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From a private past to a public future?

– the problems of water in England and Wales

By

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November 2007

This paper was commissioned by the GMB Union

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1. Summary

- Since privatisation the water companies have continued to increase investment, in line with the growth which began in the 1980s under the publicly owned RWAs.
- The level of this investment has been driven by standards legally required by the EU and the UK government, and part financed by government subsidy
- The shareholders of the private companies have financed almost none of this investment, instead the companies have borrowed and built up their debts
- Debt finance is cheaper than shareholder equity, but government debt is cheapest of all
- Productivity has been growing more slowly since privatisation
- Outsourcing has threatened the quality of labour, and the regulator has played no part in developing industry training standards
- The companies have almost ceased to invest in research and development
- Prices have risen sharply in real terms, despite the cut in 1999
- There is a growing problem of water poverty in the UK
- Regulation provides little scope for disclosure of information or public participation
- The regulator has been deceived by the companies legally, by overestimating capital investments, and illegally, by miscalculating key figures on customer debt, customer service, and leakage
- The regulator has given companies almost eternal monopolies by requiring 25 years notice of termination
- The droughts and water shortages have been highly predictable, the companies have failed to reduce leakage, and leakage is at levels of east European and Asian cities
- There is no coherent forum for policy-making on water at national or regional level
- There remains a substantial majority in favour of public ownership of water, and always has been
- The water sector could be brought into public ownership under the current regional structure, with new boards including representatives from government and local government
- Public ownership would replace private capital with cheaper public finance, and could lead to savings of £900million per year.

2. Introduction

Until 1974, water services in England and Wales were run by local authorities, as they still are in nearly all other countries. In 1974 the regional water authorities (RWAs) were created, each covering a river basin area, under the effective control of central government. In 1989 the Thatcher government privatised these regional companies by selling their shares on the stock exchange. In Scotland and Northern Ireland water remains controlled and operated by public authorities.

This privatisation of the water companies was supposed to improve the economics and governance of the water industry, by comparison with public ownership. The economic benefits were expected to be:

- Higher levels of investment
- Investment financed by private shareholders, which would be better value than using public finance
- Greater efficiency from private sector management than from public sector managers

The governance benefits were supposed to be:

- A regulator who would protect consumers from over-charging
- An independent, non-political, regulator could provide a better long-term perspective than politicians
- The public would prefer a privatised water service to the public sector

This report reviews the evidence on these issues.

3. Investment

One of the key reasons for privatisation was to improve the level of investment. It was expected that this would be financed by private investors, who would be induced into investing their money because they could see the opportunity for good returns as a result of the regulatory mechanisms. This would be more efficient for the national economy than using public finance for investment.

3.1. Levels of investment

The level of actual capital investment in the water industry has been much higher since 1989 than it was in the previous decade. This is now claimed as an indicator of the success of privatisation: a factsheet published by OFWAT gives the figures for investment before and after 1989, and claims: “Under Ofwat, investment in water and sewerage services is at its highest ever level”.¹ According to OFWAT, a total of £55 billion has been invested in the 15 years since privatisation, an average of £3.7 billion per year, compared with an average figure of £2 billion per year during the 1980s.² This is a difference of £1.7 billion per year, or 46% of all expenditure. (All figures are at 2004-2005 prices).

This picture however exaggerates the difference between investment levels before and after 1989. The RWAs did not make the same level of investment throughout the 1980s, but showed a clearly rising trend towards the end of the decade, recovering from the long decline in investment imposed by successive governments between 1975 and 1985 (see annex). Between 1985 and 1989 investment rose steadily from about £1.6 billion to over £2.2 billion per year, so their investment had been increasing at a rate of 8% per year in the second half of the 1980s. The OFWAT comparison assumes that there would have been no further increase by the RWAs, but this is very implausible: because of the legal requirements for investment (see next section) the RWAs would certainly have had to continue increasing their level of investment. Even if this increase had averaged 4% per annum, half the rate they were delivering in the second half of the 1980s, they would have delivered a total investment of over £50 billion over the next 15 years: about the same as the private companies have actually achieved.

Table 1 Investment levels and growth rates before and after privatisation

(£billion, 2003-04 prices)

	1985	1989	2004	Average annual % growth rate
RWAs (pre-privatisation)	1.6	2.2	-	8%
Privatised companies and OFWAT	-	2.2	3.6	3%

Source: OFWAT³, author's calculations

An examination of the factors behind the need for investment, and the financing mechanisms used, also suggest that the credit for the improvement should not lie with the act of privatisation, nor the activity of OFWAT.

3.2. Drivers of investment: EU legislation

The biggest factor driving this increase in expenditure was but the EU directives on higher standards for the quality of drinking water, cleanliness of beaches, and in particular treatment of wastewater. There are various estimates of the scale of this. In 1993 the government claimed that the water companies were investing £3 billion per year to achieve the standards required in the directives⁴ - this was clearly an exaggeration, as that would represent over 100% of the actual capital expenditure in that year. In 2004, OFWAT estimated that about 50% of all capital expenditure – equivalent to £1.9 billion per year, more than the whole increase in spending – is required in order to meet new quality standards,⁵ which largely stem from the EU directives. This is consistent with OFWAT's estimate in 1992, that the implementation of EU directives would cost £10 billion (adjusted to current prices)⁶. An EC report in 2000 estimated that the EU wastewater directive alone has required investment in the UK averaging £0.6 billion per year since 1990.⁷ It seems reasonable to conclude that at least half of all the increase in capital investment since privatisation is entirely attributable to

the requirements of the EU directives. The UK was legally obliged to carry out this investment, whether privatisation happened or not.

The privatisation process, in itself, simply created new sources of resistance to these improvements. Whereas in the 1980s the government had sought to avoid paying for the improvements required by the EU, from privatisation onwards both the companies and OFWAT tried to avoid making such investments. During the passage of the law, the government tried to insert a clause to exempt the privatised water companies from prosecution by the European Commission (EC) for failure to comply with the directives:

“The latter point is of crucial importance to City analysts, with growing doubts about the value of buying into a privatised water industry for which ministers are promising a tough regulatory regime on prices and higher environmental standards requiring heavy investment. Ministers have been seeking to allow privatised water companies to delay implementation of tough EEC directives on drinking water standards.”⁸

This attempt failed: the EC warned the government that it had no power to waive EU laws in this way⁹. The opposition to the requirements of the directives nevertheless continued after privatisation, with OFWAT itself challenging the need for the investment in 1992, 1993 and later.¹⁰

3.3. Public finance for private investment

It is also true that, after privatisation, the finance became available to pay for the necessary investment. This however was partly due to the government injecting a large amount of money, by writing off all the debts of the water companies before privatisation, plus a further “green dowry” to meet the environmental standards required by the EU. In addition to this cash injection, the government allowed the private companies to make large real increases in the price of water, which the RWAs had been prevented from doing, and the private companies were freed from the limits on public sector borrowing.

The final value of the debt write-off was worth over £5 billion, and the green dowry £1.5 billion – roughly equivalent to the total received for the sale of the companies (the water and sewerage companies even gained an extra £120million just by having these gifts in the bank in 1990/91).¹¹ **These public subsidies alone financed roughly one-third of all the investments in the first 10 years of privatisation.**¹² There was a further subsidy, in the form of tax relief on the companies’ profits, worth £7.7 billion¹³. The total amount of public finance injected into the privatised water companies was thus over £14 billion (though much of the tax relief was subsequently clawed back by the ‘windfall tax’ introduced by the new Labour government in 1997).

All of these things could have done without privatisation, as a Financial Times editorial pointed out, in 1989, under the heading “Private Water, Public Costs”:

“One of the Thatcher Government’s odder justifications for privatising the water services is that the state would never have found enough money to clean up the industry to meet the state’s own standards. However, Mr Michael Howard, the minister in charge of the sale, yesterday announced steep price rises stretching to the end of the 1990s and a large injection of government money. This will help pay for improvements in the purity of drinking water and the removal of untreated sewage from rivers as required by the Water Act 1989. These expenditures are necessary, but it is not obvious why privatisation was necessary to achieve them. The Government has now been obliged to put £5.4 billion up front to grease the slipway to flotation, writing off the industry’s debts to the Treasury and adding a cash bonus imaginatively decked out as a “green dowry.””¹⁴

3.4. Shift from equity to debt

When the companies were privatised, they were expected to finance investment like other private companies – by shareholders investing in the company (‘equity’), supplemented by the company increasing its debts by issuing bonds or bank loans. The water companies had almost no debt when they were privatised in 1989 – the government had written off all the existing debts – by contrast, companies in general in the UK have debts representing between 20 and 30 per cent of the total of debt and equity (the ‘gearing’ ratio).¹⁵ The broad expectation was that as the water companies made profits, investors would continue to inject money, and the price limits have been set in order to create this incentive: “*OFWAT’s aim at each price review has been to ensure that returns assumed should provide shareholders with sufficient incentives to provide*

*additional funds, either in the form of retained earnings or new equity, to enable companies to make new investment where this is appropriate.”*¹⁶

But in practice, there has been a sharp and steady increase in debts, and an actual reduction in shareholder equity. The gearing of the water companies has risen from an average of 0% to an average of 60%, with a number of companies having gearings over 75%. Instead of shareholders putting money into the industry, there has been a significant *withdrawal* of shareholder equity from the water companies – the exact opposite of the effect desired from OFWAT’s regulation. It represents a return to the same form of finance used by public sector water operators – indeed, a significant part of the borrowing has been from the European Investment Bank (EIB), a public sector bank owned by the European Union which is able to lend at very good rates. There has been only one case in the 17 years since privatisation, of a water company raising new funds from shareholders, when United Utilities raised £1 billion from rights issues in 2003 and 2005. But only £100 million of this has been invested in the water industry as direct shareholder equity investment – another £200 million has been invested in the form of a loan from the parent group to the water company.¹⁷¹⁸

This happened in two phases. Firstly, during the decade following privatisation, the companies paid out a lot of dividends to their shareholders with a return on capital reaching 12%. Interest rates were however far lower than this, and so the companies preferred to borrow to finance investment, and used the profits from higher prices to pay dividends to their shareholders.

The second phase followed the price review of 1999. Following the 1997 general election, the new Labour government introduced first a windfall tax on utility company profits, and then OFWAT set price caps which required 12% cuts in prices. The combined result was to squeeze the profitability of the industry. The rate of return on capital was halved, from 12% to 6%. The response of many companies to this was to withdraw equity capital as far as possible, and instead use debt to finance the great majority of operations.

Different methods of withdrawing equity were adopted. The most extreme version took place in Wales, where the private water and energy utility was taken over by a consortium of USA energy companies, who wanted to abandon the water business altogether. They transferred all the assets, liabilities and statutory functions to a not-for-profit company, run by an appointed and self-perpetuating group of individuals, and financed entirely by debt. (This entity is neither elected by citizens nor owned by shareholders or customers, but is often wrongly described as a cooperative or a mutual). Another company proposed complete withdrawal of equity from Yorkshire Water, by selling the company to a consumer cooperative, but this was abandoned as a result of fierce local opposition.

Other companies have simply reduced their equity stakes and replaced them with debts, including Anglian and Southern water. The water only companies have undergone a number of similar restructurings: for example East Surrey issued a £100m bond; Mid Kent Water was purchased by a management buyout, the Swan Group, funded predominantly by debt from WestLB¹⁹; there was a similar deal at Portsmouth Water, backed originally by Royal Bank of Scotland; Veolia’s former shareholdings in Bristol Water and South Staffordshire were purchased by an investment fund, Ecofin Water and Power.²⁰

The objective in these proposals has been for the shareholders to sell their investment and maximise the price they get for it. This was most apparent in the proposal to sell Yorkshire Water to its customers in 2000 (subsequently disallowed by OFWAT), which would have delivered up to £1 billion to the shareholders, more than twice what they had paid for the company in 1989, in addition to the £350m which had been received in dividends already.²¹ The Financial Times commented on this proposal that: *“From the shareholders’ point of view, spinning the water and waste assets into a mutual, financed entirely by debt, is all gravy”*.²² One analyst commented that: *“The turn to mutualisation, far from representing a return to a form of public ownership, represents an exit strategy for the infrastructure industries and a mechanism for evading price regulation, at the expense of consumers. We can expect more subtle variants on the mutual theme to surface in the future. That this should happen within 11 years of privatisation is testimony to the failure of the policy”*²³

As a result, the gearing of the companies – the proportion financed by debt rather than equity – has risen from nearly zero at privatisation to over 61% in 2005.²⁴

3.5. The cost of capital

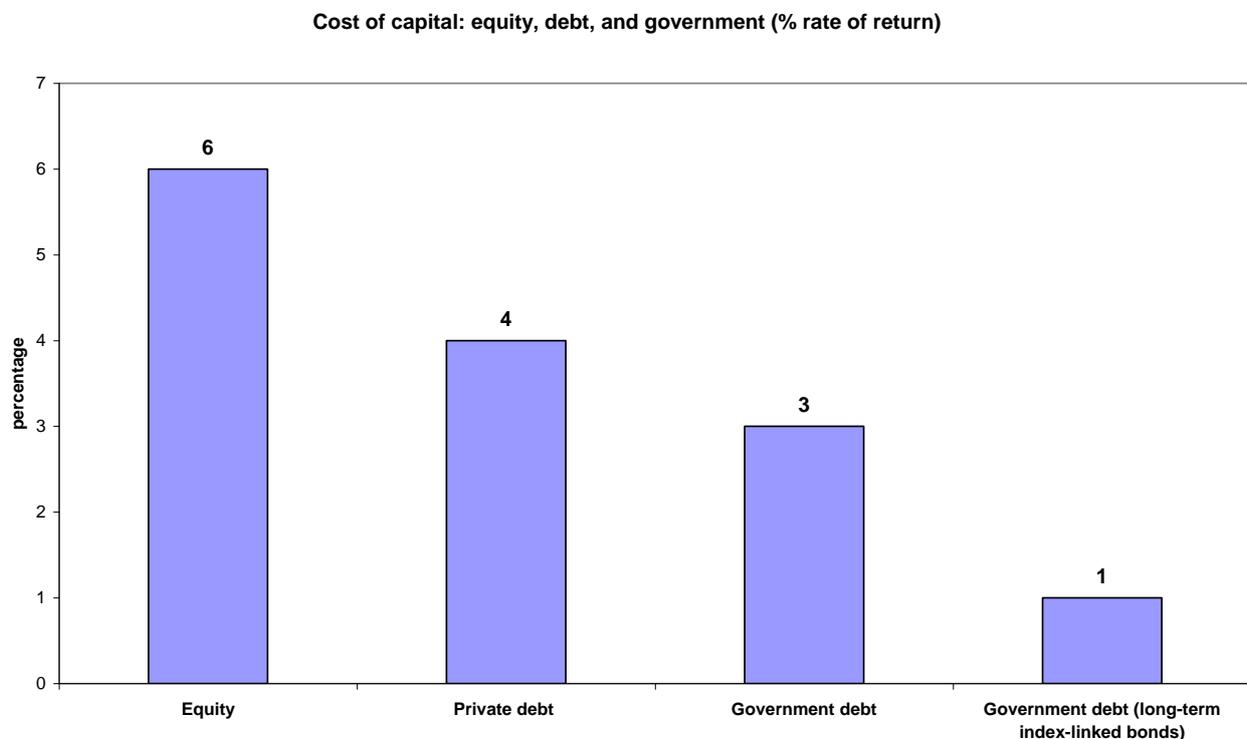
The effect of this change has been to highlight how expensive it is to finance investment using shareholders' equity. As OFWAT has acknowledged: "debt financing has, other things being equal, been a significantly cheaper source of finance than equity since privatisation".²⁵

Indeed, OFWAT pointed this out very soon after privatisation, in a 1991 paper which estimated that the cost of equity for the water companies was about 5%-7%, the cost of company bonds about 3% to 5%, and the cost of government bonds about 2%-4%.²⁶ A detailed study of long-term rates of return over the whole the 20th century, commissioned by OFWAT in 2003, concluded with similar figures: that the long-term average cost of equity is around 5.5%-7.5%, whereas the 'risk-free' rate (typically of government bonds) is about 2.5%.²⁷ OFWAT also noted that the actual cost of long-term government bonds since World War 1 has been less than 1%²⁸, which is also the effective cost of long-term index-linked bonds observed at the start of 2006.²⁹ The figures used in these papers for government debt are broadly in line with other estimates.³⁰

The central numbers in these estimates are shown in the graph. Simplifying, they mean that if a private company replaces equity with debt, the cost of capital falls by roughly a third. If a company has an equal mixture of debt and equity – 50% gearing – then its average cost of capital is 5%, and moving from here to 100% debt would reduce the cost of capital by a fifth.

Moving to 'risk-free' government debt would reduce it still further (and if the actual rate of long-term government bonds is achieved, the cost of using capital is one-sixth of the cost of using equity). As the IMF recently observed: "*private sector borrowing generally costs more than government borrowing..*"³¹ Because the water industry is very capital intensive, the potential savings are very significant.

Chart A. Cost of capital estimated by OFWAT and others



Source: OFWAT, Helm 2006.³²

¹ IMF PPPs, para 22

OFWAT and other regulators have however been very concerned that this drift to cheaper debt undermines the basic concept behind privatisation, that private shareholders can drive efficiency improvements. A 2004 report on whether the structure of the industry was still ‘fit for purpose’ concluded reassuringly that it was.³³ In 2006, a paper by economist Dieter Helm³⁴ was followed by a joint paper from OFWAT and OFGEM [the regulator for gas and electricity] on ‘Financing Network Services’³⁵. Helm discusses four different models of finance (including “private equity in partnership with direct pension fund investment”), but – like all the other papers - ignores the possibility of public ownership. Yet elsewhere in the same paper Helm himself points out that: “The alternative—and the overwhelmingly dominant one in recent history—is state ownership and guarantees. Roads, and now much of rail, remain in that category in Britain, and across Europe, nuclear electricity in France and municipal water are in this category too.”

4. Efficiency and productivity

One of the major expectations of privatisation was that it would improve the efficiency of the water industry. Private ownership was expected to bring stricter cost management, driven by the incentive to increase profit margins, and so the productivity of the companies would improve, enabling consumers to benefit from lower prices as well the companies benefiting from higher profits. OFWAT’s system of regulation is also designed to create incentives for the companies to increase their profits by making efficiency savings. The expectation would therefore be that the operating costs of the industry should be reduced.

4.1. Productivity before and after privatisation

The data on operating expenditure does not however show any significant reduction in the 15 years since privatisation. After adjusting for inflation, the operating expenditure reported by OFWAT increased in the early 1990s, before falling back to the same level as the year after privatisation.

Table 2 Operating expenditure of water companies 1990-91 to 2004-05

	1990-91	1994-95	1998-99	2004-05
£m. 2004-05 prices	2946	3219	2955	2937
Index 1990-91=100	100	109	100	100

Source: OFWAT reports on financial performance, PSIRU calculations.³⁶

However, changes in operating expenditure reflect not only productivity changes but also outputs, and so a level performance in terms of operating expenditure still reflects a growth in productivity. For example, the EU directives on quality require not only increased capital expenditure but also higher maintenance costs: an EC study estimated that the wastewater directive alone requires an extra £290million per year in operating expenditure by 2010.³⁷ The overall productivity of the water companies has certainly increased since privatisation, but there remains the question what has been the impact of privatisation and regulation on productivity.

