private costs ...  

This pricing rule was advocated by many eminent economists during the first wave of nationalisations in the UK in the 1950s. An account of these early debates is contained in Ruggles (1949–50). It identifies key proponents of marginal cost pricing, the above caveats set out by Farrell and the problem of 'second best' pricing, *i.e.* the 'first best' optimal allocation of resources in the economy is unattainable because not all organisations will price at marginal cost. The picture this draws is that of a rational, logical system, in which the regulator knows, with confidence, the cost and revenue functions of the utility to be regulated and from
which the appropriate guidance, to price at marginal cost, ensures the efficient allocation of resources.

This approach abstracts too much from reality: it reflects a static, deterministic world. It is far removed from the social and political settings of state monopoly; its implicit assumption of omniscience on the part of the Minister (state regulator) and the failure to address the complexity of regulator and regulatee relationships limits severely the value of this theoretical framework.

**The new regulatory economics**

The old regulatory economics presumed that the regulator, or Minister of State, could implement welfare maximising, *ie* 'first best', regulatory policies *ex ante*, and simultaneously eliminate opportunities for strategic behaviour by nationalised industries or regulated firms through transparent and costless monitoring of the regulatory bargain, *ex post*.

The new regulatory theories address the fundamental issue of the regulatory bargain from the perspective of the principal: agency theoretic. This presents the regulator as the principal, with the regulated firm as agent. At the heart of this perspective are two major strands:

- the value and importance of information in the regulatory process; and
- the nature of regulator and regulatee relationships.

In relation to the value and importance of information in the regulatory process the theory recognises the existence of information asymmetry, as discussed further below. The concept of regulator omniscience is regarded as myth.

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1 The history of government guidance for nationalised industries, finance, investment and pricing policies is more complex than mere adherence to the marginal cost pricing rule, but this did dominate advice from government on how to price. For a full account of the issues and debates see Lapsley (1981).
In relation to the nature of regulator and regulatee relationships a raft of new concepts have been deployed to shed light on the regulatory bargain, notably the use of incentives and contracts, but also less tangible aspects of bargaining such as: trust and levels of commitment in bargaining; the existence of adverse selection and moral hazard; the need for monitoring; and the possibility of regulatory capture. The richness of this approach is that it recognises the importance of interaction between regulator and regulatee, regulatory processes, and of the context, social, economic, political, in which this regulation takes place. It should, nevertheless, be recognised that, despite such advances there remain significant unresolved matters in the new regulatory economics (see Laffont, 1994). These are discussed briefly later in the chapter. First, we explore the nature of information asymmetry and related concepts.

Information asymmetry

An observation by Weitzman (1978, p.684) captures some of the facets of information asymmetry:

_An essential feature of the regulatory environment that I am trying to describe is uncertainty about the exact specification of each firm's cost function. In most cases even the managers and engineers most closely associated with production would be unable to precisely specify beforehand the cheapest ways of generating hypothetical output levels. Because they are yet further removed from the production process, the regulators are likely to be vaguer still about a firm's cost function._

This observation reveals uncertainty both within, and outwith, the regulated firm on the precise nature of what is regarded as the easier of the functions, cost and demand, to estimate. It also hints at the potential for a different kind of monopoly ie not of the fundamental, core product or service which is being regulated, but a monopoly on information about the regulatee, within the regulated firm. This inductive conclusion has led theorists to reconsider the informational assumptions which underpin neoclassical models, leading to the emergence of normative
theories of regulation which model such hidden information, or 'adverse selection', and the potential for hidden actions, or 'moral hazard', on the part of the regulatee to dupe the regulator.

Baron and Besanko (1984b) advocate that the process of regulation should be regarded as being trichotomised into the stages of information gathering, policy implementation and monitoring of the regulatory bargain. As part of this process, ex post monitoring of the regulatee is conducted to determine not only whether the firm complied with the regulatory policy, but also to verify the accuracy of information supplied to the regulator and upon which the regulatory bargain was struck. The monitoring function thus recognises that incentives and opportunities exist for the firm to deviate from the regulator's intended policy. A posteriori the firm's ability to engage in strategic behaviour is consistent with a regulatory environment where the regulatory institution is unable to observe perfectly the actions of the regulated firm, and where regulatory prescriptions are based upon incomplete information. In this scenario, the regulator has to devise incentives for more appropriate regulatee behaviour.

There have been numerous attempts at modelling such information asymmetries to formalise previously intuitive theories of imperfect control of regulated firms and to derive incentive schemes for regulatees. It is outwith the scope of this report to review all such models, but key developments are briefly discussed and appraised. This is to illustrate the kinds of problems experienced by regulatory institutions as a result of hidden actions and information and the consequent potential for profits to be extracted by regulated firms due to their informational advantage.

The models can be categorised as static, or single period, and dynamic, the multi-period case, which affords greater opportunities for the study of potential interactions between regulator and regulatee. It should be noted, however, that both sets of models cannot be regarded as definitive solutions to actual problems of regulation. They proceed by a

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2 For a more detailed discussion of the exact specification of these models, the reader is referred to the actual papers themselves or to a more general review eg Waterson (1988) and Armstrong et al (1994).
series of simplifying assumptions which do not capture the real world of
the regulator and they may include imaginative solutions to regulation
which are not pursued or permitted, at the present time, by policy
makers. Examples include auctioning for utility rights and the use of
lump sum ‘fines’ or ‘taxes’ by regulators. Nevertheless, these normative
models do provide insights into how more effective regulation might be
achieved and it is on this basis that we consider not only their key
findings, but also the related policy possibilities which emerge from and
build on these new theories of regulation.

Model 1 - Loeb and Magat (1979)

One of the first papers to model informational asymmetries explicitly
in a regulatory context is that by Loeb and Magat (1979). This provides a
model of economic regulation where the unit of cost production is
known by the firm but cannot be observed by the regulator, and in which
the level of demand is known by both parties. In this scheme, the
regulator delegates the pricing decision to the firm and, to induce the
firm to equate price to marginal cost, is willing to pay a subsidy by an
amount equal to total consumer surplus. As part of this model, Loeb and
Magat propose that the right to the monopoly franchise be auctioned
among competing firms or, alternatively, that the regulator has the right
to levy a lump sum tax.

Model 2 - Baron and Myerson (1982)

Baron and Myerson (1982) note that the effectiveness of franchise
bidding depends crucially upon the existence of alternative potential
suppliers. They also note that, in the absence of cost information, the
imposition of lump sum taxes requires the regulator to estimate the level
of social welfare surplus and risks setting the tax too high with the
consequence that the firm refuses to supply. Baron and Myerson (1982)
extend the Loeb and Magat model. Under conditions of information
asymmetry they design a regulatory policy for a natural monopoly which
is also an informational monopoly. This policy recognises that the firm
may have an incentive to misreport its costs to obtain more favourable prices. Since the regulator does not know the firm’s costs, he must set the firm’s price and subsidy as a function of some cost report from the firm. In this model, the regulatory policy must satisfy the constraint that the firm should have an incentive to report truthfully the information desired by the regulator. Because of this truth telling constraint, the regulatory policy can be optimal only in a constrained sense, and a welfare loss results from the informational asymmetry.

Model 3 - Baron and Besanko (1984)

The above difficulty is addressed by Baron and Besanko’s (1984a) model of a regulated firm which is better informed about its cost function than the regulator. By auditing at a cost, however, the regulator is assumed capable of observing the realised cost of the firm. If the regulator discovers that the firm had misrepresented its costs at the time at which prices were set, under this model he would be able to order a refund to consumers. In the optimal policy the regulator audits when the firm reports for pricing reasons that its costs will be high, and orders a refund when the audit finds that realised costs are lower than expected. While this model is more explicit in its awareness of, and its response to, information asymmetry, it is based on an ease of observation of regulatee practices which may not materialise in practice.

Model 4 - Laffont and Tirole (1986)

Laffont and Tirole (1986) address this difficulty by constructing a model of regulation which introduces noisy cost observability as well as an unobservable effort variable. In their model, the planner observes the firm’s output and cost but not its efficiency parameter, its effort and the cost disturbance. The firm knows its efficiency before contracting. After contracting it chooses an output and a level of effort which, together with an additive uncertainty, result in a cost level. Its reward depends on output and cost. The optimal regulatory policy involves a trade-off between internal efficiency and allocative efficiency with output lower
and price higher than at the optimum with symmetric information. The difficulties with this model are that the level of cost reducing effort is sub-optimal and the firm earns monopoly profits due to its informational advantage.

While the above models do not result in the design of an optimal strategy for the regulation of utilities, they do demonstrate that the effectiveness of regulation depends critically upon the information available to the regulators. They also point to the need for incentive structures which not only increase the operational efficiency of regulatees, but which also encourage information revelation by regulatees. Hence the dynamics of the regulator and regulatee relationship can be seen as a crucial ingredient in effective regulation. We now turn to a model (Baron and Besanko, 1987) which is dynamic and which draws out some of these key elements of the regulatory bargain.

Model 5 - Baron and Besanko (1987)

In a multi-period contractual relationship \textit{ex ante} efficiency is achievable when the parties are able to commit to how they will respond to the \textit{ex post} consequences of their actions. Williamson (1983) has argued, however, that the incentive to take advantage of opportunities arising from \textit{ex post} consequences limits the ability to make credible commitments and thus decreases the efficiency of long term contracts. Baron and Besanko (1987) investigate the allocative and distributive consequences of this opportunism in a stylised regulatory setting.

The authors present a multi-period model in which one party, the firm, has private information and the other party, the regulator, has the ability to make various degrees of commitment about policies which will be offered in future periods. If the regulator is able to make enforceable commitments regarding policies to be offered in the future, the equilibrium policies are stationary, \textit{i.e} not changing, in the sense that the quantity produced and the revenue are the same in every period even though performance in one period provides information that could be used to improve \textit{ex post} welfare. That is, the regulator commits to ignore
the information about the firm that it learns in period one, *i.e.* this new information does not feed into future periods regulatory policy.

Public bodies and agencies can be thought of as having an ability to make enforceable commitments during their term of office, but not beyond this, because one government is unable to bind future governments. Given this circumstance, the regulator cannot make a firm commitment about continuity of behaviour in future terms of office. This has the specific difficulty that the regulator may gather information as part of the current review which is subsequently revisited and exploited in a future term of office. This becomes a question of trust: the regulated firm may be less inclined to yield information if it considers that this will be used against it, more than once. To overcome this difficulty, Baron and Besanko propose a voluntary agreement between the regulator and the regulated firm which they call a fairness arrangement. Under this arrangement the regulated firm will agree not to withdraw from the market if, in future periods, it is allowed by the regulator to earn a profit compatible with the agreed interpretation of the information which it revealed in earlier periods. A difficulty arises in such arrangements where there are numerous regulatees as the regulator may pool information gathered on their performances. As a consequence of the lower transparency of information about individual firms, regulated firms may see a greater possibility of pretending to have higher costs in the first period under review with the aim of securing a more favourable regulatory regime in subsequent periods.

A fairness arrangement is preferred to an arrangement in which no credible commitments can be made and the regulator is forced to completely pool information in the first period. From an *ex ante* perspective the firm may also prefer fairness to no commitment. The firm prefers fairness to no commitment from an *ex post* perspective once it knows its costs. A fairness arrangement may therefore be mutually attractive and voluntarily agreed to, by the regulator and the firm. The welfare gains achievable with a limited degree of commitment such as that corresponding to fairness indicates that the search for efficiency gains by the regulator must focus on institutional means of providing commitment and an endogenous means of generating and ensuring trust.
This, in itself, does not embrace all the nuances of the relationships between regulators and regulatees. The regulatee need not be a passive party to the regulatory bargain. Apart from the issues of asymmetric information and the creation of incentives by the regulator to induce optimal behaviour by regulatees, there may prove to be difficulties with ideas of commitment and trust. In particular the regulatee might adopt a conscious strategy of ‘capturing’ the regulator. In this circumstance, the regulator will be more inclined to support the interests of the regulated industry than those of consumers.

The process of capture

The process of capture might proceed as follows: there is likely to be regular contact between regulator and regulatee; the regulator may request information, on for example, operating statistics, financial position, from the regulatee; the regulator may take ‘soundings’ from the industry which he regulates on specific policy topics. All of this presents an opportunity for the regulatee to convince the regulator of the merits of its case. This may be accentuated by the origins of the regulator if he has a prior specialist knowledge of the industry to be regulated or by the career of the regulator if he subsequently becomes employed by the regulated industry. This latter circumstance might be depicted as an implicit, and anti-consumer, contract between regulator and regulatee.

Whether this latter extreme case happens or not, the typical case is described by Stigler (1971) as a situation in which the regulator becomes an advocate of the industry which he regulates and, at the same time, regulatees might proclaim the value of competition while striving to dilute it in their industry. This raises additional dimensions to the idea of ‘trust’ in the regulatory bargain: can the regulator trust the regulatee, not only to reveal all pertinent economic or financial information truthfully, but also to behave in a straightforward manner vis-a-vis the regulator; also, can the consumer rely on the regulator to discharge his responsibilities towards customers without being ‘captured’ by the regulatee?
This poses questions about the availability of appropriate people to take on this demanding role of regulator. As Stigler (1971, p.4) puts it, in discussing, with some considerable scepticism, the 'merits' of regulation:

... Appoint to a commission seven highly intelligent men who have unflagging zeal to serve the public interest, and only the public interest, equip them with the resources to find out what to do, and give them the legal power to do it ... If, on occasion, a commissioner is less than superb, replace him; if on occasion the commission does something wrong, reprimand it; if the commission does too little, enlarge its powers and fatten its appropriations. With at most an occasional searching glance from the legislature, the agency will take care of monopolistic railroads, or profit-grabbing television, or deceptively quoted interest, or whatever ... The only suitable word to terminate such a discussion is 'Amen': have not five or seven apostles been dealt off the top?

This uncompromising position in favour of consumer self-interest and competitive markets as the best means of expressing such interest highlights a particular difficulty of the reliance on regulators, ie their degree of discretion. Substantial discretion in the hands of the regulator in the view of 'capture' theorists (see also Posner, 1974; and Pelzman, 1976) can lead to tacit agreements between regulator and regulatee which compromise the interests of the consumer. The regulator may rely too heavily on information provided by the industry which may make him knowingly or unknowingly, a victim of capture. Where Ministers of State take a detached view of regulated industries for which they are formally responsible, thereby increasing the discretion of the regulator, the likelihood of regulatory capture may increase.

Summary

The discussion of the new regulatory economics has pointed to the need to shift from the idea of regulation as a simple mechanism, such as the use of a specified rate of return. New dimensions of the regulatory process have been identified by the new regulatory economics, but it is
clear that there is no definitive solution to 'the regulation problem'. One of the leading contributors to these theories (Laffont, 1994) elaborates on the challenges facing regulatory reformers as they seek to devise a means of characterising optimal regulation. The importance of both incentives and monitoring were discussed but, as Laffont states, there is a need for a better integration of research on these two dimensions of the regulation problem. Also, within the need to devise better incentive schemes, the assumption of costless communication needs to be addressed more fully. In the view of Laffont, a major omission is a theoretic which explains the behaviour of regulator and regulatee in the face of incomplete information and collusion, as possible in regulatory capture. Related issues of what constitutes 'trust' and 'commitment' are now recognised, if not resolved, in the literature on the new economics of regulation. These are all key ideas, highly pertinent to the development of regulatory mechanisms, but also incomplete, and not offering a comprehensive model of regulation. Against this background of theoretical developments we now explore the actual mechanisms adopted by regulators within the UK and the extent to which these take cognisance of the difficulties of regulation identified in the literature.
REGULATION IN ACTION
Next we turn to our third research question: *How effective has UK regulatory policy been?* In the next four chapters, we examine the regulatory system adopted in the UK, in particular by focusing on its distinctive aspects, regulatory mechanisms and the central role of the regulator. This examination reaffirms the 'trust relationship' held by the regulator in his dealings with the regulatees. This was underlined by the discussion in the previous chapters which showed that, while public corporations had significant difficulties, see chapter 3, no optimal system of regulation, see chapter 4, was available for the newly privatised utilities in the UK.

In this chapter, we first examine the weaknesses of the traditional method of utility regulation, the rate of return model. We then outline briefly, the principal component of UK regulatory policy, the price cap.

**The rate of return model**

The most obvious policy option to adopt was the US rate of return model but, as mentioned previously, this has been subject to sustained criticism. As Laffont (1994, p.509) states:

... the allocation of fixed costs among products became an accounting nightmare for a doubtful pricing method. By equalling prices to average costs, no incentives for cost minimization (through a choice of effort levels, or a policy of innovation) existed, except in a very limited way
through the regulatory lag. No incentive for the provision of quality existed either, except that the reimbursement of all costs made the firm indifferent about incurring monetary expenses for quality...

Criticisms of the US rate of return model, with regulatory commissions, have been made at a number of levels. At one level free market proponents have challenged the efficacy of the US regulatory system. For example, Stigler and Friedland (1962) examined the regulation of the US electricity industry and concluded that it was ineffective, partly because of misdirected effort - there was no long run monopoly power in the electricity industry - and partly because the regulatory body was incapable of forcing US utilities to operate at specified combinations of output, price and cost.

In addition there have been criticisms of the mechanisms employed by US regulators. Thus, in a classic study, Averch and Johnson (1962) examined the behaviour of utilities when constrained by the typical device of a specified 'fair' rate of return. They demonstrated that under this regime there are: (a) incentives for regulated firms to expand their capital base to deflate returns to a 'fair' level, rather than operate at the level of output which minimises their costs; and (b) incentives to expand into other regulated markets even if the firm runs at a long run loss in these markets. In this way it may drive out other firms, or discourage their entry into these other markets, even though the competing firms may be lower cost producers.

This highly influential critique of the principal mechanism of regulation is accompanied by substantive criticism of the process of such regulation. For example, Sappington (1986, p.243) comments on the quasi judicial system of regulation in the US which results in lengthy and costly investigatory processes and 'regulatory hearings famous for the inordinate amount of time and resources which they consume'.

The above criticisms weaken the case for the rate of return model, but at least one critic acknowledges that this model has something to offer. Laffont (1994) argues that the rate of return model is embedded in a more realistic view of government which moves away from the traditional naive view of the benevolent state and, in doing so,
exemplifies the need to make the long run commitment which is necessary given the typical length of asset lives in utilities.

Here then was the challenge facing the government in its policy of regulatory reforms. How to overcome the defects of the US rate of return model, but at the same time build on the advantages identified by Laffont and also take more cognisance of the key elements of the regulatory process identified in the new economics of regulation.

The UK option: price caps

Setting aside the cumbersome regulatory processes of the US, see Sappington above, the rate of return model can be seen as almost unidimensional. This sets the scene for the UK regulators to:

- devise a mechanism other than rate of return which has both control and incentive properties;
- address issues of informational asymmetry, trust and commitment; and
- provide a regulatory setting which facilitates rather than inhibits the regulatory process.

