

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

EXECUTIVE SUMMARY

I. CONTEXT

1. The Government has set clear objectives for the water industry. These include:
 - To protect public health;
 - To protect and improve the environment, ensuring that the industry can continue to finance and deliver continuing water quality and environmental improvements with minimum impact on customer bills;
 - To meet the Government's social goals, including affordability of water supplies for households; 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.
2. To deliver these objectives requires a strong water industry with a secure future and the financial capacity to support investment. Since privatisation, the industry has invested almost £50bn (around £3bn p.a.) to deliver sustained improvements in drinking water and environmental quality, and to maintain and improve services to customers, including security of supply. The industry now faces the prospect of having to make further environmental and quality improvements, as well as replace ageing infrastructure. The Government wants to be satisfied that the industry retains the capacity to fund substantial investment programmes over the next 15-20 years, and accommodate significant uncertainty in the scale of that investment.
3. A number of changes have taken place in the industry since the last periodic review in 1999. Five of the regional water and sewerage companies (WASCs) have changed ownership and the industry has shifted towards much greater reliance on debt finance. The average level of gearing in the industry¹ has risen from 41% in 1998/99 to 57% in 2002/03 with the level of net debt rising from £11.8bn to £18.8bn (by 59%). The overall rise in gearing follows the trend evident in the previous decade.
4. New funding models have been developed, based on highly leveraged structured finance with strong covenant protections for creditors, which have allowed levels of gearing to reach 85% for companies such as Anglian and Southern. Taken together with Glas, a not-for-dividend Company Limited by Guarantee (CLG), three of the WASCs, accounting for 24% of total turnover, have now

¹ Calculated as net debt divided by regulatory capital value (net debt/RCV)

adopted either thin or zero equity models, with a similar proportion of coverage among the water-only companies (WOCs).

5. These developments have been viewed by some as a ‘flight of equity’ and appear to challenge the traditional equity model put in place at privatisation. Others have seen these developments as reflecting a further natural stage of development of the industry from focusing on improved operating costs and capital efficiency in earlier control periods towards optimising balance sheets - against the background of favourable debt market conditions. In relation to the fundamental low risk characteristics of the sector, and under incentive regulation, companies are bound to consider the most efficient ways of financing their businesses.

II. THE PUBLIC POLICY ISSUES

6. So far, these changes do not appear to have affected the industry’s capacity to deliver. However, Defra and Ofwat, in consultation with HM Treasury and DTI, have sought 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 the sector.
7. The terms of reference for the study (Annex A) focus particularly on the implications for financing substantial investment programmes over the next 15-20 years, as well as the ability to accommodate uncertainty in the magnitude of such programmes. They also seek advice on the public policy consequences of the new forms of corporate structure developing in the industry.
8. From a public policy perspective, these developments raise a number of potential concerns. We address them in this report in the following structure:
 - Does the loss of equity from the sector necessarily involve a change in the character of companies, in particular, the weakening of efficiency incentives in the sector – or can the properties of equity be replicated in other ways?
 - Is the remaining level of equity in the sector sufficient to accommodate likely financial risks – and how do we measure risk accommodation?
 - Are highly leveraged structures more at risk of financial distress leading to special administration; are there risks of systemic failure simultaneously affecting all such structures; and are potential risks for customers and taxpayers increased?
 - How significant is the scale of investment requirement for the sector and how does this translate into financing needs for different types of company?

- What are the implications of different structures for access to the capital markets?
 - Are highly leveraged companies more constrained in financing future investment programmes because of their existing high levels of gearing?
9. Our study also addresses issues concerning the long term sustainability of the traditional equity model and, indeed, the future role of equity in the water sector.
 10. A fuller discussion of public policy concerns is contained in Section 3 while the issues are addressed in Section 6 of our report.

III. METHODS AND SCOPE OF STUDY

11. The study, which has been conducted within a three month time frame, has been based on interviews across the sector, involving companies, investors, analysts, credit rating agencies and monoline insurers together with industry specialists and regulators. Through these interviews we have sought to do two things:
 - To record the views of participants on recent developments in, and future prospects for, the sector; and
 - To better understand the properties of some of the new corporate and financial structures now found in the sector.
12. More than 40 interviews were conducted and a workshop was held in September to discuss key findings and test emerging propositions with a number of those interviewed, together with Government officials and Ofwat.
13. A review of literature, including related work in this area, has also been carried out and some new analysis, including high level modelling, undertaken. This analysis has taken the following forms:
 - An analysis of risk accommodation for the sector, using an economic measure which assesses equity as a multiple of annual expenditure;
 - An analysis of investment requirements across companies based on projections in company draft business plans; and
 - High level modelling to assess and illustrate the economic properties of different types of structure and their sensitivity to financial shocks; and also the effects of investment requirements on long term financeability ratios for different types of structure.
14. Given the fact that the new financial structures are very recent developments in the sector, together with the limited timescale for our work, a number of our judgements remain provisional. To answer more fully the questions raised about the features of different structures, further work should be considered on

detailed financial modelling of the financeability properties of alternative structures and also on an overall risk assessment of the sector.