The empirical evidence indicates that there has not been any significant improvement in productivity performance since privatisation. A study analysed the growth in productivity in the five years before privatisation, and the 10 years after privatisation, and concluded that: “despite reductions in labour usage, total factor productivity growth has not improved since privatisation.”³⁸ A further study using a different method showed that total factor productivity may have improved after 1995 but “neither paper finds any evidence of an increase in TFP growth that can be directly attributed to privatisation”³⁹. Since 1999 the performance appears to have got worse. A paper commissioned by OFWAT in 2004 found a decline in productivity growth rates after 2001. This study focussed on operating expenditure, but it also found that for the water only companies “capital efficiency appears to be declining ... particularly after the 1999 price review”.⁴⁰ A further study, published in 2007, with a further change in methodology, confirmed the broad picture, and concluded that: “while technical change improved after privatization, productivity growth did not improve ... average efficiency levels were actually moderately lower in 2000 than they had been at privatization.”⁴¹

So the private companies cut jobs more rapidly than was happening in the 5 years before privatisation, but, although labour productivity has risen slightly faster, when other factors are taken into account, including capital, the total factor productivity of the companies has grown less rapidly since privatisation than it was doing in the five years before privatisation.⁴²

The table summarises this evidence.

Table 3 Growth of productivity before and after privatisation.

	Before privatisation 1985-1990 Average annual % change	After privatisation 1990-1999 Average annual % change	2000 -2003 Average annual % change
Growth in outputs	2.7	2.6	
Change in employment	-1.9	-2.8	
Labour productivity	4.5	5.4	
Total factor productivity	2.3	1.6	
Opex productivity (water & sewer cos)		1.9*	1.8
Opex productivity (water only cos)		1.3*	1.2

Source: Saal and Parker 2001.⁴³; Stone and Webster 2004⁴⁴ and author's calculations

*Opex productivity average for period 1993-1999

The studies also found that the companies had been increasing their prices faster than their increases in costs, which suggests that the regulatory regime of OFWAT has failed to fix prices to reflect efficiency gains: "Moreover, total price performance indices reveal that increases in output prices have outstripped increases in input costs, a trend which is largely responsible for the increase in economic profits which has occurred since privatisation."⁴⁵

4.2. Public ownership and efficiency

While these results may seem surprising, they are consistent with other findings that privatisation is not connected to greater efficiency.⁴⁶ The IMF observed in 2004 that in relation to the supposed efficiency of the private sector "*the theory is ambiguous and the empirical evidence is mixed*"⁴⁷. A World Bank paper in 2005, reviewing studies on the water industry, worldwide, concluded that "*there is no statistically significant difference between the efficiency performance of public and private operators in this sector*".⁴⁸

Studies of the UK privatisations in general have concluded that there is "*little evidence that privatisation has caused a significant improvement in performance. Generally the great expectations for privatisation evident in ministerial speeches have not been borne out*"⁴⁹, and were "*unable to find .. evidence that output, labour, capital and TFP productivity in the UK increased substantially as a consequence of ownership change at privatisation compared to the long-term trend.*"⁵⁰

The historical evidence on the UK water industry, the actual experience under privatisation in England and Wales, and global experience all indicate that the industry would be at least as efficient under public ownership.

4.3. Employment, outsourcing and training

The private companies have steadily reduced employment in the industry. As the previous table shows, they have reduced the numbers employed at a faster rate than was being done before privatisation.

Many of the private water companies have replaced direct labour by outsourcing work to contractors. Between 1994-95 and 1998-99 there were 22% cuts in labour costs, around £90 million, but nearly half of this was offset by a rise of £40million in the cost of agencies and contractors services.⁵¹ Over the next five years, to 2004-05, labour costs were cut by a further £16 million (4%), but with a £9 million increase in agencies and contractors, as companies have contracted out functions that were previously carried out by their own employees.⁵²

Outsourcing in particular is known to have a significant negative effect on the level of training, as sub-contractors seek to reduce overheads in order to submit tenders lower than competitors. In 2005 there were signs that OFWAT had begun to recognise that outsourcing could have negative implications for the quality of labour in the industry, and so on the industry's performance. It warned the new owners of the Surry and East Sutton water that if they outsourced an increased amount of work in the future "we might require further licence modifications... to ensure that the regulated business retained control of its outsourced functions, to enable it to meet its responsibilities as a water undertaker."⁵³ Otherwise OFWAT has paid almost no attention to employment policies in the sector.

The training standards of the industry have nevertheless been maintained through the Sector Skills Council for electricity, gas, waste management and water (EUskills). This has two distinctive features; firstly it is a government-funded organisation, and secondly it involves joint working arrangements between the employers and trade union in the industry. EUskills has identified future skill needs for the industry, developed new National Occupation Standards for revised NVQs, and developed Apprenticeship and Foundation Degree frameworks, and a transferable training 'passport' scheme.⁵⁴

4.4. Low R & D expenditure

The private water companies are now spending about the same on research and development (R&D) as before privatisation. R&D can develop new technologies that provide more efficient or effective systems - a computerised control system that was developed by Yorkshire Water saved £5m per year in energy costs as well as assisting long-term planning.⁵⁵

The current regulatory system itself discourages R&D, however, because it is treated as an operating cost, not as capital investment, and any efficiency savings are clawed back by the regulator at the end of each 5-year price cap period. So it is in the interests of companies to reduce R&D as much as possible, in particular any R&D that does not have an immediate short-term return. As a result, according to the House of Lords report: "many companies' research and developments budgets have all but disappeared".⁵⁶

This is a common feature of privatised and liberalised sectors. R&D has very high returns, and even higher social returns, but is risky and the benefits may not be limited to the company that does the research. As a result: "Private markets, including competitive markets, are expected systematically to under-provide R&D in relation to what is socially desirable"⁵⁷. R&D policies typically require public finance, either through direct research funding or subsidies: the House of Lords report quotes the example of Australia's government-funded Cooperative Research Centre Programme.⁵⁸

5. Prices

5.1. Prices

The universal experience of water privatisation in the UK was a sharp increase in the cost of water. In cash terms, the average annual bill for water and sewerage rose from £120 per year in 1989 to £294 in 2006, an increase of 245% in 17 years. In real terms, it represents a rise of 39% over and above the general rate of inflation.

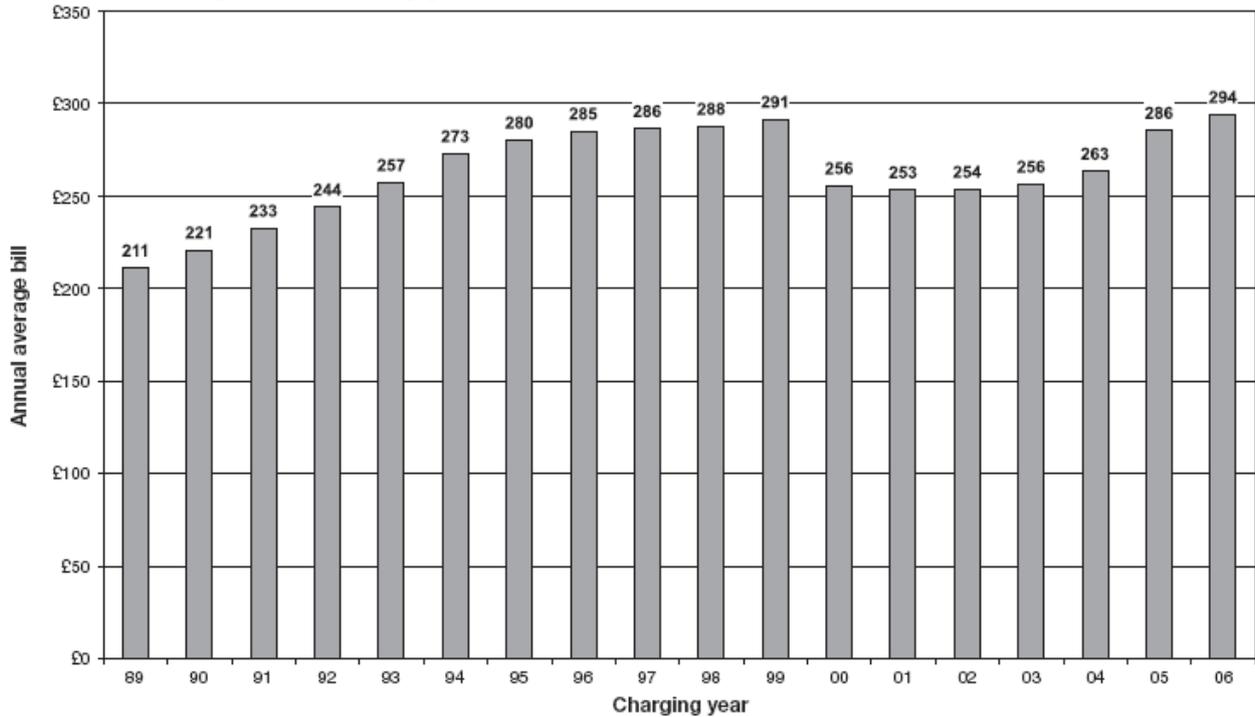
The pattern of rises shows clearly that there was an initial rapid rise during the early 1990s, slower but still significant rises during the later 1990s, and then a one-off drop of about 12% in 2000, following the price review. The price reductions in the 1999 review were largely due to 'clawing back' the overgenerous settlements of previous years. Prices then levelled out, but since 2004 have risen sharply once again, following a new price review. The increase from 2004-2006 is the highest rise over two years since 1993-1994.

A breakdown of the component elements in the water bills shows that operating costs have remained roughly constant in real terms (as noted above). The entire increase in customers' bills is due to the various elements

associated with capital – capital charges, interest, and profits – which have approximately doubled, in real terms, over this period.⁵⁹

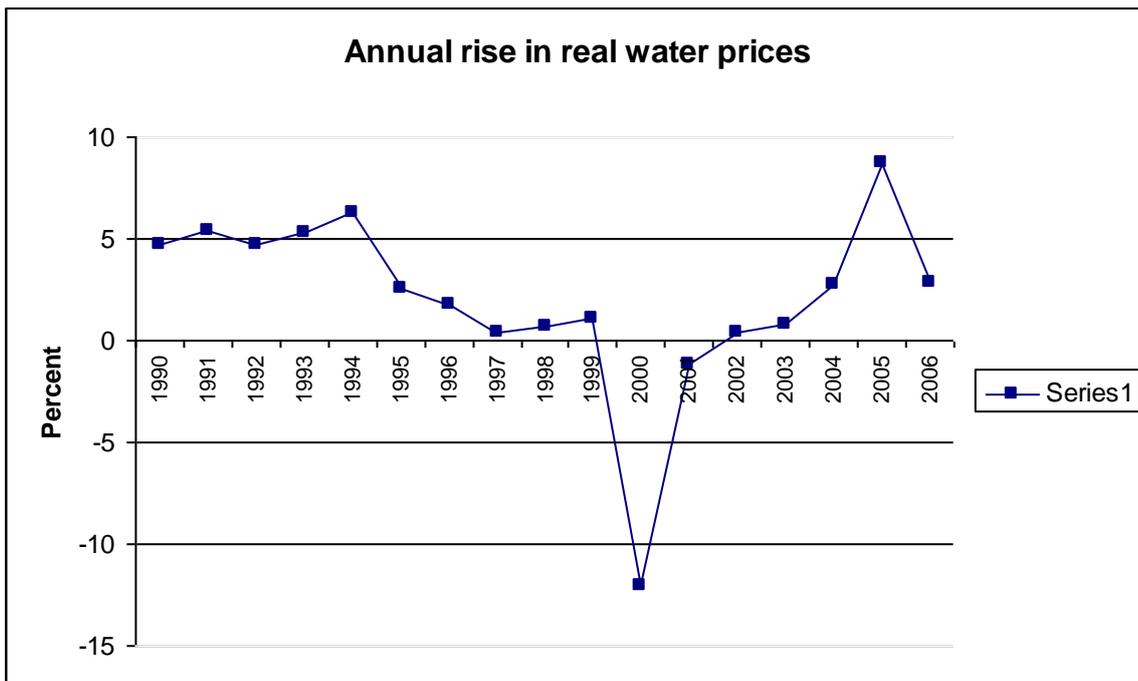
Chart B. Average annual cost of water 1989-2004

(£ real terms, 2006 prices, excluding general inflation)



Source: OFWAT 2006⁶⁰

Chart C. Annual rise in prices, 1989-2006



Source: OFWAT 2006⁶¹, author's calculations

5.2. International comparisons

It is difficult to make international comparisons of household charges on a comparable basis. However, industrial users are invariably charged on a volumetric basis, with less adjustment for social policy reasons, and so international comparisons over time could be expected to show the impact of pricing by water companies.

Results from a survey of these charges by consultancy firm NUS suggests that water in Britain has become relatively more expensive since privatisation. In 1988-89, the last year of public ownership, the NUS survey of water costs for industrial users showed that British companies paid relatively low charges for water: Britain was “ninth in the NUS league table, behind five of its EC counterparts including Italy.... The NUS figures show that in 1988-89, the cost of water in the UK was less than half that in Australia and West Germany.”⁶² In 2005 the corresponding NUS survey showed the UK was in third highest position, with costs nearly double those of Australia, 70% higher than in Italy, and only 18% lower than Germany and 23% behind Denmark.⁶³

5.3. Impact on poor: threat of cut offs, inadequacy of support system

Following privatisation there was a sharp rise in the number of households being disconnected. The rate tripled in the first 5 years, with 18,636 households disconnected in 1994.⁶⁴ But there was widespread opposition to this practice on social and health grounds. When their powers to disconnect were curtailed, the companies started using the ‘pre-payment meter’ for customers unable to pay their bills. This supplied water when charged with a card: otherwise the household would get no water. They thus operated as self-disconnecting meters. By 1996 over 16,000 had been installed, according to OFWAT, which led to “a startling increase in the number of hidden disconnections associated with these meters”. Birmingham city council successfully challenged the legality of the meters, and the 1999 Water Act confirmed this by making it illegal for water companies to disconnect customers’ water supply, or to install pre-payment meters or ‘trickle valves’.⁶⁵

Nearly one-third of those on the lowest incomes are already having to pay more than 3% of their income for their water and sewerage bills, and a similar proportion of the unemployed, even on average income. The numbers paying above this level fell from 2000, but are now increasing, due to the new surge in water prices over and above inflation. The government treat this level of 3% of income as a ‘sustainability indicator’, i.e. if people are paying more than 3% of their income for water then the price level is not sustainable.⁶⁶

The only systems for assisting those with difficulties in paying resemble 19th century approaches. There is a set of highly restrictive rules for special assistance, which are publicly funded but administered by the private companies, and the companies themselves may also provide charitable handouts at their own discretion. The House of Commons Environment, Food and Rural Affairs, the House of Commons Environmental Audit Committee, and now the House of Lords have all argued that “people suffering from serious difficulty in paying their bills should be helped through the benefits and tax credits system”.⁶⁷

The private companies have nevertheless been pressing since 1999 for the restoration of their right to cut off non-paying customers, and/or install cut-off meters, claiming that the level of non-payment, and the size of outstanding debt, is too high. (since companies have now been found guilty of exaggerating these bad debt figures, the data they offer may be more questionable). The House of Lords report surprisingly responds to this pressure by recommending the use of ‘trickle flow’ meters to deal with the “completely unacceptable” problem of unpaid bills: “water companies should be permitted to disconnect them partially from the water supply”.⁶⁸ The report refers with approval to the practice of water companies in Victoria, Australia, but appears unaware of a report which showed arbitrary variation in company practices, with one company restricting nearly 2% of all its customers, with many of those restricted being so poor they were entitled to concessionary rates, and one company restricting the water flow for over 14 days in most cases.⁶⁹

Table 4 Water poverty in England and Wales 2004**Table B of Cross Government Review of Water Affordability report****PERCENTAGE OF HOUSEHOLDS SPENDING MORE THAN 3 PER CENT OF DISPOSABLE INCOME ON WATER AND SEWERAGE BILLS**

<i>Average Income</i>	2004–05	2005–06	2009–10
Working household with children	1.2%	1.5%	1.9%
Working household without children	3.2%	3.8%	4.1%
Non Working household with children	16.5%	19.0%	23.0%
Non working household without children	29.9%	33.4%	36.5%
Pensioners	11.6%	13.6%	16.9%
All households	7.9%	9.2%	10.7%

<i>Lowest income quintile</i>	2004–05	2005–06	2009–10
Working household with children	6.3%	7.4%	9.5%
Working household without children	29.5%	33.2%	37.2%
Non working household with children	20.6%	23.3%	27.6%
Non working household without children	47.1%	51.7%	55.0%
Pensioners	28.0%	32.3%	37.5%
All households	29.4%	32.9%	36.9%

Source: CCWater evidence to House of Lords ⁷⁰

6. Regulation and gaming

Under the privatised system, the regulator, OFWAT, is responsible for setting price limits and incentives so that the companies, while making a profit, can deliver the service, and the prices, that consumers want. The water companies are responsible to their shareholders for achieving the best possible return. The system is intended to result in regulations which create incentives for the companies to improve their performance, but also creates incentives for the companies to try and arrive at a more favourable deal for themselves at the expense of consumers.

6.1. 'Unexpected' savings on capital expenditure

There is strong evidence that OFWAT has been unable to deal with active and persistent 'gaming' by the companies in order to gain higher profit margins. This gaming happens around the price caps set by OFWAT in the price reviews, which effectively set the level of water prices in England 5 years in advance. The companies submit their projections of expenditure and claim that they need to increase prices to cover this spending. OFWAT then has to try and make its own assessment of the accuracy of these forecasts, and then set the prices. The companies have every incentive to mislead the regulator, by exaggerating the capital expenditure necessary – then they get allowed to charge higher prices, but the real expenditure is lower, and so they can pocket the difference as increased profit.⁷¹ The whole process is in effect a game between the regulator and the companies.⁷²

The process began to be noticeable in 1994, after OFWAT's first price review was finalised, and the companies' price caps for the next 5 years had been fixed. Some companies 'discovered' that they had made 'capital efficiency' savings, or that they did not need to spend so much on capital expenditure in future. The companies, then made use of this to justify paying extra dividends⁷³: Yorkshire Water paid out an extra £50million in dividends justified by savings in its capital programme (OFWAT later suggested that Yorkshire Water PLC's failures to ensure a reliable supply during the drought of 1995, or to control leakage and flooding from sewers, had to be related to the company's dividend policy⁷⁴); North West Water found £400m savings from capital efficiencies, and also increased dividends to shareholders rather than cutting prices;⁷⁵ Thames Water likewise passed the benefits of a £350m reduction in forecast expenditure to shareholders rather than customers:

*"Britain's biggest water company is to cut its investment programme by £350 million - but it will not be passing on the savings to its 7 million customers. Thames Water has no plans for early price reductions or rebates. Instead consumers - whose bills have increased by 50 per cent since privatisation in 1989 - face yet another rise in April, by inflation plus 0.5 per cent. The latest price rise was decided by the industry regulator, Ofwat, during the five-yearly price review last year. It was based on a £2.1 billion capital investment plan agreed with the company. But now, six months after the review, Thames says its investment target is only £1.75bn - down £350m, or £70m a year - equivalent to £10 off every domestic bill."*⁷⁶

For the period 1995-2000 as a whole, capital investment totalled £17.5 billion - 10%, or £1,900 million, less than had been assumed when OFWAT set the price limits.⁷⁷ This resulted in a corresponding boost to company profits.

