STRUCTURE OF THE WATER INDUSTRY IN ENGLAND: DOES IT REMAIN FIT FOR PURPOSE?

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STRUCTURE OF WATER INDUSTRY IN ENGLAND: DOES IT REMAIN FIT FOR PURPOSE?

BACKGROUND

(i) Government Objectives

1. The Government's objectives for the water industry remain:
   - To protect public health;
   - To protect and improve the environment, ensuring that the industry can continue efficiently to finance and deliver continuing water quality and environmental improvements with minimum impact on customers' bills;
   - To meet the Government's social goals, including affordability of water supplies for households, protecting vulnerable groups, the interests of customers in rural areas, and the disabled and pensioners; and
   - To safeguard services to customers, by sustaining an industry that can provide water efficiently with the highest levels of customer service and with an effective emergency and drought regime to ensure that supplies are always available where needed.

2. A strong water industry with a secure future is essential for delivering public policy objectives on water. There is a need to determine if recent changes in water companies' structure and financing affect the medium to long-term capacity of the industry to deliver these objectives.

3. Therefore, Defra and Ofwat, in consultation with HM Treasury and DTI, seek views and further advice on the reasons for and implications of recent trends in the pattern of ownership and financing of water companies for the industry's ability to meet the Government's objectives for this sector.

4. While comparisons to other utilities will be made, and reference to experiences irrelevant sectors, it is envisaged that this work will focus specifically on the water sector as this work is seeking to inform Ministers' decisions regarding this sector.

(ii) The Past

5. The provision of water services in England and Wales - water supply and water treatment - were provided until 1989 by a mix of public and private bodies and companies. In 1989, the 10 public bodies supplying water services were privatised. To prepare them for privatisation, the Government wrote off existing debt of some £5billion and injected additional cash of £1.5billion (the green dowry). Consequently at that point, they had low levels of borrowing, substantial equity and were all quoted on the London Stock Exchange.
6. Since 1989, there have been a number of changes, principally in the shape of individual businesses, the pattern of ownership and how operations are financed. Companies have diversified (and, in some cases, retrenched). The number of major water and sewerage companies has remained constant at 10 but there is now a degree of foreign ownership (two companies) and the number of listed companies has fallen to 6. Water-only companies have reduced from 29 to 13 - only 6 are listed. However, these changes are far less substantial than those that have occurred in the electricity industry that was privatised at much the same time. There has been a significant increase, particularly in recent years, in the level of gearing. By 2001-02, the average was 55%, and projected by some commentators to rise to 60-70% by 2010. Some companies are already in excess of these forecast figures. Recently there has been a growing interest in the water, sector by private equity companies and banks.

7. The regulatory framework requires a compulsory reference to the Competition Commission for mergers of water companies over a certain size (£30m). This helps the regulator maintain comparative competition in what is a largely monopolistic industry. All the small water only companies below the size threshold have been merged with other water companies. None of the water and sewerage companies have merged with each other (although the ownership of 5 out of the 10 has changed since privatisation).

8. The drive for greater efficiency, coupled with the desire of some companies to achieve business growth within the constraints of the present regulatory regime have led to extensive contracting-out of operations and customer services in some companies, and other diversification.

9. So far, these changes do not appear to have affected the industry's capacity to deliver. Against a background of rising public expectations and higher standards being set, largely through European-wide legislation, there has been a steady improvement in the quality of water, for drinking and ecologically, the delivery of a £50 billion capital programme and increased efficiency.

(iii) Looking forward

10. In 1989, there was a widespread recognition of the need to increase the level of investment. Following privatisation, the annual rate of investment doubled and, over the last 14 years, it has averaged at about £3 billion per year. It was always anticipated that at some point the necessary rate of investment would ease, as past deficiencies were made good. However, it is increasingly difficult to see when this point may be reached.

11. There are a number of continued pressures for increased expenditure, including:

- Higher standards as our knowledge of health risks increases, e.g. Cryptosporidium and lead.
- Rising public expectations - less tolerance for, e.g., odours from sewage works and sewer flooding.
- Future implementation of agreed Directives - Habitats Directive and, most importantly, the Water Framework Directive.
• New Directives on, e.g., potentially hazardous substances, bathing water and groundwater.

• Investment to maintain and upgrade the assets of the water industry.

12. The degree of risk faced by investors should be matched by the reward they expect for taking on that risk. To some extent, water companies' returns are a function of the assumptions underpinning the cost of capital and allowed rate of return provided for in price limits. There is some evidence since the last price review (e.g., share price performance, Water UK survey) that the returns earned (or expected to be earned) by water companies have not matched investors' expectations. Some companies have substituted debt investment for equity investment (e.g., Dwr Cymru, Anglian). Some commentators have interpreted this as a 'flight from equity' in the water industry and a view that price limits in 1999 understated the cost of equity.

13. However recent evidence would not support this. Taken together, the Joint Regulators' Report and the most recent Competition Commission (CC) views on cost of capital leads most observers to conclude that, if anything, the cost of equity is lower today than in 1999. See e.g., the CC report on mobile call termination charges, in which lower values are placed on all of the common components of CAPM than were used in the price control references for Mid Kent and Sutton & East Surrey in 2000.

14. There have been no rights issues to date since privatisation to finance water companies. The capital programmes have been financed through a mix of retained earnings and debt with the latter bearing the brunt of the investment. However, financing of continuing capital programmes of any magnitude may not be sustainable wholly by debt in the future.

15. ISSUES/QUESTIONS FOR EXAMINATION

16. In order to provide comprehensive background information and appropriate context, the study will include a risk analysis of possible market and/or policy failures that may affect companies financing decisions and evidence for or against their existence.

17. Specific questions include:

Company Structure and Finance

18. Are there specific reasons for the recent changes in structure and financing, in particular the trend towards higher levels of gearing?

19. Where a company is essentially debt-financed, it is questionable whether there is the same appetite for risk; the objective will be to cover the debt payments. Such companies may be excessively prudent, to ensure than the annual interest obligations can be met, and not risk innovation. In such cases, what (if any)

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impact does this have on how businesses are run (e.g. decisions on capital maintenance, diversification etc)?

20. Are the recent changes in structure and financing imposing wider costs (and risks) on the industry as a whole? To what extent are these changes irreversible?

21. What are the advantages and disadvantages of different structures and financing?

22. Do the recent changes in structure and financing affect the way managers/companies respond to the current regulatory regime?

23. If further access to equity is necessary, then prices must be set at a level that enables a reasonable return on that additional equity to be earned by investors. Are there any other conditions required for equity formation? Are the conditions for rights issues different?

24. Do the recent changes in structure and financing affect the medium to long-term capacity of the industry (and individual companies) to deliver these objectives?

25. In particular, does the industry retain a capacity to fund substantial investment over the next 15-20 years and an ability to accommodate significant uncertainty about the magnitude of that expenditure?

26. If evidence does suggest that present trends in terms of industry structure and finance do (or may in the future) threaten the capacity of the industry to deliver the Government objectives, what are the possible solutions? This should include a brief assessment of each solution in terms of issues such as practicality of implementation, likely acceptability, etc.

Implications for Ministers and the Regulator

27. Are there significant differences in approach between private equity/financial owners of water companies and trade/strategic owners? If there are, how will they impact on managers' decisions and the industry as a whole? How should the regulator and Ministers react?

28. Is there a limit of prudent borrowing? If so, should there be structural constraints placed on the industry? If so, what form might they take?