15. Subject to these caveats, our report sets out our conclusions on each of the areas of public policy concern and assesses the implications for Government and regulatory policy, against the background of recent developments in the industry.

IV. DEVELOPMENTS IN THE SECTOR

16. Despite the growth in debt financing and gearing levels across the sector, the water industry currently exhibits significant structural diversity. Four principal corporate/financing models can be identified:

- The ‘not-for-dividend’ CLG: Glas
- The ‘thin equity’ model with structured finance (typically 85% gearing): companies include Anglian, Southern Water, Dee Valley, Mid Kent and Portsmouth
- ‘Pure’ (i.e relatively undiversified) conventional companies without structured finance: these include Kelda, Northumbrian, Thames, Wessex and Bournemouth
- Diversified companies with conventional financing: these include Severn Trent, United Utilities, South West and South Staffs

17. Table 1 shows how the ten WASCs we have grouped under these models compare under a number of dimensions. Gearing levels are, predictably, very much higher under the company limited by guarantee (CLG) and ‘thin equity’ models than for the conventional diversified companies where it remains at around 50%. At the same time, gearing levels vary across the third category of ‘pure’ conventional companies. The diversification measure also shows variation within categories. Anglian, for example, falls in the ‘thin equity’ category but is part of a larger diversified group, like Severn Trent.

Note: For the purposes of assessing financeability in our report, we use a slightly different categorisation of the models, discriminating between the conventionally financed models by their gearing levels rather than by their diversification.

Table 1: Structural models amongst the WASCs

2002/03 Data (£m or %)

Model	Company	Col 1 Structured Finance? (Yes/No)	Col 2 LSE listing? (Yes/No)	Col 3 Regulated Turnover £m	Col 4 % of Non Appointed Group Turnover	Col 5 Financial Gearing (net debt/RCV)	Col 6 Equity Spend Multiple (RCV equity/ annual spend) ⁴
1. CLG	Glas	Yes	No	458	1%	85%	0.6x
2. Thin equity	Anglian	Yes	Yes	719	57%	82%	1.1x
	Southern ¹	Yes	No	431	1% ²	85%	0.7x
3. Pure conventional	Wessex	No	No	261	3% ²	70%	1.5x
	Yorkshire	No	Yes	568	18%	40%	3.0x
	Northumbrian	No	Yes	422	4%	63%	1.7x
	Thames	No	No	1074	30% ³	47%	2.3x
4. Diversified companies with conventional structures	South West	No	Yes	262	37%	54%	2.3x
	Severn Trent	No	Yes	905	51%	49%	2.3x
	United Utilities	No	Yes	965	49%	48%	2.4x

Table notes:

1) Southern includes effect of restructuring on financial gearing and equity spend multiple

2) The Group turnover included here is only the small amount of non-appointed business turnover. Ultimately both companies are owned by multinational groups

3) The Group turnover included here is only that of the immediate holding company, Thames Water plc. Thames is ultimately owned by a multinational, RWE

4) The figures shown are the adjusted equity spend multiple which includes interest costs within annual spend; a fuller description of this calculation is provided in Section 6

18. The particular circumstances in which the Glas CLG model emerged may prove to be unique. However, other companies have moved to adopt the ‘thin equity’ model which shares a number of similar features. At the other end of the spectrum, there are companies which remain strongly committed to the traditional equity model, one of which, United Utilities, has recently announced a £1bn rights issue to fund the heavy capital programme of its regulated water subsidiary. (Part 1 of this rights issue has now been completed with more than 90% take up.)
19. New foreign trade owners such as RWE (Thames) and YTL (Wessex) also remain committed to the equity model though will want to compare the returns from their UK water businesses with other overseas businesses.
20. Although the sector was viewed as unattractive to equity investors following the last periodic review - particularly in comparison with growth stocks - more recently, the sector has attracted investors interested in income stocks. The sector has also attracted strategic investors (see above) and financial investors (both private equity and hedge funds). Private equity bids have been made for a number of water-only companies. Equity should not therefore be viewed as homogeneous. Private equity and pension funds have different reward characteristics and will tend to invest in different parts of the sector.
21. Nevertheless, the sector has continued to trade at a discount to the regulatory capital value (RCV) and equity investors attach particular importance to the equity return in the weighted average cost of capital (WACC) at the forthcoming periodic review. The outcome of the review will be critical in future decisions on financial structure. Some companies are deferring decisions on financial structure until after the periodic review. Nevertheless, the range of views we have heard from across the sector suggests that there is no inevitability about a wholesale drift towards structured finance. Rather, in the right regulatory environment, there is seen to be room for a number of models to co-exist, reflecting the range of businesses which water companies have become.
22. Three other observations are worth adding on the basis of our survey work:
 - With ten WASCs and 13 WOCs, there is a general view among those in the industry that scope exists for further consolidation. A number of those interviewed felt that this could be achieved without the loss of useful comparators for regulatory purposes. At the same time, there is recognition that the main gains are likely to come through mergers of WASCs and WOCs within the same region. The existing merger controls are also felt to favour trade buyers and private equity in water bids at the expense of existing water company managements with long term commitment to the sector.
 - Outsourcing of operations and customer services is not a necessary product of structured financing and there seems no wholesale movement in this direction. However, selective out-sourcing and market-testing are taking place across the sector as companies explore new ways of improving operating efficiency. This is seen as a manifestation of increased competition and potentially provides new sources of information to the Regulator.
 - Regulated water businesses operate as part of larger groups, either UK or foreign-owned. Group strategies vary across the sector. However, since the last review, some companies have sold off unregulated businesses to become more focused water