The pattern continued in the subsequent period, 2000-2005. This was again obvious after the first year: capital expenditure for 2000-2001 was £700 million below projected levels. The underspend continued during the rest of the period, and capital expenditure for the full period 2000-05 was around £1.7 billion lower than the assumptions underpinning price limits over the five years as a whole, at £17.7 billion, compared with the £19.4 billion assumed, a shortfall of 9%. This again provided a boost to profits. From the last ten years, the companies have enjoyed windfall profits of over £3.4 billion as a result of these underspends. As a result: "Profits are at the highest levels that we have seen over the last five years."⁷⁸

The problem got even worse in 2005-2006, when the underspend in a single year reached nearly £1 billion, 22% lower than the level assumed by OFWAT when setting the price limits: the regulator's comment on this shortfall was the mild observation that "the companies concerned will face a stiff challenge if they are to deliver all the outputs required of them over the five-year period."⁷⁹ Yet the same report notes that the companies managed to increase dividends to shareholders by a total of £700 million (£385million plus £313 million in special dividends) – so all the increase in dividends, and more, was made possible by the shortfall in capital expenditure.⁸⁰

Table 5 Using capital underspend to boost dividends 1995-2006

Period	Underspend as percentage	Underspend/boost to profits in £million
1995/96-1999/2000	-10%	-1,900
2000/01-2004/05	-9%	-1,500
2004/05-2005/06	-22%	-960
TOTAL	-9.5%	-4,360

Source: OFWAT 2000, OFWAT 2005, OFWAT 2006

The 2005 stakeholder survey contains a scathing summary of views on a key part of the process, mainly from the companies themselves: "The cost base methodology is widely seen as flawed. It is open to gaming and different companies take different approaches. Many see it as unlikely that the wide variations in unit costs can be explained by efficiency."⁸¹

6.2. Severn Trent and others: deceiving the regulator

The recent scandals concerning Severn Trent and other companies also confirms the existence of gaming, which may involve illegal behaviour, and the difficulty for OFWAT in identifying it and countering it. The scandal emerged as a result of whistle-blowing, and not as part of Ofwat's regulatory scrutiny. A manager, David Donnelly, said in 2004 that he had been instructed by his bosses to exaggerate figures of debts owed by non-paying customers: Severn Trent denied this, and denied that customers had been overcharged.⁸²

A year and a half later, however, OFWAT produced a report on the allegations which "found that Severn Trent Water had provided regulatory data that was either deliberately miscalculated or poorly supported. This led to price limits being set for the water company that were higher than necessary, which would have resulted in customers paying £42 million more by 2009-10."⁸³ There were also allegations that Severn Trent had misrepresented information on leakage, which has been referred for examination to the Serious Fraud Office for a possible criminal prosecution – their investigation was still ongoing in May 2007.

The allegations prompted further confessions and discoveries of errors. Southern Water confessed to having made mistakes about its responses to customers, and failure to make payments due to customers; the Serious Fraud Office investigated these too, but finally decided not to prosecute.⁸⁴ Thames Water⁸⁵ and Severn Trent itself⁸⁶ admitted that they had misrepresented data on its response to customer enquiries, which also affects customer bills; Tendring Hundred admitted it had made an “accounting error” in its estimates of income from metered customers, and overcharged customers £5 per head as a result of this unfortunate mistake.⁸⁷

6.3. Profits, dividends and directors pay

The water and sewerage companies have paid their owners good dividends ever since privatisation, but 2006 has been notable for a significant rise in such payments.⁸⁸ In 2005-2006 dividends paid by the water and sewerage companies rose by over 64%, to a total of £1,797.7 million. The biggest increase in dividends came from Thames Water, whose parent company RWE was in the process of trying to sell. This is equivalent to over half of the total amount invested in water and sanitation by these same 10 companies the year before. Income of the highest paid directors, by contrast has ‘only’ risen by 7.6% - still much faster than inflation or average earnings.

Table 6 Dividend payments and highest paid director, 2005-2006

	Dividends			Highest paid director		
	2006	2005	% change	2006	2005	% change
Anglian	305.7	233.6	30.9	408.0	362.0	12.7
Dwr Cymru	0.0	0.0	-	331.7	355.0	-6.6
Northumbrian	73.8	67.6	9.2	278.5	250.8	11.0
Severn Trent	234.3	162.0	44.6	973.8	708.2	37.5
South West	197.9	79.5	148.9	232.0	231.0	0.4
Southern	44.8	43.4	3.2	203.0	254.0	-20.1
Thames	276.0	45.8	502.6	397.0	385.0	3.1
United Utilities	344.7	317.5	8.6	791.5	814.0	-2.8
Wessex	52.2	42.1	24.0	186.0	173.0	7.5
Yorkshire	268.3	100.2	167.8	175.0	164.0	6.7
Total	1797.7	1091.7	64.7	3976.5	3697.0	7.6

Source: Company annual reports

6.4. 25 year concessions, plus 25 years notice of termination: eternal private monopolies

There is no competition in the water industry. The private water companies hold regional monopolies, created by the act of privatisation in 1989, when the companies were sold to private shareholders complete with statutory rights to enjoy these monopolies. There was thus no competition for these monopolies in the first place. The Water Act 1988 specified that these monopolies are in fact concessions, lasting 25 years from the date of privatisation, and thus due to expire in 2014, so at least in principle it would be possible to either terminate or invite tenders for the licenses, as happens in France when private concessions come to an end.

The 1988 Act did not provide for what would happen at the expiry of the concessions, but placed some constraints on the ability of ministers to terminate them. The Water Act 1992 introduced a much stronger constraint: government ministers had to give companies at least 10 years notice before terminating these concessions. In 2002, OFWAT lengthened this period even further, to 25 years. The stated purpose of the proposal was to create stability and security: *“Ofwat today published proposals to reduce regulatory uncertainty in the water industry by increasing the minimum ten-year notice period for the termination of a company licence to 25 years.... Under the current arrangements notice would have to be given by 2004 for licences to be terminated by 2014. OFWAT Director General Philip Fletcher said the approach of 2004 was creating uncertainty for the water industry, which was likely to drive up the costs of raising finance. Mr Fletcher said: “Customers’ interests are best served by a stable regulatory environment that keeps costs down. The longer notice period will enable companies and their investors to plan ahead more securely.”*⁸⁹

The change was proposed in a consultation document on 30 July 2002, and implemented, without publishing any responses to that consultation, in October 2002, by inserting a new clause into the license of all the water

companies.⁹⁰ The timing of the consultation effectively minimised the opportunity for public and parliamentary debate, because parliament was already suspended for the summer holidays, and all comments were required by 24th September, before parliament reconvened again. It is not known what representations were made, as OFWAT never published them. Indeed the consultation paper itself was removed from the OFWAT website by the end of September 2002. All that remains is the press statement issued at the same time.⁹¹ The change was welcomed by United Utilities: “we welcome the decision to change companies’ licences so that the minimum notice period of termination will be 25 years rather than 10 years.”⁹²

The change certainly creates greater security for the companies. It means that a decision to submit the current monopolies to tender for the first time ever, or a decision to end the private monopolies altogether, would take 25 years to implement, in which time it could be reversed by any one of at least 5 different governments. If the clause remains, it effectively provides a government guarantee which protects the privatised companies in perpetuity. This is in sharp contrast to France, which used to permit indefinitely long private concessions, but in the 1990s changed the law to require the periodic submission of concessions to tendering, and limited the duration of concessions to a maximum of 20 years.

6.5. Private regulation

Although regulation is the only way in which the public interest can be protected under the privatised system, the extent of public participation and ability to influence the process is severely limited. The regulator issues papers on which the public and various stakeholders are invited to make submissions, but the companies themselves are not subject to public examination. OFWAT and the companies consult and discuss regularly on various issues. The companies own data is protected by commercial confidentiality.

This is a great contrast to the model of regulation in the USA, in which, surprisingly, the companies are subject to much greater scrutiny. Companies are required to make detailed submissions to justify any proposed price increase; they have to provide all information and documents requested by any member of the public or any employee, including supporting documents; public hearings are held, at which all documents and arguments can be challenged by anyone; every decision of the regulator must be supported by published documentation; companies are legally obliged to pass cost reductions on to the public in the form of lower prices; citizens can initiate investigations of utility prices if they suspect excessive profits are being made.⁹³

The system in England and Wales, by contrast, allows none of this. Instead, OFWAT publishes technical papers for consultation at various stages of the process. This practice appears to suit the needs of the companies and investors, but fails to respond to, or even be intelligible to, consumers or environmental groups, according to the responses to a survey of stakeholders in 2005.⁹⁴

In relation to transparency of the system, and OFWAT’s clearer explanation of its methodology: “This was highly regarded by the water companies, and also very much appreciated by the City respondents”. But the consumer representatives at Watervoice saw it differently: “WaterVoice is much less happy than other groups with transparency. Its main concern around transparency of decisions seems to arise from an inability to get information about the reasoning for the Draft Determination following the Final Business Plan.” This is the crucial stage where OFWAT proposes price limits in response to the companies’ forecasts: if the connection between the two is a mystery to the consumer body set up to represent consumer interests, then the regulatory process is failing badly.⁹⁵

Consumer and environmentalists spelled out their view of the process more sharply:

“WaterVoice sees the review process as structurally unable to take proper account of customer interests, rather than this being a result of Ofwat’s failure to follow proper procedure. Their view is that in the way the review process is structured City and government views are accorded more importance than customer needs, and issues of affordability and social justice are not included in the process. Environmental groups have concerns about whether all discussions between Ofwat and government were fully in the public domain. They see Ofwat as selective of information used in consultations and feel that Ofwat does not take sufficient account of either customer or environmental interests.”⁹⁶

The same discrepancy emerges again in relation to communications:

“City communications were very highly regarded, with City briefings and so on very much appreciated; this benefited both the City institutions themselves and also the water companies appreciated the more certain financial environment.

While recognising the difficulties Ofwat faces in communicating with a wide range of audiences, respondents in consumer groups and WaterVoice in particular raised concerns about the level of knowledge necessary to understand Ofwat publications, and suggested that more consumer-friendly publications might be beneficial.”⁹⁷

One such example can be seen in the recent joint paper issued by OFWAT and OFGEM on financing networks, which deals with the very significant issue of financing capital investments, received 36 responses nearly all of which were from the companies in the industry, and a few financial investors and consultants. There was no response on behalf of consumers or employees in the water sector or from any elected body, except for one single response from the consumer body for energy, Energywatch.⁹⁸

OFWAT has also been criticised by Environmental Agency chief executive Barbara Young, who complained in December 2004 to a parliamentary committee that OFWAT has begun to take environmental decisions, by dropping or deferring schemes, even though they were required under EU law and UK policy. She said that Ofwat's behaviour had upset the balance of power in price reviews and had 'significantly diminished our role and the role of the minister'. The agency said the situation had been exacerbated by Ofwat's refusal to put into the public domain even the criteria against which it judged whether green schemes were acceptable, unacceptable or in need of further scrutiny, because Ofwat believed such information was commercially sensitive.⁹⁹

More recently, OFWAT has been criticised by the Public Accounts Committee of the House of Commons for a series of weaknesses, including slowness to use its full enforcement powers, failure to collect reliable data on water consumption, leakage, and efficiency savings.¹⁰⁰

7. Droughts, water shortages and leakage

7.1. Predictable droughts and water stress

The water shortages of 2006 have highlighted the problems of providing adequate water supplies, especially in the east and southeast of England, and provoked a large volume of public criticism of the water companies. The drought of 1995 also led to problems and widespread public criticisms. The companies mostly present these as short-term problems, related to water shortage in a particularly dry summer, with short-term solutions such as hosepipe bans (although one company, Folkestone and Dover, has successfully won permission to make metering compulsory for all its customers).

The problems however are not short-term. The Environment Agency presented a detailed report in 2002, which showed that there are long-term problems in England of water supplies which are inadequate to meet demand. It proposed long-term solutions, with priority given to controlling demand, through reducing leakage, and reducing the volume of water used by consumers.

The problems have also been well known for many years, ever since privatisation. In 1990, just after the sale of the water companies, the Guardian reported: “Britain could be said to be in a state of hydrological stress...in some districts, particularly in the east, only four or five of the last 26 months have been wetter than average...What is also giving rise for concern is the very low groundwater or underground water levels which are well below average in all regions but notably low in eastern regionsthe water mains leak alarmingly: South West Water loses 32 per cent of everything it supplies, Thames 25 per cent, North West up to 30 per cent, a total in England of Wales of about 12 billion litres a day or enough for London and more.”¹⁰¹

The question to be addressed is therefore whether the water companies have consistently failed to address a long-term problem, and in particular why leakage levels remain so high in a situation of long-term scarcity. The same article in 1990 advanced an explanation for this: “...the water companies curtsy to the idea of repairing their leaks but there is no real incentive for them to do so because water is not priced at its real environmental costs”.¹⁰²

7.2. Limitations of the economic level of leakage

Regulation of leakage fails to correct these problems. The principle mechanism used to regulate leakage is the “economic level of leakage” (ELL), which is defined as the level at which it would cost more to make further reductions than to produce the water from another source.¹⁰³ This has a number of limitations.

Firstly, it gives no weight to the general case for conserving water supplies to reduce the stress on the environment: Thames Water is proposing a new reservoir and a new desalination plant, whilst still allowing leakage of around one-third of its water and failing to meet the targets set by Ofwat”.¹⁰⁴ (The concept of economic level of leakage has even been used to argue for an *increase* in leakage levels. In 1995, a World Bank team criticised low leakage levels (between 1% and 5%) in Germany, and recommended that the country should allow *higher* leakage to develop, until the costs of plugging the leaks was equal to the price of the water saved.¹⁰⁵)

Secondly, the relative costs of stopping leaks or using more water vary between companies, and so each company uses an agreed formula to work out its own ELL: but it is then treated as a commercial secret, and the ELLs are not published, and so there is no scope for public debate around these targets.

Thirdly, in practice, the method accepts the current levels of leakage, because the water companies are now operating at or very close to the economic level of leakage.¹⁰⁶

The House of Lords report concluded that more stringent leakage targets need to be set, based on a broader concept of “sustainable level of leakage”, which would also take greater account of the environmental and social implications, determined after public debate.¹⁰⁷

7.3. Leakage rates in England and Wales

It is now well-known that the water companies in England and Wales on average lose nearly a quarter of their treated water through leaks, that the worst company, Thames, loses one-third, and that in at least some parts of the cities the leakage rates are even higher. OFWAT produces regular reports on leakage, based on data collected from the private companies. The latest data shows leakage rates of between 13% and 33%, with an average of 23% across all the companies in England and Wales. OFWAT

Table 7 Leakage rates, 2004-2005

	Leakage rate (% of water lost)
Anglian & HPL	18
Welsh Water	26
Essex & Suffolk	14
Northumbrian	22
United Utilities	26
Severn Trent	26
South West	18
Southern	16
Thames	33
Wessex	20
Yorkshire & York	23
Water Supply Companies	
Bournemouth & West Hampshire	13
Bristol	18
Cambridge	19
Dee Valley	16
Folkestone	17
MidKent	18
Portsmouth	17
South East Water	18
South Staffs	22
Sutton & East Surrey	15
Tendring Hundred	17
Three Valleys/North Surrey	17
INDUSTRY TOTAL	23

Source: OFWAT, House of Lords

7.4. Leakage rates and international comparisons

The causes of leakage are obviously to be found in local conditions – the state of the pipes, joints, valves and pumps through which water travels, and these in turn derive from local factors such as the age and materials of the pipes. Leakage rates themselves are also affected by the length of the piped network – the longer the network the more likelihood there is of leakage – and by local practices: for example, reducing the mains water pressure reduces leakage, although at the expense of steady flows from the taps. Hence the wide variation of reported leakage rates, even within England,

Nevertheless, the problem of wasted resources is a common one, and factors such as age of networks apply to many cities, so international comparisons of leakage rates can be helpful in identifying whether leakage is taken more or less seriously in than in other cities and countries. Comparisons are sometimes made at the level of countries, but outside the UK better data is more often available for cities (or regions) where a single water company – private or municipal – is responsible for water supply. The comparisons which follow use data gathered by OFWAT ¹⁰⁸, data from a recent EC research project, Watertime ¹⁰⁹, and a recent study by the Asian Development Bank ¹¹⁰, it is possible to present some comparisons with cities in continental Europe, Asia, and the USA.

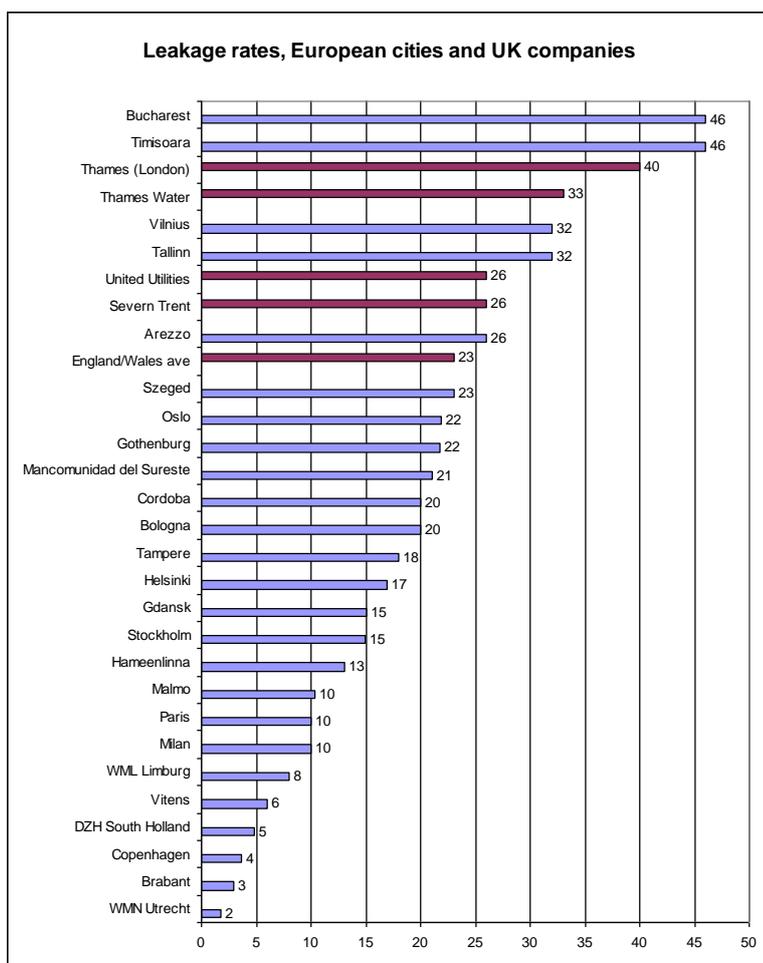
The evidence suggests that leakage rates in England and Wales are in the same area as leakage in the former communist countries of eastern Europe, or the better performing cities in Asia, but below the rates achieved in many cities in northern and western Europe.

- **Europe**

The chart below sets out data on a number of cities in Europe. Some of it comes from the OFWAT international comparison, and some from the Watertime project. The UK average, and the companies covering the major cities in England, are all at the higher end of this list, in the same area as figures for the eastern European cities. Most of the north European cities – in Netherlands, Denmark, Sweden and even Poland, have leakage rates under 20%.