29. What could Ministers and the regulator do to help create the right conditions for investment - be it equity or debt? Are the conditions for each type of investor different?

30. Are there any public policy implications of the new forms of corporate structure developing in the water industry?
Mergers

31. Does the special merger regime impact on (i) the decisions of managers and (ii) the position of investors or lenders?

32. Does the size of a company materially affect its ability to raise finance?

33. PROPOSED METHOD OF WORK

34. Literature Review

35. Recent work commissioned for Ofwat and Water UK will need to be reviewed along with relevant articles. Account will also need to be taken of the emerging results from the work being undertaken jointly by Treasury and DTI on regulation.

(ii) Meetings with:
- Individual water companies (including Dwr Cymru)
- Economists familiar with the sector
- Investors and lenders
- Water UK
- City analysts
- Regulators - Ofwat, Environment Agency, DWI
  - Other utilities
- Relevant government departments

36. Defra officials have already met leading managers in the water industry. Notes of those discussions will be made available as background.

(iii) Reporting

37. Once the above stages of work are completed, a meeting will be held with Defra and Ofwat officials to undertake a ‘stocktake’ of issues and the available evidence will be undertaken in order to identify

- Issues that require no further research;
- issues that require further research; and
- any priority issues.

(TIMING - for discussion on appointment).

38. The final stage of this project will be a final report. The final report will need to understood by a non-specialist audience. It should include an executive summary and a list of consultees.

TIMESCALE

39. In order to inform upcoming Government decisions, the report needs to be concluded by end September 2003.
Water Companies
- awg and AWS
- Bristol
- Glas
- Kelda
- Northumbrian
- Severn Trent
- South Staffs
- South West
- Thames
- United Utilities
- Wessex

Investors & banks¹
- Barclays Capital
- BNP Paribas
- Citigroup
- Ecofin
- M&G
- Merrill Lynch
- Morley
- Perry Capital
- Royal Bank of Canada
- Royal Bank of Scotland

Insurers, rating agencies
- Financial Security Assurance
- MBIA
- Fitch
- Moody’s
- Standard & Poor’s

Major Stakeholders
- Environment Agency
- Ofwat
- Water UK
- WaterVoice

Economic Consultants
- CEPA
- Indepen
- NERA
- OXERA

¹ Note: Newton Asset Management were not interviewed separately but attended the September workshop
SECTION 1. INTERVIEWS WITH COMPANIES

1. Introduction

Interviews were conducted with nine water and sewerage companies (WASCs) and two water only companies (WOCs) in August/September 2003; in some cases, this involved more than one interview. The interviews with company directors were wide ranging and covered developments over the last four years together with prospects going forward. The (unattributed) summary of some of the key points from these interviews is set out below.

2. Impact of the 1999 review

It was widely considered that the 1999 review delivered a ‘wake up’ call to investors. They appear to have been surprised by the outcome and reacted particularly adversely to the large Po reduction (averaging 12%). The severity of the outcome increased perceptions of regulatory risk and led to the situation where companies have traded at a discount to the RCV. At the same time, the review was seen by some as corrective action by Ofwat to what they had perceived as excess returns made by equity shareholders in earlier years.

3. Financial Structure

A range of views were expressed on the development of new financial and corporate structures within the industry. The original Kelda proposal for a mutual structure, which was turned down by the Regulator, had also been canvassed as an option elsewhere but was viewed as a way of backing out of the privatisation model.

More generally, banks had offered the model of structured finance to companies in the industry as a way of reducing their costs of finance. The increasing level of debt in the industry was driven by the need to maximise equity returns in a low return environment, and outperform the Regulator’s allowed cost of capital.

There was no consensus concerning future trends in financial structure. Some companies indicated that they would defer decisions on financial structure until after the periodic review. At the same time, it was noted that, although Ofwat stated that capital structure was a matter for companies, the decisions they made would be fundamental to how the industry developed.

A number of companies believed that, although some refinancing may be necessary, they could sustain their businesses more effectively with a traditional equity structure. Others were strongly committed to retaining the equity model but were looking to the review for additional retained profits and a modest growth story for shareholders.

United Utilities felt they were flying in the face of conventional wisdom in going for a rights issue but, given the scale of their AMP4 capital programme, would still need to tap the debt market for substantial new borrowings.
A further group of companies, whilst having no particular wish to move to a covenanted structure, felt that they might in due course be forced to do so as a result of pressure from investors and rating agencies.

4. The ‘thin equity’ model

Companies adopting the thin equity model have been forced to strengthen governance arrangements in order to provide the necessary protection for investors. Their strategies have been concerned with optimising balance sheets and providing clear accountabilities and focus for the appointed business. It was argued that, with stronger ring-fencing arrangements, increased gearing would continue to incentivise the right behaviours - providing the company had a sound understanding of the operational risks involved.

Others expressed a number of reservations about these structures. These included:-

- The extent to which highly geared structures could remain within covenanted levels of gearing if they had to undertake heavy capex programmes.
- The view that bond holders might prefer ‘no equity’ to ‘thin equity’ because of the potential conflict between bond holders and shareholders.
- The potential drift to securitisation was also seen by some as transferring risk to customers which would lead over time to the emergence of a rate of return regime with the loss of incentives.
- Finally it was felt that securitisation was likely to make further equity raising difficult – it effectively closed the door on future rights issues. Over time, ‘thin equity’ was likely to create a bond-financed mentality.

5. Outsourcing

A variety of views were expressed across the industry. Only Glas has gone for wholesale outsourcing and claims that its outsourcing arrangements are reversible. Nevertheless, the effect has been to create a more competitive value chain and provide a new important information source for the Regulator.

At the other extreme YTL, the new parent of Wessex, believes in carrying out core activities in house and has reversed previous outsourcing arrangements.

Other companies see value in benchmarking internal work against external costs and in ‘right-sourcing’ certain activities – but are concerned with the need to maintain quality control. The jury is still out in relation to outsourcing in the water sector.

6. Trade buyers

Since the 1999 review, overseas trade buyers have purchased two of the WASCs (Wessex and Thames). Both will consider the contributions they receive from their regulated UK water business against returns elsewhere. RWE, in particular, has
international interests in the utility sector and is looking to grow its overseas water business.

7. Consolidation

The prevailing view amongst companies was that industrial logic pointed to some further consolidation in the industry, particularly involving mergers between WASCs and WOCs. Whilst the principles of comparative competition were accepted, it was felt that the quality of comparators was more important than the quantity. The current structure of the industry was felt to be inefficient. In addition, well performing managements felt penalised because they were disadvantaged relative to businesses outside the sector in taking over companies with less effective managements. It was felt desirable to allow some potential for further consolidation – even though it was acknowledged this was unlikely to have much impact on investor sentiment.

8. AMP4 capital investment programmes

In general, these were said to be of a similar magnitude to AMP3 but were skewed more to asset maintenance and mains replacement. Most of the large bathing water and estuarial schemes had now been completed. Concerns were expressed over the low rates of replacement of ageing infrastructure with implied asset lives of 600 years or more being quoted. Some increase in capital maintenance was also required to support recent investment in relatively short-lived assets since privatisation.

Capex programmes were not viewed generally as presenting significant risk – other than the tight deadlines for completion in some cases - since investment programmes generally comprised portfolios of relatively small schemes. There were greater risks associated with having to meet higher environmental compliance standards.