businesses, thereby increasing their attraction to those equity investors who prefer ‘vanilla’ companies without diversification risk.

V. MAIN FINDINGS AND CONCLUSIONS FROM ANALYSIS

i) *Incentives and the character of companies*

23. One of the principle concerns of Government has been that the reduction in the level of equity in the water sector could threaten the achievement of their objectives for the sector. This is because equity is seen to have unique properties relative to debt in relation to risk-bearing, risk-taking and incentivising of management to seek further improvements in efficiency and performance. The five main properties of equity are summarised in the table below.

Table 2: The properties of equity

	<i>Properties of equity</i>	<i>Description</i>
1	Risk-absorption	Provides a ‘cushion’ in balance sheets that can protect creditors from the financial effects of shocks or underperformance
2	Discretionary service costs	Dividends can be reduced or withheld by management if financial circumstances require this
3	Non-maturity	Share capital does not need to be repaid at a specified date
4	Incentives	Value-maximising shareholders, through corporate governance and management incentives put pressure on managers to maximise profits
5	Corporate governance	Shareholders provide governance of the company through their controls over boards and management. The trading of shares also introduces the effect of capital market competition on management

24. In addressing this question we observe that, with the exception of Glas, equity remains in all of the companies in the sector. Where it is reduced in quantum, it still retains corporate governance controls. Further, as its risks and returns are now leveraged it might be expected to put more pressure on managers to perform. The changed form of equity with more strategic and financial owners might also exercise enhanced corporate governance and incentive properties through its concentration of ownership. Against this, it is argued that bondholders have a much greater say in the way in which such companies are run, although the evidence for this will only become apparent over time.
25. Second, even if managers were to respond to the more risk-averse interests of lenders, it is not obvious that this now poses a real threat to Government objectives. It is recognised by Ofwat, in the context the 2004 review, that the potential for efficiencies to ameliorate new costs is much smaller than in 1999, when significant outperformance could be factored into the equation². At the same time, Europe Economics observe, more than a decade after privatisation, no evidence of a systematic slow-down in the efficiency improvements being achieved by UK privatised utilities, in respect of operating expenditure. However, given the general concerns about the resilience of networks, water managers across the sector may also be expected to be more cautious about taking further costs out of their businesses.

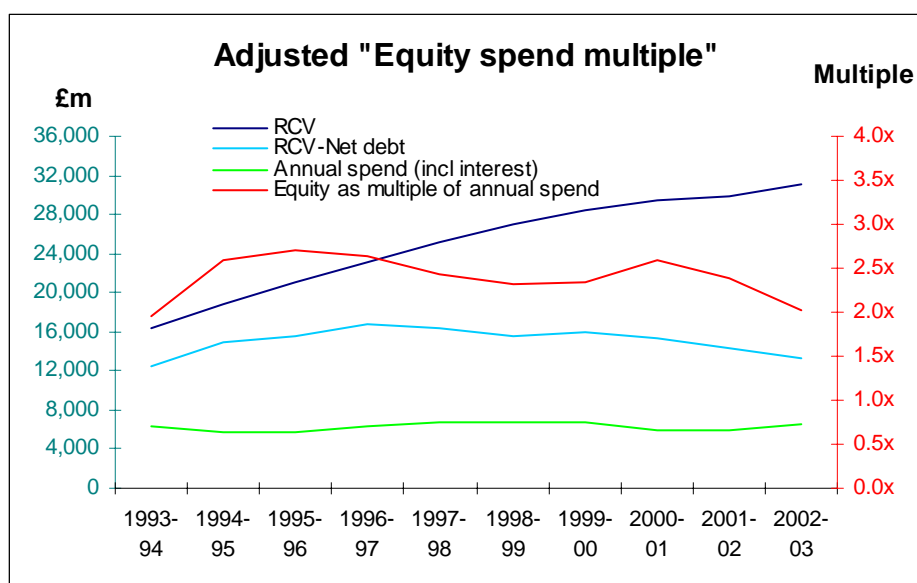
² Scope for efficiency improvement in the water and sewerage industries – Report for Ofwat by Europe Economics (March 2003); and covering letter to Regulatory Directors (RD 12/03).