The response of the UK to this challenge was threefold: (i) the adoption of price capping, rather than rate of return (after Littlechild, 1983); (ii) the promotion of yardstick competition, where feasible (after Shleifer, 1985); and (iii) the promotion of contestable markets (after Bailey, 1981; and Baumol et al 1982). Each of these dimensions of the UK regulatory system is explained and assessed briefly below.

The price cap is a control device which focuses on utility pricing policies, rather than profits earned on its assets employed. In this way, it sidesteps 'the accounting nightmare' of Laffont ie the allocation of costs to accounting periods, and over output, within a given accounting period. The cap is also intended to provide incentives for regulated utilities to be innovative and efficient, ie if a given utility constrains costs by being more innovative or economical in service delivery it may retain these efficiency gains. Also the cap was intended to be both simple and at several
removes from the regulated firm, such that the potential problem of information asymmetry is reduced, as is the danger of regulatory capture.

This was achieved by allowing utility prices to grow at the retail price index, less some specified rate set by the regulator, ie RPI-X. This particular mechanism is attributed to Littlechild, who is currently the regulator at OFFER (the Office for Electricity Regulation) and was previously an academic and commentator on regulatory issues (Littlechild, 1983). In this seminal contribution, which addressed the needs of British Telecom, the RPI-X model was formulated, accepted for BT and subsequently utilised for other utilities, water, gas and electricity. Indeed the entire process of regulatory reform in the UK owes much to the initial system established for BT. Table 5.1 shows the responsibilities of the regulator for telecommunications which are very much the model for subsequent privatised utilities. As can be seen from that table there are elements common to the regulatory framework for the nationalised industries, particularly the ‘reasonable demands’ (para A.1(b)) and ‘efficiency and economy’ (para A.2(c)) requirements. Consumers needs and the promotion of competition distinguish this set up from its predecessor, and central to this is regulation by price cap.

**Table 5.1 The responsibilities of the regulator: the case of telecommunications**

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**A. General duties of Secretary of State and Director**

(1) The Secretary of State and the Director shall each have a duty to exercise the functions assigned or transferred to him by or under Part II or Part III of this Act in the manner which he considers is best calculated:

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³A variant in this RPI+K operates in the water industry, where real prices are scheduled to increase.
Table 5.1 The responsibilities of the regulator: the case of telecommunications (continued)

(a) to secure that there are provided throughout the United Kingdom, save in so far as the provision thereof is impracticable or not reasonably practicable, such telecommunication services as satisfy all reasonable demands for them including, in particular, emergency services, public call box services, directory information services, maritime services and services in rural areas; and
(b) without prejudice to the generality of paragraph (a) above, to secure that any person by whom any such services fall to be provided is able to finance the provision of those services.

(2) Subject to subsection (1) above, the Secretary of State and the Director shall each have a duty to exercise the functions assigned or transferred to him by or under Part II or Part III of this Act in the manner in which he considers is best calculated:
(a) to promote the interests of consumers, purchasers and other users in the United Kingdom (including, in particular, those who are disabled or of pensionable age) in respect of prices charged for, and the quality and variety of, telecommunication services provided and telecommunication apparatus supplied;
(b) to maintain and promote effective competition between persons engaged in commercial activities connected with telecommunications in the United Kingdom;
(c) to promote efficiency and economy on the part of such persons;
(d) to promote research into and the development and use of new techniques by such persons;
(e) to encourage major users of telecommunications services whose places of business are outside the United Kingdom to establish places of business in the United Kingdom;
(f) to promote the provision of international transit services by persons providing telecommunication services in the United Kingdom;
(g) to enable persons providing telecommunications services in the United Kingdom to compete effectively in the provision of such services outside the United Kingdom; and
(h) to enable persons producing telecommunication apparatus in the United Kingdom to compete effectively in the supply of such apparatus both in and outside the United Kingdom.
B. Other functions of the Director

General functions
Publication of information and advice
Investigation of complaints
Functions under the Fair Trading Act 1973 and the Competition Act 1980
Power to give assistance in relation to certain proceedings
Power to require information etc.
Power to establish advisory bodies
Preparation of annual and other reports

Note: Emphasis inserted by the authors.

The price cap has attracted considerable interest overseas. In the US, for example, the telephone industry has been analysed by Braeutigam and Panzar (1989) in a study where they examine two schemes of regulation for firms which serve both monopoly markets and markets subjected to substantial competition. The first scheme, cost based regulation, combines elements of rate of return regulation with fully distributed cost pricing, similar to the form of regulation in place in the US telephone industry. The second scheme, price based regulation, establishes price caps on non competitive services and allows the firm to enter competitive markets and charge whatever prices it chooses in those markets.

Models are developed of both forms of regulation and are analysed with respect to incentives for cost misreporting, choice of technology, cost reducing innovation, choice of prices and output levels, and diversification into competitive markets. It is shown that rate of return regulation gives a firm incentives to misreport cost allocations, choose an inefficient technology, and under produce in a non core market. These and other disadvantages have led the Federal Communications Commission to recommend a system of price based regulation for the telecommunications industry.

Subsequent comparative studies of price cap and rate of return regulation demonstrate that certain of the difficulties associated with
regulation remain, even with the price cap. Pint (1992) focuses upon
differences in timing of regulatory reviews and the amount of cost
information collected under both price cap and rate of return regulation.
Pint employs a stochastic model to analyse the response of a monopoly
operating under these financial regimes. He reports that the use of
average cost data combined with fixed intervals between regulatory
reviews results in dramatic social welfare improvements, with most gains
received by the consumer. Pint also demonstrates that both regulatory
regimes induce over investment in capital and excessive managerial slack,
in sub-optimal levels of managerial cost reducing effort. Here is the
potential weakness of the RPI-X, price cap mechanism, the reference to
the Retail Price Index component of the price cap is detached, neutral
and beyond the manipulation of the regulator or the regulatee, but this
may not also be true of the X factor.

The regulator has to decide on an appropriate X factor and review
this decision periodically. The precise process by which this review is
implemented is a revision of the licensing conditions of the regulatees.
This decision, the size of X, reintroduces into the regulatory process the
problems of incomplete knowledge and of information asymmetry which
favours the regulatee with the potential for adverse selection, moral
hazard and regulatory capture.

In addition to the mechanism of the price cap, the regulator can also
promote competition by structural change and by the use of
benchmarking in devising X factors, in licensing agreements. The
promotion of competition in this context owes a great deal to the ideas of
contestable market theorists, as discussed in chapter 2, and therefore not
repeated here, and also to the creation of real competition where feasible.

Yardstick competition, a ‘benchmarking’ approach, owes a great deal
to Shleifer (1985). In the normal regulatory scheme, a franchised
monopoly has little incentive to decrease costs. Shleifer presents a
mechanism in which the price which the regulated company receives
depends on the costs of identical firms, and, in equilibrium, every firm
selects a socially efficient level of cost reduction. The mechanism
generalises to cover heterogeneous firms with apparent differences. In
this way, yardstick competition describes the simultaneous regulation of
similar or identical companies. An important potential drawback of yardstick competition is its susceptibility to collusive manipulation by participating firms. However, if the regulator discerns firm behaviour which can be proven to be collusive, companies could be punished for engaging in such conduct.

This merely serves to underline the importance of information and the interactions of regulator and regulatee.

Summary

This chapter has demonstrated the distinctive nature of UK regulatory policy. There was a rejection of the US style rate of return regulation, with cumbersome regulatory procedures and, instead, the UK opted for the price cap control device, which focuses on utility pricing policies, rather than profits earned on assets employed. In addition, in the UK, a single person, the regulator, was charged with overall responsibility for specific utilities. In the UK, regulators also had a general obligation to encourage and facilitate the development of competitive markets in the utility for which he was responsible.

These aspects of the UK system of regulation heighten the contribution made by the regulator and, in the absence of clearly defined, operational models for the achievement of effective regulation of utilities (see chapter 4), accentuate his discretion in achieving effective regulation. This discretion, and the existence of information asymmetry between the regulatees and regulators, emphasises the importance of trust in regulation: the trust placed in the regulator by other stakeholders to exercise sound discretion, and the extent to which the regulators trust regulatees in the face of informational disadvantages (information asymmetry).

On this latter aspect, some regulators (at OFWAT, OFFER) had the opportunity to implement yardstick competition. In this way informational disadvantages can be mitigated, at least in part, by the comparison of similar companies, the regional electricity companies, the privatised water companies, which helps to establish what is/is not attainable in terms of operational efficiency. Other regulators (at
OFGAS, OFTEL) have constructed models to test out the possibilities for efficiency gains in the companies which they regulate.

These aspects of regulation: the actions and reactions of specific regulators and regulatees; and the impact of regulatory decisions in terms of outcomes, of periodic price reviews, of financial results and standards of performance, are explored in chapters 6, 7 and 8.
CHAPTER 6

REGULATORY PROCESSES

This chapter contributes to our examination of research question 3, on the effectiveness of UK regulatory policy, by focusing on the results of our field visits: the interviews with regulators; and members of regulated firms. The relationships between these parties are at the very core of the UK style of regulation. In examining the research results we discuss two dimensions to the very public arena of public utility regulation:

- the study settings, particularly the transition from state industries to privatised utilities; and
- regulatory processes, with emphasis on the interactions between regulators and regulatees.

This discussion builds on two aspects of the Denzin’s triangulation, i.e., the views of regulators and regulatees, with discussion of the third strand, outcomes (price caps, financial and non-financial results) in the following chapter. This analysis of regulatory processes necessarily reflects differing perceptions of what regulation means, in practice, but as these results reveal, by comparing and contrasting these perspectives, we present a picture which captures the realities of utility regulation.

The study settings

An exploration of the study settings reveals contrasting views of the transition from state to privatised industry. On the part of the regulatees,
this might be characterised as 'surprise' and, on the part of regulators, a 'certainty' in their purpose or mission statement. Each of these perspectives is examined.

The regulatee perspective of 'surprise', at the implications of privatisation for these utilities, was evident at all four of the organisations included in this study, but to differing degrees. One major privatised utility stated that it did not understand the nature of regulation. This was due in part to their unpreparedness, but also to communications from policy makers and politicians who inferred that a 'light hand' of regulation would be employed. Senior executives in this company expressed its situation in this way:

Post privatisation the company assumed it would run the business and the regulator would merely set in place a few technical constraints. We assumed that post-privatisation we would become a private sector organisation like all other private sector organisations. The reality proved to be very different. Given the perceived regulatory environment, which had been signalled to us as minimum intervention, we had not foreseen the invasive nature of regulation and the high level of regulator intervention which followed privatisation.

An added sharpness was brought to this situation in the case of this particular utility because they believed that their regulator was offended by the low number of staff employed in the area of regulatory affairs. This might be seen as an instance of the perverse incentive of regulator expansiveness, whereby he seeks to expand activities or influences under his sphere of influences (see de Alessi op.cit.).

This perspective of 'surprise' was repeated in the interviews with the other privatised utilities. At another utility, the director of regulatory affairs expressed the view that their expectation was that competition would increase and regulation would atrophy but, in fact, while competition has increased so has the amount of regulation. A senior executive at another privatised utility characterised the experience of going private as 'entering the unknown' and admitted that his company had underestimated what this change would entail.
Another dimension to this was evident at a major privatised water company where tensions between competing groups emerged on privatisation, *ie* those senior staff who identified with the public service ethic and those managers who saw privatisation as a vehicle for the pursuit of opportunities. A particular manifestation of this was the manner in which the managerially minded staff, from outside the industry, came to view the skills and values of the traditional public service staff, usually water engineers, as a skill which could be marketed in the new world of privatisation. This was a further display of the ‘surprise’ at the impact of privatisation, but in this particular instance the changes wrought by the change of ownership were most profound for long serving members of staff in the new privatised company.

In contrast to the views of the regulatees, the regulators convey a sense of certainty about their roles, objectives, mission and the manner in which this is or should be conducted. The initial reference point for the regulators is the particular Act which privatised ‘their’ industry. The general view was one of clarity. For example, one regulator stated that the Act defined his job in ‘quite precise terms’ and, indeed, this was the most precise job description which he had ever had. This perspective was reinforced by other regulators who looked to the Act and its references to the promotion of competition as defining their role. One regulator indicated that he, nevertheless, had a considerable degree of discretion under the terms of ‘his’ Act and, indeed, expressed as a belief from the outset that the rules existed to be re-written. This matter is taken up, further below, in a general discussion of the extent of regulator discretion.

The scene is therefore of a situation fuelled by tensions by, on the one part regulatees who are surprised at the nature of regulation and, on the other, a set of regulators who are set to oversee the activities of regulatees with certainty and conviction. The impact of these differing perspectives on the processes of regulation is taken up in the following section.
Regulatory processes

We examine regulatory processes from two perspectives: the impact on information flows between regulator and regulatee; and a particular issue which was highlighted, in our consideration of the study settings, viz regulator discretion. We consider the perspectives of regulatees and regulators in turn.

Information flows

We sought to explore three dimensions of information flows between regulator and regulatee:

- the impact of regulator demands upon information provided by regulatees;
- the costs associated with meeting the requests of regulators; and
- the potential for obfuscation by regulatees in dealings with the regulator.

These three dimensions lie at the heart of the new regulatory economics with its emphasis on information flows, hidden actions and information, asymmetry between regulator and the regulatee and the need for the regulator to extract credible information from regulatees and avoid ‘capture’ by the regulatee (see Stigler, op.cit; Posner, op.cit; Pelzman, op.cit; and Laffont and Tirole, op.cit).

Regulator demands

Regulator demands are affected by diversity in the behaviour of regulators where and if discretion exists.

At one extreme, we have a regulatee which finds a good fit between the regulator’s demands for information and the information which it needs for its own purposes. In this company, the business splits naturally into the regulated units and the management accounts accord broadly with this company’s regulatory submissions on a historical cost basis.
There are two further twists to the provision of the regulator with his information needs: the allocation of common costs over the regulated and non-regulated parts of the business and the conversion of historical costs to current costs. Neither of these is seen as a major obstacle in this company. Indeed, this particular company welcomed the production of regulator requested information as yielding positive side effects as a spur to regulated firms to improve efficiency.

The benign relationship is a-typical. One major regulated company concurs with the observation that accounting systems are sufficiently flexible to provide information for routine regulatory submissions, with only minor amendments necessary, for example conversion to current costs. However, it is the demands over and above the routine which cause difficulties for this particular company: one-off studies of cost allocations; tariff formula reviews; and increase the burden of regulation. This burden is exacerbated by the tendency of this company’s regulator to publish what the company regards as commercially sensitive information.

The issue of the sheer volume and diversity of information demanded by regulators is intensified by the nature of the information requested by some regulators. Regulator demands are particularly affected by the origins of the regulatory regime, which lie in economics, and the typical accounting based information found in large corporations. As one major utility expresses it, the regulator increasingly issues exhortations on his desire to regulate on an economic basis, but the accounting information that is available is different from economic concepts. Indeed in some cases, in their view, there is hardly any relationship between the two. This is most evident in the need to compile historical cost information, ‘... the City expects it and we cannot not produce that information ...’ , and current cost information. This is accentuated by the insistence of the regulator on getting ‘nearer and nearer to the economic concepts and the pressure to use some idea which represents some “true” economic cost’. A consequence of this, for this company, is that it is presented with one economic way of making a decision, which approximately maps into a business way of making a decision, and another, regulatory way of making a decision. The dilemma is whether all of these converge.
Part of this dilemma is the prospect of a drift from robust, audited accounting data into econometric or engineering studies which are not comprehensive, systematic or auditable in the same way as financial information. This issue of defining what is or is not useful information for management or regulatory purposes is captured in the response of the senior executive of one regulated utility:

... some of the detail you have to provide has immense transaction costs. We have unfair requests. We respond that ‘we don’t know’ and don’t gather information in this form, but this is supposed to be for management purposes. You get pedants, there. We ask, ‘why do you need it? We don’t do it. If we can’t get this information to manage the business what’s in it for the regulator?’ The debate has focused on output monitoring rather than input monitoring. Previously the focus was on inputs. More sympathy from [the Regulator] than his minions.

**The costs of meeting regulator requests**

The cost of meeting regulator demands must be looked at when considering the information flows between regulator and regulatee. There is a general, but not universal, view amongst regulatees that, not only are these demands burdensome, but also that many of these demands appear to be uninformed, a probing at the inner recesses of the workings of regulatees without real knowledge on the part of regulators. The concluding quote in the previous section hinted at the kinds of costs associated with meeting regulator’s demands for information. Also, as one regulated utility insists, most of the accounting changes which were made for the regulator would not have been made by the regulated corporation, if he had not insisted on them. This regulatee also alleged that as a result of this additional accounting regulation there was a greater amount spent on auditors than this company would otherwise have spent. A further regulatee expresses its situation as follows:
The amount of actual accounting information that we have to provide to the regulator is becoming very great indeed. And actually generally quite onerous ... 

The most evident examples of the costs associated with the interventions of the regulator can be found when the regulator challenges a decision of the regulator and this results in an investigation by the Monopolies and Mergers Commission (MMC). British Gas has twice been involved in such inquiries. These typically last for one year. Given the length of time of these investigations, there is a clear cost to the regulatee in terms of the extent of time which top management had to devote to the MMC inquiries, a high managerial opportunity cost. However, the general view of the regulatees is that there are benefits, e.g., the pursuit of international markets, from privatisation. These corporations feel disadvantaged by their normal operating and financial costs and the burden of regulation.

The perspective of the regulatees on the need to provide additional information is mirrored in the views of the regulators. Again there is diversity within the regulatory frame of reference. Within the water industry, there has been an initiative from the outset on current cost accounting. This is seen as part of output information relating to service provision. In the terms of our description of the respective stances of regulatee and regulator, of ‘surprise’ and ‘certainty’ respectively, the position of the regulator for water typifies certainty. Differences between accounting practices and an economics based regulatory regime are ‘not really an issue’. This contrasts with a view of another regulator who described ‘this area as very problematic, and accounting information has proved unsatisfactory in meeting the regulator’s needs. Accounting information does not meet resource allocation requirements which come from economic analyses’. This view is reaffirmed by yet another regulator who describes himself as using accounting information in an economic context. He cites an example of examining a regulatee’s pricing policies to assess whether it was or was not non price discriminatory. In this case, existing accounting data was unable to
provide the necessary answer to whether there was or was not pure discrimination and an economic analysis was performed.

A further regulator identifies two dimensions of this particular issue, *ie* the need to refine the information generating capacity of regulatees and the context in which this information is being used. On the first of these, there is a convergence with the views of this regulator and the regulators cited above. This regulator is critical of the particular regulatee for which he is responsible. Pre-privatisation, in his view, this company's internal management systems were very poor, 'they just recorded cash', and he has pressed for a move from fully allocated costs, 'useless for decision making', to long run incremental costs with the particular aim of making pricing more transparent and to eliminate cross subsidisation and price discrimination.