Investment strategies by companies varied. In some cases, companies inclined to a smaller capex programme because of concerns about the allowed return being below their cost of capital. At the same time, companies felt they could increase spending on infrastructure renewals without increased borrowing since this would be funded directly through higher charges.

9. Other issues

Other observations included the following:-

- Concerns about reputational risk from cases involving bathing water pollution and Environment Agency prosecutions; a further concern arose over the potential implications of the current litigation against Thames on sewer flooding and what this might imply for the industry.

- The need to consider both willingness to pay by consumers and the availability of finance from investors in the periodic review.

- The perception that ‘it would not take a drastic change of approach’ to attract equity investors back into the sector. At the same time the view was expressed that the regulatory environment had to allow sustainable long-term growth in
returns and allow companies to keep more of the efficiency gains that were made.

- A number of companies emphasised the importance of the Regulator’s financing duty.
SECTION 2. INTERVIEWS WITH INVESTORS

1. Industry fundamentals

Capital markets view the sector as being a pure monopoly providing an essential service, with capital investment being determined by Government agencies. This has led to attention being focused on the dynamics of the regulatory system and the role of the regulatory capital value (RCV).

Both investors and rating agencies attach strong importance to the stability of cash flows in the sector and their predictability. The RCV is seen as representing the NPV of future cash flows.

Capital investment was not considered to be a major risk unless the industry had to ratchet up its capital programmes. Capital investment was very much a ‘bread and butter’ activity – as compared with say, the electricity industry.

2. The regulatory system

The market attached strong importance to Ofwat’s transparency of approach and regulation was also seen to be the key for equity investors who perceive that the Regulator wants to keep equity involved in the sector.

At the same time, the regulatory environment is viewed as supportive through the Regulator’s financing duty, the provisions for interim determinations (IDOKs), and the ‘shipwreck clause’. This leaves the risk position between companies and customers very clear.

3. Highly leveraged structures

Some investors expressed reservations about structured finance models. These included the loss of flexibility in raising future finance and also the loss of flexibility if things go wrong.

Some investors are more comfortable to hold debt in companies where there is a larger slice of equity and concerns were expressed about holding single A rated debt in corporate structures above 60% net debt/RCV. We also heard reservations on how far junior debt could effectively replace equity. Tensions between bondholders and shareholders were also evident in thin equity structures. However, the biggest risk to such structures was seen to be the closure of bond markets – a phenomenon which had effectively occurred for the sector in the period 1999-2001.

Others were more relaxed about highly geared structures and believed them to be inevitable because of the low return characteristics of the sector.

4. Covenants and ring fencing

The covenant regime was viewed as a means of ‘explaining’ to investors the protections available in a regulatory environment. The result was that investors were happy to lend towards companies for 30 years providing the risk profile did not
change. All the financing took place at the level of the appointed business. At the same time, it was acknowledged that the monoline insurers in these structures became the ‘dominant’ creditors with the covenants and trigger ratios providing mechanisms to stop money from being paid out from the appointed business if it got into financial difficulty.

5. Financial innovations

WOCs had benefited from the development of the Artesian Structure – whereby the Royal Bank of Scotland (RBS) had provided a means for smaller water only companies to have access to the wholesale market through the bundling of bond issues.

Not all financial innovation in the sector had been successful. The proposal for the Kelda mutual structure had failed on account of the perception that assets were being foisted onto unwilling customers. There was also concern over structures, which were being driven by financial players who may not be interested in the long-term health of the businesses.

6. Views of equity investors

Equity views of the sector had changed since 1999 and there had been a shift from public equity towards private equity and institutional funds interested in income stocks (with similar characteristics to bond holders). Some equity investors interviewed expressed a clear preference for water companies managed by water specialists without diversification into other areas. It is this feature which made Northumbrian Water attractive to certain classes of equity investor in the recent acquisition. Some were also keen on the future possibility of mergers.

While equity was viewed as a flexible financing tool, it was seen to be difficult, in practice, to cut the dividend where companies were experiencing difficulty.

7. Views of debt investors

In a monopoly industry the role of equity in protecting consumers from risk was viewed by some as questionable. The main risks in the sector were management and regulatory and, for this reason, it made sense for it to be a predominantly debt funded market. The efficient arrangement of debt had the biggest impact on the company's capital costs.

Debt investors had to finance water industry investment in 40-year assets. At the same time it was felt that the Regulator should take proper account of embedded debt since failure to do so would discourage long-term debt finance.

8. Views of bond investors

It was noted that the bond market closed to ‘low rated’ stocks between 1999 and 2001 – this affected not just the water sector. More recently, there had been a big increase in the size of the corporate bond market, in part because of the appetite of pension
companies. Utilities were viewed as ‘good ballast’ in corporate bond portfolios although there had been concerns at recent credit downgrades.

Providing ratings stayed at single A, there should be no problems of market capacity to fund investment, unless there was a general change in the demand for bonds. However, if companies geared up continuously, they would need to offer increasingly high returns on bonds.

There was also an appetite for water company bonds as ‘stable performers’ although, again, credit ratings were important. Overall, the sector’s position in the bond markets was very dependent on rating agency methodology, and there were concerns that agencies had become more ‘trigger happy’ than before.

9. Credit ratings

The sector’s ongoing negative cash flow was said to drive the requirement for single A ratings in the sector.

Attention was drawn to the fact that one of the agencies had declared that a drawdown on the liquidity arrangements within the structured finance arrangement would lead to a rating downgrade. Moreover Standard and Poors had taken the position that, if a regulated company goes to BBB, the holding company should be two notches lower. This, too, was seen as having significant implications.

It was felt that Ofwat have now effectively moved their position to a single A requirement.

10. Industry consolidation

Some investors questioned existing merger policy for the perspective of lack of long term bidders for companies in the sector. The views of debt and equity investors differed sharply on this issue. From a debt perspective, mergers presented ‘event risk’ but for equity investors mergers represented value opportunities.

11. Periodic review

There was broad agreement that the issues for investors were the allowed return, the levels of capital investment, and efficiencies required. Equity investors attached particular importance to the equity return in the WACC as well as opportunities within the sector to grow through acquisition. Debt investors were also concerned at the credit ratings being targeted and the tools used by Ofwat to keep the sector at the right credit ratings.

12. Other issues

Concern was expressed at what were seen as ‘unsustainable’ dividend policies within parts of the sector. Increasingly, returns from the sector would be compared with those from European Utilities, which were seen as ‘ten years behind the UK’, with less developed regulatory systems.
SECTION 3. ADDITIONAL POINTS FROM INTERVIEWS WITH SECTOR ANALYSTS

1. **Industry fundamentals**

Water companies were viewed as ‘very bankable’ since they offered large stable cash flows. There was also seen to be scope for a variety of business models to operate. Some considered equity to be an expensive way of financing these low risk businesses.

Some took a less upbeat view of the sector. From an equity perspective, the fact that companies had been trading at a discount the RCV pointed to something being fundamentally wrong. The companies had been cash negative since privatisation and faced the prospect of another 10-15 years in the same position. This persistent negative cash outflow to equity was considered to make the sector an unattractive proposition to equity investors. It might lead, in some cases, to dividends having to be paid out from increased borrowing.

2. **Highly leveraged structures**

These were viewed as ‘not something to fear’ since the new disciplines in the way ringfenced businesses were managed could generally be viewed as for the better. At the same time, it was felt that lower geared, poorly covenanted structures might actually be viewed as more risky.

It was also acknowledged that these highly leveraged structures had not really been tested and if something did go wrong, the debt markets could be closed ‘for a while’.