The relatively low leakage rate for Paris demonstrates the feasibility of reducing leakage rates. Paris reduced its water losses from over 60 million cubic meters in 1989 to less than 20 million cubic meters in 2004, a cut of two-thirds. Because the level of consumption also fell over the same period, the fall in the leakage rate was less dramatic but was still halved, from about 20% in 1989 to about 10% in 2004. ¹¹¹

Chart D. European cities compared with English companies



Sources: OFWAT, Watertime

- **USA**

A comparison with the leakage rates of companies operating water services in some cities in the USA shows that the English company average of 23% is higher than the mid-range and average (20%) for the USA companies. The English companies covering the largest cities are at the high end. Five of the USA companies in the table – Pittsburgh, Chicago, Missouri, New Jersey and Indiana – were also owned by Thames Water (although at the time of writing in 2007 they have been sold).

- **Asia**

The English companies' performance looks better when compared with cities in Asia. Only three out of 18 cities in a 2004 study record a worse figure than the average for England and Wales; Thames Water's leakage rate is about the same as the average figure for the 18 Asian cities (34%), in between Ulaanbaatar (Mongolia) and Karachi (Pakistan). There are two reasons, however, why this comparison is less favourable than it appears. Firstly, the figures for Asian cities are for 'non-revenue water' (NRW), which includes not only leakage but water which is 'stolen' from the system or not paid for. That is a negligible element in the UK, but is a significant factor for many Asian cities. In Colombo, for example, the NRW figure for Greater Colombo of 35% is made up of 23% leakage and 12% illegal connections and other forms of non-payment.¹¹² So on leakage alone, Colombo may be performing at about the same level as the English and Welsh companies – and better than Thames Water. Secondly, two of the worst leakage rates in this table are recorded by cities whose water is partly managed by English companies. In Manila, where the overall leakage rate is 62%, half the city has been managed since 1995 by a joint venture (Manila Water) partly owned by United Utilities. In Jakarta, half the city has been managed by a Thames Water subsidiary since 1997: the leakage rate in Thames' half of the city is 48%. The water shortages experienced in Jakarta in summer 2006 also have a familiar ring:

“Water customers represented by the People's Coalition for the Right to Water (KRUHA) complained Tuesday about the service provided by the city's two water companies. They urged the Jakarta administration to end its partnership with foreign firms PT Palyja and PT Thames PAM Jaya

(TPJ). "PT Palyja and PT Thames PAM Jaya simply haven't been performing well. The problem with the water shortages in Jakarta lies in their bad management, but instead they blame the dry season's effect on Jatiluhur Dam, where we get about 80 percent of our water supply," said Hamong Santono, KRUHA's coordinator..... the water shortage was still the problem of the companies. "What we cannot understand is why the two companies couldn't anticipate this problem."¹¹³

7.5. OFWAT resists merging of water resources in south-east England

The problem of water resource management in the UK may have been made worse, especially in the south-east, by OFWAT's resistance to mergers. The south-east is characterised by a patchwork of water-only companies, whose boundaries date back to long before privatisation (and even the regional reform of 1974). The area is now subject to major water stress, to such an extent that the residents of Folkestone and Dover are subject to compulsory metering.¹¹⁴ There have been a series of proposals in 1997, 2002, and again in 2007 to merge some of the companies in this area, with a key argument being the potential benefits from sharing water resources. All of these have been resisted by OFWAT, and the merger plans of 1997 and 2002 were rejected.

OFWAT's rationale for this opposition to mergers has been to maintain a sufficient number of companies for the 'virtual competition' exercise, whereby OFWAT compares the performance of different companies in order to set targets (although, as the previous sections have discussed, the benefits of this exercise are dubious). But in resisting these mergers, OFWAT has perpetuated an inefficient structure, especially in relation to water resource management: without that opposition, such mergers could have happened earlier and provided greater water security for the Southeast.

In 1997, the two water multinationals (Generale des Eaux and SAUR) who then owned most of the small companies, including Folkestone and Dover, proposed a merger, which they justified by arguing that "the merger would result in much improved management and use of water resources in the area."¹¹⁵ That merger was blocked, following opposition from OFWAT, which argued that the resource issues could be met by contracts between companies. The Financial Times described the decision as "baffling both the City and the environmentalists": the companies had argued that the merger "would optimise the use of scarce water resources in the south of England...[and] delay the construction of an environmentally unfriendly reservoir by splitting **Mid Kent's** resources between two companies owned by Generale and **Saur** on either side of it: Folkestone & Dover and South East Water", but the decision was made because the competition authorities agreed with OFWAT's views on competition.¹¹⁶

In 2002 there was a proposed takeover of Southern water by Vivendi (now Veolia), which already owned Folkestone and Dover: again, this was opposed by OFWAT, and rejected. But the Consumers Council told the House of Lords that:

"With the existence of more than 20 water companies across England and Wales, the structure of the water supply network is fragmented. Although many companies operate bulk supply agreements with neighbouring companies, there is little scope to transfer water on a regional basis as ring mains through more than one company area do not exist. We think there is a strong case to look at integrating of supplies across company borders in water stretched areas such as the south-east to help address water distribution problems. For example, had the proposed acquisition of Southern Water by Vivendi Water UK Plc been approved by the Secretary of State, the completion of a ring main around the periphery of Kent would have been an option for the newly formed company."¹¹⁷

OFWAT also argued against the latest proposal – a merger between Mid-Kent Water and Southeast Water – on the familiar grounds that it would lose comparators for its virtual competition exercise, and dismissed the arguments for water resources in one paragraph, repeating its view that the resource issues could be met by contracts between companies and saying that "there is evidence of co-operation between companies to manage resources in the south east".¹¹⁸ However, this latest proposal was finally approved by the Competition Commission in 2007, despite OFWAT's opposition. A consultant's report for the Commission had emphasised the benefits in terms of better management of water resources:

"...a number of significant benefits in managing water resources in the South east of Englandwhich could not be achieved unless a merger was in place...an improvement in the security of

supply of customers in the enlarged region in the short term, a removal of risk surrounding existing or alternative schemes, and a removal of the supply-demand imbalance in the longer term. The merging of the two companies would allow a long-term regional strategy to be developed....a number of cross-border strategic interconnections could be put in place... this would provide a regional basis for transferring water from areas of surplus to areas of deficit....This level of long-term strategic planning would not be possible without a merger.”¹¹⁹

The Environment Agency also supported the resource benefits of the merger, implicitly criticising OFWAT's complacency over supply contracts: “companies preferred to be self-sufficient this might explain why resource development had taken precedence over demand management or sharing of supplies.... the merger would increase flexibility in the area and the increased connectivity between the two companies would optimize the small resource surpluses that were available. This would not be as easily achieved with two separate companies....negotiating with fewer partners to try to come to a consensus on key issues would be much easier.”¹²⁰

8. Accountability

8.1. Democratic deficit

Under the current system in England and Wales neither the water companies nor the regulator are accountable to elected representatives. Elsewhere in Europe and north America, water remains the responsibility of municipalities, and so elected local councillors are responsible to the public, through local elections, for the water service – even if the operations are outsourced to a private company. In the great majority of cases, the water companies are themselves wholly owned by the municipalities, and therefore the companies themselves are also directly accountable to elected representatives.

There is by contrast a total democratic deficit in the UK.

The water companies themselves are accountable only to their shareholders, who are investors concerned with the return on their investment. (Even in Wales, the company is accountable only to a board of appointed, not elected, individuals). Neither the companies nor the shareholders are subject to any democratic accountability.

More surprisingly, OFWAT itself is not accountable to ministers, nor to parliament. The constitutional status of OFWAT is as a non-ministerial government department. It fulfils the functions that one would expect a government ministry to perform, but without being controlled by a minister, and this is what makes it ‘independent’. Ministers cannot instruct OFWAT – they can only submit their views to OFWAT, and hope that OFWAT takes them into account, like anyone else in the country. Parliamentary committees can invite OFWAT to give evidence, but OFWAT is not accountable to parliament through ministers.

Unlike the health service, or the Home Office, where government ministers have to take responsibility for the service, in the case of water the secretary of state for the environment can simply say to parliament that it is not his or her responsibility, but that of OFWAT. OFWAT employs 188 people at a total annual cost of £10.6m, but this is not paid for out of taxation, but out of license fees charged to the private companies (the costs of which are recovered by the companies through higher prices to consumers), so is not accountable for using money raised through taxes authorised by parliament.¹²¹ The only way that parliament can hold regulators to account is by changing the legislation concerning the sector¹²². Short of this, OFWAT can only be subjected to instruction through judicial review, by bringing a court case arguing that it has exceeded or misused its powers.

8.2. No coherent public policy machinery

One result of the lack of democratic accountability is that there is no clear forum for debating public interests in policies on water. In practice OFWAT is making a series of policy decisions on crucial public interest matters such as levels of investment and prices, but cannot claim to represent the public interest. The Environment Agency is equally detached. The private companies can only be expected to represent their shareholders' interests. DEFRA has an arms length relationship with the regulators and no direct relationship with the water companies.

This problem is made worse because of the fragmentation of bodies with different responsibilities in the sector.

There are no national or regional bodies which bring all the different interests and stakeholders together, nor are there national or regional forums for public debate of those policies. The recent House of Lords report gave a succinct summary of the situation:

“Responsibility for water management is dispersed and unclear. We need clearer lines of responsibility, greater accountability and more effective funding procedures.... The current institutional arrangements in England and Wales allocate responsibility for different aspects of water management to water companies, OFWAT, the EA and the DWI. The boundaries between the respective responsibilities of each organisation are by no means clear.”¹²³

The House of Lords also pointed out that despite the existence of special consumer complaints machinery and a special bureaucracy on consumer issues, the system does not provide public mechanisms for consumers as citizens to influence policy decisions: “consumers of water and those interested in the water environment in England and Wales have little direct contact with the water service provider—nor do they have any influence on the companies’ *modi operandi* or the standards with which the companies must comply. This lack of direct contact risks impairing attempts to engage effectively with the public and influence their behaviour, and contrasts with the strong public involvement in water services in countries such as France and the United States of America”.

As a solution, the House of Lords recommended the creation of regional boards to draw up long-term water management plans, with representatives from the existing regulators and consumer bodies, acting as advisors to the national regulators and the Regional Assemblies - which are made up of 70% elected councillors and 30% stakeholders.¹²⁴ This would at least represent a first step towards reintroducing bodies which had some electoral and stakeholder representation.

8.3. Ownership and accountability: private equity funds

Even the private companies themselves have become less accountable. As discussed earlier, there has been a steady trend to replace equity with debt financing. As a result, an increasing number of the water companies are now owned by private equity (PE) funds, which specialise in buying companies using a large amount of debt (‘leveraged buyouts’). This form of ownership has even less accountability than stock exchange companies, because there is no obligation to publish detailed annual reports and quarterly updates (although OFWAT continue to receive a separate set of annual accounts for the water company).¹²⁵ PE funds have also been the subject of great criticism for their readiness to make cuts in operations in order to generate substantial profits for the financial partners of the PE firms themselves: a recent study concluded that leveraged buyouts consistently result in cuts in wages for the workforce.¹²⁶

This issue has been highlighted by the takeover of Thames Water by a large PE fund, Macquarie, through a new holding company called Kemble water. In response to an OFWAT consultation paper on the proposed structure for running the company, the consumer council for the region stated bluntly:

“The ownership and voting structure is Byzantine, and does little to convince us that Kemble will act in the best interests of Thames Water and its customers. The multi-layered structure seems to be designed to allow investors to extract as much as they can from Thames Water on the grounds that they need to ensure that all of the various holding companies receive ‘appropriate’ returns. We fear that Thames Water will be seen as a cash cow to be milked for all it is worth. This would not be in the short, medium or long term interests of the company, its employees and its customers.”¹²⁷

Only 5 of the large water and sewerage companies are now part of stock exchange quoted companies, and financial investors hold dominant stakes in 3 of these; only one of the water-only companies is stock exchange quoted, and that also has a dominant financial investor. Even the multinational water companies have retreated, so that only 4 of the smaller water-only companies are owned by French groups specialising in water.

Table 8 Ownership of water companies in England and Wales, April 2007

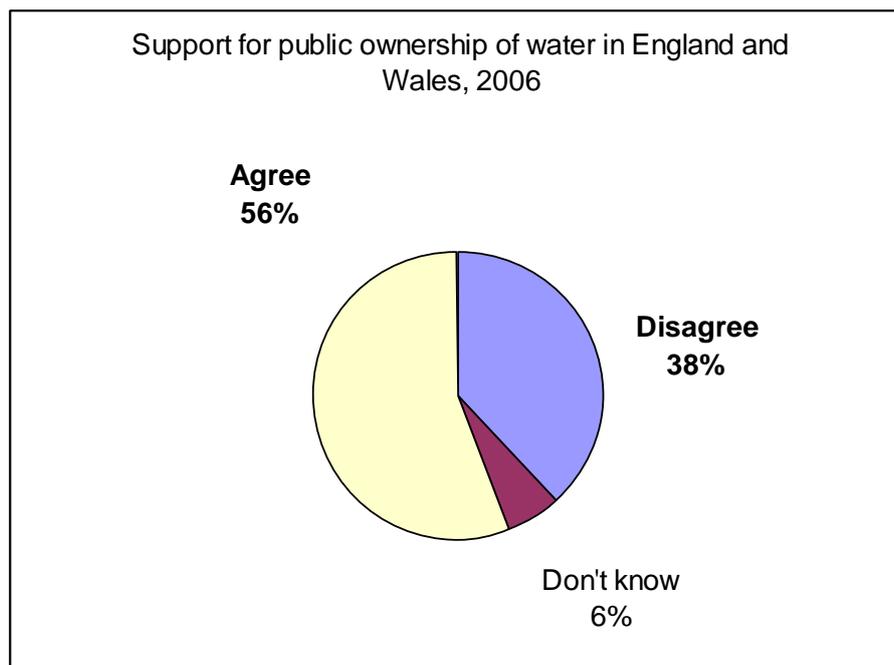
(Type of owner: SEC = stock exchange quoted (UK); M = multinational; PE=private equity; NPC=not-for-profit company; P= privately owned company)

Company	Owner	Country	Type of owner	Comments
Anglian Water	Osprey/AWG	UK	PE	Consortium of 3 PE funds, inc. 3i
Northumbrian Water		UK	SEC	25% owned by Ontario Teachers Pensions, 15% by fund managers Amvescap, 5% by Barclays Bank
North West Water	United Utilities	UK	SEC	
Severn Trent Water	Severn Trent	UK	SEC	
Southern Water	Royal Bank of Scotland	UK	PE	Owned by SWC: RBS owns 49% of SWC (PPI Investments is other main shareholder).
South West Water	Pennon Group	UK	SEC	Pennon is 30% owned by 5 financial investors
Thames Water	Macquarie	Australia	PE	
Welsh Water	Glas Cymru	UK	NPC	
Wessex Water	YTL	Malaysia	M	
Yorkshire Water	Kelda	UK	SEC	Two PE investors buy 7% stakes in April 2007
Bournemouth and West Hampshire Water	Biwater	UK	P	Private company, operates internationally, but not in EU outside UK.
Bristol Water	Agbar/Suez	ES/FR	M	
Cambridge Water	Cheung Kong Infrastructure	Hong Kong	M	
Cholderton Water	Cholderton Estate	UK	P	Private family owned
Dee Valley	-	UK	SEC	35% of shares owned by Axa SA.
Folkestone and Dover	Veolia	FR	M	
Mid Kent Water	UTA and HDF	Australia	PE	Utilities Trust of Australia (UTA); Hastings Diversified Utilities Fund (HDF). Bought Swan Group, the holding company of Mid Kent Water. Swan also owns 51% of Halcrow water Services.
Portsmouth Water	South Downs Capital	UK	PE	South Downs Capital is 36% owned by SMIF/Land Securities (PE). SMIF=Secondary Market Infrastructure Fund. SMIF itself was bought by Star Fund (PE) in 2003, sold in 2006 to Land Securities (PE)
South East Water	UTA and HDF	Australia	PE	Macquarie bought South East Water from SAUR in 2003; sold it to UTA/HFM in October 2006, prior to a purchase of Thames Water.
South Staffordshire Water	Arcapita Bank	Bahrein	PE	Formerly known as First Islamic Investment Bank
Sutton & East Surrey Water	Aqueduct Capital	DE	PE	Aqueduct Capital is part of Deutsche Bank. Bought holding company East Surrey Holdings Group (ESH) for £189m in 2006 from Kellen Acquisitions Ltd – part of Terra Firma. Kellen had bought ESH only in October 2005, and then sold off gas companies.
Tendring Hundred	Veolia	FR	M	
Three Valleys	Veolia	FR	M	

9. Majority support for public ownership

The British public still believes that water should be in the public sector, 17 years after the water companies of England and Wales were privatised. In June 2006, 56% of people in an opinion poll believed that the country “would have fewer problems with water supplies if the industry was renationalised and the private companies replaced with a government-owned water board”, while 38% disagreed. The results were consistent across all age groups and regions (see Annex 1 for detailed results).¹²⁸

This poll was taken in the context of water shortages, drought orders, restrictions on consumption, high levels of reported leakage, companies reporting increased profits and higher pay for directors, while water prices continue to rise, but it is consistent with all previous polls in Britain, in which there has always been a large majority in favour of public ownership of the water industry.

Chart E. Popular support for public ownership of water industry

Source: BBC Daily Politics Show Poll Fieldwork : June 14th-15th 2006. Conducted by Populus.

http://www.populuslimited.com/pdf/2006_06_20_Daily_Politics.pdf (see Annex)

This public opposition to water privatisation was apparent throughout the 1980s when water privatisation was being proposed and introduced. The first proposals in 1985 were widely criticised: even a Financial Times editorial suggested that: “the water industry has many special characteristics which seem to justify public ownership”.¹²⁹ A vigorous campaign against the policy was led by the unions, along with “a wide range of different interest groups...[including] some naturally sympathetic bodies such as Labour local authorities, but mostly non-political organisations, such as the Countryside Commission, the National Farmers' Union, the British Pensioners' Association, Greenpeace, the River Thames Society and the Royal Society for the Protection of Birds.”¹³⁰ The government decided in July 1986 to postpone the plans, because the policy could have been a serious political liability in the general election expected the following year: “it did not seem a particularly attractive policy to introduce so close to an election”.¹³¹ A poll in December 1986 showed that 71% were opposed to water privatisation, and only 21% in favour.¹³²

After the government won the June 1987 election, the Financial Times political columnist observed that “The Tories won the election largely because of their past record and a dislike of the alternatives. They would be mistaken to assume that the success implies popular support for their agenda.”¹³³ This was confirmed when proposals for water privatisation were relaunched: despite the election result, polls in October and November 1987 showed opposition at the level of 64% to 65%¹³⁴, and by December 1988 the majority against water privatisation had risen to 75% (electricity privatisation, which was taking place at the same time, was almost equally unpopular, with 69% opposed)¹³⁵. The Times commented of these privatisation plans: “by and large the public sees little point and only disadvantages in them. They seem simply doctrinaire.”¹³⁶

The opposition partly reflected scepticism about the effects of privatisation, with more than half expecting water services to get worse under privatisation,¹³⁷ but also a stubborn continuation of a belief in the importance of the public sector. A January 1988 poll showed a majority favouring a “mainly socialist society, in which public interests and a controlled economy predominated, and where caring for others was more highly rewarded than creation of wealth”¹³⁸, and a June 1988 poll showed that 40% “felt nationalisation gave ordinary people a larger stake in the country” against 35% preferring privatisation.¹³⁹ After a decade with Mrs Thatcher as prime minister, in May 1989, polls showed that British people wanted the public sector to be larger, not smaller: 38% thought more sectors should be in public ownership, 41% felt that things were about right, and only 14% thought that more industries should be privatised.¹⁴⁰

Two very large advertising campaigns tried to change public opinion. The water authorities spent £22million promoting privatisation during 1989, and the government then spent a further £22million to promote the actual sale.¹⁴¹ This expenditure was double that of the largest campaign for a commercial brand that year, the £20million spent by Nestle to promote sales of Nescafe. Despite this, opposition to water privatisation as recorded by the polls rose to 79% in July 1989¹⁴², 72% in November 1989¹⁴³, and remained at 71% in October 1990, nearly a year after privatisation.¹⁴⁴ Water in England and Wales was nevertheless privatised in 1989.