On the second point, this regulator emphasises the limits of economic theory in explaining and predicting behaviour in the regulatory situation. As he remarks:

... *regulation is also rooted in politics, involving the interaction of power plays between dominant groups within society ... (the transition to) more fragmentary competitive markets complicates the regulatory process and reduces the regulators capacity to apply economic theory ... (I am) a resolver of problems with a lot of data missing and tremendous ambiguity of objectives ...*

These observations address, at least in part, the fundamental issue of information asymmetry, *ie* the ability of regulatees to hide actions and information from the regulator, to obfuscate, perhaps even to 'capture' the regulator. These aspects of regulatory processes are considered next, as a strand of the dimensions of information flows between regulator and regulatee.

**Potential for obfuscation**

The view of the regulators is that regulatees have, and some continue to, obfuscated in their dealings with the regulator. This
reaffirms the 'certainty' perspective of regulators. The regulators point to a variety of ploys which regulatees can use, including non disclosure and delaying tactics. One regulator expresses his view, which as can be seen is one of frustration, as follows:

*All licence holders attempt to frustrate the regulatory process. The capacity to delay provision of information is enormous. The consultation process prior to implementing regulatory policy can involve the MMC and is both time consuming and ties up regulator and regulatee resources. There are no sanctions that can be imposed upon licence holders to induce them to move quickly during this process... We are operating in an adversarial, confrontational regulatory environment...*

Another regulator stated that his office had observed cases when the regulatee 'went slow', but found it difficult to ascertain whether this was deliberate or whether the required information was not available. Yet another regulator, who had a number of regulatees to oversee, reported that, by comparing regulatee information disclosures, his office was able to evidence cases where they had sought to obfuscate the regulatory process through conscious manipulation of information submitted to the regulator. A further regulator, who had responsibility for one major recently privatised company stated that it had used its monopolies of informational and technical expertise to frustrate the regulatory process, but that this was in the past, and the regulator and regulatee were now 'working together'. The final regulator included in this study was dismissive of the idea of obfuscation, pointing out that he has statutory powers to demand 'requisite' information and that convinced him that regulatees had not knowingly attempted to mislead him. This particular regulator had exploited this power by defining information requirements at an early stage of the regulatory process and also by issuing guidance on the preparation of regulatory accounts. He also worked closely on information requirements with industry groups and this convinced him that there was no reason to believe that there was regulatee obfuscation.

It is interesting to note that one of the above regulators, who expressed concern at the behaviour of regulatees, valued this statutory
power to extract information but nevertheless expressed anxieties about whether the regulatees collated the information which he required as part of the ordinary running of the business, thereby enhancing the credibility of these figures for both parties. This raises the issue of how regulators tackle the problem of information asymmetry and, indeed, whether their mechanisms are effective.

A common approach with all regulators is the utilisation of external reference points. These regulators cite the use of organisations in similar overseas markets as yardsticks for operating capabilities and efficiency. For example, in telecommunications, the regulator has access to a number of independent sources of information, including Kingston Telecom (Hull), cable telecom, information from the US telecommunications industry, suppliers, eg manufacturers of telephone switches etc. Also, the industries themselves, gas, electricity, water, telecommunications, now comprise numerous organisations. In the case of electricity there are the fourteen regional electricity companies and there are the ten major water companies.

Regulators have drawn on this circumstance to have routine industry meetings which present opportunities for the discussion of specific policy options at which the principal regulatee can argue its case in front of competitors. At these meetings additional information becomes available to the regulator. Also, overseas operators are willing to provide the regulators with information.

OFTEL get round the information asymmetry problem by constructing a financial model of BT from any relevant non BT sources and from independent information supplied by BT, eg financial statements. The model was designed to identify rate of return, in historical and current cost terms, cost of capital, productivity gains. This model was presented to BT who had the opportunity to argue OFTEL out of the assumptions made in the model and in this way, the model was debugged. In addition to the above activities, regulators have bought in specialist knowledge when required, which may include, for example, former employees of regulatees. In this regard, one regulator pointed to his comparative scarcity of resources.
The regulatee perspective on these interactions is one of frustration. They are well aware of the regulators’ use of industry sources and external consultants to gather information on their performance. Indeed, one of the regulatees was almost dismissive of this strategy. In terms of negotiation, it did not matter who or where the regulator went to because the regulatees always had the ability and the muscle to more than match the resources of the regulator to seek outside views. Also, from their way of looking at this, there is not an issue of obfuscation. One major regulatee stated that, at one time, it was cautious about providing information. It did obfuscate and minimise its information submissions to the regulator, although it felt that it could not ‘grossly distort’ the process, as it considered that this would be discovered in future periods. This regulatee had now lost its monopoly on information and obfuscation was no longer possible. The other regulatees denied that they had deliberately been obscure in their dealings with regulators and, on the question of delaying information provision, pointed to the requests of regulators for information which they did not actively collect.

Indeed, a coherent picture emerges of a concern on the part of regulatees to see the regulator as well informed about their business environment and the industry conditions as the firms which he regulates so that, potentially, he could make better informed decisions. At present there is a concern that the regulator cannot understand all of the issues, because of their complexity. As one regulatee put it:

... this could be the reason why the regulator takes the decisions he does... because he does not have the resources either to handle all the other stakeholders or to understand what is going on ...

A possible side effect of this is that there is pressure on regulators to demonstrate their ‘effectiveness’, with the danger that there is a focus on ‘objectives’ or ‘milestones’ and, instead of good regulation, we have the ‘achievements’ of regulation. From the viewpoint of the regulatees, the regulator obfuscates his decisions, by not making regulatory decisions more transparent, so that they can be better justified and defended. This important issue is explored further in a discussion of regulator discretion.
Regulator discretion

The issue of regulator discretion is explored here by addressing three strands of this:

- whether there is regulator discretion and if so, the extent of this;
- whether the existence of regulator discretion leads to informal arrangements between regulator and regulatee; and
- the impact of regulator discretion on the commercial activities of the regulated enterprises.

These dimensions are important elements of regulator and regulatee relationships. In the previous regime of nationalised industries, there was criticism of the extent of Ministerial discretion, and the use of informal arrangements which did not make explicit the extent of Ministerial intervention, all of which impacted on the commercial outlook of the nationalised industries.

We analyse these strands, in the first instance, from the perspective of the regulator.

Extent of regulator discretion

One regulator denies the existence of both high degrees of discretion and informal or tacit agreements between regulator and regulatee. In his view, he has a duty to ensure regulatees fulfil their functions and that they can finance them. His duties then require him to protect consumers and to ensure economy and efficiency. If he performs these functions honestly and diligently, he does not have a lot of discretion in setting price limits. In discussions with this regulator, he stresses that the regulatory process which he oversees is transparent, with consultation between regulator and regulatees and with customers and investors included. In this way, rules were established, known and accepted by both parties to the regulatory process. Uncertainty of each parties' actions and reactions was eliminated. Any uncertainty that exists is in the forecasts for economic uncertainties. This regulator has included a
margin to cover risk and uncertainty associated with different economic scenarios, but this requires ‘regulatory judgment’ and is not a discretionary process, in his view.

While the picture of events from one regulator points against excessive levels of regulatory discretion, it nevertheless underlines the distinctiveness of this particular regulator, and the extent to which regulators can define and interpret their role and this is, prima facie, a necessary condition for discretion. This discretion, about whether to fully exercise discretion or not, is also evident from the comments of other regulators:

... the more precise the rules are, the easier it is for licence holders to get round them ... a loosely prescribed regulatory regime relies heavily upon the regulator as ‘judgment taker’ (Regulator no.2)

... the regulator requires high levels of discretion in order to compensate for the strengths of the regulatee. A more legalistic system (increased parliamentary influence) would lead to a prescriptive system which would be stultifying and which would benefit the regulatee. The success of regulation is dependent upon the regulator, which makes his selection very important (Regulator no.3)

... in practice, the regulator has a high degree of discretion. I believe (the regulatee) could pin my discretion back more than it has, for example, by challenging my interpretation of the regulatory rules or seeking an MMC ruling. But (the regulatee) allowed me to exercise discretion, why? Perhaps it is in a weak position, ie not held in high public esteem, perhaps I use my discretion well ... (Regulator no.4)

... the ‘real’ level of regulator discretion is not as high as it may first appear. A single regulator is strongly fettered, having the example of other regulators as a constraining influence and as a guide to operational or appropriate practice. Other forces exist, eg the media, which help to restrain the regulator ... with a single regulator there exists the danger of
idiosyncratic regulation (But) if final decisions are left to a committee, it may lead to a stultifying situation ... (Regulator no. 5).

Informal arrangements between regulator and regulatee

However, if regulators, in the main, acknowledge that they do have considerable discretion, they are also adamant that they do not exercise this by making tacit or informal deals with regulatees. One of the regulators, cited as regulator no 3, does make tacit agreements with regulatees. This regulator seeks informal contact with regulatees as an action which is vital to the conduct of his job, but this is on the strict understanding that there are no 'under the counter' deals and the regulator can go public on the conclusions of these discussions at a later stage, without being embarrassed. Another of these regulators, no 5, stated that it was 'hard to say' whether there were, or had been, tacit agreements, he prefers to operate under a broad framework of rules, ideally written down. The other regulators dismissed the idea of tacit agreements, pointing to the need to maintain transparency of the regulatory process and to avoid 'fettering their discretion', ie by making informal agreements which subsequent events would make them want to change. In this way, these regulators stand apart from their predecessors, ie the Ministers of State responsible for nationalised industries. These regulators see informal or tacit agreements as weakening their discretion.

The regulatees confirm the regulators' view of events. One of the major regulatees overseen by the regulator who does make informal agreements cited a number of examples of such arrangements. This regulatee had achieved a number of informal agreements on small issues with the regulator as both parties agreed that these could achieve quicker, cheaper outcomes. On big issues, this regulatee stated that there were none of these, because the 'regulator is too vulnerable'. A further, major regulatee stated that there are not a lot of informal arrangements with its regulator. Yet another describes the occurrence of informal arrangements as 'rarely, if ever'. The final regulatee in the study describes the frustrations of his firm's attempts to strike informal arrangements with the regulator:
... they (the Regulator's office) don't have deal makers ... There is an uncertainty, a lack of business experience, on their side. It is something to do with the institution of the process. To be seen doing a deal causes nervousness. The letter of the law takes precedence over the spirit ...

However, one of the regulatees was able to cite an instance of an informal agreement whereby an excess profits clawback was shared equally between shareholders and consumers. This was done with the cognisance of the regulator although, legally the consumers were not regarded by management as being entitled to anything.

There is a significant divergence between the perspectives of regulatees and regulators on the existence, and extent of, regulator discretion. From the frame of reference of the regulatees this degree of discretion is also aligned with the potential for highly individualistic interpretations of the act which governs their activities. The views of the regulatees illustrate this:

_Policy discretion does exist. With discretion comes a personality factor whereby different regulators can hold different views of regulation and how to interpret and implement regulatory policy. This illustrates a weakness of the regulatory framework where the same rules can be interpreted differently, achieving different outcomes. From (the regulatee's) perspective, this level of discretion, inherent within the regulatory process, increases its unpredictability._ *(Regulatee no.1)*

At the moment the regulators, and our regulator in particular, want an awful lot of discretions of a kind which are unacceptable. They artificially create uncertainty. So the regulator has to show that there will be some great social benefit from them. And it has not been entirely clear that that has been the case. And that kind of discretion, which not only short-circuits (the regulatee), but it also short circuits the ordinary process set up under competition policy and (the privatisation) Act enforcement through the MMC, and this seems to me to be a thoroughly
bad thing. You can understand why the regulator wants it, but he should not be given it - just because he wants it. (Regulatee no.2)

How do you know where the Regulator is coming from if he has so much discretion? (Regulatee no.3)

We are very dependent at the moment on the whim of one individual (but in the previous system we were exposed to the whims of politicians), for example, in seeking the redistribution of income ... on the basis of the process, so far, you need the right regulator in place ie if you have a good regulator, you have a good regulatory process, despite the process and the machinery. We are too process driven. At the end of the day what matters is the people who drive the system. (Regulatee no.4)

An example of the individualistic treatment of the interpretation of privatisation can be found in the different responses from different OFGAS regulators to the government's energy efficiency proposals. While operating under the same legislative framework one allowed the so called E-factor to be included in the price cap formula and for these costs to be passed through to customers, but another has suggested that the E-factor cannot be passed on, because it is a tax.

**Impact of regulator discretion**

In terms of the impact of this, perceived, high level of regulator discretion, the regulatees all identify the phenomenon of regulatory risk, whereby the profitability of their operations and their financial planning is affected, usually adversely, by the potential effects of decisions made by the regulator, which are hard to predict. One regulatee points to the risks associated with being what is essentially a non diversifiable commercial activity, with the need to gain the regulator's approval for the reduction of this risk by investments in other activities. Another regulatee observed that regulatory risk exceeded competitive risk by reference to the collapse of specific, traditional markets of theirs, as a result of regulator interventions. A further regulatee emphasised the interactive nature of
regulatory and competitive risk, pointing to a recent intervention by the industry regulator which had ‘destroyed’ regulatory stability and posed major uncertainties for an industry which had to make long term investments. Yet another regulatee observed that the distribution of returns to his company was being made actively asymmetric by the regulator’s interventions.

The importance of the adverse effect of regulatory risk on regulatees is such that they have sought to diminish its influence. At one level, a regulatee has promoted a debate for the reform of the regulatory process with specific recommendations to reduce the discretion of the regulator. Other regulatees have sought to influence events by negotiating amendments to their licences. In this respect a major concern of these regulatees has been the incomplete nature of their regulatory contract. They want more certain regulation rather than less certain regulation. The general picture is one of limited success. Indeed, one regulatee stated that his company had ‘failed completely’ to reduce areas of regulator sourced uncertainty. There is little sympathy for this view of the impact of regulatory activity amongst regulators. Perhaps their view is best encapsulated by the following, somewhat dismissive, verdict from one regulator:

... dominant licence holders are asserting that regulatory risk is impacting upon their cost of capital. Regulatory risk, however, is minimal compared to the risks firms face in fully competitive markets. Interestingly, companies who have never operated in competitive markets perceive regulatory risk to be greater than risks from competition, whilst entrants from competitive markets do not consider regulatory risk to be significant ...

**Summary**

The introduction of the regulator has had a dramatic impact on the processes of regulation. There are substantive differences from the previous regime of political control by Ministers of State. The regulators bring a more commercial focus, with certainty and conviction in their
drive for competition and the consumer interest. They ostensibly have considerable discretion to discharge their duties. In part, this can be seen as a counterweight to the problem of information asymmetry, where the hidden actions and information of regulatees might prevent an optimal regulatory solution. This also appears to be a device which they seek to use to exploit their position as regulators and, almost, market surrogates. Real concerns were expressed by regulatees that, in practice, the balance had gone too far towards the regulator. In other words the oft cited benefits to them of information asymmetry had been overstated and coping with the demands posed considerable costs on them, in terms of presenting the regulator with the information which he requested. These reservations were of less importance than their perceived vulnerability to regulator discretion.

These findings underline the importance of 'trust' relationships, between the regulated firm and the regulator, and between the consumer, the regulated firm and the regulator. The existence of regulator discretion compels the other parties involved to trust the regulator's decisions. The capacity of regulated firms to hide actions and information from the regulator's gaze prompts him to trust, at least to some degree, the information provided by regulatees, rather than the alternative of the enormous burden of prohibitive monitoring of the actions of the regulatees. As a consequence, consumers must place their trust in the probity of the management of regulated utilities and in the calibre of the individual who discharges the responsibilities of the regulator.

This chapter has focused on processes. Next we explore outcomes, to determine if these new regulatory processes have yielded substantive benefits.
CHAPTER 7

REGULATORY OUTCOMES:

PRICE CAPS

In seeking to answer research question 3, on the effectiveness of UK regulatory policy, we have demonstrated the distinctive nature of UK regulatory policy, particularly the use of the price cap and the appointment of regulators, with considerable powers and responsibilities (see chapter 5). We have examined the interactions between regulatees and regulators, ‘regulatory processes’, to determine how effectively this regulatory regime operates (see chapter 6). That evidence suggested there was considerable diversity of practice between regulators in their approach to the regulation of utilities and that trust relationships between regulators, regulatees and consumers were central features of regulation.

Here we look at the impact of regulatory differences on the key component of the price cap, the periodic review of prices undertaken by the regulator. This provides important evidence on whether trust was misplaced in regulator and regulatee relationships in determining this key regulatory policy.

We examine this outcome of regulator and regulatee interactions for utilities, as follows:
water supply and sewerage;
electricity;
telecommunications; and
gas.

Water supply and sewerage

Since the privatisation of the water industry in 1989, there have been two attempts at devising a price cap formula. The first of these was instituted by the Department of the Environment at the inception of the newly privatised water industry. This price cap formula was set at RPI+K, a factor which recognised the need for substantive capital investment, principally to meet the demands of new EC standards, but also to catch up on a backlog of capital asset requirements. This not only recognised the specific needs of this industry, but it permitted such costs to be passed on to the consumer. The initial price cap position for this industry is shown in Table 7.1. This reveals not only divergences between the newly privatised water companies, but also differences over time. At 1990/91, we have a spectrum with Yorkshire Water at the lowest value and Northumbrian Water at the highest, but this is overshadowed by the planned increases for South West Water to 11.5% for the year beginning 1992/93, and 11.0% for subsequent years.
Table 7.1 Capping formulae for water and sewerage companies

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<tr>
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<tbody>
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<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
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<td>5.5</td>
<td>5.5</td>
<td>5.5</td>
<td>4.0</td>
</tr>
<tr>
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<td>7.0</td>
<td>7.0</td>
<td>5.0</td>
<td>7.0</td>
</tr>
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<td>5.0</td>
<td>5.0</td>
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</tr>
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<td>5.5</td>
<td>3.6</td>
<td>5.5</td>
</tr>
<tr>
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<td>6.5</td>
<td>6.5</td>
<td>11.5</td>
<td>11.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Southern Water Services Ltd</td>
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<td>5.5</td>
<td>5.5</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
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<td>4.5</td>
<td>4.5</td>
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</tr>
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<td>6.5</td>
<td>6.5</td>
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</tr>
<tr>
<td>Wessex Water Ltd</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
<td>3.5</td>
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</tr>
<tr>
<td>Yorkshire Water Services Ltd</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>2.3</td>
<td>1.9</td>
</tr>
</tbody>
</table>


Notes:
1. Increases in the tariff basket have been controlled by an RPI+K+U formula. The K factors incorporate assumptions on the scope for efficiency improvements and the investment needs of each company. U allows unused K's to be carried forward from previous years (voluntary abatements to K are carried forward as unused K). Following the 1994 periodic review, a new formula, RPI-X+Q, in which X is an efficiency factor, has been instituted by OFWAT, see Tables 7.2 and 7.3 below.
2. The tariff basket for the Water and Sewerage Companies comprises unmeasured water, unmeasured sewerage, measured water, measured sewerage and trade effluent.
3. An interim adjustment was made to the price formula of South West Water from 1992/93.