26. Third, the governance structures of highly-leveraged structures can mean that managers are more focused and accountable for the performance of the regulated water business than in a conventionally structured business. Under structured finance, conflicts of interest with the group are lessened and managers are incentivised purely on the performance of the regulated business. The system of comparative performance measurement through, for example, Ofwat's reports on annual levels of service can also assume increased importance in keeping pressure on managers, when comparisons are possible with companies with conventional equity structures. Indeed, if Government objectives are best served by companies remaining focused on their core business, recent developments in the sector can be viewed as helpful.
27. Finally, some of the incentive properties associated with equity can be replicated by other means - either through junior debt or strengthened corporate governance arrangements under structured finance arrangements.
28. Therefore, we conclude that:
 - Equity in the sector displays a broad set of properties with many of these properties replicable by other means.
 - It is not evident that the reduction of equity in particular structures to date is an immediate cause for concern, given the increased accountability and focus for the performance of the appointed business in structured finance arrangements, and the continuation of comparative competition.
 - Nevertheless, because the role of equity in the sector has been associated since privatisation with successful delivery of improved service and quality standards and improved efficiency, it must be right to be concerned about further losses of equity from the sector - at least until such time as the performance of other models can be demonstrated.

ii) Risk accommodation and financeability

29. A second related issue concerns whether the remaining level of equity in the sector is sufficient to accommodate likely risks.
30. As a starting point, we should not require an increase in the absolute level of equity simply because the RCV has grown on account of enhancement spend, since this does not necessarily imply any increase in the risks faced by the company.
31. Consequently, we have looked at this first in terms of trends in the overall level of equity in the sector as measured by RCV less net debt; the current absolute level of equity, although declining from peak levels in 1996/97, is at a similar level to that of ten years ago. To assess risk accommodation, we have examined the level of annual spending both in relation to the RCV (i.e. operational gearing) and in relation to the level of equity. The latter concept, which we have termed the 'equity spend multiple', is a measure of the number of times the equity in the company's balance sheet can support the annual spending requirements of the company and therefore accommodate the risk of additional unplanned spending. This is illustrated below in Chart 1.

Chart 1: Levels of risk accommodation in the sector



32. Comparison across other regulated sectors using the equity spend multiple shows that despite wide variations in the sizes of RCV, levels of debt and annual spend across industries, there are very similar levels of risk accommodation. If the water industry is viewed as relatively low risk, then it enjoys at least adequate risk accommodation compared to its peers. However, within the sector it is clear that highly leveraged companies have much lower equity spend multiples than conventionally financed companies. Even allowing for the inclusion of junior debt, the higher leveraged structures still have significantly lower multiples.
33. We conclude that:
- It is important to look at broader measures of the level of equity than simply financial gearing.

- The level of risk bearing capital should be assessed in relation to the level of business, regulatory and financing risks in the sector.
- High levels of financial gearing in the water sector are to some extent offset by low operational gearing (expenditure/RCV). As enhancement spend has increased the value of the RCV, operational gearing has declined.
- On the basis of the ‘equity spend multiple’, while the sector as a whole has similar levels of risk accommodation to other regulated sectors, highly leveraged companies have lower levels. Financial modelling shows how illustrative (and unmitigated) financial shocks could erode the thin level of risk accommodating equity of these companies.
- Whether these results represent a serious concern depends on views taken of the levels of risk in the sector. If the question of the sector’s vulnerability to financial shocks is to be addressed further we believe there is a case for a more rigorous quantitative risk assessment of the sector to inform this discussion.

iii) Risks and financial failure

34. A third area considered was whether these highly leveraged structures were more at risk of financial distress and whether there were risks of ‘systemic failure’ and potential risks for customers and taxpayers.
35. In terms of the risk of financial distress, these structures include provisions which are specifically designed to reduce the risk of financial failure. They include covenants which build upon regulatory ringfencing provisions to isolate the regulated business from ‘event risks’ affecting the group and trigger mechanisms which give early warning of financial problems. In addition, regulatory ringfencing arrangements in these cases have now been strengthened to reinforce the arm’s length relationship between the regulated entity and parent group. (It was the regulatory ringfencing protections which enabled Wessex to survive one of the highest profile corporate failures in history, the collapse of Enron, with no discernible threat to the delivery of services to customers.)
36. Second, through the standstill provision arrangements, they also reduce the risk of Special Administration Orders by providing an 18 month window of opportunity for the company to resolve its difficulties, without the need for regulatory action – or for the company to be sold. Formalised response structures provide for an orderly process of resolving the problems of a company in difficulty although, as Moody’s have noted, these provisions have yet to be tested in practice. The evidence of recent years suggests no shortage of buyers for water businesses, although the requirement for Competition Commission referral can be an impediment in the case of bids from within the sector.
37. Third is the question of ‘systemic risk’, where intrinsic vulnerabilities in the highly leveraged model could bring down a number of these companies simultaneously. Most of the risks which have been identified would appear to be mitigated by the specific design characteristics of these models. For example, refinancing risk is addressed through the debt maturity profile which limits the amount to be refinanced in specified periods. Exposure to credit rating decisions is also reduced to the extent that these companies seek to maintain ratings well above investment grade. Moreover, these structures are directed at providing access to a wider range of capital markets, rather than making them over-dependent on a few. The principal concern must be that these models have not run long enough for their risk-mitigating

features to be tested.