The actual experience of privatisation reinforced the unpopularity of the policy. The companies gained a bad reputation for excessive pricing and profits. As summarised later by a parliamentary committee: *“After privatisation profits started to soar in real terms—between 1990/91 and 1997/8 the pre-tax profits of the ten water and sewerage companies increased by 147% at a time when customers faced continual price rises. Water and sewerage prices rose respectively by 36% and 42% from 1988-1998 (in real terms) with the bulk of the increase occurring in the period up to 1994-1995. The industry faced a public outcry in relation to high levels of directors' pay and profits...”*¹⁴⁵

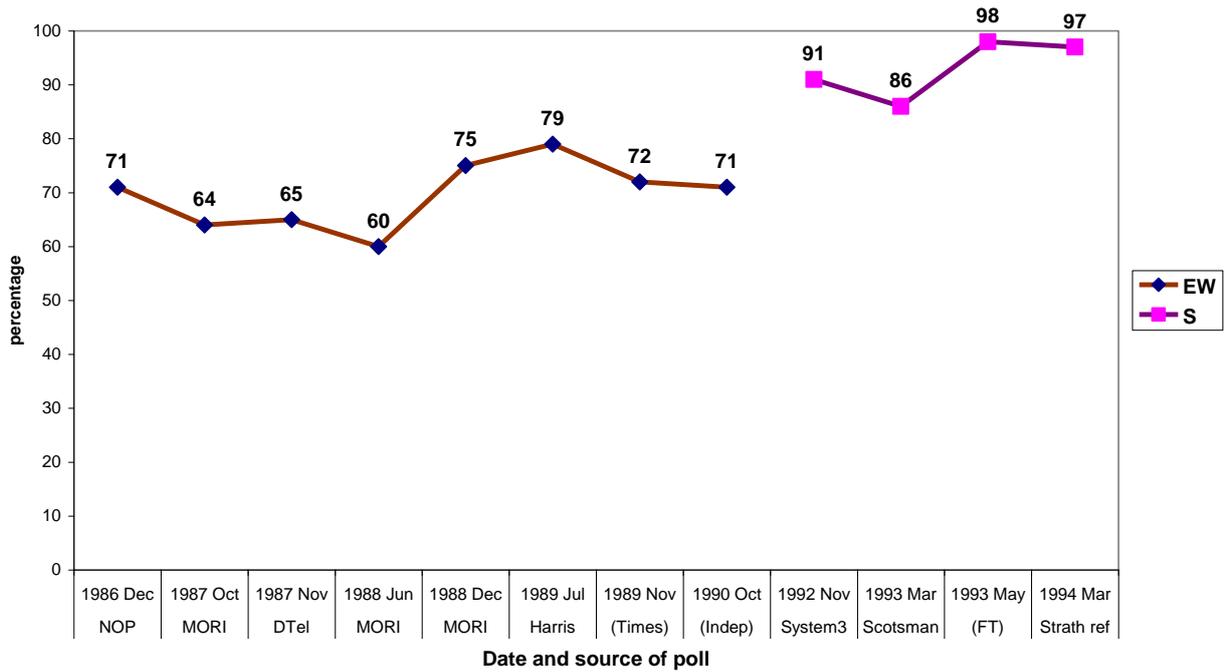
This view was not confined to a particular political perspective. The Daily Mail, a staunch supporter of the Conservative party, ran consistently critical coverage, typified by a feature in 1994 entitled ‘The Great water Robbery’, which slated the companies on all counts: *“In recent weeks the penny has been dropping that something has gone horrendously wrong with the privatisation of Britain's water industry. When it was privatised in 1989 the water industry was hailed as the jewel in the crown of the Thatcherite privatisation programme....In reality, as a string of reports have confirmed - including the latest today from the National Consumer Council - the water industry has become the biggest rip-off in Britain. Water bills, both to households and industry, have soared. And the directors and shareholders of Britain's top ten water companies have been able to use their position as monopoly suppliers to pull off the greatest act of licensed robbery in our history”*.¹⁴⁶

In the early 1990s, the government also proposed to privatise water in Scotland, but public opposition there was even higher: successive polls showed 91%¹⁴⁷ or 86%¹⁴⁸ of people definitely opposed. In March 1994 Strathclyde Regional Council, covering nearly half the population of Scotland, organised a postal referendum on the issue: seven out of ten voters returned papers, a total of 1.2 million people, of whom 97% rejected water privatisation.¹⁴⁹ The government finally abandoned the attempt to privatise Scottish water, and issued an emphatic leaflet at Scottish local elections in May 1994 with the headline “Tories say no to privatisation.”¹⁵⁰ Public resistance to water privatisation remains high in Scotland: a poll in 2004 found that 70% are still opposed.¹⁵¹

In Northern Ireland, the UK government is introducing new water charges which are extremely unpopular with all sections of the community. Even a majority of small businesses were opposed to privatisation.¹⁵²

Chart F. Public opposition to water privatisation in Britain, 1986-1993

Percentage opposed to water privatisation in England and Wales, and Scotland, 1986-1993



Source: Opinion polls reported in Financial Times, Guardian, Times, Independent, Scotsman and Herald, 1986-1993 (see text).

10. Conclusions: improvements through public ownership

10.1. Investment, efficiency, accountability and policy making

This review of experience with water privatisation in England and Wales has identified a series of problems with capital investment, the cost of capital, productivity, quality of labour, price rises, relations between the companies and the regulator, accountability and transparency, and policy formulation. OFWAT addresses some of these issues in its papers and proposals, and attempts to improve and adjust its practice to deal with some of the problems. Many of the issues have also been considered by reports from the House of Lords.

In all these discussions there is no consideration at all given to the possible gains from public ownership and operation of the water sector. This is not surprising. Both OFWAT and the owners of the private companies have clear interests in maintaining a private system, and government policies have been firmly in favour of reducing the role of public ownership for over 20 years.

But there are five reasons why the public debate should include serious consideration of the merits of reforming the water industry under public ownership.

- Firstly, many of the economic problems identified in this review could be dealt with more effectively under public ownership. These include the cost of capital, where public sector debt is a more efficient way of financing the industry than shareholder capital; and the control over prices of an essential service, by eliminating private monopolies with incentives to exploit services.
- Secondly, the political problems of lack of accountability and the need for coherent and public policy making on long-term investments, could be better addressed through public ownership, which would subject the whole sector to the scrutiny of elected representatives and open the industry to public debate.
- Thirdly, water and sewerage systems are owned and run by the public sector in the great majority of countries in the world – no-one had followed the English and Welsh model of privatisation. Public ownership is not an obsolete way of providing water, but the normal way of providing water services in the 21st century, as it was throughout the 20th century.
- Fourthly, public ownership would enable more coordinated and long-term management of water resources, including more flexible sharing and distribution of existing resources, and make it easier to develop a programme to reduce leakage instead of developing new reservoirs or desalination plants.
- Finally, as demonstrated above, a substantial majority of people in the UK continue to express a clear preference for water to be in public ownership, and have never been convinced of the desirability of privatisation at any time before or after 1989.

10.2. Returning water to the public sector

The normal form for public ownership of water services in Europe and throughout the world is by local councils or municipalities, the same as in England and Wales before 1974. To revive this structure now would mean breaking up the existing companies, and also recreating capacity to deal with water in local councils, and so there would be a lot of transaction costs.

The existing regional companies could be transferred to public ownership, owned by the government. The new companies should be accountable to new Public Water Boards (PWBs), to replace the shareholder boards of the private water companies. The PWBs should include representatives of the government, as owners of the new companies; representatives from the county councils in the region covered by the companies; representatives from the Environment Agency; and representatives of stakeholders such as consumer bodies and trade unions. The PWBs could be built on the new Regional Assemblies, which have a

similar structure already. Below the PWBs would be much smaller management boards which would report to the PWB on a monthly basis.

The opportunity should be taken to transform the transparency and accessibility of the new structure. The PWBs should reflect a new public openness and democratic accountability. All documents of the new public companies should be open to the public, including all contracts, except those that concerned individual employees. The monthly meetings of the PWBs should be open to the public – as they were until 1983. Annual public meetings could be held to encourage discussion of the PWBs plans for the coming year.

OFWAT would continue as a government department, but its staff should be returned to political accountability as part of a government department, DEFRA, and answerable once again to ministers. The relationship between DEFRA and the PWBs should enable overall price and investment levels to be the responsibility of DEFRA, while the plans and actions and prices of each regional PWB would be determined by the PWB.

10.3. Bulk water supply and water resources

Another approach would be to create a single, national, public body responsible for managing water resources and all the bulk supply of water from reservoirs and aquifers: a National Water Resources Authority (NWRA). Such a body would naturally have strong representation of the Environment Agency, as well as of government, local councils, and stakeholders. It would be able to develop a long-term plan for managing water resources, free from commercial short-term considerations; could develop the most efficient systems for distribution of bulk water to match demand and so reduce water stress; and so could develop plans to minimise the need for further reservoirs or desalination plants.

A further advantage of such a separate NWRA would be an immediate positive effect on the incentive to deal with leakage. The NWRA would sell bulk supplies of water to the distribution companies, and so the companies would have a significant financial incentive to reduce real leakage losses, because this would enable them to reduce their purchases of bulk water. In Paris, where the city council owns and runs the bulk water supply, the leakage rate was halved in 15 years as a consequence (see above, section 8.3).

10.4. Costs and borrowing

There are a number of standard objections to bringing such a large sector into public ownership. One is that the public sector is assumed to be less efficient. This argument is not supported by the evidence, as has already been discussed: public sector water operators have records on efficiency and productivity which are every bit as good as any private companies.

Two other objections are based on cost.

One argument says that it is too expensive to bring a large sector like water into public ownership: it would increase government borrowing, and therefore increases the long-term level of taxation to pay the interest on these bonds. It is also argued that expenditure on other social services, such as healthcare and education, has higher priority, and so taxes should not be used to finance this kind of change in ownership. (however, this argument cannot be absolute: if a change of ownership puts us in a better position to deal with our water resources, makes policies more responsive to the public, and leads to lower costs and less exploitation of monopolies, then public ownership financed by government bonds should be considered on both political and economic grounds).

The second argument is that it would mean a great increase in public sector borrowing, which would conflict with EU and UK government rules which limit government deficits.

The next two sections address these arguments.

10.5. Public ownership and bond financing: reducing costs

Public ownership of the industry would mean refinancing it, by replacing the present mix of private capital entirely with public sector bond finance. The impact of such a switch to bond financing would not increase the costs to the taxpayer or consumer at all – in fact it would result in a considerable reduction in costs.

This is because debt finance – through bonds or loans – is cheaper than the existing mixture of private equity, bonds and bank loans – . This has been recognised in earlier discussions of converting the companies into mutuals, when OFWAT estimated that the real post-tax cost of debt finance is about 1 1/2 percentage points cheaper than the current mixture of debt and equity.¹⁵³ And, because the water industry is capital-intensive, the effect of using less costly finance is dramatic: in 2000, an analyst at UBS Warburg “estimated that water prices could fall by a further 5 per cent if the industry financed itself more efficiently purely by debt”.¹⁵⁴ This was confirmed from the actual savings achieved when Welsh Water was transferred to a private not-for-profit company, which paid by issuing bonds.¹⁵⁵ It estimated that the effect of refinancing the operation with bonds was to cut the annual financing costs of Welsh Water by around a quarter, saving £50 million a year.¹⁵⁶

The actual savings of bringing the companies into public ownership through bond issues can be estimated from the current data on the cost of equity and debt finance to the private companies. Dividends to shareholders represent a cost of about 8.8% on capital; interest payments on debt represent a cost of about 5% on capital. The total cost in 2004-05 was £2.4 billion. If all this was replaced with public sector debt at 4%, the cost instead would be about £1.5 billion – an annual saving of £900million. If lower cost government debt was used, at 3% or less, the savings could be even greater: long term debt at 2.5%

Public ownership of all the water companies could thus save at least £900 million every year by reducing the cost of capital of the water companies. This is equivalent to a reduction of about 12% off the average household bill for water and sewerage, about £20 per year per person in England and Wales, or an increase of 25% in capital investment.

Annual savings on this scale would open greater possibilities of progress on a number of issues which are currently of great public interest. Price freezes or reductions would become a serious possibility. Capital investment could be increased by 25% or more. This would make possible a more serious and rapid programme for controlling leakage, and/or make it more feasible to finance other proposals, such as proposals for inter-regional transfers of water resources to drier areas such as the South East.

Table 9 Annual savings from public ownership: reduced cost of capital

	Private companies			Public ownership	
	2004-05				
	Equity	Debt	Total	Debt at 4%	Debt at 2.5%
Capital	14.0	22.5	36.5	36.5	36.5
Dividends/interest	1.2	1.1	2.4	1.5	0.9
Cost as %	8.8	5.0	6.5	4.0	2.5
ANNUAL SAVING FROM PUBLIC OWNERSHIP				0.9	1.5

10.6. Government or PWB bonds

The largest savings would be achieved by using long-term 50 year index-linked government bonds. These have the lowest real cost of all: if the estimates discussed earlier are correct, then the real cost of such bonds could be as low as 1%, which would represent a saving of about £2 billion per year over the current costs. Such long-term financing is entirely appropriate to the water industry, which has a guaranteed long-term future, and whose capital programmes are best planned on a long-term basis. Such financing would help release the industry from the commercial short-termism from which it suffers. In addition, pension funds and insurance companies, who are looking for long-term investments but suffering from a severe shortage of government bonds, could positively welcome public ownership financed by such bonds.

If government remains resistant to the idea of using public borrowing, public ownership of the water industry could instead be financed by water bonds issued by the new PWBs themselves (or by a special water bank, owned by the PWBs). The bonds could be secured not against tax revenues but against the revenues from water charges. This is a widespread and normal form of financing water services elsewhere in the world:

municipally owned companies such as Stockholm Water issue their own bonds, which are very highly rated, and the Netherlands water banks are also very highly rated. Public ownership would then have no implications for central government borrowing.

A move to public ownership financed by either of these methods would probably be greatly welcomed by major investors. And it would not necessarily be strongly resisted by all the current private owners, many of whom have been attempting to sell their water companies for years. RWE, for example, might be relieved to sell Thames Water in exchange for secure public sector bonds. It could be positively welcomed by the bondholders and banks who have financed them, as their current holdings would be replaced with long-term public sector bonds. In terms of credit ratings, the absence of private shareholders is a positive advantage, according to the rating agency Standard and Poor, which has stated that: “an ownership structure which excludes shareholders, is viewed as being more prudent from a credit perspective as it eliminates potential pressure for dividends and other shareholder returns.”¹⁵⁷

10.7. EU and government borrowing limits and public ownership

There is therefore no doubt that public ownership would result in lower costs of capital. Nevertheless, it would also result in an increase in the borrowing and debt carried by the public sector, and so the EU and UK rules on public borrowing need to be considered.

The EU rules set a limit on government deficits of 3% of GDP. If the water industry was brought into public ownership through issuing £36 billion in bonds, this would however have no effect on the EU limits, for two reasons. Firstly, it is because the EU, unlike the UK, treats a purchase or sale of a trading operation as a simple exchange, whereby the amount spent is offset by the equal value of the assets bought – in this case the water industry itself. Secondly, if the debt is issued by the newly public PWBs, the EU does not count this as government borrowing. The EU definition of government deficit excludes the borrowing or debt of “commercial operations”, even if they are wholly owned by governments or local authorities. The new PWBs would clearly be “commercial entities” as their income is almost totally from user charges. Bringing the industry into public ownership would thus have no effect on the UK’s compliance with EU rules (see Annex 2 for details).¹⁵⁸

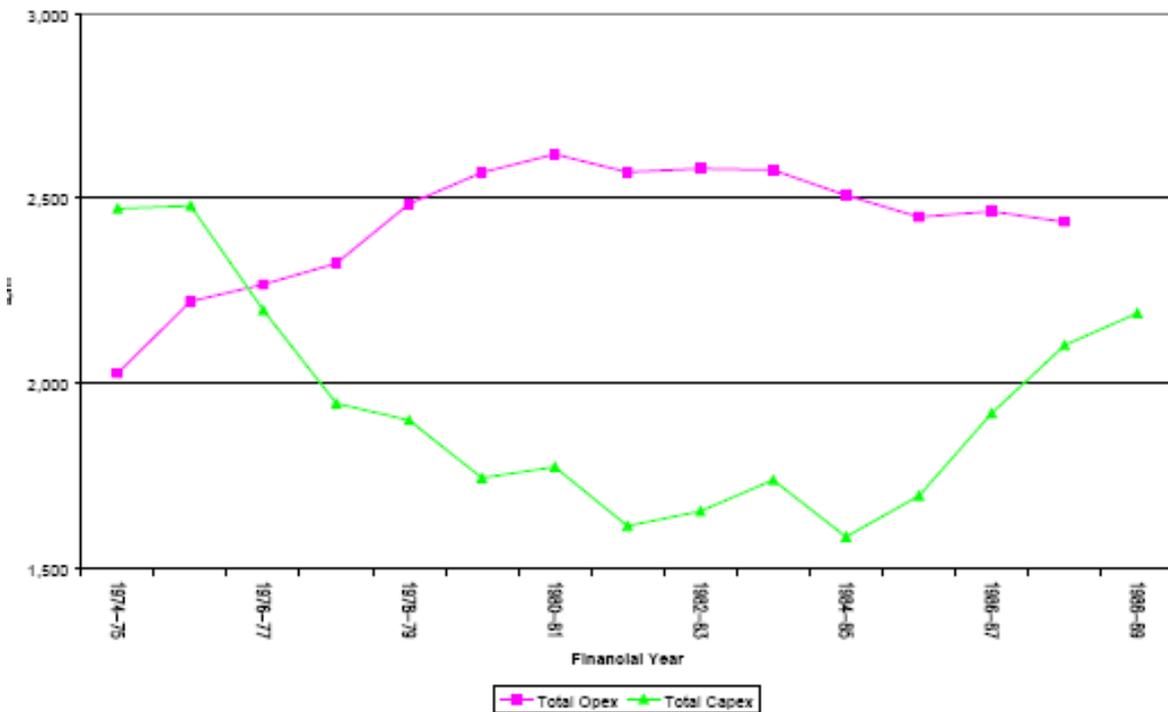
The UK government policies are based on two principles: the golden rule, that “over the economic cycle, the Government will borrow only to invest and not to fund current spending”; and the sustainable investment rule: “public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level.” The UK definition of public sector net borrowing (PSNB) differs from the EU definition in two crucial respects, both of which create artificial incentives in favour of privatisation and against public ownership. Firstly, it includes the borrowing of publicly owned corporations, and so even bonds issued by the PWBs would count as public sector borrowing in terms of UK policy. Secondly, it treats the income from privatising public corporations as reducing the deficit, and the cost of buying corporations as increasing the deficit (whereas the EU approach simply treats these payments as a change of ownership, in which the value of the money paid in either direction is simply swapped for assets of equal value). It is these policies and definitions which create an artificial incentive in favour of private ownership.¹⁵⁹

However, even under the UK definitions, borrowing to refinance the water industry at a much lower cost should, on any definition, be treated as an investment – with substantial returns to the public of hundreds of millions of pounds per year – and should therefore be clearly compatible with the golden rule. This would be true whether government bonds or PWB bonds were used.