It is important to note that these variations were not the outcome of decisions by the regulator. Nevertheless, a consequence of this set of price caps has been fierce criticism of their effects, as Helm and Rajah (1994, p.92) state:
... within a few years of the regulatory regime, the fixed term RPI+K pricing formula had in practice degenerated into annual interventions to a degree not witnessed in other regulated industries. This has undermined its credibility.

A particular concern of Helm and Rajah is the length of the planning horizon, 20 years, declaring this to be too rigid to cope with unexpected changes or ‘shocks’ to the water industry.

Such interventions have culminated in the regulator bringing forward the periodic review of the water industry tariff formula from 1999 to 1994. Byatt (1994) points to the need to intervene because of a mechanism introduced into the licence by the water companies and the government in which an adjustment, upward or downward, should be made to price limits if construction prices changed, rose or fell, by more than was forecast. This was the basis of the regulators’ interventions in 1991 and 1992, there were no such adjustments in 1990 or in 1993. The first of these adjustments has been described as ‘voluntary ... rather like an out of court settlement’ by the regulator, but the second was formal as the regulator responded to criticisms that the first adjustment had not been transparent enough (Byatt, 1994). In his view, the reasons for such interventions were due to the acceptance by the UK of the need to adopt EC standards for urban waste water treatment, subsequent to the initial price cap. As interim adjustments between price reviews are limited in scope, eg they exclude efficiency considerations, he pressed for a periodic review. The outcome of that periodic review can be seen in Tables 7.2 and 7.3.
### Table 7.2 Comparison of price limits for water and sewerage companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Average annual price limits 1995-96 to 1999-2000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Previous limit set in 1989</td>
</tr>
<tr>
<td>Water and sewerage companies</td>
<td>%</td>
</tr>
<tr>
<td>Anglian Water Services Ltd</td>
<td>5.5</td>
</tr>
<tr>
<td>North West Water Ltd</td>
<td>5.0</td>
</tr>
<tr>
<td>Northumbrian Water Ltd</td>
<td>3.0</td>
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<tr>
<td>Severn Trent Water</td>
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</tr>
<tr>
<td>South West Water Services Ltd</td>
<td>5.0</td>
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<tr>
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</tr>
<tr>
<td>Thames Water Utilities Ltd</td>
<td>4.5</td>
</tr>
<tr>
<td>Welsh Water Ltd</td>
<td>5.5</td>
</tr>
<tr>
<td>Wessex Water Ltd</td>
<td>4.5</td>
</tr>
<tr>
<td>Yorkshire Water Services Ltd</td>
<td>3.0</td>
</tr>
<tr>
<td>WaSC average (weighted)</td>
<td>3.9</td>
</tr>
</tbody>
</table>

**Source:** OFWAT, Future Charges for Water and Sewerage Services: The Outcome of the Periodic Review, p.6.

**Note:** The previous limits are those set in 1989 by the Secretaries of State for the Environment and for Wales.
Table 7.3 Water and sewerage companies: price limits for 1995-96 to 2004-05

<table>
<thead>
<tr>
<th>Company</th>
<th>Annual Price Limits</th>
<th>Average over 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER AND SEWERAGE COMPANIES</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Anglian Water Services Ltd</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>North West Water Ltd</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Northumbrian Water Ltd</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Severn Trent Water</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>South West Water Services Ltd</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Southern Water Services Ltd</td>
<td>4.0</td>
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</tr>
<tr>
<td>Thames Water Utilities Ltd</td>
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<td>0.5</td>
</tr>
<tr>
<td>Welsh Water Ltd</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Wessex Water Ltd</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Yorkshire Water Services Ltd</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>WaSC average (weighted)</td>
<td>1.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Sources: Compiled from OFWAT, Future Charges for Water and Sewerage Services: The Outcome of the Periodic Review, pp.5-6, p.11, p.15 and p.17. OFWAT, 'The K Factor - What It Is And How It Can Be Changed', Information Note No.8, October 1991 (Revised September 1994).

Notes:
1. Companies are permitted to increase charges each year, on average, by RPI plus (or minus) the limit shown in the above table.
2. The price limits for 1995-96 take account of any unused K carried over from previous years. For companies with carry-over, the formal Adjustment Factor (K) set for that year will be lower than the effective price limit shown above.
3. The K factor limits the average increase in a company's charges to its customers. Increases in the bills for individual customers, and even for large classes of customers, such as household customers, will often differ from the K factor.
The average increase (see Table 7.3) is determined by reference to a ‘basket’ of tariffs: charges for unmeasured water supply; charges for measured water supply; charges for unmeasured sewerage services; charges for measured sewerage services; and charges for reception, treatment and disposal of trade effluent. This takes account of the balance between the numbers of customers taking measured and unmeasured supplies and the different charges, for example, to household and business customers and for water and sewerage services. Provided that there is no undue discrimination against, or undue preference in favour of, particular classes of customers, the precise way in which the increases are applied is a matter for the companies rather than the regulator.

The K factor for a company can be thought of as comprising two elements:

1. X, comparable to the X factor for other utilities, for the normal utility operations covering:
   
   (a) Base service levels: the maintenance of existing levels of service, including the return on existing assets;
   (b) Enhanced service levels: the improvements in standards of service not driven by legal obligations;
   (c) Growth: programmes for system expansion, leakage or demand management measures to meet any shortfall between demand and existing capacity; and
   (d) Other factors, such as changes in the charging base of the company.

2. +Q, which reflects statutory improvements in drinking water and environmental quality standards. The reduction in prices in real terms for water and sewerage services (-X), as a result, for example, of increased efficiency, is offset by increases arising from the significant improvements in quality (+Q) still required.

The response can be seen as firm, decisive action by the regulator. It can also be seen, and this is the view of our water regulatee, as the regulator bearing down on these utilities because both their initial price
caps, set by the Department of Environment, and the terms of their privatisation were too generous. Indeed, as Tables 7.2 and 7.3 show, following from OFWAT’s efficiency review in the water industry, these price caps are a far tighter fit than previously.

Electricity

Next we consider the situation of the electricity industry. Tables 7.4 and 7.5 show the capping formulae for the regional electricity companies. There are two sets of information here: the price cap at privatisation; and the price caps from the 1994 periodic review by the regulator. The periodic review must be analysed from the context of the initial price caps, which have been influential in determining financial outcomes for electricity companies. These price caps were initially established, for most, if not all, electricity companies, such that price increases over and above the rate of inflation were permitted. This ability to pass on costs in price increases must be seen in the light of a flotation which was considered to be generous, in which the price of shares was set too low and for which the potential for cost reduction, by rationalisation of activities, and strong profit performance was underestimated, particularly in an industry structure which created local monopolies (see for example, Waller, 1994). Such favourable circumstances have drawn criticism from consumers of electricity, including a major industrial user, ICI, which has campaigned for price reductions on the grounds that the regulatory regime is lax (see for example, Donovan, 1995).
Table 7.4 Capping formulae for English regional electricity companies

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<thead>
<tr>
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<tr>
<td></td>
<td>X Value(%)</td>
<td>(i) X Value (ii)</td>
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<tr>
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<td></td>
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<tr>
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<tr>
<td>East Midlands Electricity</td>
<td>1.25</td>
<td>(11) (2)</td>
</tr>
<tr>
<td>London Electricity</td>
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<td>(14) (2)</td>
</tr>
<tr>
<td>Manweb</td>
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<td>(17) (2)</td>
</tr>
<tr>
<td>Midlands Electricity</td>
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<td>(14) (2)</td>
</tr>
<tr>
<td>Northern Electric</td>
<td>1.55</td>
<td>(17) (2)</td>
</tr>
<tr>
<td>NORWEB</td>
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<tr>
<td>SEEBOARD</td>
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<td>(14) (2)</td>
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<td>Southern Electric</td>
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<td>(11) (2)</td>
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<td>SWALEC</td>
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</tr>
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<td>SWEB</td>
<td>2.25</td>
<td>(14) (2)</td>
</tr>
<tr>
<td>Yorkshire Electricity</td>
<td>1.30</td>
<td>(14) (2)</td>
</tr>
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<tr>
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<tbody>
<tr>
<td>Eastern Electricity</td>
<td>0.00</td>
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<tr>
<td>East Midlands Electricity</td>
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<td>(2.00)</td>
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<tr>
<td>Manweb</td>
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<td>Northern Electric</td>
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<td>(2.00)</td>
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<td>NORWEB</td>
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</tr>
<tr>
<td>SEEBOARD</td>
<td>0.00</td>
<td>(2.00)</td>
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<tr>
<td>Southern Electric</td>
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<td>SWALEC</td>
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<tr>
<td>SWEB</td>
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<tr>
<td>Yorkshire Electricity</td>
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</table>

Table 7.5 Capping formulae for Scottish electricity companies

<table>
<thead>
<tr>
<th>Activity/Company</th>
<th>April 1990 to March 1994</th>
<th>April 1994 to March 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission: RPI+X</td>
<td>X Value</td>
<td>X Value</td>
</tr>
<tr>
<td>Scottish Hydro-Electric</td>
<td>(0.50)</td>
<td>(1.50)</td>
</tr>
<tr>
<td>ScottishPower</td>
<td>(1.00)</td>
<td>(1.00)</td>
</tr>
<tr>
<td>Distribution: RPI+X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 1990 to March 1995</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scottish Hydro-Electric</td>
<td>(0.30)</td>
<td>(1.0)</td>
</tr>
<tr>
<td>ScottishPower</td>
<td>(0.50)</td>
<td>(2.0)</td>
</tr>
<tr>
<td>Supply: RPI+X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 1990 to March 1995</td>
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<td></td>
</tr>
<tr>
<td>Scottish Hydro-Electric</td>
<td>(0.30)</td>
<td>(2.00)</td>
</tr>
<tr>
<td>ScottishPower</td>
<td>(0.50)</td>
<td>(2.00)</td>
</tr>
</tbody>
</table>


Notes:
1. Price controls limit the average charge per unit of electricity transmitted, distributed or supplied.
2. Supply charge formulae contain an additional component Y which allows the companies to pass through to consumers those costs (such as costs of transmission and distribution) which have already been regulated and ‘allowed’ electricity purchase costs.

It was against this background that the regulator set the price caps as part of the periodic review of the regional electricity companies RECs in August, 1994. The outcome of that periodic review is shown in Table 7.4, ie cuts in allowed revenue in the RECs distribution businesses by 11-17% in the year from April 1995, with price increases restricted to 2% below inflation in each of the following years to March 2000. The regulator argued that those companies whose allowed revenue was planned to fall by 17% in the first year of the price cap were on the equivalent of an inflation minus 7.5% formula over each year of the five year period: the companies with an initial 14% reduction in allowable
revenue were on the annual equivalent of inflation minus 6.5%; and those suffering 11% cuts were on the equivalent of inflation minus 5.5%. *Prima facie* this is evidence of a tougher regulatory regime, but the reaction, particularly of the stock markets, was that of a set of price caps which were less tough than expected, with a risk of takeovers of RECs in prospect. Did the regulatees use their information asymmetry, by hidden actions and information to obfuscate the regulator in these negotiations? Clearly, the financial press thought so. A selection of comments made by investment analysts in finance houses illustrates the view of the city:

*The result is a fudge ...* (cited in article by D.Lascelles, the *Financial Times*, 12 August, 1994)

*... the review was much better than expected from the market’s point of view ...* (cited in *Financial Times*, 12 August, 1994)

*... it’s been a very successful review for the RECs and better than the market was expecting ... and ... I think that the companies have got a review that’s far better than they privately had hoped for ...* (both cited in *M.Walker, Financial Times*, 12 August, 1994)

*... one stockbroker, asked if the companies would be able to cope with new price limits, said: ‘Cope? The companies can fly with this. I don’t think we can believe how far they managed to pull the wool over the regulator’s eyes’,* (cited in an article by R.Tieman, M.Waller and N.Wood, *Financial Times*, 12 August, 1994)

This suggestion of obfuscation is also accompanied by hints at the possibility of collusion between the RECs within the financial press. Michael Smith, in an article ‘Review starts champagne corks popping’, in the *Financial Times* of 12 August 1994, makes the following observation:

*The chief executives of most of the regional electricity companies made a ‘gentleman’s agreement’ some time ago that whatever the outcome of the distribution review they should not accept the regulator’s verdict on the day
it was announced. One said 'We felt it might be a bit unseemly to snap it up immediately.'

Another outcome of this review was the increased speculation over merger activity which continues today. These include: Scottish Power's move to take over Manweb; Trafalgar Houses' bid for Northern Electric; and the Southern Company in the US was reported to be interested in SWEB.

However, in the face of these responses to the periodic review, within eight months of its announcement, the regulator announced his intention to initiate yet a further review of price controls. He cited his reasons as the rise in share prices since the August 1994 ruling and, in particular, the defence employed by Northern Electric in its desire to fend off a takeover by Trafalgar House. Part of this defence was a 'loyalty' payment of £5 to existing shareholders, implying that Northern was cash rich. The regulator stated that:

... Northern Electric's defence against Trafalgar House envisaged gearing which was outside the range of possibilities which the company put to me earlier and (he was concerned) that his proposals may result in the companies having substantially greater resources than are needed to finance the carrying out of their licensed activities ... (cited in M. Smith, Analysts Predict Price Cuts, Financial Times, 25 March 1995).

The outcome of this further review of electricity price caps was that in year two, i.e. 1996/97, of the review period (see Table 7.4) instead of an RPI-2 formula, the regional electricity companies were to see allowable prices fall by a further 10-13%, with an additional reduction of 3% from RPI in each of the following three years. In declaring the results of this subsequent review, the regulator announced:

... There was widespread concern that the price controls I made last August were too lenient. These new proposals deal fully with that concern. They ensure that customers as well as shareholders will have
done extremely well, and that an acceptable balance ... will have been

The general impression within the financial community was, yet
again, the regulator had been less tough than feared.

**Telecommunications**

Next we consider telecommunications or, more accurately, the
regulation of BT. This is an interesting story, the case of a regulated
industry which heralded in the new regime of price caps as a control
device, from its privatisation in 1984, and which may initiate the demise
of the price cap regime with the expiry of its current price cap in 1997.
Before this potentially dramatic break with the status quo in regulatory
regimes, we briefly consider BT's experience of price caps. These are
summarised in Table 7.6.

**Table 7.6 Capping formulae for British Telecom**

<table>
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</thead>
<tbody>
<tr>
<td></td>
<td>RPI-3¹</td>
<td>RPI-4.5²</td>
<td>RPI-6.25³</td>
<td>RPI-7.5⁴</td>
</tr>
</tbody>
</table>

**Source:** Compiled from OFTEL, Annual Report 1994

**Notes:**
1. Domestic and business exchange line rentals, local and national direct dialled call charges.
2. Domestic and business exchange line rentals, local and national direct dialled call charges, operator assisted calls and directory enquiries service.
3. Exchange line rentals, local and national call charges, operator assisted calls, international calls, quantity discounts and alternative tariffs to high volume users.
4. Exchange line rentals, local and national call charges, operator assisted calls, international calls, connection charges.

This shows an X factor which steadily increased from 3% (1984–
1997), resulting in steadily decreasing prices, in real terms. This is only
part of the story. There is also evidence of increased control being exerted by the regulator. Thus as part of the 1988 price review, not only was the price cap tightened to 4.5%, but there was an increase in the scope of control to include connection charges and operator assisted calls. In the 1992 review, the standard connection charge was reduced. Also any quantity discounts offered by BT did not count in assessing compliance with the RPI-7.5 price cap. Throughout this period, there was an RPI+2 price cap on domestic and single line business exchange rentals. An important issue here is that there was a basket of tariffs subject to the overall price cap and this flexibility meant that customers could, in practice, experience real increases instead of decreases in prices. The RPI+2 was a control device which sought to mitigate the extent of this eventuality for particular consumers. This succession of reviews was undertaken by the then Director General of OFTEL, Sir Bryan Carsberg. In his negotiations with BT, if there was disagreement, there was always the prospect of a referral by either party to the MMC, but this never happened, as BT accepted all of these price reviews. In this way, the experience of the oldest of the regulated industries with snug price controls ever tightening, appears to be in marked contrast to the tensions evident in other regulated industries.

In 1993, Donald Cruickshank was appointed the new Director General of OFTEL. He inherited the price cap set by his predecessor. In December 1995, he initiated the price review for the period beyond 1997. This has been overshadowed by a lengthy consultation exercise in which the regulator is proposing fundamental changes to the regulation of telecommunications (OFTEL, 1995b). Despite the ever tightening price caps set out, BT still controls some 97% of connections to customers and BT remains the dominant operator with almost 90% of the telecoms services market (Cane, 1995). The regulator’s solution to this predicament is to increase competition, but in a manner which gives benefits to BT and additional powers to himself. In particular OFTEL are proposing a move to incremental costs for interconnection charges from 1997; its withdrawal from the detailed setting of some individual interconnection charges; formal arrangements to share the costs of delivering a universal service; the renewal of provisions on exchange line
rental prices; the continuation of restraints on the flexibility in BT's pricing for large customers; improving OFTEL's methods of licence enforcement dealing with anti-competitive behaviour and the introduction of a general provision into BT's licence to control anti-competitive behaviour. The regulator is quite clear that he wants these changes because he believes BT is spending too much time and energy on finding ways to circumvent its specific licence prohibitions. The regulator is quoted as saying:

\textit{BT is not 'playing ball' as far as competitive issues are concerned and needs to take a more positive approach ... There is a rising degree of professional tension between OFTEL and BT. I am being blunt and honest with the board. I am doing my job.} (cited in G.Counsell, \textit{The Scotsman}, 26 July 1995).

As noted previously, BT have to agree to these proposed changes, or they will be referred to the MMC. The reaction of BT is captured by the statement of its chairman, Sir Iain Vallance, that there is 'a hostile and unpredictable regulatory environment in the UK' (cited in C.Sims, 'BT Feels the Pressure', \textit{The Herald}, 19 May 1995). Indeed, BT have made specific suggestions for modification of these proposals from OFTEL, including procedural changes: the separation of OFTEL's proposed 'prosecution' powers from its 'judicial' function; the promise of a full hearing; and a proper appeal system against any decisions. Also, while BT welcomed the abolition of the line rental price cap it wanted to be able to offer large discounts to big business customers. It also wanted recognition that the use of incremental costs as a basis of interconnect charges raised major questions of practicality and of principle (see G.Counsell, 'BT Clashes with Watchdog Over Curbs on Regulatory Avoidance', \textit{The Scotsman}, 26 July 1995). There is no immediate end in sight to this debate. This may mean that for the first time, the telecommunications industry is referred to the MMC. The implication is that, not only will the MMC be examining specific regulatory proposals, but that it will also be considering the future of the price cap regime in the industry where it originated.
Gas

The price caps for British Gas are shown in Table 7.7. The price cap set at privatisation in 1986 was RPI-X+Y. This allowed the maximum revenue to be earned in the tariff market for gas as equal to Y, the average cost of purchasing gas, the so-called full cost pass through, which reflected British Gas involvement in long-term contracts which could not be changed, plus a non-gas component which grew by the percentage change in the retail prices index less an X factor of 2%. There was also a further cap which prevented British Gas from raising the standing charge in real terms. This initial price cap was criticised as being too gentle. For example, Armstrong et al (1994, p.257) cite evidence of average annual increases in British Gas factor productivity of 6.2% in the period 1983–88 which is considerably above the 2% X factor.