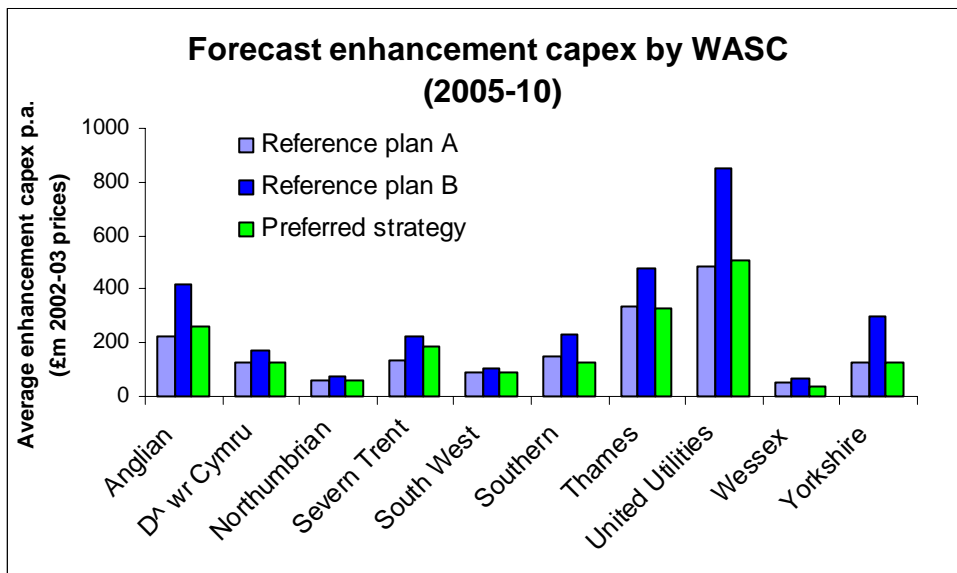
38. At the same time, it should be acknowledged that the highly leveraged structures have sought to ensure that there is a sufficient cushion for risk absorption to protect the interests of senior lenders. This comes about through the provision for cash reserves (specifically in the Glas model) and also through subordinated debt which can be 'cut loose' in distress situations to provide a similar buffer to equity.
39. If highly leveraged structures can accommodate the identified risks concerning adverse changes in capital market conditions and pricing, or in credit rating changes, then the remaining risks are those of a political or regulatory nature. This emphasises the need for continuity and stability in Government policy and regulatory methodology.
40. Comfort can also be drawn from the licence provisions for water companies which make the risk position between customers and shareholders well defined. The last few years have seen more extensive use of the interim review (IDOK) provisions with approximately three applications per year.
41. The characteristics of the water sector, with capital investment financed by consumers rather than taxpayers, and with a mature regulatory system, also means that the public policy implications of company failures are likely to be relatively low. The risk of financial failure transferring risk back to taxpayers is very remote. Financial failures in the water sector are susceptible to market-based solutions and there appears to be an active market for water businesses.
42. The main conclusions we draw are the following:
 - Although structured finance arrangements have raised concerns about the increased risk of financial failure, their design incorporates features which strengthen ringfencing arrangements and accountability for the appointed business. These should reduce the risk of financial distress and, where this does occur, the risk of special administration.
 - Some forms of debt have risk-bearing properties that mitigate the public policy concerns that would be associated with high levels of senior debt. Analysis of public policy interests should move beyond a simple dichotomy between *debt* and *equity* in order to ensure these different properties are fully understood.
 - Our research has identified no hidden fault line running through these structures which would substantiate concerns over systemic failure – but the models have yet to be tested in adverse conditions.
 - Although the structures have been subject to sensitivity testing on the basis of a range of identified risks, their relative novelty suggests that we should be cautious about any rapid extension of the models until their properties have been better tested.
 - The diversity of corporate structures in the water industry contributes to its resilience to systemic risk.
 - The characteristics of the sector, both with the protections available under the licence and the fact that customers ultimately pay the costs of investment programmes, means that the risks and public policy consequences of water company failures are relatively

low.