Public ownership of the water industry does not affect compliance with EU rules on government deficits, and is fully compatible with the UK’s “golden rule”, as it would represent an excellent public investment, yielding a return to the public of over £900 million per year.

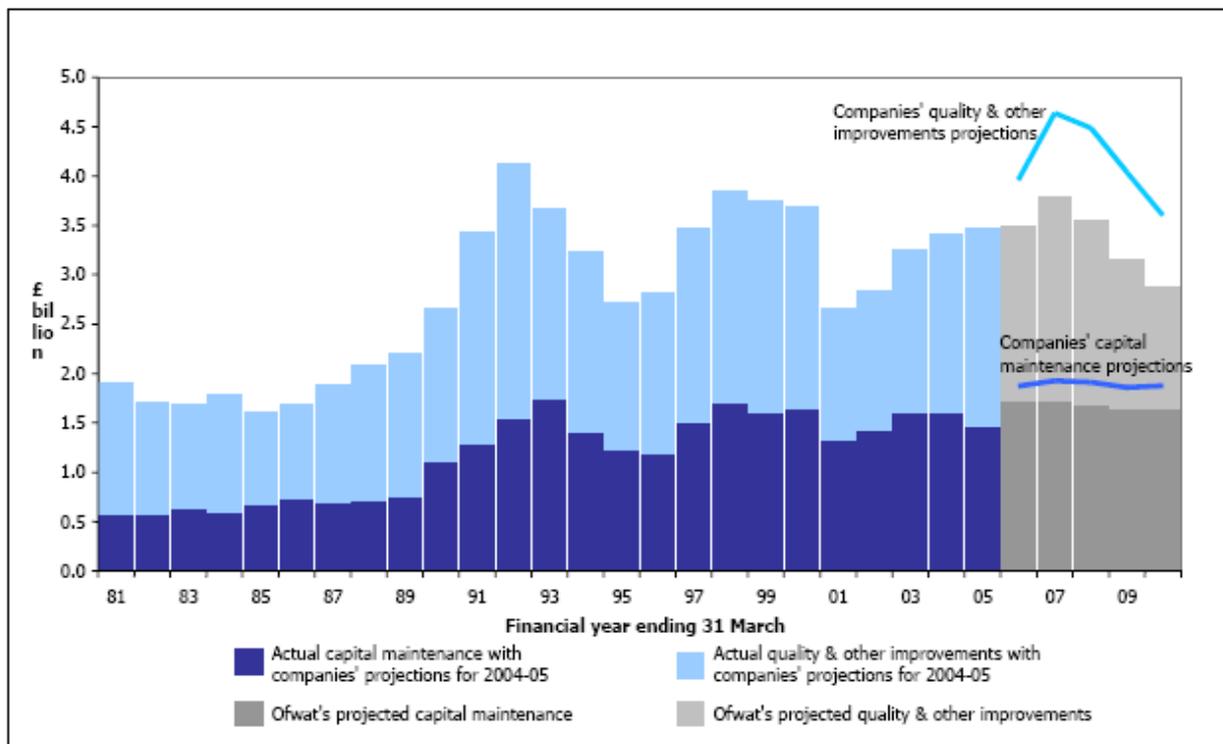
Annex 1 Further charts and tables

Chart G. Trends in expenditure of RWAs before privatisation: operating and capital expenditure of water authorities 1974-1989 (2003-04 prices)



Source: OFWAT ¹⁶⁰

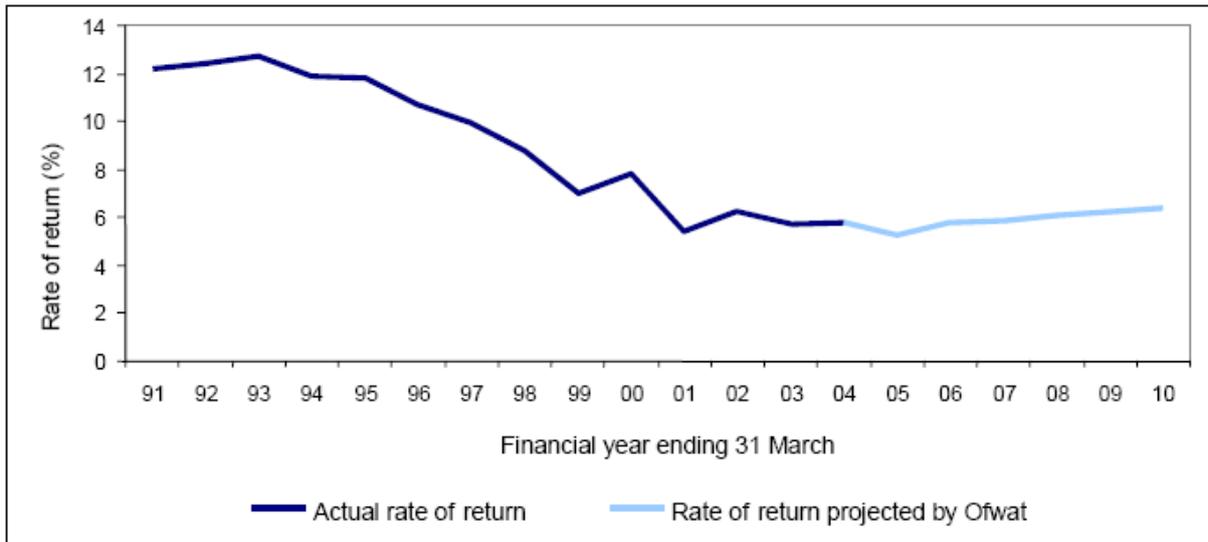
Chart H. Actual and projected capital investment by water companies in England and Wales 1981-2010 (at 2003-04 prices)



Source: OFWAT ¹⁶¹

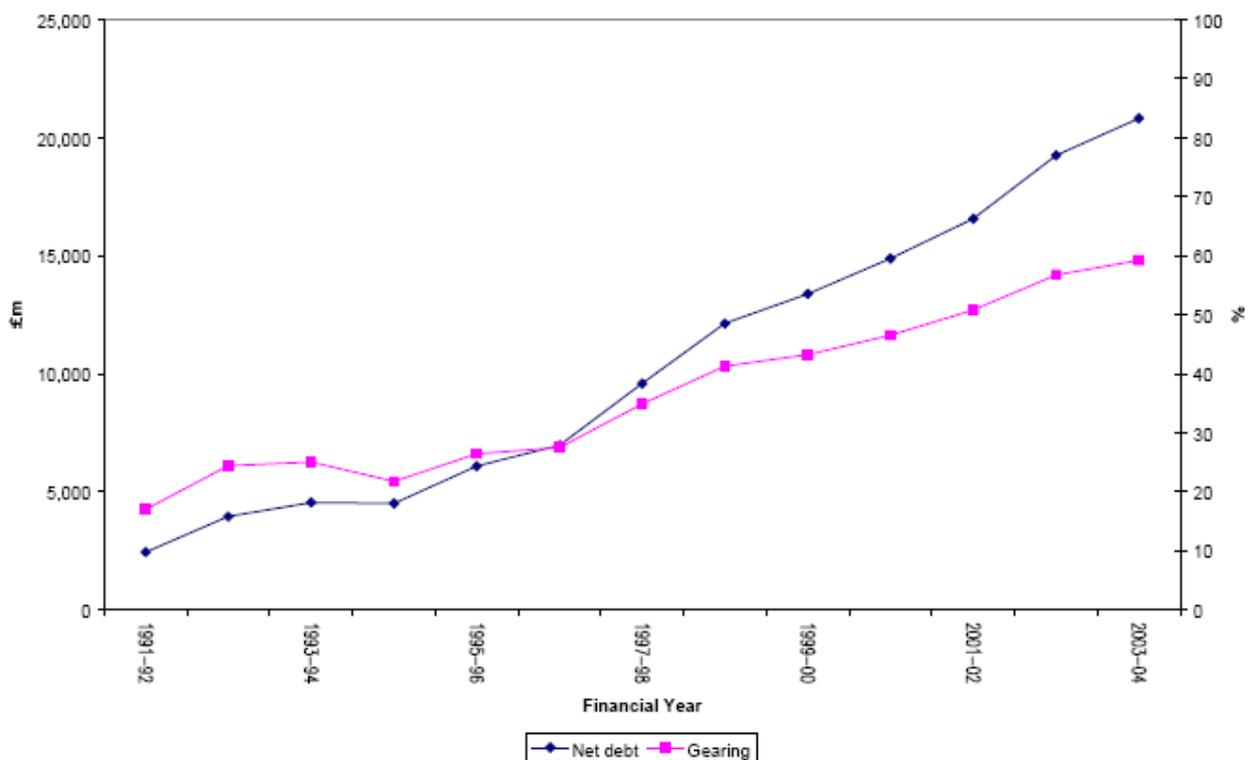
Chart I. Rates of return to water companies 1991-2004, and projected

Figure 6.3.7 Industry post-tax rates of return from 1991 to 2004 and Ofwat's projection to 2010



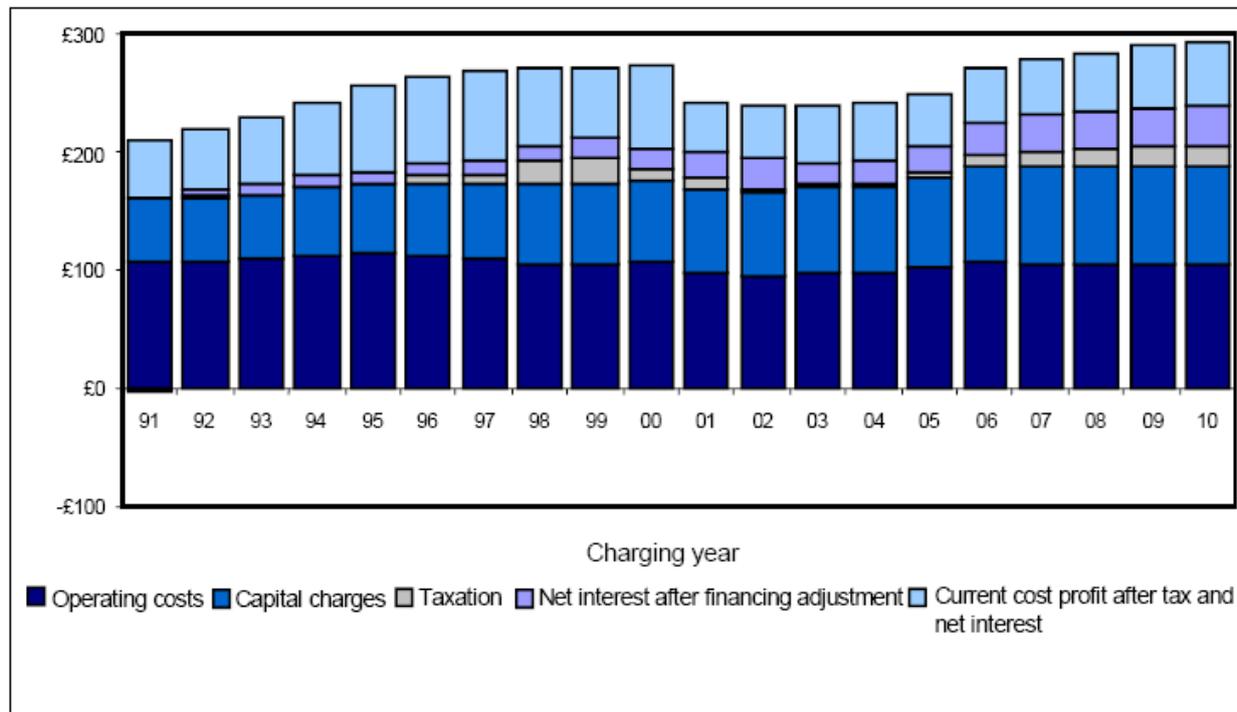
Source: Ofwat

Chart J. Increase in debt of private water companies since privatisation



Source; OFWAT/DEFRA 2006 ¹⁶²

Chart K. Components of the average household bill 1991-2004



Source: OFWAT/DEFRA 2006.¹⁶³

Table 10 International comparisons of water costs for industrial users, 2005

Current Rank	Prior 2004 Rank	Country	Cost (US¢)/M ³	Year on Year Change
1	2	Denmark	219.75	+2.3%
2	1	Germany	206.74	+1.2%
3	3	United Kingdom	169.39	+15.1%
4	6	Belgium	157.72	+1.5%
5	5	France	142.09	+3.6%
6	4	The Netherlands	137.68	-1.9%
7	7	Italy	98.29	+5.5%
8	10	Finland	87.83	+13.1%
9	9	South Africa	86.81	+13.8%
10	11	Australia	86.15	+5.7%
11	8	Spain	84.73	+1.4%
12	12	Sweden	79.71	+3.8%
13	14	Canada	64.78	+5.0%
14	13	United States	61.87	+3.5%

The survey is based on prices as of 1 July 2005 for an organization with an annual usage of 10,000 cubic meters. All prices are in US cents per cubic meter and exclude VAT. Where there is more than a single supplier, an unweighted average of available prices was used. The percentage change is calculated using the local currency in order to eliminate currency movement distortion.

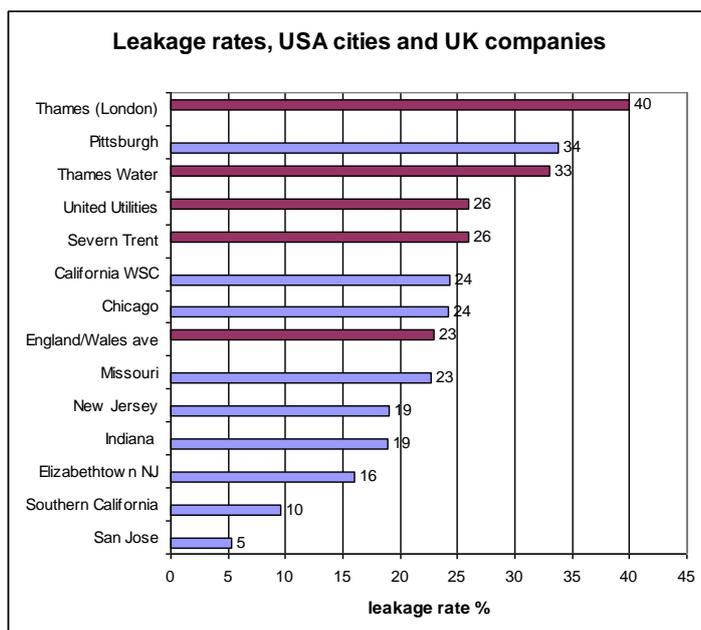
Source: NUS Consulting Goup 2005¹⁶⁴

Table 11 Investment shortfalls by private water companies 2000-2005¹⁶⁵

	Assumed total volume of investment activity 2000-01 to 2004-05 £ million	Actual total volume of investment activity 2000-01 to 2004-05 £ million	Five year difference from 2000-01 to 2004-05 £ million	Five year difference as a percentage of total volume of investment activity %
Water and sewerage services				
Anglian	1,511	1,334	-177	-12
Dwr Cymru	1,322	1,194	-138	-10
Northumbrian	1,059	1,003	-55	-5
Severn Trent	2,268	1,914	-354	-16
South West	902	801	-100	-11
Southern	1,133	1,145	12	1
Thames	2,417	2,484	67	3
United Utilities	3,308	3,000	-308	-9
Wessex	936	794	-142	-15
Yorkshire	1,789	1,553	-237	-13
Total WaSCS	16,655	15,223	-1,432	-9
Water only companies				
Bournemouth and West Hampshire	60	49	-11	-19
Bristol	117	107	-10	-8
Cambridge	16	18	2	15
Dee Valley	31	30	-1	-5
Folkestone	31	29	-2	-7
Mid Kent	111	106	-5	-5
Portsmouth	55	41	-14	-26
South East	211	180	-31	-15
South Staffordshire	104	103	-1	-1
Sutton and East Surrey	97	90	-7	-7
Tendring Hundred	15	15	0	-3
Three Valleys	261	275	6	-2
Total WoCs	1,129	1,042	-87	-8
Industry Total	17,784	16,265	-1,519	-9

Source: OFWAT 2005¹⁶⁶

Chart L. USA cities compared with English and Welsh companies



Source: OFWAT , author calculations

Chart M. Asian cities compared with English and Welsh companies

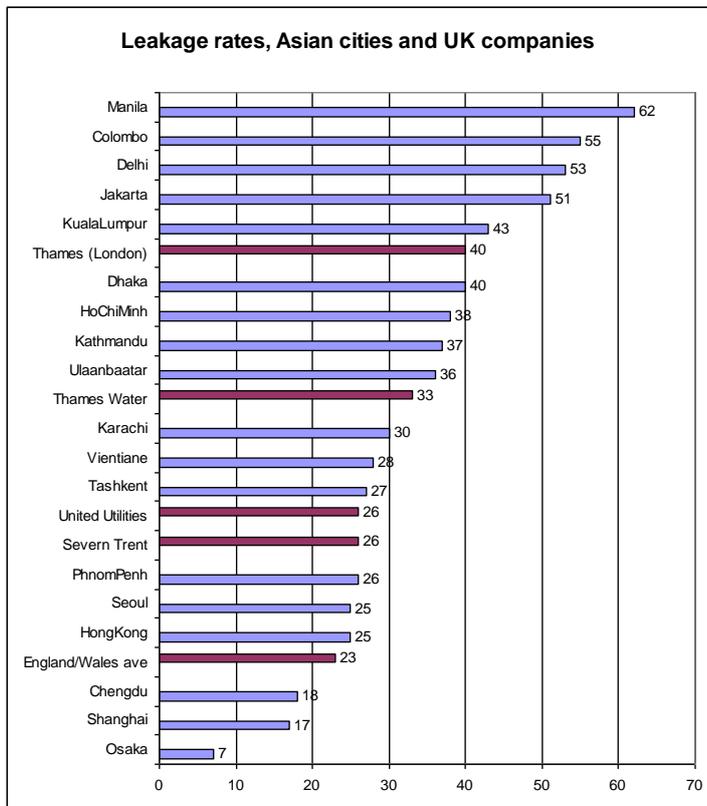


Table 12 Breakdown of leakage and non-revenue water: Colombo and Thames Water

	Non-revenue water	Of which: Illegal connections, unpaid bills, etc	Leakage
City of Colombo (inner city)	53	28	25
Greater Colombo	35	12	23
Thames Water	33	0	33
England and Wales average	23	0	23

Sources: *Water in Asian Cities*¹⁶⁷; author's calculations from OFWAT data; OFWAT letter to Guardian

Table 13 Results of BBC/Populus poll on public ownership of water June 2006

Page 2

BBC Daily Politics Show Poll
Fieldwork : June 14th-15th 2006

Table 1
Q.1 Britain has suffered a long period of low rainfall and several water companies have announced restrictions on water use. Please can you say whether you agree or disagree with each of the following statements?
Base: All respondents

Absolutes/col percents

	Sex			Age						Social Class				Region				
	Total	Male	Female	18-24	25-34	35-44	45-54	55-64	65+	AB	C1	C2	DE	South East	Mid-lands	North Eng-land	Wales & South West	Scot-land
Weighted base	1012	486	526	111	172	202	172	152	202	253	293	212	253	270	264	249	141	80
We would have fewer problems with water supplies if the industry was renationalized and the private water companies were replaced with a government-owned water board.																		
Agree	566 56%	284 59%	282 53%	83 56%	94 55%	111 55%	108 63%	82 54%	107 53%	125 49%	152 52%	130 61%	159 63%	142 53%	137 52%	148 59%	79 56%	60 87%
Disagree	385 38%	186 38%	200 38%	43 38%	71 41%	82 41%	55 32%	59 39%	75 37%	111 44%	119 41%	74 35%	81 32%	105 38%	111 42%	85 34%	57 41%	26 29%
Don't know	61 6%	16 3%	45 9%	6 5%	7 4%	9 5%	9 5%	11 7%	19 10%	17 7%	23 8%	9 4%	13 5%	22 8%	16 6%	16 6%	4 3%	3 4%

Prepared by Populus

Annex 2 EU rules on government borrowing and deficit

The EU policies on government deficits, known as the Stability and Growth Pact, are summarised on the European Commission website at http://ec.europa.eu/economy_finance/about/activities/sgp/sgp_en.htm .