Table 7.7 Capping formulae for British Gas

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<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>RPI-2+Y(^1)</td>
<td>RPI-5+GPI-Z+E(^2)</td>
</tr>
</tbody>
</table>


Notes:
1. The price cap limits total revenue per therm in the tariff market (for the period of the cap the tariff market was defined as supply of gas to customers with a demand of less than 25,000 therms per annum). The effect of the formula was that for part of its costs (called 'non gas costs'), British Gas could increase prices in line with the rate of inflation minus two percentage points, while the cost of direct gas purchase by British Gas could be passed through directly into prices under the Y element of the formula.
2. The price cap limits total revenue per therm for the supply of gas to customers with a demand of less than 25,000 therms per annum. For its non gas costs British Gas can increase prices in line with the rate of inflation minus five percentage points. For its direct gas costs British Gas can increase prices in line with a new gas cost index (GPI) minus Z; where Z/100 equals (1.01)\(^t\)-1 and t+2 in year one of the price cap and increases by one each year thereafter. Costs of energy efficiency projects implemented by British Gas and approved by the Director General may be passed through into prices.
This set the scene for a challenge to the regulator which was exacerbated by the response of British Gas to the new environment in which it found itself. In the words of the regulator:

*I tried to work with British Gas to achieve change and I was told to get lost. They had failed to look closely enough at the legislation. So I had to challenge them and devise a strategy for doing so.* (cited in Bruce, 1993, p.9).

A major element of the regulator's strategy was the construction of a financial model to estimate the effects of changes in the parameters of the operation of British Gas. He was denied access to this information by British Gas, but has described the manner in which this was ultimately resolved:

*Denis (Rooke, then chairman of British Gas) sat at the end of a long table. I sat to his right facing four or five of his managers across the table. I made my requests for detailed financial data. Rooke didn't say anything. But his managers all started jumping up and down in full macho fashion tearing into me and my views. They thought this would impress Rooke. But then he leaned across to them, they stopped and very quietly he said to them: 'Who are the public going to believe in five years' time - him or you?' And he told them to get on with providing me with the financial data I wanted. Rooke did finally see the point. And that was that. It was game set and match, because if you know the numbers you are away.* (cited in Bruce, 1993, p.8).

We can see from this exchange the tensions of the regulatory process. The initial reluctance of British Gas to give financial information was, apparently, resolved but the information asymmetry problem remained, it was at the discretion of British Gas to divulge information. Also, the confrontational aspects of regulating British Gas remained, with this the only regulated industry referring contentious issues to the MMC. This aspect of the regulation of British Gas is taken up further but, first
we examine the periodic price review carried out by OFGAS in 1990/91, in which the price cap was established by the regulator, for the first time.

This is shown in Table 7.7. Clearly this is significantly different from the previous price cap. The first difference is that the criticisms of a relatively lax price cap in the years after privatisation is addressed by increasing the X factor for non gas costs to 5% from 2%. Secondly, the Y factor, the cost pass through of purchasing gas could be seen as a diminishing of the incentives to purchase efficiently at British Gas. This was replaced by allowing the pass through of an index of gas costs rather than actual costs, less an efficiency factor of 1%. This is an incentive to British Gas to negotiate more favourable contracts for gas purchase or to renegotiate existing contracts, as the benefits gain would be retained by it, if it beats the index. Finally, an E factor was the allowance of the recovery of expenditure which was designed to make consumers make more efficient use of gas supplies. This tightening of the formula was also further constricted by the agreement of a set of key standards of service between OFGAS and British Gas. Failure to comply with these agreed standards was a trigger for a further price review. This issue of standards of service accomplishments is considered further in the following chapter.

This price review, notwithstanding the above caveat over standards of services, was intended to last until 1997, giving British Gas a five year planning horizon. There were other regulatory pressures at work which led to revisions of this formula in 1994. The above price caps refer to the tariff market, essentially domestic consumers, and not to the non tariff market, essentially industrial consumers. While OFGAS has focused on the tariff market, the activities of British Gas in the non tariff market have not gone unregulated. Soon after privatisation, the Office of Fair Trading (OFT) referred British Gas to the MMC because of complaints over price discrimination. This report concurred with these criticisms of British Gas, but felt that price caps were unsuitable for the regulation of this activity because of the volatility of the market. Instead, it recommended that there should be greater transparency in prices, specifically, by British Gas publishing price schedules relating to volume, load factor and degree of interruptibility. Also, it recommended that more information should be published by British Gas about access to the gas network to give
potential competitors a clearer idea of the costs of transmission and
distributing and that British Gas should agree not to contract for more
than 90% of any new gas field which opened (MMC, 1988). These
proposals were reviewed by the OFT in 1991. This review made further
recommendations to open up the market to competition, in addition to
recommending the continuation of the price schedules. Specifically it
recommended that British Gas should release some of its gas contracts and
that it should divest itself of, or at least put at arms length from the rest of
British Gas, its activities in the transportation and storage of gas (OFT,
1991). British Gas accepted these proposals.

Part of these proposals contained the proviso that British Gas should
be regulated by OFGAS on its access charges to gas supply. This resulted
in yet another reference to the MMC, on this occasion instigated by
British Gas. It had estimated its return on investment for its
transportation business to be 6.7%; OFGAS wished to stay with 4.5%, on
the grounds that transportation was a low risk business. In its report,
MMC (1993), recommended that transportation should be divested from
British Gas; that there should be regulation of charges, with a rate of
return on new investment in supply and storage of 6.5-7.5% and, on
existing assets, of 4-4.5%; and that the tariff market price cap should be
reduced from RPI-5 to RPI-4. The government rejected the
recommendation of British Gas divesting itself of its trading and
transportation, but British Gas was recommended to operate these as
separate subsidiaries, an ‘accounting’ separation. As a consequence of this
MMC investigation, the price cap for the tariff market has been relaxed
to RPI-4. The OFGAS regulator, who commenced duties in September
1993, has recommended that the price cap regulation for transportation
and storage should be RPI-5, with the aim of meeting the MMC returns
specified for new and existing investment. The regulator has presented a
decision in the following terms:

This is a demanding but fair target for British Gas. It gives a clear
signal that costs must continue to be controlled and that customers
should benefit. It strikes a fair balance between the interests of the
consumers and the needs of the business to finance the new investment.

The response of British Gas may be seen as predictable. Its chief executive, attacked the OFGAS proposals, stating:

... it will be difficult for the company to justify any increase in dividends for 1994. We are carrying out one of the biggest restructurings this industry has witnessed and all we get is another kick up the backside ... (cited in M. Harrison, Evening Standard, 15 June 1994).

At that point, the chairman intimated that some 70% of his time was being spent on regulatory and government issues. In many ways these tensions and confrontations can be seen as fallout from a privatisation structure, a fully vertically integrated industry, which gave inadequate potential for competition and for which the regulatory scheme was too focused on one particular market segment.

Summary

This chapter has reviewed an outcome of the new regulatory processes. Our particular focus was on the implementation of the price cap formula. This is a direct, visible outcome of the regulatory mechanism. This is a signal, not only to the regulator, but to all other interested parties, policy makers, consumers, the capital markets, on the effectiveness of the regulatory regime. We have documented instances where the regulator has been challenged as being too soft. This can be seen as misplaced trust in the discretionary powers of one individual, the regulator, to deliver a tight enough price cap. It also suggests, prima facie, that the regulator’s trust in information provided by regulatees was misplaced, but there are other instances where the regulator has been found to be too unpredictable and even harsh, by regulatees. These findings confirm the characterisation of the regulatory process as one in
which there is considerable discretion at the behest of the regulator and, therefore, scope for alternative interpretations of how to regulate.

Such discretion also underpins the finely balanced nature of trust relationships between regulator and regulatees, where regulatees trust in the regulator to deliver a transparent, fair determination of a price review and what may be a severe determination is the outcome of information asymmetry and, a lack of, trust. While in the circumstances of an adverse determination of the periodic price review the regulatee has recourse to the right to take its case to the MMC, this option in itself carries a heavy penalty, particularly in terms of the opportunity cost of the time of senior executives, as discussed, above. In such evaluations, it is also important to take account of the different economic circumstances of these regulatory situations. This is particularly so, on the one hand, for water and electricity, with the potential for meaningful yardstick competition (Shleifer, 1985) and, on the other, for industries such as telecommunications and gas in which there is a dominant supply organisation such as BT and British Gas.
CHAPTER 8

REGULATORY OUTCOMES:
FINANCIAL AND NON FINANCIAL PERFORMANCE

Our preceding chapter examined research question 3 on the effectiveness of UK regulatory policy from the perspective of the price caps emerging from the periodic reviews of prices charged by utilities which is undertaken by the regulator. This we regarded as an outcome of these interactions and deliberations between regulator and regulatee. While the price cap decision is an outcome, it might be described more accurately as an intermediate outcome. A more direct means of assessing the effectiveness of the regulatory regime is an examination of financial and non financial results. These are subject to intense scrutiny by the media and pressure groups and are often the basis upon which criticisms are made of regulatory regimes. Here is the nub for these, and other interest groups: has trust in the regulator been misplaced, as evidenced by the regulated utilities earning substantial or even excessive profits; and/or by failing to deliver a standard of service of a sufficiently high quality? This can be evidenced from the financial results and from the performance standards of these utilities.
However, we would stress that, while this kind of information is in the public domain and is used widely as a basis for commenting on the performance of the privatised utilities, we point to a number of caveats in the interpretation of this information. We make a number of observations, in the prelude to the discussion of non financial measures of performance. These do not detract from the use of such measures of the efficiency of the operation of these businesses, but point to their developmental status.

Of greater concern is the reliability of the financial information published by these utilities. As Henley et al (1992) demonstrate the financial information prepared by these industries can be described as inherently diverse. Some of this diversity is a function of historical accident, for example, the water companies were previously in local authority ownership, with its distinctive system of capital accounting, but it is accentuated by the different actions of the regulators on what they deem to be ‘best practice’ in accounting for assets, the nature of the assets themselves with their long lives and systems effects in operation. This particular problem of soft asset values which may yield information which is unreliable and non comparable has also been demonstrated by Carey et al (1994). Indeed, this study asserts that regulators do not use statutory or regulatory accounts, whether at historical cost or current cost, but have their own private accounts, which they use for regulation. These private accounts embody the regulator’s understanding of the regulatory contract. These private accounts reflect circumstances such as the discount at which assets were sold at privatisation. This aspect of the Carey et al findings has two particular dimensions of importance to this study. In the first instance, the assertion of ‘private accounts’ being used by regulators for oversight purposes lessens the importance which might be attached to published accounts to assess regulatory performance. Secondly, the bases of asset valuation used in regulatee accounts is not the current cost accounting (CCA) value of these assets, because of the heavily discounted values of these firms at privatisation. Given such discounted values, which priced the assets of the privatised industries at less than replacement cost on privatisation, the appropriate basis of valuation in CCA would be recoverable amount. However, recoverable amount is notoriously difficult to measure, and is particularly soft in the context of regulation,
because there is a circularity about the regulator setting price caps, which would yield recoverable amounts, and being able to use accounts which are arms length, to permit the assessment of regulatory actions. This circumstance is compounded by the use of replacement costs by regulatees in a situation where recoverable amount is more logical, in terms of CCA. All of this undermines the usefulness of the statutory and regulation accounts.

Nevertheless, despite such caveats, this financial information is used widely in the media and in financial comments and often in a critical fashion. Given this scenario, that this information is of doubtful validity, but is, nevertheless, regarded by many as a valid test of the performance of these industries, we examine the financial results of these utilities and make some simple comparisons of financial performance. These results tend to confirm our later analysis of the wider issues involved in regulation, ie the regulators have dampened down excess profits in these industries.

In this chapter, we evaluate these dimensions of regulation. An additional perspective would be an examination of the impact of regulators in encouraging market competition. Thus, regulation is not just a matter of bearing down on the costs and prices of regulated industries, but it is also a question of creating competitive conditions by fostering the actual, and the threat of, new entrants to the industry, see discussion of contestable market theory in chapter 3. However, this analysis is out with the scope of the present study. Interested readers may refer to Armstrong, Cowan and Vickers (1994), which presents the findings of such an economic analysis of the impact of regulation for the privatised utilities. In this chapter, we examine, in turn:

- financial performance; and
- non financial performance.

As regards financial results, we apply some simple tests to determine if the regulator has/has not allowed excess profits to be earned by regulatees. These generate interesting results, but we emphasise that this is an initial, broad brush exploration of an extremely complex area. On non financial results, we examine the attainment or otherwise of the
performance standards set by the regulator for these utilities in relation to utility licences set under the Competition and Services (Utilities) Act of 1992.

Financial performance

We examine the financial performance of the regulated water and sewerage companies and the regional electricity companies by aggregating their financial results to present an overall industry performance. We also examine the financial results of BT and British Gas from their published annual accounts. As a basic yardstick against which these results can be gauged, the return on capital employed, measured as profit before tax/historical cost of capital employed, in selected heavy industrial sectors is shown in Table 8.1. The period used is similar to that of the privatised utilities in this study. These show returns on capital employed ranging from 1.5% to 14.3% in 1991; from 1.6% to 14.3% in 1992; and from 1.8% to 16.0% in 1993. It is important to note that these benchmark numbers are computed on an historical cost basis. This contrasts with the approach of regulators who focus on current cost figures and this contrast creates a tension which must be a factor in the critical reaction to the financial performance of these utilities.
Table 8.1 Return on capital employed: industrial comparators

<table>
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<th>Industry</th>
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<td>6.3</td>
<td>6.9</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>8.8</td>
<td>7.8</td>
<td>9.3</td>
</tr>
<tr>
<td>Communication</td>
<td>2.2</td>
<td>1.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Electric, Gas and Sanitary Services</td>
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<td>11.5</td>
<td>12.7</td>
</tr>
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<td>14.3</td>
<td>16.0</td>
</tr>
<tr>
<td>Oil &amp; Gas Extraction</td>
<td>1.5</td>
<td>1.7</td>
<td>4.8</td>
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</tbody>
</table>


Note: The above data are industrial median return on capital figures.

The results of the privatised utilities are examined for (1) water and sewerage services, (2) electricity, (3) telecommunications, (4) gas and (5) an overview of all these utilities.

Water and sewerage services

While the aggregate financial performance of these utilities masks individual variations between specific water and sewerage businesses, the overall picture is, in our view, a fair representation of the financial performance of this industry (see Table 8.2). The period included is that before the most recent periodic review of the price cap. It was noted earlier that there was criticism of the initial price cap at flotation of the water companies as being too generous, but these financial results do not vindicate this view. The return on capital employed is not excessive on an historical cost basis although it is at the higher end of the range of heavy industries included in Table 8.1. It could be argued that water supply and sewerage are low risk, if not risk free, activities and a lesser return on capital employed should be considered appropriate for this industry. This ignores the manner and the strength of OFWAT’s directives that water companies should employ current cost accounting and the regulator’s use of this form of measuring financial performance.
As Table 8.2 indicates, on this basis, the return on capital employed is extremely modest with industry average returns on capital of 0.72% (1991); 0.86% (1992); 1.00% (1993) and 1.04% (1994).

At a more general level, this industry can be characterised as a significant capital spender over this period as it improved infrastructure investment. While it has financed significant elements of this increase in capital employed by increased borrowings (see Table 8.2), it is evident that the ability of this industry to price for capital improvements as part of its price cap formula has been put to good effect. Capital gearing ratios are light and it could be argued that this industry could have resorted to greater borrowing, particularly given the security of both income and capital invested in essential services in what are local monopolies.
Table 8.2 Aggregate financial performance of regulated water and sewerage companies

<table>
<thead>
<tr>
<th>Water and sewerage companies</th>
<th>1990 £m</th>
<th>1991 £m</th>
<th>1992 £m</th>
<th>1993 £m</th>
<th>1994 £m</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aggregate historic cost information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating profit</td>
<td>1,006.8</td>
<td>1,190.8</td>
<td>1,467.6</td>
<td>1,687.3</td>
<td>1,843.1</td>
</tr>
<tr>
<td>Retained profit for year</td>
<td>(1,915.3)</td>
<td>506.8</td>
<td>741.9</td>
<td>273.0</td>
<td>833.6</td>
</tr>
<tr>
<td>Capital employed</td>
<td>10,074.2</td>
<td>11,847.2</td>
<td>13,885.4</td>
<td>15,655.9</td>
<td>17,245.2</td>
</tr>
<tr>
<td>Borrowings</td>
<td>590.9</td>
<td>1,388.0</td>
<td>2,393.2</td>
<td>3,304.3</td>
<td>3,699.2</td>
</tr>
<tr>
<td>Shareholders funds</td>
<td>9,496.3</td>
<td>10,126.3</td>
<td>10,868.2</td>
<td>11,699.8</td>
<td>12,500.2</td>
</tr>
<tr>
<td>Average ROCE</td>
<td>9.99%</td>
<td>10.05%</td>
<td>10.57%</td>
<td>10.84%</td>
<td>10.69%</td>
</tr>
<tr>
<td>Average gearing</td>
<td>6.22%</td>
<td>13.71%</td>
<td>22.02%</td>
<td>28.24%</td>
<td>29.59%</td>
</tr>
<tr>
<td><strong>Aggregate Current Cost Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating profit</td>
<td>-</td>
<td>882.3</td>
<td>1,101.8</td>
<td>1,330.0</td>
<td>1,433.4</td>
</tr>
<tr>
<td>Retained profit for year</td>
<td>-</td>
<td>420.6</td>
<td>413.2</td>
<td>(96.8)</td>
<td>488.0</td>
</tr>
<tr>
<td>Capital employed</td>
<td>122,647.7</td>
<td>128,589.8</td>
<td>132,709.7</td>
<td>137,641.3</td>
<td></td>
</tr>
<tr>
<td>Borrowings</td>
<td>-</td>
<td>2,098.5</td>
<td>2,748.2</td>
<td>3,993.6</td>
<td>4,447.6</td>
</tr>
<tr>
<td>Shareholders funds</td>
<td>122,757.2</td>
<td>126,108.8</td>
<td>129,694.9</td>
<td>134,025.8</td>
<td></td>
</tr>
<tr>
<td>Average ROCE</td>
<td>0.72%</td>
<td>0.86%</td>
<td>1.00%</td>
<td>1.04%</td>
<td></td>
</tr>
<tr>
<td>Average gearing</td>
<td>1.71%</td>
<td>2.18%</td>
<td>3.08%</td>
<td>3.32%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled from the annual reports and accounts of water companies.
Notes:
1. Appointed and non appointed businesses of water and sewerage companies.
2. Appointed business only.
Electricity