3. **Views of equity investors**

There has been a change in the way the equity market viewed returns from the sector. At the time of privatisation, it was suggested that stocks were bought and sold on the basis of yield relative to the market. Now the investment market operated on a ‘total return’ basis, which is the sum of income and capital returns. This development was seen as reflecting the impact of pension and tracker funds.

It was also noted that water stocks had not traded above 90% of the RCV although recent market conditions ‘could not have been more favourable’. The combination of Po cuts in 1999, the low real returns and the demand for cash outflow was viewed by parts of the market as an unattractive equity prospectus.

4. **European Context**

It was noted that the UK water sector was now subsumed within a ‘general utilities’ sector, which meant there were fewer specialist water analysts. Investors now also operated within a European Utilities market, which, under a less onerous regulatory system, generally offered higher returns. In contrast, UK water companies constituted a narrow group of stocks offering little or no dividend growth. On this view, it was questioned why investors should buy stocks in UK water, if there were higher returns elsewhere.
5. **Dividend policy**

It was noted that around 30% of the average water bill now goes to service capital. The view was expressed that it was not sustainable for more than 15% of regulated revenues to be paid out in dividends. In the past, water companies were seen as having over-distributed to shareholders – 9% compound dividend growth to the sector over ten years was quoted.

6. **Periodic review (PR04)**

It was felt that, given the negative sentiment towards the sector, investors needed a higher equity return – ‘*a few tweaks would not be sufficient*’. The rewards to shareholders needed to be comparable to returns from investment in European Utilities. The view was expressed that the industry needs an end in sight to its negative cash outflow burden – otherwise this would result in increasingly expensive funding. Others questioned the realism of some of the recent business plan projections.
SECTION 4. INTERVIEWS WITH MONOLINE INSURERS

1. The role of monoline insurers

The monoline insurers have a background in the US municipal and regulated sectors where US insurance law encourages the provision of financial guarantees. They provide financial guarantee instruments for the payment of interest and, more recently, have been involved in the UK in the utility field, and in PFI /PPP deals.

In the UK water sector, they have been involved in all the major structured financing where they have taken tranches of senior debt and, through credit guarantees, increased its rating to AAA. Their involvement in structured financing deals has the effect of providing water companies access to more sectors of the market.

One of the insurers has provided the means for smaller water companies to secure funding on better terms through the so-called Artesian Structure.

2. Sector fundamentals

The monoline insurers see similar attractions in the water sector to other debt investors. The key features are that water companies provide an essential service with a predictable cash flow and an understandable regulatory mechanic. At the same time, investment requirements are determined by outside agencies and for this reason are seen as relatively low risk. As compared with the US regulatory environment, they also see benefits from having a single economic regulator with the accountability of companies defined by the licence and therefore to the Regulator, rather than to Government.

3. Approach to minimising risk

The key requirement for the new structures is seen as separation from the holding company and the restructuring of the appointed business into a single purpose company. In this way, the structures avoid blending risk between the diversified holding company and the appointed business. The new financial structure is seen as placing debt in the appointed business and aligning this with the regulatory ringfence.

The new structures contain arrangements for a formalised approach in cases where a company has problems in repaying debt. A ‘trigger event’ regime with 18 months standstill arrangements, are designed to provide the opportunity for a ‘workout plan’ to be put in place and avoid creditors panicking.

With these provisions designed to minimise risk, the insurers perceive the main remaining risk to the sector to be regulatory. They draw comfort from the licence provisions including the ‘substantial adverse effects’ clause, which addresses liquidity issues in the event of major incidents that are not attributable to management failings. They also acknowledge that the Regulator can exert a calming influence on the market.

One view expressed was that the sector could afford individual failures. The example of Midlands Electricity was quoted where the company’s failure did not stop funding
for the rest of the sector. It was felt that bondholders could quickly discriminate between individual failures and systemic risk.

Overall, the new structures are seen to provide increased capital market flexibility with structured finance arrangements offering 18 months of reserves plus standstill liquidity arrangements. For these reasons they had the confidence to make substantial investments in the sector.

4. The role of controlling creditor

In structured finance arrangements, the monoline insurers, who guarantee senior tranches of debt, effectively become the controlling creditor. As such, whilst (unlike shareholders) they don’t gain from upside performance, they take action if a company is poorly performing. The primary means of exercising control is through the covenants, which are seen to be quite rigid. As one monoline observed ‘the further they stay away from covenants, the less they see of us’.

The standstill arrangements were seen as giving the company time to sort itself out.

They would not expect Government to bail out companies in financial difficulty although there was an onus on the regulatory regime to ensure that companies could raise the necessary capital to finance their obligations (in line with the regulatory duty). Providing the regulatory system worked well, companies should never be in a position requiring bail out.

The monoline insurers are in regular dialogue with the companies (and also Ofwat) although, unlike shareholders, they claim they have no direct ability to change the management.

5. Covenants

These are in three types:

- Hard financial ratios (eg. interest cover)
- General requirements such as compliance with contractual licence obligations; and
- Covenants ‘which synthetically replicate what large shareholders would do’ focusing on budget performance and availability of financial resources.

A key element of the covenant packages is to enhance the regulatory ring fencing arrangements. However, it is not seen as the business of the monoline to tell companies how to run their business.

6. Availability of finance to the sector

The insurers see a continuing requirement for monoline insurance arising from further financial restructurings within the sector – with a potential requirement of up to £10bn. There was felt to be appetite for this with the market being willing to commit this amount to one sector, providing there was a reasonable spread of maturities. The
example of Southern Water refinancing was quoted which involved £1bn ‘wrapped’ debt, comprising 55% of total gross debt.

Nevertheless, it was felt that the dominance of wrapped bond financing could diminish in the future as the low risk characteristics of the sector came to be confirmed.

Viewed against the background of AMP4 investment requirements, it was felt that the industry could double its level of debt over the next 10-15 years and at the same time spread the sources of debt finance to include more debt raised overseas.

The scale of capex requirements was not viewed as a problem with the levels of debt in the UK water industry comparing favourably with the US water sector (where $400-500 billion debt was said to be outstanding).

At the same time, the view was also expressed that, if the sector were to maintain a mixed capital structure, then equity would need to put in around 30-45% of the required finance.

7. Future Prospects

Although it was felt that more companies would move towards highly leveraged structures with covenant protections, it was acknowledged that these structures may not be suitable for the whole industry. However, it was likely that capital market investors would increasingly ask why all highly leveraged companies did not have these covenant protections.

It was also recognised that, unless there were significant amounts of new equity, companies might find it more difficult to maintain rating stability as gearing increased in the industry. Levels of leverage would also be responsive to signals from the Regulator.

Over the next few years, it was acknowledged that the new structures would be tested by a wide range of variables.

Finally, the industry was seen as facing a basic choice between a model based on regional (single purpose) water companies with structured finance, and diversified groups incorporating regulated water businesses. The question was raised as to whether the relaxation of merger control would create a better environment for the development of diversified (international) water businesses along the lines of Vivendi.

Among other factors which it was felt could affect the future availability of finance to the sector were competition and the use of outsourcing. There was some scepticism concerning the prospects for competition in the sector and also on the extent to which outsourcing allowed risks to be transferred away from the licensed entity.
SECTION 5. INTERVIEWS WITH CREDIT RATING AGENCIES

1. **Background**

Most WASCs had been rated since 1993. In the early years they were lowly geared and often rated AA. Ratings are now trending towards A or BBB+ for highly leveraged structures. Changes in ratings have also been driven by diversification and acquisition by water groups.