iv) Investment requirements

- 43. One of the prime concerns of Government is the capacity of the sector to undertake future capital investment programmes. A specific concern is whether highly structured debt financed businesses would have the same appetite to invest as conventional equity-based companies and whether they would face financial constraints in their ability to invest.
- 44. The element of investment which puts pressure on companies' financeability is its expenditure on enhancement capex. This investment is required to deliver quality and environmental improvements. Whilst customers ultimately pay for these improvements through increased bills over time, they do so over the full life of the improved assets rather than facing the full cost at the time when the investment is made. Companies therefore need to have the ability to raise finance upfront for this capex which customers ultimately pay for through the allowed return on the RCV.
- 45. We have assessed forecast levels of enhancement capex for the period 2005-10 based on draft business plans submitted by companies to Ofwat in August. These comprised reference plans A and B including defined packages of quality and environmental improvements and a company preferred package. The analysis shows annual enhancement investment across the sector under reference plan A and the preferred strategies of around £2bn p.a. – similar to recent levels of enhancement spend – rising to £3bn under reference plan B.
- 46. However, as shown below in Chart 2, the scale of investment requirement across the sector is very uneven. Three companies (Anglian, Thames and United Utilities) account for 59% of the aggregate projected expenditure under reference plan A.

Chart 2: Investment requirement across WASCs



- 47. Part of this reflects differences in the size of businesses. When normalised according size of RCV, these three companies account for 44% of projected investment spend. Our analysis also shows no correlation between the levels of preferred investment strategies and financial structure – although it is perhaps no accident that the company with by far the largest capital programme is the one to have undertaken a rights issue.

48. Any assessment of financial 'stress' has to be made against the background of these investment projections.

49. Our conclusions are:

- Levels of enhancement investment seem likely to continue broadly at similar levels to those seen in recent years.
- While draft business plan projections show wide variations in levels of investment spend, there is nothing to support the view that highly leveraged companies have a lesser appetite for investment.
- Were there to be problems for the industry in financing this scale of investment, there are no easy options available for overcoming this constraint. The options identified would either involve large increases in customer bills (by moving to a pay-as-you-go approach); the use of special purpose vehicles to deliver this investment by PPP-like arrangements; or reducing or deferring the size of the investment programme.

v) *Access to capital markets*

50. Given the scale of projected investment, water companies are likely to have a substantial requirement to raise new capital, both debt and equity. Retained profits are likely to finance only a moderate proportion of the industry's capital requirements. The move to greater debt finance is also seen as increasing the re-financing requirement for the sector, although highly leveraged structures borrow significant amounts of long term debt.
51. It is questionable whether highly leveraged structures would in reality be able to raise equity through a rights issue, given that their structure is seen as primarily serving the needs of debt investors. Against this, these leveraged structures were designed to tap into a wide range of segments of the debt market – arguably widening rather than narrowing access to capital.
52. At the other extreme, United Utilities will need to tap the debt as well as the equity markets in financing their large capital investment programme.
53. We conclude that:
 - All companies, whatever their structure, have a shared interest in accessing the capital markets and in retaining access to a diverse set of markets, so as to be able to respond flexibly to changed circumstances.
 - Different financial structures seem likely to improve access to different types of capital; in particular, highly leveraged structures may give access to a wider range of debt markets.
 - Diversity of structures across the sector seems likely to broaden the sector's overall access to capital markets.

vi) *Financeability ratios*

54. In raising capital, companies have to satisfy a number of key financial ratios relating to their financial strength and ability to service and repay capital. Such ratios are particularly evident in highly leveraged structures because of their extensive use in debt covenants.
55. Financial modelling was used to illustrate the capacity of alternative types of structure to finance future investment programmes. In particular, we wanted to explore whether the highly leveraged model was likely to come up against financeability constraints (and covenanted ratios) more quickly than other types of structure. The modelling used a 30 year time horizon and tested the sensitivity of some high level financial ratios to changes in key parameters for four different types of company.
56. To maintain gearing at its current level requires annual investment spend to be financed proportionately to current levels of gearing with debt and equity. Thus a company which has 85% gearing, for each £1 of investment, has to raise 15p from equity to maintain gearing levels. In contrast, a company which is only 40% geared has to raise an extra 60p from equity for every £1 of investment. The lower the level of gearing to be maintained, the more the equity that has to be raised. Thus, it will probably be easier for highly leveraged companies to *maintain* levels of gearing than conventionally financed companies – even though they may have less financial headroom below covenanted gearing caps. At the same time, a company with 40% gearing may be able to afford to use debt as its sole marginal source of finance for investment, even though this will raise gearing levels, since it may currently have significant

headroom below its 'threshold' level of gearing. In this way, it may retain more flexibility than a highly geared company.