The basic rules on government deficit are set out in Article 104 of the treaty:

Article 104

1. Member States shall avoid excessive government deficits.
2. The Commission shall monitor the development of the budgetary situation and of the stock of government debt in the Member States with a view to identifying gross errors. In particular it shall examine compliance with budgetary discipline on the basis of the following two criteria:
 - (a) whether the ratio of the planned or actual government deficit to gross domestic product exceeds a reference value...;
 - (b) whether the ratio of government debt to gross domestic product exceeds a reference value.....
 The reference values are specified in the Protocol on the excessive deficit procedure annexed to this Treaty.

<http://europa.eu/eur-lex/en/treaties/selected/livre223.html#anArt6>

The definition of government deficit is set out in a Protocol annexed to section 104 of the treaty:

Article 1 : The reference values referred to in Article 104(2) of this Treaty are:

- 3% for the ratio of the planned or actual government deficit to gross domestic product at market prices;
- 60% for the ratio of government debt to gross domestic product at market prices.

Article 2 In Article 104 of this Treaty and in this Protocol:

- government means general government, that is central government, regional or local government and social security funds, to the exclusion of commercial operations, as defined in the European System of Integrated Economic Accounts;
- deficit means net borrowing as defined in the European System of Integrated Economic Accounts;

- investment means gross fixed capital formation as defined in the European System of Integrated Economic Accounts;
 - debt means total gross debt at nominal value outstanding at the end of the year and consolidated between and within the sectors of general government as defined in the first indent.
- ; <http://europa.eu/eur-lex/en/treaties/selected/livre335.html> .

The definition of ‘commercial operations’ is set out in Council Regulation (EC) No 475/2000 of 28 February 2000 amending Regulation (EC) No 3605/93 on the application of the Protocol on the excessive deficit procedure annexed to the Treaty establishing the European Community

“2. ‘Government’ means the sector of ‘general government’ (S.13), that is ‘central government’ (S.1311), ‘state government’ (S.1312), ‘local government’ (S.1313) and ‘social security funds’ (S.1314), to the exclusion of commercial operations, as defined in ESA 95.

The exclusion of commercial operations means that the sector of ‘general government’ (S.13) comprises only institutional units producing non-market services as their main activity.

(COUNCIL REGULATION (EC) No 475/2000 of 28 February 2000

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=32000R0475&model=guichett

The European System of Accounts (ECA95)

<http://forum.europa.eu.int/irc/dsis/nfaccount/info/data/esa95/en/titelen.htm> include the definitions behind this concept.

“General government (S.13)

2.68 . Definition: The sector general government (S.13) includes all institutional units which are other non-market producers (see paragraph 3.26.) whose output is intended for individual and collective consumption, and mainly financed by compulsory payments made by units belonging to other sectors, and/or all institutional units principally engaged in the redistribution of national income and wealth.

2.69 . The institutional units included in sector S.13 are the following:

a) general government entities (excluding public producers organised as public corporations or, by virtue of special legislation, recognised as independent legal entities, or quasi-corporations, when any of these are classified in the non-financial or financial sectors) which administer and finance a group of activities, principally providing non-market goods and services, intended for the benefit of the community

<http://forum.europa.eu.int/irc/dsis/nfaccount/info/data/esa95/en/een00080.htm>

.....3.26 . Definition: Other non-market producers are local KAUs or institutional units whose major part of output is provided free or at not economically significant prices.

<http://forum.europa.eu.int/irc/dsis/nfaccount/info/data/esa95/en/een00125.htm#0003fac1>

Annex 3 References

- ¹ Water and regulation: Facts and Figures. OFWAT May 2006.
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/water_regfacts_figs.pdf/\\$FILE/water_regfacts_figs.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/water_regfacts_figs.pdf/$FILE/water_regfacts_figs.pdf)
- ² OFWAT: Financial performance and expenditure of the water companies in England and Wales 2004-2005 report. September 2005 p.47. [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2004-05.pdf/\\$FILE/fpe_report2004-05.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2004-05.pdf/$FILE/fpe_report2004-05.pdf) . Figures are implicitly on a constant price basis of 2004-05 prices.
- ³ Water and regulation: Facts and Figures. OFWAT May 2006.
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/water_regfacts_figs.pdf/\\$FILE/water_regfacts_figs.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/water_regfacts_figs.pdf/$FILE/water_regfacts_figs.pdf)
- ⁴ UK Parliament Written Answers to Questions Tuesday 19 October 1993 ENVIRONMENT Col 197.
<http://www.publications.parliament.uk/pa/cm199293/cmhansrd/1993-10-19/Writtens-1.html>
- ⁵ OFWAT: Financial performance and expenditure of the water companies in England and Wales 2003-2004 report. September 2004. [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2003-04.pdf/\\$FILE/fpe_report2003-04.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2003-04.pdf/$FILE/fpe_report2003-04.pdf)
- ⁶ The Guardian (London) August 14, 1992 Water Bills 'To Double By Turn Of Century'; Watchdog challenges profit margins and EC standards
- ⁷ Study On Investment And Employment Related To EU Policy On Air, Water And Waste Report No.: EC 4739 September 2000. Final Report Annex 1 Best Estimates Of Costs Table 6.20. The data in these tables shows €12.53 billion Euros at 1996/97 prices: the estimate in the text is derived by converting this to €16 billion at current prices, an average of €0.8 billion per annum, and converting to £ at an exchange rate of 0.7.
http://ec.europa.eu/environment/enveco/industry_employment/inv_and_empl_annex_1.pdf#search=%22%22Study%20On%20Investment%20And%20Employment%20Related%20To%20Eu%20Policy%20%22%22
- ⁸ The Times (London) February 20 1989: Ministers in water and power battles; Privatisation
- ⁹ Financial Times (London,England) May 5, 1989: Water Row Starts To Cool Ahead Of Sell-Off
- ¹⁰ Financial Times (London,England) November 5, 1993: Byatt's water escalator
- ¹¹ OFWAT. Financial performance and capital investment 1994-95 p.10
- ¹² Wilfried Schönback, Gerlinde Oppolzer – ifip Technical University Vienna, R. Andreas Kraemer, Wenke Hansen, Nadine Herbke – Ecologic Berlin-Brussels. International Comparison of Water Sectors Comparison of Systems against a Background of European and Economic Policy . Vol. 6: English Edition Vienna, October 2004. Table 4.36, p. 70
http://www.arbeiterkammer.at/pictures/d21/153_Band6.pdf
- ¹³ OFWAT/DEFRA 2006. The Development Of The Water Industry In England And Wales. Section 4.3.5 Flotation.
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/\\$FILE/development_of_water_industry270106.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/$FILE/development_of_water_industry270106.pdf). Much of the tax relief was subsequently clawed back by the 'windfall tax' introduced by the new Labour government in 1997.
- ¹⁴ Financial Times (London,England) August 3, 1989 Editorial: Private Water, Public Costs
- ¹⁵ OFWAT and OFGEM. Financing Networks: A discussion paper. February 2006. Para 21.
<http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/FinancingNetworks080206>
- ¹⁶ OFWAT/DEFRA 2006. The Development of The Water Industry In England And Wales. Section 7.5.3 Equity
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/\\$FILE/development_of_water_industry270106.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/$FILE/development_of_water_industry270106.pdf)
- ¹⁷ OFWAT/DEFRA 2006. The Development of The Water Industry In England And Wales. Section 7.5.3 Operating Expenditure.
 P.97[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/\\$FILE/development_of_water_industry270106.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/$FILE/development_of_water_industry270106.pdf)
- ¹⁸ OFWAT: Financial performance and expenditure of the water companies in England and Wales 2004-2005 report. September 2005 p.24. [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2004-05.pdf/\\$FILE/fpe_report2004-05.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2004-05.pdf/$FILE/fpe_report2004-05.pdf)
- ¹⁹ See Swan Group press release 18/8/2002 - Swan group to Refinance Existing Debt
<http://server1.thewwwcompany.net/swangroup/phpnew/mediastory.php?contentid=19>
- ²⁰ See presentation by Keith Tozzi, Chief Executive, Swan Group plc at IEA Water 2002 Conference London June 2002: Corporate Restructuring : Journey Or Destination?
<http://server1.thewwwcompany.net/swangroup/phpnew/mediastory.php?contentid=10>
- ²¹ Shaoul 2000 p. 3
- ²² FT 15 June 2000
- ²³ Jean Shaoul "Tapping into Mutuals" Public Finance 8 Sept 2000, p.18
- ²⁴ OFWAT Financial performance and expenditure of the water companies in England and Wales 2004-05 report. September 2005

- ²⁵ OFWAT/DEFRA 2006. The Development Of The Water Industry In England And Wales. Section 7.5.3 p.97
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/\\$FILE/development_of_water_industry270106.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/$FILE/development_of_water_industry270106.pdf)
- ²⁶ Cost of Capital: a consultation paper Volume 1. 1991. OFWAT
- ²⁷ A Study into Certain Aspects of the Cost of Capital for Regulated Utilities in the U.K. Stephen Wright, Robin Mason, David Miles. Feb 2003. Section 6.7 p.48-49
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/cost_of_capital130203.pdf/\\$FILE/cost_of_capital130203.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/cost_of_capital130203.pdf/$FILE/cost_of_capital130203.pdf)
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/cost_of_capital130203.pdf/\\$FILE/cost_of_capital130203.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/cost_of_capital130203.pdf/$FILE/cost_of_capital130203.pdf)
- ²⁸ Cost of Capital: a consultation paper Volume 1. 1991. OFWAT
- ²⁹ D Helm: Ownership, Utility Regulation And Financial Structures: An Emerging Model 14th January 2006
http://www.dieterhelm.co.uk/publications/OwnershipUtilityReg_FinancialStructures.pdf
- ³⁰ M. Sawyer and K. O'Donnell. A Future for Public Ownership. 1999. p.12 estimates the average real cost of government borrowing at 3%.
- ³¹ International Monetary Fund Public-Private Partnerships March 12, 2004 para 38
<http://www.imf.org/external/np/fad/2004/pifp/eng/031204.htm>
- ³² D Helm: Ownership, Utility Regulation And Financial Structures: An Emerging Model 14th January 2006
http://www.dieterhelm.co.uk/publications/OwnershipUtilityReg_FinancialStructures.pdf
- ³³ Structure Of The Water Industry In England: Does It Remain Fit For Purpose? John Smith and Duncan Hannan. November 2003. OFWAT.
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_defraofwat_report.pdf/\\$FILE/pr04_defraofwat_report.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_defraofwat_report.pdf/$FILE/pr04_defraofwat_report.pdf)
- ³⁴ D Helm: Ownership, Utility Regulation And Financial Structures: An Emerging Model 14th January 2006
http://www.dieterhelm.co.uk/publications/OwnershipUtilityReg_FinancialStructures.pdf
- ³⁵ OFWAT and OFGEM. Financing Networks: A discussion paper. February 2006. Para 21.
<http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/FinancingNetworks080206>
- ³⁶ OFWAT Financial performance and expenditure of the water companies in England and Wales 2004-05 report. September 2005 table 15 p.41; OFWAT Financial performance and expenditure of the water companies in England and Wales 1998-99 Table 16 p.29; and OFWAT 1994-95 report on the Financial performance and capital investment of the water companies in England and Wales Figure 1 p. 9. All data revalued to 2004-05 prices.
- ³⁷ Study On Investment And Employment Related To EU Policy On Air, Water And Waste Report No.: EC 4739 September 2000. Final Report Annex 1 Best Estimates Of Costs Table 6.20. The data in these tables shows €0.36 billion Euros at 1996/97 prices: the estimate in the text is derived by estimating this as €0.41 billion and converting to £ at an exchange rate of 0.7.
http://ec.europa.eu/environment/enveco/industry_employment/inv_and_empl_annex_1.pdf#search=%22%22Study%20On%20Investment%20And%20Employment%20Related%20To%20Eu%20Policy%20%22%22
- ³⁸ Saal D. and Parker D. (2001) Productivity and Price performance in the privatised water and sewage companies of England and Wales. Journal of Regulatory Economics 2001, 61-90
<http://www.springerlink.com/content/m3j6018112134q78/>
- ³⁹ David S. Saal. The Impact of Privatisation on the English and Welsh Water and Sewerage Industry. Paper presented at CESifo Conference on Privatisation Experiences in the EU, Munich 10-11 January 2003. The Impact of Privatisation on the English and Welsh Water and Sewerage Industry http://www.cesifo-group.de/pls/portal/docs/PAGE/IFOCNTENT/BISHERIGESEITEN/CESIFO_INHALTE/EVENTS/CONFERENCES/PRI03/PAPERS/PRI03-SAAL.PDF
- ⁴⁰ Stone and Webster 2004. An investigation into opex productivity trends and causes in the water industry in England & Wales - 1992-93 to 2002-03. Main Report – Final May 2004.
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/stone_webster_100604.pdf/\\$FILE/stone_webster_100604.pdf#search=%22site%3Awww.ofwat.gov.uk%20productivity%22](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/stone_webster_100604.pdf/$FILE/stone_webster_100604.pdf#search=%22site%3Awww.ofwat.gov.uk%20productivity%22)
- ⁴¹ Saal D., Parker D., and Weyman-Jones T. (2007) Determining the contribution of technical change, efficiency change and scale change to productivity growth in the privatized English and Welsh water and sewerage industry: 1985–2000. J Prod Anal (2007) 28:127–139 DOI 10.1007/s11123-007-0040-z
- ⁴² A comparison with a longer period pre-privatisation may be even less favourable, because the RWAs reduced employment from 80,000 to 50,000 in 15 years between 1974 and 1989, an annual reduction of over 6%. Bernard Barraque “les Politiques de l’Eau en Europe” 1995 p.233
- ⁴³ Saal D. and Parker D. (2001) Productivity and Price performance in the privatised water and sewage companies of England and Wales. Journal of Regulatory Economics 2001, 61-90
<http://www.springerlink.com/content/m3j6018112134q78/>
- ⁴⁴ Stone and Webster 2004. An investigation into opex productivity trends and causes in the water industry in England

& Wales - 1992-93 to 2002-03. Main Report – Final May 2004.

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/stone_webster_100604.pdf/\\$FILE/stone_webster_100604.pdf#search=%22site%3Awww.ofwat.gov.uk%20productivity%22](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/stone_webster_100604.pdf/$FILE/stone_webster_100604.pdf#search=%22site%3Awww.ofwat.gov.uk%20productivity%22)

⁴⁵ Saal D. and Parker D. (2001) Productivity and Price performance in the privatised water and sewage companies of England and Wales. *Journal of Regulatory Economics* 2001, 61-90

<http://www.springerlink.com/content/m3j6018112134q78/>

⁴⁶ There is an overview of this evidence in “The relative efficiency of public and private sector water” by David Hall and Emanuele Lobina. September 2005. <http://www.psiu.org/reports/2005-10-W-effic.doc>

⁴⁷ International Monetary Fund Public-Private Partnerships March 12, 2004

<http://www.imf.org/external/np/fad/2004/pifp/eng/031204.htm>

para 25

⁴⁸ Infrastructure performance and reform in developing and transition economies: evidence from a survey of productivity measures. A. Estache, S. Perelman, L. Trujillo World Bank Policy Research Working Paper 3514, February 2005.

http://wdsbeta.worldbank.org/external/default/WDSContentServer/IW3P/IB/2005/03/06/000090341_20050306101429/Rendered/PDF/wps3514.pdf

⁴⁹ S. Martin and D. Parker In: *The Impact of Privatisation Ownership and Corporate Performance in the UK*, Routledge, London (1997).

⁵⁰ The Great Divestiture. Massimo Florio. 2004. MiT. A paper covering some of the results is available at The Missing Shock: The Macroeconomic Impact of British Privatisation Massimo Florio and Mara Grasseni. *Nota di Lavoro* 104.2004 July 2004

http://www.feem.it/Feem/Pub/Publications/WPapers/default.htm?WP_Year=2004&WP_Campi=Author&WP_Keyword=florio&WP_Page=1&FRAMELESS=true&NRNODEGUID=%257b1A870B4D-D3E0-403E-9701-64635CE6C28C%257d

⁵¹

⁵²

⁵³ The completed acquisition of the East Surrey Holdings Group by Aqueduct Capital (UK) Limited and its impact on Sutton and East Surrey Water plc. A consultation paper by Ofwat. March 2006

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/ses_conspaper280306.pdf/\\$FILE/ses_conspaper280306.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/ses_conspaper280306.pdf/$FILE/ses_conspaper280306.pdf)

⁵⁴ See <http://www.euskills.co.uk/>

⁵⁵ HoL Appendix 6 p.136

⁵⁶ HoL 3.68-3.73 p.33

⁵⁷ The Future of Research and Development in the UK Gas Industry. Steve Thomas. March 2004. p.6

<http://www.psiu.org/reports/2004-04-E-UK-Advantica.doc>. See also N. Rosenberg (1990) ‘Why do firms do basic R&D (with their own money)?’ *Research Policy* vol 19, no 2, pp 165-174, for a good summary of the arguments.

⁵⁸ HoL 3.68-3.73 p.33

⁵⁹ OFWAT 1999: Draft determinations - Future water and sewerage charges 2000–05: pp19-26.

⁶⁰ OFWAT. Water and sewerage charges: 2006-07 report.

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/tariff_report06.pdf/\\$FILE/tariff_report06.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/tariff_report06.pdf/$FILE/tariff_report06.pdf)

⁶¹ OFWAT. Water and sewerage charges: 2006-07 report.

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/tariff_report06.pdf/\\$FILE/tariff_report06.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/tariff_report06.pdf/$FILE/tariff_report06.pdf)

⁶² Financial Times (London, England) July 11, 1990: Water Industry 3; Green costs begin to bite

⁶³ NUS Consulting Group: 2004-2005 International Water Report & Cost Survey July 2005

http://www.nusconsulting.com/downloads/2005%20Water%20Survey_website%20ver.pdf

⁶⁴ See tables on “Domestic disconnections for non-payment of bills - England and Wales” from 1989/90 to 1997/98 (*DisconnectionReport9899.pdf*, p. 54).

⁶⁵ Water Act 1999, clauses 1 and 2 and schedule 4. <http://www.opsi.gov.uk/acts/acts1999/19990009.htm#1>

⁶⁶ <http://www.sustainable-development.gov.uk/sustainable/quality04/maind/04q03.htm>

⁶⁷ HoL report p.36, http://www.parliament.uk/parliamentary_committees/lords_s_t_select/stwater.cfm

⁶⁸ HoL, http://www.parliament.uk/parliamentary_committees/lords_s_t_select/stwater.cfm.