2. **The rating process**

Rating is viewed not as a mechanistic process based only on quantitative assessment of financial ratios, but it also takes account of the regulatory environment and features of the particular business. Company specific factors can be important.

Re-ratings are generally triggered by company performance (annual accounts or interim results), regulatory developments or corporate activity such as acquisitions. There are a range of credit events from management actions (e.g. acquisitions) to force majeure events. The rating horizon is normally three to five years, which makes it necessary for the agencies to make assumptions about the outcomes of periodic reviews.

Companies may, as a result of a credit event, be put on ‘credit watch’ which is normally a short-term arrangement lasting less than three months. In contrast, a ‘credit outlook’ is a longer-term arrangement of up to two years and can be positive, stable, negative or developing. Management credibility in terms of delivering and maintaining its business strategy can also be important in determining ratings.

A lead analyst from the credit rating agency generally maintains day to day contact with the companies and will put forward rating proposals to a ratings committee.

One of the rating agencies rates eight of the WASCs. Pennon (South West Water) is unusual in choosing not to have a rating.

3. **Holding versus appointed company ratings**

The general approach appears to be to rate the regulated company first and then to rate the holding company (one or possibly two) notches lower. However, this can get more complicated if there are different risk profiles of companies in the group. With structured financing, the appointed business is rated on a largely standalone basis, without much regard to ownership.

4. **Structured finance**

The origins of structured finance arrangements are found in other sectors and are not fundamentally driven by the needs of rating. The key factors regarding the rating of the appointed business under structured finance were default risks and recovery prospects in default. Structured finance was seen as reducing the default risk.
At the same time, it was acknowledged that it was difficult to judge the effectiveness of the Glas-type arrangements until they were tested by a significant shock but the agencies took some comfort from the tight controls which were placed on management in these circumstances. A key issue concerns the mechanisms under which bond holders could change management where failures have occurred – with the first step being the appointment of an independent consultant.

5. Risk management

If the regulated business fell below the defined ratios, they would first have to forego dividend payments for the group. One consequence of structured finance is that bondholders have effectively tightened what regulated entities can pay out to the group. Particular attention is paid to the ring fencing arrangements. Regulatory ring fencing provisions are seen to have value but there may be a time lag before they cut in. Recent down gradings of credit ratings for Wessex and Northumbrian Water could be attributed to the fact that their ring fencing provisions were not as tight as in the securitisation models.

The view was expressed that there remained a risk of ‘systemic backlash’ in response to news of a company not paying out interest on junior debt. The structures were also seen as vulnerable if Ofwat changed the basic methodology, with the key requirement that the Regulator continues to remunerate an expanding asset base. It was felt that highly leveraged structures could react quite differently to shocks on account of their high gearing and this required careful thought on which ratios it was most appropriate to use.

6. The Regulatory regime

This was seen as generally supportive of credit with the parties (including the rating agencies) having learned a great deal about regulatory methodology and financial dynamics in recent years. At the same time, it was felt that Ofwat were ambivalent towards highly leveraged structures - although it was suggested that their treatment of the tax wedge at each review gave companies an incentive to increase gearing during the subsequent control period.

The emergence of highly leveraged structures could limit regulatory discretion to some extent although, it could equally be argued that equity- based companies can do so too because of the implied threat that regulatory action could harm the attitude of the equity markets.

7. Financing capex requirements

In general, it was thought that highly leveraged companies could manage within their financial covenants even with predicted capex requirements for AMP 4. It was also pointed out that providing they do not pay out the full dividend, investment programmes could be financed proportionately by debt and retained earnings – therefore avoiding the need for companies to leverage up any further. It was felt that there could also be limits to the amounts of single A long-term debt available to the sector (although evidence was not provided to support this).
8. Periodic review

The outcome could effect ratings most significantly through any significant increases in overall capital investment requirements or by any repeat of 1999 Po reductions. The outcome was felt to be more important for equity-funded companies and, overall, it was not expected to change the financial profile of the sector.

9. Other points

In general, the agencies saw a stable outlook for the sector. No distinction was currently made for companies using outsourcing although one of the agencies indicated they would watch to see how outsourcing developed in the longer term (it was not seen to be a product of leveraged structures).

It is generally assumed that the Regulator would not change his broad approach to address the implications of leveraged structures and there is confidence that highly leveraged companies can manage within their covenants and deliver AMP4 investment programmes.
Discussion was focused around six key issues concerning the properties of the new financial structures occurring in the water sector. In each case, two stylised quotations were used to illustrate different views that had been expressed during the interview stage of the work. The discussion was used to explore the differences in perspective which exist on these issues and to test them.

**Key issue 1: The inevitability of changes**

"The low risk fundamentals of the sector are now better understood by capital markets and suggest that a continued shift to highly leveraged structures is not something to be feared"

or

"Equity investors are still interested in the sector and the equity risk remains. However the future for conventional equity structures will depend fundamentally on the decisions that Ofwat makes"

**i. Equity yields**

There was recognition that water is a yield business with its shares viewed as income stocks. There had been a move away from equity investors who benchmark against growth stocks.

At the same time with low inflation and low economic growth, we should now expect water stocks to trade at a premium to the RCV. Since they do not, this was an indication that higher yields are required. The view was expressed in the case of United Utilities, that in order to trade at the RCV valuation, they had to offer a higher dividend yield, and finance this through a rights issue.

However, equity investors should not expect real growth from the sector given its fundamental characteristics and the regulatory framework. It was doubtful whether the yield requirements of conventional equity could be justified in regulatory terms.

**ii. Capital Requirements**

The industry had reached the position where financeability was viewed as the key issue because the industry had to raise a lot more capital. The question was how it should do this. Did the debt market have sufficient appetite to finance the sector’s investment needs? The general view was that the industry would have to add to its equity either through retained earnings or rights issues. However, to retain equity in the sector would require the right regulatory environment. It was observed that yields on equity as a proportion of RCV had steadily declined and hence currently the framework for equity retention was not there. Improved rates of return (or higher interest rates) were needed to attract equity to the sector.

Diversity of funding sources was generally viewed as a good thing and the sector should avoid full reliance on the fixed income sector. It needed to be attractive to a range of investors.
iii. Other points

Equity returns were also important for water companies which formed part of larger groups and where the parent had choices on where to invest equity – either between water or other sectors, or between the UK and overseas.

The view was also expressed that the closer the sector moves towards debt–financed structures, the more this would imply a cost-based rate of return regulatory regime.

Key issue 2: The unique properties of equity

"Equity can essentially be replicated through junior debt, reserves, stakeholder governance and management incentives"

or

"Equity has some unique properties in risk absorption, incentivisation and governance which the sector continues to require"

i. Changing requirements for equity

Value upside potential is necessary for incentive-based regulation; however if there is limited upside potential, then the equity incentivisation element is less – although the appetite for value upside was unique to equity.

At the same time the risk absorption properties of equity had also become less important with the low risk properties of the sector. However there was still a requirement for equity. Companies could not have rewards for success without punishment for failure.