57. There is a further factor. All companies, whatever their financial structure, are required to stay within gearing and related financial ratio parameters, related to their structures. These ratios are set by investors and credit rating agencies and reflect current perceptions of risk. Financial ratio tests may be revised over time to reflect changing perceptions of the risk profile of companies. If the low risk properties of the industry are confirmed over time, then financeability thresholds may be relaxed allowing even higher levels of debt in highly leveraged structures.
58. In practice, most companies are likely to rely on retained earnings (i.e. the element not passed out to holding companies and shareholders in dividends) rather than new equity through rights issues. This has implications both for dividend policy and the financial 'headroom' allowed for by the periodic review settlement.
59. The regulatory implications of financial ratios are explored with suggestions that in the longer term the Regulator may want to apply the concept of an 'efficiency frontier' to the financeability of companies at periodic reviews. If underlying measures of financeability could be found that were common to all structures, this would allow the Regulator to make a financeability assessment, without regard to each individual financial structure and its particular ratios and thresholds, even were there not a natural 'default' model to assume for companies in the sector.
60. We conclude that:
 - If enhancement capex is wholly debt-financed, this will put further upward pressure on gearing levels and perhaps cause some companies to come up against maximum financial gearing constraints.
 - To maintain gearing levels unchanged while financing investment programmes requires a contribution to be found from new equity or retained profits in proportion to current gearing. This requires conventionally financed companies having a higher share of retained earnings than highly leveraged companies, although the latter may be closer to covenanted financial gearing ratios.
 - Conventionally financed companies with relatively low gearing may retain the flexibility of using debt as the sole marginal source of finance because of their current headroom below their gearing limits. This will lead, over time, to increased levels of gearing and may, at some stage require such companies to adopt features of the structured finance model. Relatively highly geared but conventionally financed companies, which are not well placed to raise new equity, may be unable take on significantly more debt without adopting more structural protections for lenders.
 - There is a case for taking into account different forms of debt and particularly risk-bearing junior/mezzanine debt in a regulatory assessment of gearing levels and financeability.
 - Pressure on gearing levels across all companies will depend on levels of retained earnings which will depend on the level of financial 'headroom' allowed for in the regulatory determination, both through allowed revenues and the scope for outperformance. It will also depend on company dividend policies.

- In the future (beyond the next review), the Regulator may need to consider the application of comparative efficiency more explicitly to financial ratios and the possibility of defining an ‘efficiency frontier’ for the financeability thresholds of companies.

VI. THE IMPLICATIONS FOR GOVERNMENT AND REGULATORS

61. The water industry has been through a period of considerable change involving new ownership and financial structures. At the same time, it has continued to outperform the 1999 periodic review assumptions despite an outcome which was seen by many as severe, and which appeared to precipitate a ‘flight of equity’ in the market conditions pertaining at the time. Although there has been a general increase in debt financing and the emergence of highly geared structures in parts of the sector, the industry continues to display considerable diversity on a whole range of dimensions.
62. Our work suggests that the general increase in gearing across the industry has occurred in some large part as a direct consequence of the industry’s investment programme and is likely to continue with future capital spending requirements in AMP4. Water is alone among the regulated utilities in having continuing large scale capital programmes 15 years after privatisation. The work also suggests that some of the concerns over structured financing - in terms of the risks of financial failure and loss of incentives and equity cushions - appear overplayed. The new structures would appear to strengthen the low risk business properties of water companies, incorporate new disciplines on the management of regulated entities and provide for formalised arrangements for handling financial distress.
63. However, the structures are new to the water sector and there would be concerns if this model were quickly to become the prevailing model for the sector. The beneficial features of these structures have not yet been fully proven and the potential weaknesses have not yet been properly tested by events.
64. An industry composed principally of single purpose, debt financed, low risk water businesses might over time suffer from a loss of dynamism and innovation. This could have long run implications for Government water policy. One issue might be the loss of effective capability to sell UK water expertise overseas and contribute to UN development goals for water and sanitation – in line with Government objectives. Were this to be a serious prospect, Government would need to take a view on the sort of water industry that would best serve UK interests and wider Government policy.
65. In our view, the key principles the Government should adopt for the industry going forward should be to:
 - Continue to provide a framework which allows private companies to raise money to deliver public policy objectives for public health and the environment;
 - Support access to as wide a range of capital markets as possible; and
 - Maintain a broad regulatory framework which encourages diversity and innovation.
66. The key issue for the industry going forward is financeability. Although difficult tradeoffs between customer bills and the scale and pace of environmental improvements are

unavoidable, if companies are to continue to raise large sums from the capital markets to finance investment programmes then the scale of enhancement programme has to be financeable. Debt and equity investors are partners – with customers – in delivering these programmes.