The financial results of the regional electricity companies show a favourable performance. We have aggregated these results for all regional electricity companies in Table 8.3. This period reflects the financial performance of the regional electricity companies when they were operating under the RPI+X price cap, see Tables 7.4 and 7.5, chapter 7. It is evident that this pricing regime permitted significant, increasing returns to capital employed on an historical cost basis with returns for the industry of 15.4% in 1991; 19.3% in 1992; 19.9% in 1993; and 19.8% in 1994. Even when examined on a current cost basis, these results compare favourably with those of the water industry with returns on capital of 4.96% (1991); 6.87% (1992); 8.18% (1993); 9.58% (1994). It is also evident that there have been no significant capital expenditures in this period. There is also an increasing reliance on equity finance with relatively little borrowing by 1994. Sound financial results and little or no long term obligations are also indicative of a possible reason for interest being shown in these companies which results in predatory takeovers.
Table 8.3 Aggregate financial performance of regional electricity companies

<table>
<thead>
<tr>
<th>Regional Electricity Companies</th>
<th>1991 £m</th>
<th>1992 £m</th>
<th>1993 £m</th>
<th>1994 £m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate Historical Cost Information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating profit</td>
<td>1,405.2</td>
<td>1,914.6</td>
<td>2,110.8</td>
<td>2,314.9</td>
</tr>
<tr>
<td>Retained profit for year</td>
<td>711.7</td>
<td>868.6</td>
<td>990.3</td>
<td>1,031.5</td>
</tr>
<tr>
<td>Capital employed</td>
<td>9,120.0</td>
<td>9,897.0</td>
<td>10,594.2</td>
<td>11,671.2</td>
</tr>
<tr>
<td>Borrowings (total loans)</td>
<td>2,939.1</td>
<td>2,440.8</td>
<td>2,233.4</td>
<td>1,720.5</td>
</tr>
<tr>
<td>Shareholders funds</td>
<td>7,030.4</td>
<td>7,779.8</td>
<td>8,584.6</td>
<td>9,500.7</td>
</tr>
<tr>
<td>Average ROCE</td>
<td>15.4%</td>
<td>19.3%</td>
<td>19.9%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Average gearing</td>
<td>41.8%</td>
<td>31.4%</td>
<td>26.0%</td>
<td>18.1%</td>
</tr>
</tbody>
</table>

| Aggregate Current Cost Information |         |         |         |         |
| Operating profit                 | 810.6   | 1,235.2 | 1,482.7 | 1,664.4 |
| Capital employed                 | 16,355.5| 17,977.3| 18,126.8| 17,373.6|
| Shareholders funds               | 15,731.7| 17,067.6| 17,078.9| 16,185.6|
| Average ROCE                     | 4.96%   | 6.87%   | 8.18%   | 9.58%   |


Telecommunications

The financial results for BT are shown in Table 8.4. These show a different picture to that in electricity. In BT, this period covers the price cap rising to RPI-6.25 and then to RPI-7.5, 1993 onwards. The effects of the tightening regulation are evident: a relatively static market, as measured by turnover; and reduced profits, particularly in 1993 onwards, whether measured by operating profit, or return on capital employed. BT has managed to maintain a relatively high return on historical cost capital employed by controlling its costs. Major rationalisations of its labour force have caused numbers of staff employed to decrease from 237,400 in 1991 to 148,900 in 1995 (see Table 8.4).
### Table 8.4 Financial performance of British Telecom

<table>
<thead>
<tr>
<th>British Telecommunications plc</th>
<th>1991 £m</th>
<th>1992 £m</th>
<th>1993 £m</th>
<th>1994 £m</th>
<th>1995 £m</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Historical Cost Data</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover</td>
<td>13,154</td>
<td>13,337</td>
<td>13,242</td>
<td>13,675</td>
<td>13,893</td>
</tr>
<tr>
<td>Operating profit</td>
<td>3,498</td>
<td>3,405</td>
<td>2,436</td>
<td>3,015</td>
<td>2,693</td>
</tr>
<tr>
<td>Profit for financial year</td>
<td>1,262</td>
<td>1,156</td>
<td>253</td>
<td>728</td>
<td>623</td>
</tr>
<tr>
<td>ROCE¹</td>
<td>20.6%</td>
<td>19.3%</td>
<td>13.6%</td>
<td>17.1%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Gearing¹</td>
<td>34.1%</td>
<td>21.1%</td>
<td>14.3%</td>
<td>9.3%</td>
<td>17.8%</td>
</tr>
<tr>
<td>EPS (basic/under FRS 3)</td>
<td>34.0p</td>
<td>33.2p</td>
<td>19.8p</td>
<td>29.7p</td>
<td>27.8p</td>
</tr>
<tr>
<td>Net dividend</td>
<td>13.3p</td>
<td>14.4p</td>
<td>15.6p</td>
<td>16.7p</td>
<td>17.7p</td>
</tr>
<tr>
<td><strong>Current Cost Data¹</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current cost profit on</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,373</td>
<td>2,100</td>
</tr>
<tr>
<td>ordinary activities before</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>taxation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retained current cost profit</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>37</td>
<td>345</td>
</tr>
<tr>
<td>for financial year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans and other borrowings</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,551</td>
<td>3,999</td>
</tr>
<tr>
<td>Capital employed</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>19,872</td>
<td>18,975</td>
</tr>
<tr>
<td>Shareholders funds</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15,476</td>
<td>14,908</td>
</tr>
<tr>
<td>ROCE¹</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11.9%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Gearing¹</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>22.9%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Average number of employees</td>
<td>237.4</td>
<td>219.0</td>
<td>183.1</td>
<td>165.7</td>
<td>148.9</td>
</tr>
</tbody>
</table>

Notes:
1. Return on Capital Employed (ROCE) is based on profit before tax and interest on long-term borrowings, adjusted to reflect the utilisation of any restructuring provision, to average capital employed. Capital employed is represented by total assets less current liabilities, excluding corporate taxes and dividends payable, and provisions other than those for deferred taxation and restructuring. Year-end figures are used in the computation of the average, except in the case of short-term investments and borrowings where average daily balances are used in their place.
2. The gearing ratio is based on borrowings net of cash and non equity short-term investments to capital and reserves and minority interests.
4. ROCE calculated as Current Cost Profit on Ordinary Activities before Taxation divided by Capital Employed (current cost).

It has also managed to increase its dividends to shareholders over this period from 13.3p (net) to 17.7p (net). When the financial performance of BT on an historical cost basis is compared to its current cost financial performance, this demonstrates, as would be expected, a lower return on capital employed (11.9% in 1994 compared to 17.1% on historical cost; 11.1% in 1995 compared to 15.6%). Nevertheless, this relatively high return compared to other utilities underlines the profit potential of BT, and explains the desire of OFTEL to place tighter curbs on its financial performance.

Gas

The financial performance of British Gas (see Table 8.5) is less impressive than that of BT. It shows a declining profitability from £925 million in 1990 to £410 million in 1994, erratic returns to capital employed on an historical cost basis, ranging from 19.7% in 1990 to 0.4% in 1993, and declining returns on capital employed on a current cost basis, ranging from 7.6% to 4.5%. The returns to shareholders, as measured by dividends paid, are not exhibiting significant growth. Earnings per share are declining and British Gas has rationalised its labour force to reduce costs, as Table 8.5 indicates, with number of employees falling from 81,805 in 1990 to 69,971 in 1994. Its gearing is also modest at 26.5% in 1994. As noted earlier, in 1990 and 1991 British Gas was still benefiting from a price cap regime (of RPI-2+Y) which was set on its privatisation and which was seen as generous. This shows in these
financial results, with a deteriorating financial position being revealed when the more stringent price cap came into force from 1992 onwards.

**Table 8.5 Financial performance of British Gas**

<table>
<thead>
<tr>
<th>British Gas plc</th>
<th>1990 £m</th>
<th>1991 £m</th>
<th>1992 £m</th>
<th>1993 £m</th>
<th>1994 £m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating profit</td>
<td>1,645</td>
<td>1,657</td>
<td>1,092</td>
<td>(325)</td>
<td>987</td>
</tr>
<tr>
<td>Profit for financial year</td>
<td>925</td>
<td>926</td>
<td>491</td>
<td>(534)</td>
<td>410</td>
</tr>
<tr>
<td>ROCE (current cost)</td>
<td>7.6%</td>
<td>7.3%</td>
<td>4.6%</td>
<td>(1.5)%</td>
<td>4.5%</td>
</tr>
<tr>
<td>ROCE (historical cost)</td>
<td>19.7%</td>
<td>17.7%</td>
<td>11.7%</td>
<td>0.4%</td>
<td>13.0%</td>
</tr>
<tr>
<td>Gearing (current cost)</td>
<td>12.9%</td>
<td>13.5%</td>
<td>20.9%</td>
<td>22.8%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Gearing (historical cost)</td>
<td>30.9%</td>
<td>32.6%</td>
<td>49.6%</td>
<td>57.5%</td>
<td>26.5%</td>
</tr>
<tr>
<td>EPS (basic/under FRS 3)</td>
<td>21.7p</td>
<td>21.7p</td>
<td>17.4p</td>
<td>15.1p</td>
<td>13.9p</td>
</tr>
<tr>
<td>Net dividend</td>
<td>12.5p</td>
<td>10.25p</td>
<td>14.2p</td>
<td>14.5p</td>
<td>14.5p</td>
</tr>
<tr>
<td>Number of employees</td>
<td>81,805</td>
<td>84,530</td>
<td>84,023</td>
<td>79,358</td>
<td>69,971</td>
</tr>
</tbody>
</table>

**Source:** Adapted from British Gas plc, Annual Report and Accounts 1994.

**Overview**

Overall, the financial performance of these regulated industries does not look excessive. The initial ‘soft’ price caps set at privatisation have been replaced by more stringent caps, in all of these industries. With the exception of the regional electricity companies, these regulated industries exhibit the financial signs of the tightening grip of their regulators, but what has this meant for standards of service delivery? The issue of whether increasing financial pressures have reduced service accomplishments is addressed in the following section, in a discussion of the final dimension of regulatory outcomes.
Non financial measures of performance

The need for non financial measures of the performance of the regulated industries stems from the Competition and Service Utilities Act of 1992. This Act was a consequence of the government’s Citizen’s Charter Initiative to improve the quality of public services. For these industries, there has been a history of using performance indicators, described as a story of ‘hesitancy and refinement’, see (Lapsley, 1996, p.118), in their former existence as nationalised industries. There are distinct parallels between that period of the history of these utilities and the current era of the Citizen’s Charter, notably in the re-emergence of performance indicators which had been used when these utilities were nationalised. More fundamentally, there are continuing problems which beset such performance indicators, particularly the absence of global measures of performance and the consequent reliance on partial indicators, the lack of comprehensive partial indicators, the potential for conflicting signals from such partial indicators and the possibilities of ministerial fudge and manipulation, see Lapsley, 1996. All of these caveats should be borne in mind in the following discussion of non financial assessment of the services of the privatised utilities. This is not to deny that the use of such indicators may be beneficial in regulators securing better quality of services for consumers. The service standards adopted may not be those which would be selected by consumers of these services and may be regarded as an encumbrance by regulated utilities, particularly if they are not part of their routine management information. While we do acknowledge that imperfections exist, and that definitive sets of performance indicators are not yet in use, nevertheless the service standards adopted by regulators provide useful benchmarks for the assessment of service quality standards.

Mention has been made above of the actions of OFGAS in 1991 in tying its price cap proposals to standards of service accomplishment at British Gas. That particular initiative by OFGAS is in tune with the drive for objective standards and accomplishments throughout the public sector. The key elements of standards of service set out in the Act are shown in Table 8.6. This reveals an apparent uniformity of standard setting but, in practice, these provisions of the Act map out broad areas of
performance standards with the details of each sector being a matter for the industry and the regulator. One distinctive feature of this focus on non financial performance standards is the diversity which has emerged. These differences are accentuated by OFWAT which has generated the most detailed set of performance standards as shown in the following discussion. This facet of such standard setting and the manner in which it reflects the individual regulator’s interpretation of what is required, underlines the distinctive nature of UK regulation, which affords high levels of discretion to the regulators. This is reflected upon at the end of this chapter. We examine the requirements for, and performance of, each of the four industries, water, electricity, telecom and gas, taking into account the financial performance and situation of these industries as discussed earlier.

**Water and sewerage services**

The standards of service for the water industry are based on three dimensions: the availability of water; the reliability of the service; and response to customers. OFWAT has issued directives which cover each of these headings with DG1 and DG4 addressing the incidence of water restrictions; DG2, 3, 5 and 5A reporting on properties at risk from loss of water supply, significant reductions in water pressure and risk of flooding; and DG6 and DG7 reporting on measured response times in dealing with customers’ queries. This shows a steady improvement in the quality of service, in terms of availability of water and in reliability of service, but there has been some, albeit insignificant, deterioration in responsiveness to consumer queries. A more detailed analysis of the performance of the water companies on these three dimensions of service delivery (see OFWAT, 1994) reveals the following:
Table 8.6 Regulated utilities: standards of performance and service to customers

<table>
<thead>
<tr>
<th><strong>Telecommunications</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards of performance.</td>
</tr>
<tr>
<td>Information with respect to levels of performance.</td>
</tr>
<tr>
<td>Information to be given to customers about overall performance.</td>
</tr>
<tr>
<td>Procedures for dealing with complaints.</td>
</tr>
<tr>
<td>Disputes about discrimination etc. in fixing charges.</td>
</tr>
<tr>
<td>Billing disputes.</td>
</tr>
<tr>
<td>Deposits.</td>
</tr>
<tr>
<td>Disconnections.</td>
</tr>
<tr>
<td>Enforcement of standards of performance.</td>
</tr>
<tr>
<td>Interpretation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Gas supply</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards of performance.</td>
</tr>
<tr>
<td>Information with respect to levels of performance.</td>
</tr>
<tr>
<td>Information to be given to customers about overall performance.</td>
</tr>
<tr>
<td>Procedures for dealing with complaints.</td>
</tr>
<tr>
<td>Promotion of efficient use of gas.</td>
</tr>
<tr>
<td>Determination of disputes.</td>
</tr>
<tr>
<td>Billing disputes.</td>
</tr>
<tr>
<td>Preliminary investigation of disputes by Gas Consumers' Council.</td>
</tr>
<tr>
<td>Disconnections.</td>
</tr>
<tr>
<td>The 25,000 therm limits.</td>
</tr>
<tr>
<td>Conveyance and storage of gas.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Electricity supply</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Research concerning views of customers.</td>
</tr>
<tr>
<td>Information to be given to customers about overall performance.</td>
</tr>
<tr>
<td>Procedures for dealing with complaints.</td>
</tr>
<tr>
<td>Billing disputes.</td>
</tr>
<tr>
<td>Compliance with standards of overall performance.</td>
</tr>
<tr>
<td>Determination of disputes by Director: interim directions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Water supply &amp; sewerage services</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Research concerning views of customers.</td>
</tr>
<tr>
<td>Information with respect to levels of performance.</td>
</tr>
<tr>
<td>Information to be given to customers about overall performance.</td>
</tr>
<tr>
<td>Procedures for dealing with complaints.</td>
</tr>
<tr>
<td>Determination of disputes by the Director.</td>
</tr>
<tr>
<td>Reference of certain disputes to the Director.</td>
</tr>
<tr>
<td>Billing disputes.</td>
</tr>
<tr>
<td>Mergers of water undertakers.</td>
</tr>
<tr>
<td>Inset appointments.</td>
</tr>
<tr>
<td>The domestic supply duty.</td>
</tr>
<tr>
<td>Transitional provision with respect to replacement appointments.</td>
</tr>
<tr>
<td>Connections with water mains and communications with sewers.</td>
</tr>
<tr>
<td>Bulk supplies of water.</td>
</tr>
<tr>
<td>New connections with public sewers.</td>
</tr>
<tr>
<td>Discharges into and from public sewers.</td>
</tr>
<tr>
<td>Pipe-laying by water or sewerage undertaker in area of another such undertaker.</td>
</tr>
</tbody>
</table>

**Source:** Adapted from Competition and Service (Utilities) Act 1992.
Availability of water resources

The number of customers whose water resources are considered to be inadequate fell for the fourth successive year to 6.1 million, 12% of the population. This represents a 50% reduction in the population at risk of water shortages since 1990-91. Folkstone, a water only company, however, reported that all its customers were at risk of water shortages in times of drought. Thames stated that its customers in London could have been similarly affected. In both cases water restrictions were not imposed. There were no hose pipe bans or other water restrictions imposed on customers during 1993-94. This indicator has shown significant improvement from a high in 1990-91 of 41% of the population subject to restrictions on their use of water.

Reliability of services

An examination of the reliability of water supply services reveals that the number of properties reported as being at risk of low water pressure fell for the fourth successive year, to just over 1% of connected properties. Five companies reported no properties affected by unplanned and prolonged interruptions to supply of 12 hours or more. This was an increase of two companies on the previous year. The supply to 77,600 customers (0.35% of properties) was interrupted for 12 hours or more, a slight decrease on 1992-93. This however remains at the upper end of the range of this indicator with 0.2% of properties in 1991-92 and 0.42% of properties in 1990-91. The number of customers without a supply for 24 hours or more, more than doubled to 25,700. Three companies, Anglian, Thames and Yorkshire, accounted for two-thirds of the total number of supply interruptions.

An examination of reliability of sewerage services shows that the number of properties ‘at risk’ of internal flooding due to hydraulic inadequacy of the sewerage system fell by 10% to 18,000. This represents an aggregate reduction for the fourth successive year. Nine of the ten sewerage companies reported a reduction; only South West reported an increase. Over 11,000 properties were flooded internally, a similar number to that reported in the previous year. Of these over 6,200 were
flooded because of overloaded sewers. Sewer blockages and system failures accounted for the flooding of 4,800 properties.

The above relatively good picture on availability and reliability of services is rather inflated by the omission of any consideration of the events of 1995, in which the long hot summer and the consequent drought posed major problems for water companies. One major difficulty was the extent to which leakages from aged water supply pipes were exacerbating water shortages caused by the drought, with estimates of leakage rates at around 20% of Britain’s water supply (Oulton & Ghazi, 1995). This particular circumstance must be seen in the light of a summer of hose pipe bans and the use of stand pipes for domestic supply in some regions of the country. These events point to a likely dramatic deterioration in operating standards for this industry for 1995, but the regulator has not stood idly by as this set of events unfolded. After detailed scrutiny of standards of service delivery of all the ten privatised water companies, the regulator is reported to be pursuing three of them: Yorkshire Water; North West Water; and South West Water on the grounds that they have not delivered on levels of service, tap water purity, leakage control and sewage clean-ups to which they had agreed in return for being allowed to increase prices at a rate faster than inflation (Schoon, 1995). In this way it can be seen that these standards of service accomplishments are meaningful parts of the regulatory mechanism which is not solely a function of negotiations of price caps and scrutiny of financial performance.