At the same time it was recognised that debt investors cannot exert the same corporate governance controls and influence as equity – other than in circumstances of financial distress.

ii. Innovation and investment

In most businesses, equity has a role in driving innovation, which also in turn has a bearing on the quality of investment decisions. However, in water, investment decisions were made by the public sector and unlike telecoms for example, there was limited scope for companies making the wrong decisions. Because of this dimension, in practise there was likely to be a ‘political cap’ on returns to equity in water. Others talked of a possible asymmetry of treatment – that if things went wrong, equity would take the risk; if on the other hand, outcomes exceeded expectations, windfall gains were not politically acceptable.

iii. Types of equity

It was recognised that equity investors were not homogeneous – pension funds and private equity had different reward characteristics. This diversity among equity holders was also reflected in the pattern of investment across companies. For example, it was likely that investors in awg (Anglian) and United Utilities would be
rather different. In practise it was difficult to generalise about equity participation in
the sector.

iv. The debt / equity dichotomy

The simple debt versus equity view of the world was viewed as unhelpful. It really
was about shades of grey and whether the overall rewards reflected the risk profile of
the business. Some of the properties of equity were found in other forms of capital
such as junior debt.

Subordinated or junior debt was helpful in highly geared companies, but to date, no
subordinated debt holder ‘had taken a bath’.

If default did occur then this was likely to increase the cost of financing the business.
At the same time defaulting on interest payments of junior debt was no different to a
company skipping the dividend. The consequences would depend on the causal
factors involved.

v. Other points

The view was expressed that whatever the roles of equity and debt, the holding
companies would prefer to finance their regulated subsidiary through debt. This
mattered so far as the Regulator was concerned because of the consequences for
incentivisation and risk absorption.

At the same time, diversity of funding sources was seen to be key for the sector going
forward.

Key issue 3: The requirements for retaining equity

"To maintain equity in the sector would require developing a stronger investment
case for shareholders, including higher expected returns, a greater share of
outperformance and a growth story based on realising merger opportunities"
or

"Equity has essentially left the sector because of a low cost of capital settlement. It
will not take a drastic change in approach to attract equity investors back into the
sector; an increase in the WACC of 0.5-1% would be sufficient"

The sector had to rely on a reasonable WACC to attract equity as it was highly risky
to rely on other sources of return such as outperformance, given the nature of the
regulatory framework. At the same time, no one knew the right number for attracting
new equity into the sector. Reference was made to the adverse share price reaction to
United Utilities’ recent rights issue, although other companies claimed they did not
need a rights issue.

There was a need to retain as broad a mix of financial structures as possible but, at the
same time, recognise that investors had choices and that the lack of growth prospects
in the sector meant that a cost had to be borne in terms of the allowed return (WACC).
There was also discussion as to the importance of retained profits and the level of dividend. Companies needed to make it attractive to equity shareholders to keep their money invested in the business. The retention of equity was a decision that companies had to consider each year in terms of their dividend policy.

**Key issue 4: The financeability of investment under different structures**

"The properties of highly leveraged structures provide access to a wide range of capital markets and should support likely investment requirements within required financial ratios"

or

"The covenants, over reliance on bond markets and credit rating requirements of highly leveraged structures are likely to constrain investment levels unless specifically accommodated by regulatory determinations"

**i. Rate of return expectations**

It was important to consider yield expectations and the implications with different levels of leverage. With limited upside or downside potential, and no growth story, ‘equity became like mezzanine debt based on total return expectations’.

The question was also raised as to what rate of return was needed to retain gearing below the frontier level at which structured finance with creditor protections had to be introduced.

**ii. Regulatory risk**

The rate of enhancement spend was seen to be the key driver on financeability and if the RCV was growing rapidly, ‘the industry should be financeable’. If interest rates rose, and access to capital was constrained, then returns would need to rise in order to finance the investment need.

There are circular arguments around the role of credit ratings. On the one hand Ofwat was keen to preserve investment grade ratings but, if regulatory/political risks were the main significant risks for the sector, then the regulatory system itself had an important bearing on ratings for the industry. This emphasised the need for having transparent regulatory rules.

The desirability for having a stable macroeconomic environment was recognised and that approved levels of investment could not outstrip the ability of customers to pay.

At the same time, the view was expressed that exposure to macroeconomic risks was a necessary feature of the environment in which companies were required to operate.

**iii. Operational and financial gearing**

There was discussion concerning the role of gearing constraints when the RCV grows through investment. If the absolute level of risk-bearing reserves was unchanged, and
if investment grade debt could be raised, then the view was expressed that the risk/equity balance had not changed.

The size of the asset base relative to the operating costs was seen as a key ratio. If the rate of investment continued, so that RCV as a percentage of operating expenditure increased substantially, this would create surpluses, which in turn would be reflected in different ratio levels.

iv. How risky is new investment?

A key question was whether the sector could continue to attract fresh capital to deliver its obligations. If new investment was viewed as more risky, it may not be able to. In practice, however, there was no reason to think that new investment – made up of large numbers of small projects – was more risky than past investment. Doubt was also expressed as to whether the market distinguished the use to which new capital was put as opposed to generic funding of the whole capital programme. Nevertheless, the value which was exposed to risk remained a constraint. So long as everyone believed the transaction risk to be low, companies could retain high levels of leverage.

v. Regulatory level playing field

The increase in gearing was not something set by Ofwat methodology but followed choices made by companies. Companies could retain gearing levels either by using retained earnings or going for rights issues. In theory, there was no reason why gearing should be increasing. There was general endorsement of Ofwat’s level playing field approach to capital structures.

Key issue 5: Vulnerability to capital markets and credit ratings

"The successful structurings to date show that rating agencies and lenders continue to be supportive of this model and would be willing to see it extended further across the sector’’

or

"Access to bond markets is dependent on rating agencies who have become increasingly trigger happy in their decisions. Overall, investors are likely to be more comfortable where there is a bigger slice of equity"

i. Exposure to credit rating risk

It was felt to be bad for bond markets to follow rating agency recommendations ‘too slavishly’ and rating triggers embedded in capital structures were considered to be a bad thing.

At the same time, the investment grade threshold was viewed as a ‘cliff edge’ – and a key institutional constraint. The recent response of the markets to the Northumbrian Water acquisition shows that the distance from the ‘cliff edge’ can be quite short before the market falls away.
At the same time, the need to carry on raising money for the capital programme is seen as giving water companies credit strength; in contrast, it was claimed that in electricity, the Regulator could move credit ratings around with impunity.

ii. Shifts in rating agency criteria

Some rating agency decisions appear to be taken without sufficient regard to sector fundamentals, either tarring water with the same brush as other utilities or basing their ratings on false transatlantic comparisons. The view was expressed that where this was happening it was necessary to challenge the rating agencies.

Finally it was agreed that if capital markets closed, it made little difference as to what sort of capital structure companies had.

Key issue 6: Likelihood and impact of financial distress

“Highly leveraged structures are, if anything, less likely to incur financial distress than equity based models. If this does occur, there is a lower risk of consumers and Government bearing the cost of special administration and of capital markets responding adversely to the sector”
or

“Highly leveraged structures are more vulnerable to failure through high gearing and have features which expose them to systemic risk”

i. The nature of financial distress

This can be defined as a failure to meet the company's obligations such that dividend payments and interest on subordinated debt may be forgone. It is really a forward looking concept; if it occurs, capital markets will become closed to the company.

ii. Systemic risk

Differences of views were expressed on how this might arise. It was noted that all structures had to have reserves and that capital markets were clear that the Regulator would not bail out individual companies for management failure. There was always an incentive for an individual company to end up where it didn’t want to be. However, this was very different to the whole industry finding itself in this position.