67. Attempts to limit returns or the scope for outperformance in order to keep down customer bills today may be counterproductive if they increase the cost (or reduce the availability) of debt or equity to the sector – or put increased pressure on companies to increase gearing still further, thereby forcing more companies beyond the threshold at which structured finance becomes necessary. This becomes particularly important if one of the policy aims is to retain the current diversity in the sector. Through its influence over the level of enhancement capex, Government influences not only the prospects for customer bills but also the scale of the financeability challenge faced by the industry.
68. There is a further point. Since it is customers who ultimately bear the costs of these programmes, this reinforces the need to establish that such investment represents value for money, having regard to the costs and benefits involved.
69. The Government recognises the need for a strong, stable industry. This is best brought about through consistency of Government policy towards the sector within an overall framework which is long term. Therefore, in introducing policy changes affecting the sector, the Government should have regard to the *precautionary principle*, particularly in areas affecting industry fundamentals such as income stability. The current approach to introducing competition, would appear to be consistent with this principle.
70. Some relaxation of the present merger rules would allow some sensible consolidation of the sector, which could be achieved without reducing the number of regional comparators. It would also provide a level playing field between existing industry players and private equity in future bid situations, and could be helpful in cases of company failure where a mandatory reference could be a source of unhelpful delay. This could also strengthen the attractions of the water sector to equity investors.
71. Given the fundamental importance of the regulatory capital value, the Regulator might also consider incorporating this concept into the licence.
72. However, the main issues addressed by this study are for the Regulator in terms of his approach to the periodic review. The principal elements which will affect future decisions on capital structures are the level of the weighted average cost of capital to support equity returns; incentives and the balance between shareholders and customers; the efficiency targets set which will determine the scope for outperformance; and how financeability is assessed.
73. In reaching these judgements, he faces difficult decisions particularly on the question of a level playing field for companies with such diverse capital structures. He has stated his intention in setting the cost of capital of assuming a consistent level of gearing for all companies. In relation to financeability, the Regulator proposes to measure the financial projections of companies with a view to ensuring they are able to raise finance in the capital markets to undertake their investment programmes.
74. However, there are difficult judgements concerning the application of incentive-based regulation to capital structure. On the one hand, equity-based companies want to see higher equity returns. On the other, should the Regulator have explicit regard to the financial covenants set in structured financings – or can he address more economic measures related to

the fundamentals of the sector and require the capital markets to also set their thresholds accordingly?

75. In the October 2003 periodic review document³, the Regulator acknowledges the importance of future cash flows as a key factor in the assessment of the financial risk profile of the companies. This is seen to be important for both debt and equity investors. The Regulator confirms his intention of ensuring that *'the indicators of financeability remain robust and stable can continue so that efficient companies can continue to finance their functions and retain stable credit quality going forward'*. In the case of companies with highly geared structures, for the purpose of assessing financeability, balance sheets will be adjusted to reflect standard assumptions on gearing and price limits set on the basis of consistency with financial indicators on this basis.
76. One development since the 1999 review is the growing importance of credit quality for the sector and the Regulator indicates he will be consulting with the credit rating agencies on the choice of financial indicators. The document confirms that the Regulator will be targeting credit ratings *'comfortably within the investment grade category'*.

VII. PRINCIPAL POLICY CONCLUSIONS

77. These are as follows:

- i) The current diversity in the sector should be viewed as a healthy development consistent with an incentive based regulatory framework.
- ii) Whilst the design of structured financing for individual companies appears robust and strengthens the low risk features of the sector, we would be concerned if this model were quickly to become adopted by the majority of water companies over the next two to three years. This is because the equity model has delivered substantial improvements and efficiencies over the past 14 years and there must therefore be concerns over its replacement by a model whose properties are not fully proven.
- iii) A key challenge for the periodic review is to provide the basis for these different models to continue in the sector, and in particular for the conventionally financed equity model to run in tandem with the structured finance model. Ofwat have stated their intention of ensuring that returns are adequate to provide incentives for equity investment. Without this, we could expect more companies to face pressure for structured finance arrangements as they gear up to finance investment programmes and come under pressure to adopt further covenant protections for investors.
- iv) The level of enhancement capex will influence not only the level of customer bills but also the scale of the financing requirement on companies - and will be one of the factors influencing future decisions on capital structure. Government has a key role in determining the level of enhancement capex for the sector.
- v) Even if these structured finance models were to develop proven track records, there remains the question of whether an industry comprised uniformly of single purpose, predominantly debt-financed regional water companies would best serve wider Government objectives in the longer term. Government should consider what sort of

³ Ofwat, Setting water and sewerage price limits for 2005-10; Overview of companies' draft business plans, October 2003

water industry it wants and how far it should encourage equity-financed companies who may have ambitions beyond their appointed business.

- vi) Developments in financial structures have been based in large measure on water industry fundamentals including perceived low risk characteristics of the sector. Given the scale of investment requirement for the industry, 'future shocks' – of which the industry has experienced very few since privatisation – could have a damaging effect on financeability. To answer more fully the questions raised about the risks inherent in these developments, there is a case for a wider risk assessment of the industry against the background of concerns about the resilience of networks and the impact of factors such as climate change. Such an assessment would consider, *inter alia*, the adequacy of industry safety margins. There is also a case for some more detailed analysis of the financeability properties of alternative financial structures.