⁶⁹ Essential Services Commission Victoria. March 2006 Water performance report: Performance of urban water and sewerage businesses July 2004 – June 2005 http://www.esc.vic.gov.au/NR/rdonlyres/4101FCBC-21A9-4C4C-9FEC-88CDCF81889F/0/WaterPerformanceReport_0405.pdf#search=%22Yarra%20Valley%20water%20restrictor%22

⁷⁰ Evidence to House of Lords select committee p.142

http://www.parliament.uk/parliamentary_committees/lords_s_t_select/stwater.cfm.

⁷¹ In the words of one analyst: “firms have an incentive to “inflate the [value of the] asset base, to inflate CAPEX, to argue for a high OPEX [and] to maximise the assumed cost of capital” (Dieter Helm ‘British utility regulation: theory, practice and reform’, *Oxford Review of Economic Policy*, Vol. 10, No. 3, p.21; quoted in Lise and Bakker)

⁷² *Int. J. Water*, Vol. 3, No. 1, 2005 Economic regulation of the water supply industry in the UK: a game theoretic consideration of the implications for responding to drought risk Wietze Lise, Karen Bakker

- ⁷³ OFWAT 1995 Financial performance and capital investment of the water companies in England and Wales: 1994-95 report. P. 31 [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/capex1994-95.pdf/\\$FILE/capex1994-95.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/capex1994-95.pdf/$FILE/capex1994-95.pdf)
- ⁷⁴ “UK’s Ofwat says Yorkshire Water dividend policy “should not impair” business”, AFX News: 20 Jun 1996
- ⁷⁵ “Water firm is told to wipe out droughts”, Manchester Evening News: 05 Jul 1995; “A scandal of water cut-offs in North West”, Manchester Evening News: 12 May 1995.
- ⁷⁶ Observer 12 Feb 95
- ⁷⁷ OFWAT 2000. Financial performance and expenditure of the water companies in England and Wales: 1999-2000 report. P.5 [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/capex2000.pdf/\\$FILE/capex2000.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/capex2000.pdf/$FILE/capex2000.pdf)
- ⁷⁸ OFWAT. Financial performance and expenditure of the water companies in England and Wales 2005-06 report September 2006 p.15
- ⁷⁹ OFWAT 2006. Financial performance and expenditure of the water companies in England and Wales 2005-06 report September 2006 www.ofwat.gov.uk
- ⁸⁰ OFWAT 2006. Financial performance and expenditure of the water companies in England and Wales 2005-06 report September 2006: tables 10 and 13 www.ofwat.gov.uk
- ⁸¹ External Stakeholder Survey 2005. p.38 [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/\\$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22)
- ⁸² Severn Trent Probes Claim of £75m Fraud Martha Grace, *Utility Week* 26 November 2004
- ⁸³ Interim Report on Allegations Made Against Severn Trent Water OFWAT, 7 March 2006 [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/svt_report070306.pdf/\\$FILE/svt_report070306.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/svt_report070306.pdf/$FILE/svt_report070306.pdf)
- ⁸⁴ OFWAT PN10/07 20 April 2007 Southern Water customer service investigation <http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/pn1007>
- ⁸⁵ PN 21/06 19 July 2006 Ofwat proposes financial penalty on Thames Water for customer service failures <http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/pn2106>
- ⁸⁶ PN 16/06 8 June 2006 Ofwat proposes a financial penalty on Severn Trent Water for customer service failures <http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/pn1606> . See also <http://www.stwater.co.uk/server.php?show=ConWebDoc.1912>
- ⁸⁷ OFWAT PN 26/06 7 September 2006 Tendring Hundred customers to be reimbursed following accounting error <http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/pn2606>
- ⁸⁸ The Guardian (London) August 14, 1992: Water Bills 'To Double By Turn Of Century'; Watchdog challenges profit margins and EC standards
- ⁸⁹ See press notice PN 56/02 30 July 2002 Ofwat Proposes 25 Year Notice Period For Water Company Licences <http://www.gnn.gov.uk/Content/Detail.asp?ReleaseID=20509&NewsAreaID=2>
- ⁹⁰ The relevant section reads: “For the purposes of paragraph (c) of Section 7(4) of the Water Industry Act 1991, the only circumstances in which an appointment or variation may be made, in relation to the area for which the Appointee holds the Appointment as water undertaker or, as the case may be, sewerage undertaker under this instrument, are where the Secretary of State has given the Appointee at least 25 years’ notice to terminate the relevant Appointment in relation to the whole of its area and that period of notice has expired.” [inserted with effect from 15 October 2002]”.
- ⁹¹ At <http://www.gnn.gov.uk/Content/Detail.asp?ReleaseID=20509&NewsAreaID=2>
- ⁹² United Utilities Interim Results for the Six Months Ended 30 September 2002 Progress In Growth Businesses Offsets Anticipated Reduction In Regulated Earnings 05 December 2002 <http://www.unitedutilities.com/?OBH=1477&ID=37>
- ⁹³ G Palast, J Oppenheimer, T MacGregor: Democracy and Regulation – How the Public can Govern |Essential Services. Pluto Press 2003.
- ⁹⁴ External Stakeholder Survey 2005. Executive summary pp. i-vii. [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/\\$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22)
- ⁹⁵ External Stakeholder Survey 2005. Executive summary pp. i-vii. [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/\\$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22)
- ⁹⁶ External Stakeholder Survey 2005. Executive summary pp. i-vii. [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/\\$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22)
- ⁹⁷ External Stakeholder Survey 2005. Executive summary pp. i-vii. [http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/\\$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/pr04_review_accent_report110805.pdf/$FILE/pr04_review_accent_report110805.pdf#search=%22site%3Awww.ofwat.gov.uk%20gaming%22)

- ⁹⁸ Financing Networks: summary of responses. OFWAT 2006.
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/finnet_summary020806.pdf/\\$FILE/finnet_summary020806.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/finnet_summary020806.pdf/$FILE/finnet_summary020806.pdf)
- ⁹⁹ Ofwat treads on green regulator's toes [Utility Week](#); 11/12/2004
- ¹⁰⁰ House of Commons Committee of Public Accounts Ofwat: Meeting the demand for water Twenty-fourth Report of Session 2006–07 Report, together with formal minutes, oral and written evidence Ordered by The House of Commons to be printed 23 April 2007 <http://www.publications.parliament.uk/pa/cm200607/cmselect/cmpubacc/286/286.pdf>
- ¹⁰¹ The Guardian (London) July 20, 1990 LENGTH: 1719 words HEADLINE: Environment: All hands to the pumps - Why do we keep running out of water? / The mounting problems faced by the water industry and the unwillingness to confront them
- ¹⁰² The Guardian (London) July 20, 1990 LENGTH: 1719 words HEADLINE: Environment: All hands to the pumps - Why do we keep running out of water? / The mounting problems faced by the water industry and the unwillingness to confront them
- ¹⁰³ OFWAT 2006. International comparison of water and sewerage service 2006 report. P.45
- ¹⁰⁴ HoL 5.38-41 p.65-66
- ¹⁰⁵ “The German Water and Sewerage Sector: How Well it Works and What this means for developing countries” : John Briscoe, February 1995, World Bank, Washington DC, USA
- ¹⁰⁶ United Utilities memorandum to the House of Lords, Appendix of Evidence, p.374.
- ¹⁰⁷ HoL 5.38-41 p.65-66
- ¹⁰⁸ OFWAT 2006. International comparison of water and sewerage service 2006 report. P.45
- ¹⁰⁹ See various case study reports at <http://www.watertime.net/>
- ¹¹⁰ Water in Asian Cities - Utilities Performance and Civil Society Views. ADB. January 2004, Appendix 1 p.182
- ¹¹¹ Water in Paris, presentation by Ann Le Strat, president of Eaux de Paris, to Watertime workshop November 2005
<http://www.watertime.net/docs/WP6/Anne%20Le%20Strat%20-%20Eaux%20de%20Paris.ppt>
- ¹¹² Water in Asian Cities - Utilities Performance and Civil Society Views. ADB. January 2004, Appendix 1 p.182
- ¹¹³ The Jakarta Post July 19, 2006 Group gives failing grade to water firms
- ¹¹⁴ Folkestone and Dover Water Services: Water metering is coming. 2007.
http://www.fdws.co.uk/home/yh_water_scar.shtml
- ¹¹⁵ OFWAT 10 January 2007. Ofwat's initial submission to the Competition Commission following the acquisition of South East Water by Utilities Trust of Australia and Hastings Diversified Utilities Fund
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/cc_mse_submission100107.doc/\\$FILE/cc_mse_submission100107.doc](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/cc_mse_submission100107.doc/$FILE/cc_mse_submission100107.doc)
- ¹¹⁶ Financial Times January 22, 1997: Leyla Boulton and Jane Martinson consider Generale des Eaux and Saur's blocked takeover of Mid Kent and its implications: Lang's decision may herald the drying up of merger activity in the water sector.
- ¹¹⁷ Minutes of Evidence taken before the Science and Technology committee of the House of Lords 2006 p.135
- ¹¹⁸ OFWAT 10 January 2007. Ofwat's initial submission to the Competition Commission following the acquisition of South East Water by Utilities Trust of Australia and Hastings Diversified Utilities Fund
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/cc_mse_submission100107.doc/\\$FILE/cc_mse_submission100107.doc](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/cc_mse_submission100107.doc/$FILE/cc_mse_submission100107.doc)
- ¹¹⁹ Consultants report for the CC on the combined water resources report 2007 http://www.competition-commission.org.uk/inquiries/ref2006/water/pdf/atkins_final_report.pdf
- ¹²⁰ Competition Commission: Mid-Kent Water and South East Water. 2007. Summary of key arguments and views of hearing with the Environment Agency http://www.competition-commission.org.uk/inquiries/ref2006/water/pdf/third_party_summary_environment_agency.pdf
- ¹²¹ OFWAT Annual report 2005-06
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/ar2006.pdf/\\$FILE/ar2006.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/ar2006.pdf/$FILE/ar2006.pdf) ; see also Office of Water Services: resource accounts 2005-06 for the year ended 31 March 2006;
[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/resource_accounts05-06.pdf/\\$FILE/resource_accounts05-06.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/resource_accounts05-06.pdf/$FILE/resource_accounts05-06.pdf)
- ¹²² As pointed out to the House of Lords report on regulation by the DTI “The primary means by which the regulators’ role may be changed is through parliamentary amendment of the duties specified in the statutory framework. The role of regulators has been changed in this manner over time”. House Of Lords Select Committee on the Constitution 6th Report of Session 2003-04 The Regulatory State: Ensuring its Accountability Volume I Report
- ¹²³ House Of Lords Science And Technology Committee: Water Management May 2006. p.20 para 2.50
<http://www.parliament.uk/hlscience/>.
- ¹²⁴ House Of Lords Science And Technology Committee: Water Management May 2006. p.40-41.
<http://www.parliament.uk/hlscience/>. On regional assemblies see <http://www.dclg.gov.uk/index.asp?id=1109130>
- ¹²⁵ For more detail on PE funds and their impact see Private equity and infrastructure funds in public services and utilities November 2006 <http://www.psisru.org/reports/2006-11-PE.doc>

- ¹²⁶ Amess K. and Wright M. 2007 The Wage And Employment Effects Of Leveraged Buyouts In The UK. Forthcoming: International Journal of Economics and Business 2007; Phalippou L. and Gottschalg O. 2007 The Performance of Private Equity Funds
- ¹²⁷ CCWater Thames: Response to OFWAT Consultation Paper on the completed acquisition of Thames Water Holdings plc by Kemble Water Limited. Para.2 March 2007.
- ¹²⁸
- ¹²⁹ Financial Times (London,England) June 4, 1986, Wednesday
- ¹³⁰ Financial Times (London,England) April 26, 1986, Unions Adopt New Tactics In Water Privatisation Fight, by Philip Basset, Labour Editor
- ¹³¹ Financial Times (London,England) July 4, 1986 Flotation Of Water Authorities Put Off In Surprise About-Turn
- ¹³² The Guardian (London) December 8, 1986
- ¹³³ Financial Times (London,England) July 13, 1987 Lombard; The Hard Sell Is Yet To Come
- ¹³⁴ The Times (London)October 25 1987: Voters resist Tory plans;
Financial Times (London,England) November 20, 1987: Poll Tax Opinion
- ¹³⁵ The Independent February 4 1989 Free Speech 1: Public troubled over private water: This week: What, if any, advantages does the public gain from the privatisation of natural monopolies like gas, water and electricity?
- ¹³⁶ The Times (London) March 2 1989, Thursday
- ¹³⁷ The Times (London) November 2 1987, Monday Sell-offs 'will mean worse services'
- ¹³⁸ The Guardian (London) January 18, 1988 Public opposes more Government sell-offs: Opinion poll setback for the privatisation programme
- ¹³⁹ Financial Times (London,England) June 13, 1988 Poll Shows Big Opposition To Privatisation Proposals
- ¹⁴⁰ The Times (London) May 7 1989, Sunday: Has the great Tory privatisation machine run out of road? The same polls also showed that 64% felt that the government should "guarantee everybody a steady job and decent standard of living", more than the 55% who thought this in 1947. (The Independent May 6 1989, Saturday Leading Article: The Vale says she has gone too far).
- ¹⁴¹ The Times (London) September 3 1989, Sunday SECTION: Issue 8612. LENGTH: 760 words HEADLINE: New water advertising campaign under fire; Privatisation
- ¹⁴² The Independent July 4 1989
- ¹⁴³ The Times (London)November 5 1989
- ¹⁴⁴ The Independent (London)October 10, 1990
- ¹⁴⁵ House of Commons Select Committee on the Environment Seventh Report 199-200: Water Prices and the Environment HC 597 14 November 2000 (HOCSC7); www.parliament.the-stationery-office.co.uk/pa/cm199900/cmselect/cmenvaud/597/59702.htm Introduction, para 20
- ¹⁴⁶ 11 Jul 94 The Daily Mail: The Great water Robbery.
- ¹⁴⁷ The Herald (Glasgow) November 20, 1992 SECTION: Pg. 3 LENGTH: 168 words HEADLINE: Voters find water plans big turn-off
- ¹⁴⁸ The Scotsman March 8, 1993, Monday LENGTH: 615 words HEADLINE: Poll shows seven in ten Tories oppose Scots water selloff
- ¹⁴⁹ Financial Times (London,England) March 23, 1994: Poll rejects Scottish water plan
- ¹⁵⁰ Financial Times (London,England) April 27, 1994, Wednesday SECTION: Pg. 11 LENGTH: 761 words HEADLINE: Water row may drown Scots Tories: A look at the party driven to say no to privatisation
- ¹⁵¹ Daily Mail (London) July 11, 2006: DRIPPING SCANDAL; Soaring bills, poor quality and massive waste. Why it's time to end Scottish Water's monopoly
- ¹⁵² Irish News **August 29, 2003: Water** charge rethink urged
- ¹⁵³ Financial Times (London,England) June 16, 2000: Shareholders could receive Pounds 18bn from utility mutuals
- ¹⁵⁴ Financial Times (London,England) June 16, 2000: Shareholders could receive Pounds 18bn from utility mutuals
- ¹⁵⁵ For the transfer of ownership see <http://www.dwrcymru.com/English/Company/Glascymru/historical/index.asp> .
- ¹⁵⁶ Glas Cymru press release 11 December 2001: Glas Cymru deal named world's top deal of 2001
http://www.dwrcymru.com/English/library/Reports/companyreports/glascymru/pressrelease/TopDealAwards_PR.pdf .
The method used in introducing public ownership should however differ in at least one respect: Welsh Water bonds were issued through a special company registered in the Cayman Islands, a tax haven, and the bonds were issued in Luxembourg: both locations are used to minimise taxation and transparency. Bond Prospectus Part 1. 4th May 2001.
http://www.dwrcymru.com/English/library/Reports/companyreports/glascymru/bond%20issue/Prospectus_PART1.pdf
- ¹⁵⁷ Standard and Poors Cororpate Securitisation: Peer Comparison: U.K. Water Corporate Securitisations. Oct 2004.
http://www.dwrcymru.com/English/library/Reports/companyreports/glascymru/rating%20agency/Peer_comparison_UK_water_Corporate_securitisations_8Oct04.pdf
- ¹⁵⁸ The EU policies on government deficits, known as the Stability and Growth Pact, are summarised on the European Commission website at http://ec.europa.eu/economy_finance/about/activities/sgp/sgp_en.htm .
- ¹⁵⁹ The UK government rules can be found in: Fiscal Policy at http://www.hm-treasury.gov.uk/documents/uk_economy/fiscal_policy/ukecon_fisc_index.cfm#Key_documents_on_the_fiscal_framework ; The Code For Fiscal Stability 1998

http://www.hm-treasury.gov.uk/media/160/7C/fiscal_stability.pdf ; and Core Debt - An Approach to Monitoring the Sustainable Investment Rule April 2002 http://www.hm-treasury.gov.uk/media/52F/5B/bud02_coredebt.pdf

The difference in definitions from the EU criteria is noted in paragraphs 2.16 and 2.17 of Delivering Economic Stability - Convergence Programme submitted in line with the Stability and Growth Pact December 2000

<http://www.hm-treasury.gov.uk/media/A5B37/DeliveringEconomic.pdf#search=%22site%3Awww.hm-treasury.gov.uk%20PSNB%20definition%22>

Core Debt - An Approach to Monitoring the Sustainable Investment Rule April 2002 http://www.hm-treasury.gov.uk/media/52F/5B/bud02_coredebt.pdf

¹⁶⁰ OFWAT/DEFRA 2006. The Development Of The Water Industry In England And Wales. Figure 7.1.2.a

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/\\$FILE/development_of_water_industry270106.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/$FILE/development_of_water_industry270106.pdf)

¹⁶¹ OFWAT/DEFRA 2006. The Development Of The Water Industry In England And Wales. Figure 7.1.2.a

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/\\$FILE/development_of_water_industry270106.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/$FILE/development_of_water_industry270106.pdf)

¹⁶² The Development Of The Water Industry In England And Wales. Fig 7.5.2a

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/\\$FILE/development_of_water_industry270106.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/$FILE/development_of_water_industry270106.pdf)

¹⁶³ The Development Of The Water Industry In England And Wales. Fig 7.5.1

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/\\$FILE/development_of_water_industry270106.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/development_of_water_industry270106.pdf/$FILE/development_of_water_industry270106.pdf)

¹⁶⁴ NUS Consulting Goup 2004-2005 International Water Report & Cost Survey July 2005

http://www.nusconsulting.com/downloads/2005%20Water%20Survey_website%20ver.pdf

¹⁶⁵ OFWAT. (2005). *Financial performance and expenditure of the water companies in England and Wales, 2004-05 report*. OFWAT. London. September 2005. p.71

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2004-05.pdf/\\$FILE/fpe_report2004-05.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2004-05.pdf/$FILE/fpe_report2004-05.pdf)

¹⁶⁶ OFWAT. (2005). *Financial performance and expenditure of the water companies in England and Wales, 2004-05 report*. OFWAT. London. 2005.

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2004-05.pdf/\\$FILE/fpe_report2004-05.pdf](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/AttachmentsByTitle/fpe_report2004-05.pdf/$FILE/fpe_report2004-05.pdf)

¹⁶⁷ Water in Asian Cities - Utilities Performance and Civil Society Views. ADB. January 2004, Appendix 1 p.182