**Responses to customers**

Water companies answered billing queries more quickly, despite an increase in their number. During 1993–94, 83% of customers received a reply within five working days compared with 80% the previous year. The number of queries not answered within 20 working days fell to 3.30% from 3.99% in 1992–93, placing it at the lower end of the indicator’s range, 3.25% of customers 1991–92, 3.99% of customers 1992–93. Nine companies reported a fall in complaints; in the case of South East, a water only company, by over a half. However, complaints rose overall, for the fourth successive year, by 28% to 160,000. The rise was
largely attributable to Anglian which reported an eight fold increase, from 5,500 to 43,000, because of problems with a new billing system. Water companies, overall, were taking longer to answer customers’ written complaints. Although 52% of customers received a reply to their complaint within 5 working days, 49% during 1992-93, the number of complaints not answered within 20 working days rose sharply to 13%. Anglian’s poor performance in answering written billing complaints was largely responsible for this overall deterioration. This represents a 5% increase on the previous year which was broadly similar to the figure achieved in 1990-91. Sixteen companies, over half, reported very good performance for both billing query and written complaint response times, an increase of seven on the previous year. For the second successive year, only Thames reported a very poor performance for speed of response to both billing queries and written complaints.

In addition to the above standards of service, OFWAT has instituted a compensation scheme, the ‘guaranteed standards scheme’ (GSS) in common with all Citizens Charter initiatives. Under the GSS customers are entitled to payments if certain standards of service are not met. In 1993 OFWAT’s proposals to strengthen the GSS were accepted by the Secretaries of State for the Environment and for Wales. This report year was the first year of the revised GSS.

The number of payments made by companies under the GSS has increased significantly because of the changes introduced. In 1993-94 the number of payments was 11,388 compared with only 1,917 in 1992-93. However, comparisons between the number of payments made and the potential entitlement to payments indicates that the operation of the scheme needs to be reviewed. In particular:

- where the GSS requires companies to make automatic payments to customers, information suggests that a few companies may not be doing so;
- although payments in respect of sewer flooding must be claimed, the number of payments made by some companies is surprisingly small compared with the number of flooding incidents. This suggests that while some companies are operating the scheme in a proactive way, others are not; and
very few customers who are entitled to payments in respect of supply interruptions submit claims.

The companies concerned are the subject of investigation by OFWAT which is considering what steps are necessary to ensure that the GSS is operated in a way which protects customers from poor service.

**Electricity**

The major focus of the OFFER instigated performance of service accomplishments is based on responsiveness to consumers. The actual standards of service levels set for the regional electricity companies by OFFER reveal some considerable variation, with notable exceptions, such as the restoration of supply within 24 hours which is predominantly 99/100%, but 95% for SWALEC and SWEB. In terms of service accomplishments, OFFER sets out the names of those regional electricity companies which failed to achieve the standards set for them. However, some of these apparent 'failures' may be a function of the service standard set. For example, for the overall standard, on the restoration of electricity supply within 24 hours, the three regional electricity companies which 'failed' were operating on a 100% standard. Indeed a major reason for the Midlands regional electricity company 'failing' at so many performance standards seems to be that it faces the 100% accomplishment test. When this aspect of performance assessment is taken into account, it can be seen that there are, in fact, few reported instances of failures to attain standards set by OFFER for these companies.

In common with the water industry, the electricity industry also has a compensation payments scheme for consumers where regional electricity companies fail to meet agreed, 'guaranteed' in OFFER terminology, standards of service. During 1993/94, companies made just over 8,000 payments to customers under the guaranteed standards, compared with some 12,250 during the previous year, and just over 13,000 during the nine months ended 31 March 1992 (OFFER, 1994b). This drop in the number of payments for failing to meet the standards indicates an improvement in the level of service given to customers, particularly since the standards were tightened and extended in 1993.
The number of reported failures fell by over a third between 1992/93 and 1993/94.

Each of the companies has improved its performance since the standards were introduced. The number of payments made under each of the standards varies significantly. For example, in 1993/94 over 5,000 payments were made under the appointments standard (Standard 9), but only 29 under the standard on voltage complaints (Standard 6). This difference in the number of payments made under the various standards largely reflects differences in the number of services covered by each of the standards.

The fall in the total number of payments during 1993/94 compared with the previous 12 months is largely accounted for by fewer payments under the appointments standard (Standard 9), as well as fewer payments for failing to notify customers of supply interruptions (Standard 5) and for failing to deal promptly with customer account queries (Standard 8). The total number of payments made by companies fell in the case of each of the standards apart from the restoration of supply standard (Standard 2) where there was an increase in the number of payments from 433 in 1992/93 to 589 in 1993/94.

The total value of payments under the standards during 1993/94 was just over £153,000. The highest amount paid by any single company was nearly £37,000. In 1992/93, the total value of payments was £140,000 and the highest amount paid by a single company was almost £30,000. As mentioned previously the level of payments was doubled in 1993/94.

**Telecommunications**

In the telecommunications industry, there is an impressive set of statistics on BTs network reliability with negligible failures. This is supported by a high level of clearance of what is a small proportion of failures, in the first instance. It could be argued that the responsiveness within five or nine working hours could be improved upon. This adverse statistic may be a function of rationalisation and cost reduction by BT, as mentioned in the discussion of its financial results. The responsiveness of BTs operator service and directory enquiries is also
high. Finally, an overview of BT’s compliance with quality of service standards confirms the improving quality of service on network reliability, on operator services and directory enquiries. The difficulties with the fault repair service are more explicit which could be a consequence of manpower rationalisation programmes.

Gas

British Gas has met or exceeded the planned performance level set in all but three of its 39 standards and received complaints in four other service standard categories. These standards provide a comprehensive set of measures of service delivery, with a heavy emphasis on British Gas: customer interaction and the responsiveness of British Gas to requests for facilities, breakdowns in service, emergencies (such as gas escapes), meter readings and so on. Despite the continuing cost reductions and manpower rationalisations in the period covered by this study, and the financial difficulties as a consequence of regulatory action, market restructuring and a tightening of the price cap during the period of these service standard results, there is evidence of this organisation maintaining high standards of service.

Summary

This chapter includes a number of interesting findings in terms of financial and non-financial outcomes in our assessment of research question 3, on the effectiveness of UK regulatory policy. The financial performance of these industries is a high profile indicator of the effectiveness of the UK regulatory regime. In this instance, we define financial performance as measured by the reported financial results of these utilities, other dimensions of financial performance, such as share price movements and remuneration packages of utility executives are addressed in the following chapter. A crucial dimension of this assessment is the extent to which their financial results are regarded as excessive and, thereby, undermine the effectiveness of their regulators. The evidence presented in this chapter shows that regulators often inherited a price cap regime which was relatively lax, but which they
sought to tighten. The financial results of these utilities, water, electricity, gas and telecommunications, when compared to that of comparable heavy industries for the same period, does not look excessive, with the exception of the regional electricity companies. Also, for gas and telecommunications there is evidence of initial high returns reducing, as the regulator's interventions start to bite. However, in all of this, there is the important distinction between regulators focusing on financial results on a current cost basis as a better measure of the long term financial performance of these utilities, and the capital markets, the media and other interested parties responding to their financial results on an historical cost basis. This is a tension of considerable importance in assessing the effectiveness of regulatory mechanisms. On a current cost basis, there is not a question over the trust placed in the regulator by the various stakeholder groups to secure a tight financial result by the utilities, with the exception of regional electricity companies.

On the above basis, in general, the regulators have performed effectively but what of another important aspect of regulation, non financial standards of performance? In many ways, this might be seen as the most tangible expression of the standards of service provided by utilities, particularly by consumers of these services. The evidence in this chapter shows that there is evidence of high standards. The general picture is one of effectiveness in securing high standards, based on these indicators selected for performance measurement of these industries. There are exceptions to this. For example, connection problems with BT's fault repair service, which may be a function of manpower rationalisations. Also, problems of water supply, availability and reliability, which were particularly acute in certain regions in 1995.

However, due note should be taken of the caveats expressed over these performance standards which are still at the developmental stage. No regulatory office has constructed a definitive set of these indicators and, in many cases, the performance indicators used may be less robust than financial information. In particular, we draw attention to the distinctive, detailed approach to setting performance standards adopted by OFWAT. While we recognise that major factors in this may be the opportunity for benchmarking within this industry and the willingness of water companies to work with the regulator in devising standards, this is
further evidence of the importance of interpretation where regulator discretion operates and the consequent diversity of practice. Nevertheless, the evidence from these performance standards, with the particular exceptions of those cases just mentioned, are supportive of this dimension of the regulatory mechanism which strengthens the regulation of these utilities. Here is further evidence that the trust placed in these individuals as regulators to discharge their responsibilities, on behalf of consumers and other stakeholders, has not been misplaced.
ALTERNATIVE MODELS

OF REGULATION: AN APPRAISAL
CHAPTER 9

THE EFFECTIVENESS

OF UK REGULATION: AN OVERVIEW

Before we turn to research question 4, on whether the current UK model of regulation should be modified (and if so, how), we recap on question 3 on the effectiveness of the current regulatory regime.

By and large, the new regulatory regimes have been effective in promoting and protecting the interests of consumers and in preventing the earning of excess profits by the exploitation of market power by the utilities. Although, in all of this, there is also evidence of diversity, an understandable consequence of the discretion afforded the individual regulators and the different circumstances of the industries which they oversee. It is quite likely that the public perception of the performance of the regulators differs from this. One particular reason for this would be as alluded to earlier, the attention paid to the remuneration of executives employed within these industries and the amount of capital gains made on share prices, since privatisation. The implications of these issues are now explored.

Effectiveness of regulation - widening the debate

It was noted that accusations of boardroom 'excess' and of substantial gains to sectional interests have been used to place doubts on the intentions and actions of regulators. These dimensions of the
conduct and management of the privatised utilities have seized the public interest, repeatedly. Kilpatrick and Lapsley (1996) present this as a 'regulator: public interest expectations gap', but the regulators' interests do not extend to matters of executive remuneration. Also, on share prices, it is evident that share prices on privatisation may have erred on the generous side to ensure share issues were taken up. For example, Whittington (1994) makes reference to the fact that stock market values have typically been below the replacement cost value of assets per share, as was the case at flotation.

Examples of the patterns of capital gains on share prices are shown in Table 9.1. Part (d) shows that there have been significant gains in current share prices when compared to those at privatisation. However, a major factor in these gains was heavily discounted initial share values which the government used to induce sales. As part (a) of Table 9.1 shows there were significant capital gains in the month following privatisation, and as part (b) shows, the period between share prices at privatisation to the first periodic review also yielded substantial gains. But these gains to the first periodic price review were again a function of government intervention, rather than the actions of the regulators, as the initial price caps were set by government. This interpretation of events that these 'excessive' gains to capital were a product of governmental, rather than regulator, action is vindicated by part (c) of Table 9.1. This shows returns to shareholders after the effects of regulator decisions, and reveals rather modest or disappointing returns, in general, on these privatised utilities. Indeed, in every case, subsequent share prices of the privatised utilities have under performed, relative to the FTSE index.

These governmental influences on share prices were a constraint on regulatory action which was outwith the control of the regulators.
Table 9.1 Utilities' share price gains

(a) Share price one month after privatisation\(^1\) versus offer price on privatisation\(^2\).
Based on share prices quoted for 5 RECs

<table>
<thead>
<tr>
<th>Industry/Organisation</th>
<th>Average Capital Gain</th>
<th>Range</th>
<th>FTSE-100 Gain</th>
<th>FT-A All Share Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water &amp; Sewerage companies</td>
<td>59.4%</td>
<td>41-77%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>RECs England and Wales</td>
<td>47%</td>
<td>36-67%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>RECs Scotland</td>
<td>7%</td>
<td>3-7%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>BT plc</td>
<td>111%</td>
<td></td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>British Gas plc</td>
<td>32%</td>
<td></td>
<td>7%</td>
<td>4%</td>
</tr>
</tbody>
</table>

\(^1\)Share price one month after privatisation: trading price of part-paid share.
Water and Sewerage Companies - price at close on 12 January 1990
RECs England and Wales - price at close on 11 January 1991
RECs Scotland - price at close on 18 July 1991
BT plc - price at close on 3 January 1985
British Gas plc - price at close on 8 January 1987

\(^2\)Share price on privatisation: cost of part paid share.
Water and sewerage companies - first day of trading 12 December 1989, 100p part paid (240p offer price)
RECs England and Wales - first day of trading 11 December 1990, 100p part paid (240p offer price)
RECs Scotland - first day of trading 18 June 1991, 100p part paid (240p Offer price)
BT plc - first day of trading 3 December 1984, 50p part paid (130p Offer price)
British Gas plc - first day of trading, 8 December 1986, 50p part paid (135p Offer price)
(b) *Share price at announcement of first set of new price controls versus offer price on privatisation*

<table>
<thead>
<tr>
<th>Industry/Organisation</th>
<th>Average Capital Gain</th>
<th>Range</th>
<th>FTSE-100 Gain</th>
<th>FT-A All Share Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water &amp; Sewerage companies</td>
<td>140%</td>
<td>115-168%</td>
<td>32%</td>
<td>32%</td>
</tr>
<tr>
<td>RECs England and Wales</td>
<td>214%</td>
<td>186-260%</td>
<td>55%</td>
<td>58%</td>
</tr>
<tr>
<td>RECs Scotland</td>
<td>56%</td>
<td>55-57%</td>
<td>19%</td>
<td>24%</td>
</tr>
<tr>
<td>BT plc</td>
<td>94%</td>
<td></td>
<td>57%</td>
<td>72%</td>
</tr>
<tr>
<td>British Gas plc</td>
<td>159%</td>
<td></td>
<td>112%</td>
<td>107%</td>
</tr>
</tbody>
</table>


'Offer price at privatisation: Offer price of fully-paid share (see above).

(c) *Share price to date versus share price at announcement of first set of new price controls*

<table>
<thead>
<tr>
<th>Industry/Organisation</th>
<th>Average Capital Gain</th>
<th>Range</th>
<th>FTSE-100 Gain</th>
<th>FT-A All Share Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water &amp; Sewerage companies</td>
<td>25%</td>
<td>13-34%</td>
<td>40%</td>
<td>36%</td>
</tr>
<tr>
<td>RECs England and Wales</td>
<td>(3%)</td>
<td>(2%)-(9%)</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>RECs Scotland</td>
<td>(5%)</td>
<td>(4%)-(5%)</td>
<td>45%</td>
<td>41%</td>
</tr>
<tr>
<td>BT plc</td>
<td>73%</td>
<td></td>
<td>134%</td>
<td>119%</td>
</tr>
<tr>
<td>British Gas plc</td>
<td>(29%)</td>
<td></td>
<td>27%</td>
<td>30%</td>
</tr>
</tbody>
</table>

'Share price to date: Share prices quoted at close on Friday 14 February 1997. 'Share price at first set of price controls: see above.
(d) Share price to date versus Offer price on privatisation

<table>
<thead>
<tr>
<th>Industry/Organisation</th>
<th>Average Capital Gain</th>
<th>Range</th>
<th>FTSE-100 Gain</th>
<th>FT-A All Share Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water &amp; Sewerage companies</td>
<td>194%</td>
<td>162-257%</td>
<td>85%</td>
<td>80%</td>
</tr>
<tr>
<td>RECs England and Wales</td>
<td>200%</td>
<td>171-249%</td>
<td>99%</td>
<td>101%</td>
</tr>
<tr>
<td>RECs Scotland</td>
<td>49%</td>
<td></td>
<td>72%</td>
<td>74%</td>
</tr>
<tr>
<td>BT plc</td>
<td>235%</td>
<td></td>
<td>268%</td>
<td>277%</td>
</tr>
<tr>
<td>British Gas plc</td>
<td>83%</td>
<td></td>
<td>169%</td>
<td>154%</td>
</tr>
</tbody>
</table>

'Share price to date: see above
'Offer price at privatisation: Offer price (see above)

This affects decisions on what constitute ‘reasonable’ returns and, if share prices were depressed artificially, at initial sale, the substantial capital gains can be seen as the market realisation of the real worth of these industries. All of which cannot be presented as negligence by the regulator. This, of course, is not to say that share prices are ignored by regulators. OFFER, for example, specifically included high share price increases as a major contributory factor in reopening the periodic price review for the regional electricity companies in 1995.

There is also prima facie evidence of excess on executive remuneration (see Table 9.2). This table shows the movements in the average salaries paid to the highest paid director in the year before privatisation and for the current financial year in the water and sewerage companies, the regional electricity companies in England, Wales and Scotland and in BT and British Gas. While this data does exclude remuneration such as savings related share option/executive share option schemes, it nevertheless shows substantial average annual increases for the period for which these industries have been privatised. However, these raw numbers must be interpreted with some caution. The issue of executive remuneration is complex. In particular there is an argument that levels of remuneration should be related to the financial performance of these utilities, and that higher levels of earnings are necessary to attract high calibre management from the private sector. There is some limited evidence on this. For example, Ogden and
Watson (1996) present some evidence that firm performance has a role to play in determining higher levels of remuneration. On the other hand, Conyon reports no significant relationship between remuneration and financial performance.

**Table 9.2 Directors' emoluments – public and private sector comparison (£ per year)**

<table>
<thead>
<tr>
<th>Industry/organisation</th>
<th>Average emolument for highest paid director (public sector)</th>
<th>Average emolument for highest paid director (private sector)</th>
<th>Average annual increase</th>
<th>Annualised wage rate inflation¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water and sewerage companies</td>
<td>52,000</td>
<td>201,000</td>
<td>25.28%</td>
<td>5.5% pa</td>
</tr>
<tr>
<td>RECs, England and Wales</td>
<td>72,202</td>
<td>243,697</td>
<td>27.54%</td>
<td>4.8% pa</td>
</tr>
<tr>
<td>RECs, Scotland</td>
<td>79,937</td>
<td>270,551</td>
<td>27.61%</td>
<td>4.8% pa</td>
</tr>
<tr>
<td>BT</td>
<td>84,198</td>
<td>599,000</td>
<td>19.53%</td>
<td>6.8% pa</td>
</tr>
<tr>
<td>British Gas</td>
<td>73,198</td>
<td>492,602</td>
<td>23.47%</td>
<td>6.3% pa</td>
</tr>
</tbody>
</table>


Notes:
1. Figures are based upon the emoluments of the highest paid executive (director or chairman) within each organisation (and an average calculated for water and electricity industries) during the last full year of public ownership.
2. Figures are based on the emoluments of the highest paid executive (director or chairman) within each organisation (and an average calculated for water and electricity industries). Figures relate to the year ended 31 March 1995 (British Gas – 31 December 1994).
3. Figures are based on data contained in CSO, *Monthly Digest of Statistics*, and cover the period of operation of these industries as privatised utilities.