The Water Industry Act provisions effectively underwrote systemic risks from a range of factors including construction price inflation. Almost all these risks were passed on to customers. The same was true of interest rate changes, which would be allowed for at the following periodic review.

iii. The market cost of capital

The biggest risk to companies in raising money to finance their obligations was seen to be changes in the market cost of capital. For this reason, the sector needed access to more capital markets than any one company. The industry would be more systemically exposed where the range of capital markets it had access to was
constrained. The only real systemic risk would come from genuine changes in capital market conditions. Accessibility to a diverse range of markets would also enable people to make choices on where to invest.

The strong view was expressed that, so long as the Regulator allowed access to a full range of sources of capital, it did not matter how individual companies structured themselves.

iv. Other points

The Special Administration Regime focused on continuity of service but it was recognised that administration had significant cost implications.

It was pointed out that were Glas to fail, future equity ownership was not ruled out. There were processes, which allowed for its sale as a going concern and even in a distressed situation there would be a price in an active market for corporate control.
1. Purpose

1.1 As part of this assignment we developed a spreadsheet model to explore and illustrate at a high level some of the financeability features of alternative financial structures in the sector.

1.2 This model is in no way a substitute for detailed financial modelling of the financeability of different companies in the sector but was rather designed to examine some of the broader financial economic characteristics of the alternative capital structures as modelled in a stylised form.

2. Scope

2.1 In essence, the model is designed to replicate the ‘core algorithm’ which is at the root of financeability of the sector. We see the key variables in this algorithm as:

- The level of investment that needs to be financed;
- The regulatory WACC set at the periodic review;
- The existing levels of debt and RCV;
- The dividend policy of the company;
- The interest rates at which the company borrows;
- The level of any outperformance or underperformance of the regulatory settlement; and
- The rate of inflation.

2.2 This model explores the impact of alternative values for these variables on the following three financial ratios:

- Net debt/RCV gearing: this is also used in some covenants for the leveraged structures and is essentially a measure of ‘capital composition’, assessing debt as a proportion of the value of the regulatory capital base in the company on which a return is earned;

- RCV - Net debt: Its movement over time is a measure of ‘capital service sustainability’ since it shows any increase or decrease in RCV equity;

- (RCV– Net debt)/ total annual spend: the ‘equity spend multiple’. This is a measure of ‘risk accommodation’ since it indicates the available cushion for overrun on costs.

2.3 The model addressed the period from 2005/06 to 2034/35; it assumes five yearly control periods and so covers six periodic reviews (including the one currently under way).

2.4 The model is based on cashflows only and does not address any accounting issues.
3. Financial structure definitions

3.1 For the purpose of this modelling, four alternative structures have been created in stylised form. Each is scaled to be of approximately mean average size for a WASC, in relation to opening RCV, annual spend levels and financing requirement for enhancement capex. These structures are not intended to reflect the financial position of any particular companies currently in the sector. The alternative structures developed represent the following stylised companies:

- Company limited by guarantee (CLG);
- Highly leveraged structured finance;
- Highly leveraged conventional structure; and
- Lowly leveraged conventional structure.

3.2 Each structure is essentially defined by its ‘target’ financial gearing (as measured by Net debt/RCV) and whether or not it pays dividends. These definitions for the four structures are shown in the table below.

<table>
<thead>
<tr>
<th>Company limited by guarantee</th>
<th>Highly leveraged structured</th>
<th>Highly leveraged conventional</th>
<th>Lowly leveraged conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Target’ financial gearing</td>
<td>75%</td>
<td>75%</td>
<td>65%</td>
</tr>
<tr>
<td>Dividends paid?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3.3 Dividend payments for the three dividend paying models are initially set such that, at their ‘target’ financial gearing all regulatory returns are paid out as interest or dividends. The CLG is assumed to return 50% of any surplus (regulatory return less cost of debt) to customers in year.

4. General assumptions

4.1 The table below summarises the other key assumptions made in the modelling:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Assumption made</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 &amp; Cost performance</td>
<td>As a default assumption, companies are assumed to achieve no out- or under-performance of regulatory settlements</td>
</tr>
<tr>
<td>2 &amp; Tax</td>
<td>Tax is assumed to be a pass-through in year from the regulatory allowance to Inland Revenue – it is not therefore included in the model</td>
</tr>
<tr>
<td>3 &amp; Enhancements and RCV</td>
<td>All enhancement capex is assumed to be included in the RCV in the year in which it is incurred and a return earned from the following year</td>
</tr>
<tr>
<td>4 &amp; Structure of debt</td>
<td>All debt is assumed to be nominal (as opposed to index-linked). For the purpose of testing sensitivities to inflation and interest shocks it is assumed to be unhedged and 50% fixed/ 50% floating</td>
</tr>
<tr>
<td>5 &amp; Dividend policy</td>
<td>Dividends are assumed to be set in real prices and index linked over time</td>
</tr>
<tr>
<td>6 &amp; Equity</td>
<td>Equity, for the purposes of earning dividends and for ratio calculation, is calculated as (RCV - Net debt)</td>
</tr>
<tr>
<td>7 &amp; Levels of spend</td>
<td>As a default assumption, levels of spend are assumed to remain constant in real terms over time</td>
</tr>
</tbody>
</table>
5. Results

*The model without enhancement spend*

5.1 In the absence of enhancement capex, the high-level model presented a fairly simple picture. If companies were to pay out their regulatory returns fully within the year to fund interest payments and dividends and if there were no out- (or under-) performance or other volatility in costs, gearing would simply persist at initial levels and the RCV equity would remain constant. If spend levels also remained constant, the equity spend multiple would remain stable over time. This is shown in the three charts below:

**Chart 1**

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</thead>
<tbody>
<tr>
<td>CLG</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>100%</td>
<td>110%</td>
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<td>140%</td>
<td>150%</td>
<td>160%</td>
<td>170%</td>
<td>180%</td>
<td>190%</td>
</tr>
<tr>
<td>Highly leveraged structured</td>
<td>40%</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>100%</td>
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<td>150%</td>
<td>160%</td>
<td>170%</td>
<td>180%</td>
</tr>
<tr>
<td>Highly leveraged conventional</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
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<td>130%</td>
<td>140%</td>
<td>150%</td>
<td>160%</td>
<td>170%</td>
</tr>
<tr>
<td>Low leveraged conventional</td>
<td>20%</td>
<td>30%</td>
<td>40%</td>
<td>50%</td>
<td>60%</td>
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**Chart 2**

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<tr>
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<td>£2400</td>
<td>£2600</td>
<td>£2800</td>
<td>£3000</td>
</tr>
</tbody>
</table>
5.2 As can be seen the CLG, through retaining some element of its equity returns, has deleveraging properties, improving its performance against each three of the financial ratios over the period.

**Including enhancement capex**

5.3 Enhancement capex was included in the model at £200m p.a. Since, under the modelling assumptions, this would require significant debt financing, it caused an increase in gearing for the companies. This is shown in the charts below:

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---
5.4 It can be seen that the deleveraging properties of our CLG model mean that its initial increase in gearing becomes a reduction over time.

5.5 Under this modelling, the cost of equity is assumed to remain constant even whilst gearing increases. This is an arguable feature of the modelling which depends on the view we take of the changing absolute level of risk in the business. If the risk is considered to grow in proportion to the RCV, then the cost of equity should be increased in line with the rise in financial gearing, so as to maintain a constant WACC. If, however, the increase in the RCV is seen as having no impact on the companies’ risk since it results from the “safe” capital base being supplemented for historic enhancement spend, then it would seem right that the cost of equity should remain constant. This latter effect, seen here, generates an element of out-performance on financing costs which is not re-captured here by successive regulatory settlements. This in turn causes a tail-off in the increase in gearing, effectively finding a new level
of ‘sustainable gearing’ for each model which, in turn, is a function of the level of enhancement spend.