Clearly, further research is necessary to unravel this aspect of 'excess', in particular by the use of more refined measures of performance, particularly including non financial measures, and considerations of labour supply. Nevertheless, on this issue, there is a case for extending the obligation of the regulator to monitor such trends. This matter is taken up further, in the following chapter.
Summary

We have concluded that, by and large, the regulatory system in the UK has been effective. There have been exceptions to this, on price caps, in financial and non financial performance but, in general, the trust vested in the individuals charged with the responsibility for regulating the privatised utilities has been warranted. Nevertheless, this chapter has also documented criticisms of the privatised utilities which have been considered failures by the regulatory offices viz boardroom 'excess' on salaries and substantial share price gains. We have argued that these are aspects of utility performance which are and have been outwith the regulators' control. Nevertheless, in any debate over the future of the regulation of these industries, there is scope for their inclusion in any revision of the regulators' duties. These particular aspects of the financial performance of the privatised utilities have fuelled the debate for the modification of their regulation, our research question 4, which is addressed in the concluding chapter.
CHAPTER 10

ALTERNATIVE MODELS:

AN EVALUATION

Our final research question was: should the current model of UK regulation be modified and, if so, how? This study has, in general, endorsed the role and effectiveness of the regulators of privatised utilities in the UK, water, electricity, telecommunications and gas. We now assess whether the status quo could be improved upon. One of our fundamental reference points in this study has been to assess the current regulatory regime with reference to its predecessor, the creation of public or state corporations, accountable to a Minister of State, and we reflect on these dimensions of the regulatory question here. We also explore two further alternative regulatory regimes: proposed refinements to the regulatory process; and radical alternatives to the current regulatory regime, before our conclusions on the best way forward for the regulation of UK utilities.

Public corporations v regulated, privatised utilities

In our discussion of the regulation of these industries as public corporations we focused, in particular, on the issue of accountability. As nationalised industries, these public corporations were regarded as important instruments of economic policy, by administrations of differing political complexions. This resulted in substantive intervention in their pricing and investment policies in the name of economic policy.
A consequence of this was the undermining of financial results as measures of financial performance. Directives to control prices as part of counter inflation policies or to invest with the aim of encouraging employment meant that the actions of the corporation's management could not be disentangled, in financial terms, from this degree of government intervention. Related to this was the issue of informal directions from Ministers of State to public corporations which were accountable to them. Despite recommendations that such directives be made explicit it appears that frequently, these remained opaque.

From this perspective, the system of regulators for specific utilities appears to be an improvement. There have been criticisms from regulatees that the regulators are not sufficiently transparent in explaining the reasoning behind their decisions. There is no doubt that the system of periodic review, which typically involves industry-wide talks, with opportunities for consumers to make representations, and which generates a specific, explicit, price cap formula, is more transparent than the control exercised by ministers. It would also appear that these regulators all operate independently of government. Indeed, all the regulators included in this study confirmed to us that the relevant minister did not meddle with their activities. In that sense the regulatory system can be seen as superior.

This system is not without difficulties. Principally, there is the issue of information asymmetry, in which the regulator does not have a complete picture of the regulatees operating activities in terms of cost and potential for efficiencies. This is not to say that regulators do not have efficiency reviews, which they do, but there is potential for regulatees to hide pertinent information from the regulator. This has prompted at least one regulator to seek an extension of his powers. This has alarmed regulatees, many of whom see their regulators as unpredictable in their policies and constituting a risk to the success of their businesses. At one level, this can be seen as a necessary constraint on the activities of what are, in many cases, privatised monopolies, eg water and electricity companies.

In terms of outcomes from this regulatory process, we can point to modest financial returns and good quality of service accomplishments,
although this latter dimension of regulatory outcomes has slipped latterly, notably in water supply in 1995. Part of the difficulty of assessing the relative merits of these different systems is the truncated and different periods of their operation and the different data available for this purpose. BT was privatised in 1984, British Gas was privatised in 1986, the water industry was privatised in 1989 and electricity in 1990. Against this we have had nationalised industries in operation for almost a fifty year period since the immediate post-war era. Also, the fragmented picture of 'performance' within these different industries needs to take account not only of their different economic circumstances, but also the different styles of regulators. Compared to state industries, here we have a system which is in its relative infancy. When we seek to obtain comparative data, the financial results of the different regimes have such different factors impinging on them as to make meaningful comparison unlikely, even impossible. At one level we can point to different gains to different stakeholders. For example, there are periods when nationalised industries had prices held down which was an obvious benefit to consumers and similarly, there are consumers who have benefited from the price cap regimes. It could also be argued that those who had employment within the nationalised industries gained, but lost out in the rationalisations of the new privatised utilities. These examples serve to illustrate the difficulties of making simple generalisations. Also, on quality of service standards, those which are currently available are a consequence of the Competition and Service (Utilities) Act of 1992 and the Citizen's Charter and are not available for earlier periods, for the public corporations. In this way, we seek to avoid the danger of dismissing the activities of the regulators on the grounds of inadequate available evidence. We do emphasise that the existence of the regulators has brought a new visibility to the means by which utilities are judged and their performance assessed. This is a singular, important achievement over what has gone before.
Refrinements to the regulatory system

There have been numerous criticisms made of the regulators in recent times. In this section, we seek to pull these diverse attacks on the current regime into a coherent whole and to determine whether there is a useful set of recommendations for the refinement of the present system within them. As a starting point, we examine the model of regulation proposed by Baker (1994) the chief executive of National Power, as this contains reference to a broad sweep of pertinent issues, some of which have been taken up by others. Baker’s model is based on a six point plan:

1. we need to define the role of the regulator more closely;
2. regulators should publish a strategic plan for the industries which they oversee;
3. the regulatory process should be more open to scrutiny;
4. the single regulator should be replaced by a tribunal of three or five members;
5. there should be one regulatory body for all the various regulators; and
6. much work needs to be done on the impact of regulators.

We heartily agree with point (6) and, indeed, this report can be seen as part of this process of analysing the impact of regulation, but what of the other elements of this model? There are parts of this model which have been raised by others. For example on (1) above, the role of the regulator, the Director General of OFGAS has pointed to a lack of accountability, see the introduction, and the need for a further layer of accountability. At present there is the mechanism of the National Audit Office and the Public Accounts Committee, and it would appear that this regulator had some other, newer body, in mind. This may carry with it the dangers of the previous regime of an explicit Ministerial accountability, *i.e.* an invitation to meddle in regulatory affairs perhaps even to the point of day to day management. This idea is also contained within Baker’s proposals (see (4) and (5) above). It also has the support
of other regulators. For example, Sir Bryan Carsberg, who has unparalleled experience of UK regulation from his time as Director General of OFTEL and of the Office of Fair Trading has been cited as arguing for a single US style anti-trust system to replace the UK's system of competition policy based on the OFT, the MMC and the Board of Trade. The particular issue pertinent to the current discussion is the establishment of a single body employing a prohibitive approach to anti-competitive behaviour which he felt could be extended to the utilities companies (see N. Stacey, 'Carsberg calls for crackdown', The Scotsman, 23 February 1995). This is very close to the Baker model outlined above. It is also the position attributed to the regulator for telecommunications, who has stated his desire for a commission in the style of the US Federal Communications Commission at which regulation by an individual would be replaced by collective decision-making with its members voting on issues in public (see A. Cane, 'Telecoms watchdog calls for more open regulation', Financial Times, 12 September 1995).

This convergence on a particular model of governance for the utilities has attracted the interest of opposition parties to the government. While there appears to be a groundswell of support for this particular aspect of the Baker model, it should not be forgotten why this, US style form of regulation was rejected in the UK, ie the bureaucratic high cost approach, with slow decision-making on important issues. Also in our view, the concept of one regulatory commission for all the utilities deserves much careful analysis. This argument is advanced on the grounds that there would be greater resources available to the regulator(s), but the same could be said of the status quo if additional resources were made available to regulators. Also, there is the downside that there is considerable complexity attached to the regulation of these different industries, and the ones yet to be privatised. The idea of a single regulatory authority may prove to be too unwieldy and insufficiently sensitive to the specifics of particular industries.

Of the remaining elements of the Baker plan, the idea of 'more scrutiny' is not an issue with regulators, in our view. They all believe in, and strive to practice, transparency of decision making, and this relates to
the final point to be discussed in the Baker plan, i.e. number (2), the need for a strategic plan from the regulator. It could be argued that the regulator needs discretion to offset the information asymmetry embedded in the regulatory relationship. By making every aspect of his decisions public and transparent, and by setting a strategic plan, it could be seen that this could erode the discretion of the regulator. It could bring certainty to the regulator and regulatee relationship which could be exploited by the regulatee. Also the idea of strategic plans by the regulator or regulatory commission smacks of the old style public corporations with central planning by the state. This may be too static an approach in dynamic markets.

In this discussion of refinements to the regulatory process it should be noted that there are other considerations afoot. Notably the Labour Party has intimated that it would institute a new policy for utilities. At the time of writing we do not have a detailed policy available, but certain key elements have been aired for discussion and we briefly address these. The kind of changes to the regulatory process advocated by Baker, the replacement of the ‘cult of the personality’ by a commission, public hearings of decisions and a new appeals mechanism for regulatees, are apparently under consideration (see J. Sherman, ‘Labour plans to cap utility profits’, The Times, 17 May 1995). In addition to the above mechanics, there is also under consideration a ‘windfall’ tax, in which the regulator and the regulatee would agree on a ‘normal profit’ to be earned and any excess would be shared between the companies and their customers in the form of rebates or reduced prices. This particular proposal carries with it the danger that there will be a reduced incentive on the part of regulatees to generate efficiency gains. There is also a sense in which this is very close to the present practice of price caps and under which there have been rebates to consumers.

It is evident that this is only part of this emerging utilities policy and it is clear that the issues of (a) high salaries to utility chairman and executives and (b) high returns to shareholders are behind these criticisms of regulators. In practice, however, much of this criticism is fallacious. It is not the duty of regulators, for example, to scrutinise the salaries of executives. However, it is not beyond the bounds of
possibility that their regulatory powers could be extended to include a 'fair deal' constraint, such that they comment, not only on the price cap, but also on returns to shareholders and top company management. This goes against the argument deployed by senior executives in these industries who have been seen to seek to bring their personal emoluments up to the level of the private sector. This is because, in advancing this argument, these executives are ignoring the relative safety of their industries and their monopoly power and the huge public interest in the conduct of these essential, basic industries.

**Radical alternatives to the status quo**

There are two radical alternatives to the existing system of regulatory control which we consider here:

- the stakeholder model of control advocated by Corry, Souter and Waterson (1994) for the Institute of Public Policy Research; and
- the social citizenship model advocated by Ernst (1994).

Each of these alternatives to the status quo is considered below, in turn.

The stakeholder model

The stakeholder model advocated by Corry, Souter and Waterson (1994) eschews the drive for competition which is at the heart of current regulatory policy. Waterson (op.cit., p.106) states the case for caution in relying on the promotion of competition to improve utility services:

... economists often have a natural predilection for competition and competitive markets as a producer of efficiency. This arises from two important results in welfare economics. The first fundamental welfare theorem says that every competitive equilibrium (produced by an ideal free market) is 'Pareto-efficient' meaning that it is a situation in which no-one can be made better off without someone else being made worse off. The second fundamental theorem says roughly that most
such Pareto efficient solutions can be achieved by a perfectly competitive free market as long as you deal with redistribution first ... broadly speaking the two theorems taken together amount to saying that competition produces efficiency and if the outcome is inequitable, this can be dealt with as a separate issue ... (but) ... usually it is not ...

Given this perspective, a stakeholder approach to utility regulation is proposed. Corry et al identify six stakeholders:

- business and residential customers
- shareholders
- utility managers
- market entrants
- suppliers and other companies dependent on utility industries
- employees in the affected sectors.

The balancing of the different claims of these six stakeholders is seen as a task for the government which should assume the role of a seventh and, in effect, the most important stakeholder. In addition, stakeholder proponents advocate that industrial policy should be set by government for the four main utility sectors, energy, communications, transcript and water, rather than by '... an industrial policy by default ... determined by individual public servants exercising an exceptional degree of personal discretion ...' (op.cit., p.95). This is consistent with statements made to us by regulators themselves, who would welcome a broad framework, but not detailed government prescription. However, closer examination of the 'seventh stakeholder' role for central government is at odds with that. The stakeholders see central government pursuing, inter alia, the following policies: the modernisation and quality of the network infrastructure; regional equity in the distribution of utility services; research and development; training standards; the international competitiveness of UK utilities and their suppliers; standards of public safety; appropriate quality standards; efficiency in the use of finite natural resources; and environmental
sustainability. It can be seen that, while the ideas of a broad policy framework and the concept of different stakeholders being given recognition are ideas which merit serious consideration, this latter development of the 'seventh stakeholder' undermines the concept of the independent regulator and could be seen, *per se*, as a policy of over determination.

The social citizenship model

The focus on regulation to date has been on the interface between the regulator and a variety of interested parties, consumers, managers, employees, the government. Ernst (1994) has redefined the central focus of the utilities as not consumers and consumerism, but social citizenship. Ernst's basic position is that the services of the utilities should be regarded as basic welfare goods. In this way the provision of such goods would be guaranteed to all citizens, as of right on a fair basis. Within this scheme, Ernst (op.cit., p.193) writes:

... the template of citizenship - consisting of the triad of political, civil and social rights - is superimposed on the extant structure of the market economy ...

In terms of the implications for public policy, Ernst sees the social citizenship approach to utility regulation as demanding a far more active role for regulators. The requirements of social citizenship for regulators would consist of the following:

(a) setting specific service standards to provide a minimum floor of protection to low income consumers;
(b) delineation of performance targets aimed at promoting competitive 'best practice' in relation to social and environmental responsiveness;
(c) setting targets to raise the level of energy efficiency in low-income households to prevent the build up of consumer debt and eliminate disconnection for debt;
(d) standards (a), (b) and (c) would be tied to price formula;
(e) there would be some form of subsidising access to utilities eg via taxation/social security;
(f) tariffs would be strictly controlled under social citizenship;
(g) constraints would be placed on the companies' ability to generate excess profits;
(h) provision would be made for the claw-back of a proportion of the additional profits made by the utility companies, in the form of lower tariffs, without negating the in-built incentives for efficiency; and
(i) above all, under the social citizenship model, social responsiveness would form the primary criterion, along with commercial success, for evaluating utility performance.

Within this set of factors, there are many which are already taken account of, or which could be taken account of, if thought desirable, within the current regulatory regime. For example, price formula could be tied to standards, which may extend to aspects of service delivery such as disconnections. The specification and measurement of 'social and environmental responsiveness' appears to be challenging. Also, within this model, there is the windfall tax discussed above. Here, Ernst suggests that such clawbacks should not negate incentives for efficiency, but it is not evident that this will, in fact, be the case. This merits some detailed consideration of potential impacts. The fact remains that, while the perspective is radically different, this model envisages a continuing, even expanding role for the regulator.

**Whither regulation?**

In this study, we have examined the UK system of regulating privatised utilities. It is clear that, despite some reservations on the part of regulatees that there was increasing intervention, there have been improvements over the regime which existed previously. A principal benefit is increased transparency of regulatory decisions. All of this
suggests that it is unlikely that a widespread reversion to the public corporation will take place.

Nevertheless regulators have been the subject of some hostility from a variety of quarters. Some of this is unwarranted. For example, the high profile issue of the levels of salaries of senior executives in these utilities is outwith their frame of reference. Also, the generous terms, both in terms of price cap and share prices, on flotation have created difficulties for regulators. It is also important to note that there is not just one style of regulation and also that this is not just a function of the ‘cult of the personality’ but of the economic circumstances of these industries.

In the face of these criticisms there have been numerous proposals for reform of the current regulatory regime. At one level, there has been a focus on mechanics and procedures, with some considerable thought being devoted to the idea of regulatory commissions replacing ‘the regulator’. In our view this US style model offers a bureaucratic response to situations of great impact from market, social and public policy perspectives. In this sense, a clumsier, cumbersome process would be in use, without addressing the problems of the regulator, such as information asymmetry. Other proposals have been made with vastly different implications for regulation. On the one hand, the stakeholder approach as enunciated by Corry et al (op.cit.) places a heavy emphasis on government’s role, both in setting a broad policy framework and in the implementation of regulatory policy. While the former requirement has merit and could make regulation more effective, the second set of proposals, with the government as seventh stakeholder, signals the demise of the regulator and a virtual return to state run utilities. The final proposal, social citizenship, afforded a number of additional burdens which were to be put on the regulator, including an awareness and responsiveness to the needs of low income consumers and environmental impacts. These are far reaching significant issues, some of which could be incorporated in the current system.

There are continuing issues to be addressed in the regulation of utilities:
harmonising accounting systems for control and accountability, not only of the regulatee to the regulator but also to the wider public, with explicit consideration of the merits of current cost information relative to historical cost;

- preserving incentives for management; avoiding exploitation of monopoly power;
- 'fair deal' arrangements between the consumers, managers and owners, without regulators becoming submerged deep into day to day management of regulatees;
- extending the role of regulators to address social and environmental issues; and
- refining systems of accountability of the regulator to consumers, industry and government.

These are all challenging issues. This does not mean that the system of regulation in the UK can be branded a failure. These are the very necessary elements of enhancing and developing a system of regulation which is still in its infancy.
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A QUESTION OF TRUST:
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for Privatised Utilities

This research report is published by the Research Committee of
The Institute of Chartered Accountants of Scotland to offer a
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report will be of interest to all those involved in the development
of that debate.

Irvine Lapsley is Professor of Accounting and Director of IPSAR
at the University of Edinburgh. He is a member of both the
Research Committee and the Public Sector Committee of The
Institute of Chartered Accountants of Scotland. He is also a
member of the Public Sector and Not for Profit Committee of the
Accounting Standards Board and of the Research Board of the
Chartered Institute of Management Accountants. Irvine Lapsley
is Editor of Financial Accountability and Management and a
member of the editorial boards of Accounting & Business
Research; Accounting, Auditing & Accountability Journal;
Research in Healthcare Financial Management; and Journal of
Accounting and Public Policy.

Kenneth Kilpatrick is a Research Associate at the Institute of
Public Sector Accounting Research (IPSAR) at the University of
Edinburgh. He is an honours graduate in Business Studies and
Accounting at the University of Edinburgh. He is currently a
research associate at IPSAR engaged in a multi-disciplinary
research project in medical audit. In addition to the current
project, he has previously worked (with I Lapsley and
S Llewellyn) on an ESRC financed project on assessing the
impact of changes in community care.

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