**Maintaining gearing levels**

5.6 We then tested how each model can be maintained at its ‘target’ gearing level. We show below the level of equity that was required to be generated in each type of structure and how this might be achieved by different means. We examined five alternative levers to deliver this outcome and assessed the requirement for each:

- A rights issue, assumed to recur at the start of each control period;
- A reduction in the level of equity returns paid out in year, allowing a build-up of retained profits;
- An increase in the regulatory WACC;
- Outperformance of the company’s cost of debt that was assumed in the starting position; and
- Outperformance of the cost assumptions included in each regulatory settlement.

5.7 Table 3 below summarises the requirement for each of these for each of the structures:

<table>
<thead>
<tr>
<th></th>
<th>Rights issue (per control period)</th>
<th>Dividend payout reduction</th>
<th>WACC increase</th>
<th>Interest rate outperformance</th>
<th>Cost outperformance</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLG</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Highly leveraged structured</td>
<td>250</td>
<td>50%</td>
<td>0.85%</td>
<td>1.0%</td>
<td>20%</td>
</tr>
<tr>
<td>Highly leveraged conventional</td>
<td>350</td>
<td>55%</td>
<td>1.25%</td>
<td>2.0%</td>
<td>30%</td>
</tr>
<tr>
<td>Lowly leveraged conventional</td>
<td>500</td>
<td>60%</td>
<td>1.85%</td>
<td>3.5%</td>
<td>40%</td>
</tr>
</tbody>
</table>

5.8 We then assessed how this ‘target’ gearing might be achieved by a composite approach to retaining equity with features possibly appropriate to the relevant models. Possible scenarios for each structure are shown in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Rights issue (per control period)</th>
<th>Dividend payout reduction</th>
<th>Interest rate outperformance</th>
<th>Cost outperformance</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLG</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Highly leveraged structured</td>
<td>0</td>
<td>25%</td>
<td>0.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Highly leveraged conventional</td>
<td>0</td>
<td>25%</td>
<td>0.5%</td>
<td>5%</td>
</tr>
<tr>
<td>Lowly leveraged conventional</td>
<td>250</td>
<td>0%</td>
<td>1.0%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Robustness to shocks**

5.9 We assessed the models on the basis of these ‘sustainable base case’ scenarios for their robustness to some illustrative financial shocks. These financial shocks have not been designed as realistic events and take no regard of the regulatory mechanisms such as IDOKs or company mitigations such as insurance or hedging, but are shown simply to provide a range of different sensitivities. We applied the following illustrative shocks to each structure:
• £100m cost shock in year 1 of the control period;
• 10% annual underperformance on opex and capital maintenance (this can also be inferred as an equivalent reduction in annual revenue);
• 50% increase in the levels of capital maintenance (funded through customer bills);
• 1% underperformance on interest rates;
• 1% increase in dividend yield; and
• £100m additional annual capex enhancement.

5.10 The impact of these shocks on the equity spend multiple is shown in Chart 7 below.
Chart 7

CLG - sensitivity to equity spend multiple

Highly geared structured - sensitivity to equity spend multiple

Highly geared conventional - sensitivity to equity spend multiple

Lowly geared conventional - sensitivity to equity spend multiple

- £100m hit year 1 each CP
- 10% underperformance
- 50% increase in capital maintenance
- 1% on interest rates
- 1% increase in dividend yield
- £100m additional investment p.a.
5.11 The above chart shows the impact on the equity spend multiple of the six shocks described above. As can be seen from these results, the more highly leveraged structures are more exposed to some shocks as well as starting from a lower base by this measure. Clearly, this does not show the benefit of risk-bearing capital in forms other than equity, such as junior debt or reserves. The impact of an increase in interest rates is particularly distinct; however, we should bear in mind that this analysis makes no allowance for companies’ fixed rate and hedging policies. Overall, these results illustrate how financial shocks can erode the relatively thin level of risk accommodating equity of the highly leveraged structures. Whether this makes such companies overly prone to financial shocks depends to some large part on one’s view of the riskiness of the sector.
<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital maintenance</td>
<td>Repair and replacement work on water and sewerage assets necessary for the continuation of current levels of service</td>
</tr>
<tr>
<td>Comparative competition</td>
<td>The regulatory regime of comparing different companies’ performance (generally in efficiency or performance levels) as a means to establish the level that would hypothetically be achieved in a competitive supply environment and inform the targets that should be set for regulated monopolies</td>
</tr>
<tr>
<td>Corporate finance</td>
<td>(Used here in contrast to structured finance) The more conventional financial model which does not seek to enhance the quality of cash flows to lenders</td>
</tr>
<tr>
<td>Covenants</td>
<td>(Used here with reference to debt covenants) Requirements placed on companies by lenders in debt documentation to ensure companies stay within certain constraints (usually financial or in relation to company strategy)</td>
</tr>
<tr>
<td>Credit rating</td>
<td>An indication of credit quality allocated to companies and their forms of debt, provided as a service by credit rating agencies</td>
</tr>
<tr>
<td>Credit rating agencies</td>
<td>Organisations (here referring to Standard &amp; Poor’s, Moody’s and Fitch) who provide credit ratings</td>
</tr>
<tr>
<td>Efficiencies</td>
<td>Reductions in costs of delivering required outputs arising from reduced unit costs or activity levels</td>
</tr>
<tr>
<td>Enhancement capex</td>
<td>Expenditure required to deliver improved service levels</td>
</tr>
<tr>
<td>Gearing</td>
<td>See Leverage below</td>
</tr>
<tr>
<td>Highly leveraged structures</td>
<td>Here, used to describe the companies in the water sector adopting structured finance arrangements. See Structured finance below</td>
</tr>
<tr>
<td>Junior debt</td>
<td>See Subordinated debt below</td>
</tr>
<tr>
<td>Leverage</td>
<td>(Used here as synonymous with gearing) The proportion of capital of a company comprising debt, here defined as Net debt/RCV</td>
</tr>
<tr>
<td>Maturity</td>
<td>(Of debt) The point at which loans become due for repayment</td>
</tr>
<tr>
<td>P0 adjustment</td>
<td>The adjustment to regulated prices made in the first year of a control period</td>
</tr>
<tr>
<td>RCV</td>
<td>Regulatory Capital Value: The measure of the capital base of a company as used by Ofwat in setting prices</td>
</tr>
<tr>
<td>Structured finance</td>
<td>A financing technique used to enhance the quality of cash flows through the corporate structure and financing agreements to increase the attractiveness of a company to debt-financing</td>
</tr>
<tr>
<td>Subordinated debt</td>
<td>(Used here as synonymous with junior debt) Loans that have lower credit qualities than other borrowings</td>
</tr>
<tr>
<td>WACC</td>
<td>Weighted Average Cost of Capital: The average of a company’s cost of debt and cost of equity, weighted in proportion to the level of debt and equity in the company’s capital composition</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>WASC</td>
<td>Water and Sewerage Company: One of the ten largest companies in the sector that provides both water and sewerage services</td>
</tr>
<tr>
<td>WOC</td>
<td>Water Only Company: One of the smaller companies in the sector that provides water services only</td>
</tr>
</tbody>
</table>