National Audit Office

Report
by the Comptroller
and Auditor General

Ofwat

The economic regulation of the water sector

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Key facts

£11.8bn	£396	40%
total water company turnover in 2014-15	average annual household bill for water in 2014-15	real terms rise in household bills since privatisation in 1989

5%	expected real terms fall in household bills between 2015 and 2020
£126 billion	capital investment by water companies since privatisation
£64.7 billion	March 2015 regulatory capital value on which the water sector earns a financial return
£44 billion	amount Ofwat expects the water sector to spend between April 2015 and March 2020 on improving water services, improving resilience and protecting the environment
£29.1 million	cost of running Ofwat in 2014-15
£840 million	our estimate of the savings to customers between 2010 and 2015 if Ofwat had used an indexation approach to calculate the allowed cost of debt
£410 million	Ofwat's estimate of the gains to companies between 2010-11 and 2014-15 from reductions in corporation tax rates after price limits had been set

Summary

1 The water industry in England and Wales was privatised in 1989. It now includes 18 large regional independently run private companies. The services these companies provide are almost entirely funded by their customers and financed through private investment. The water industry has 22 million household customers and 2 million non-household customers in England and Wales. Total industry revenue was £11.8 billion in 2014-15, with a regulatory capital value of £64.7 billion.

2 The Department for Environment, Food & Rural Affairs (Defra) and the Welsh government set the policy and regulatory framework for the water industry in England and Wales. The Water Services Regulation Authority (Ofwat) is the independent economic regulator of the water industry. Its main statutory duties include: protecting the interests of consumers; securing the long-term resilience of water supply and wastewater systems; and ensuring that companies carry out their functions and are able to finance them. In 2014-15, Ofwat spent £29.1 million.

3 Water companies are responsible for providing services to consumers and maintaining the ability of their networks to provide these services in the future. They must also comply with European and national drinking water and environmental regulations, implemented by Defra, the Welsh government, the Environment Agency and Natural Resources Wales. The Environment Agency, the Drinking Water Inspectorate and Natural Resources Wales monitor companies' compliance and advise companies on the actions required to comply.

4 Water companies are monopoly suppliers to most consumers. Ofwat limits the prices they can charge, by setting price limits for fixed five-year periods. Ofwat has carried out five price reviews since privatisation. The most recent of these, concluded in December 2014, set water and sewerage price limits from April 2015 to March 2020. The Water Act 2014 extends retail competition to all non-household customers of English water companies from 2017, and provides for possible future competition in wholesale markets.

5 This report considers the economic regulation of the water sector, particularly the price control process. We focus on Ofwat's primary duties to protect consumer interests and ensure that water companies properly carry out their functions. We assess outcomes in the water sector up to 2015, and comment on Ofwat's approach in its price control for the period 2015 to 2020. We also consider how other regulatory decisions on quality and environmental issues affect consumers. We assess whether the system of economic regulation:

- uses sound evidence to set required levels of service and environmental quality, and achieves planned service levels while maintaining affordability (Part Two);
- provides incentives for regulated companies to be efficient and allows consumers to share in these efficiencies (Part Three); and
- promotes stable and low-cost financing of water company activities, and protects consumers and taxpayers against the risks of company failure (Part Four).

6 We do not consider the actions taken to increase competition in the water industry; we expect to examine these in future work.

Key findings

Providing services

7 **The regulatory framework has contributed to major improvements in water quality since privatisation.** It has provided the conditions to encourage private investment and has promoted environmental and quality improvements. Most measures of service quality have improved markedly. Under Ofwat's measure of the ability of networks to continue providing services, no company showed 'deteriorating' performance between 2009-10 and 2013-14. Environmental and drinking water quality measures have also improved and the UK has avoided fines for non-compliance with EU obligations. Ofwat expects water companies to spend £44 billion on improving water services, improving resilience and protecting the environment between 2015 and 2020. At its 2014 price review, Ofwat looked to companies to take more responsibility for improving services, for instance by requiring them to agree a system of incentives for achieving good outcomes and improving asset quality (paragraphs 2.11 to 2.14, 2.16 and Figure 6).

8 **Ofwat's 2014 price review successfully encouraged companies to reflect better customer priorities in pricing and service decisions.** Ofwat required water companies to demonstrate how they had engaged with their customers in developing their business plans. This led to much more detailed customer research and engagement than in previous price reviews. Companies we interviewed supported Ofwat's change in approach, but considered that Ofwat did not explain clearly enough how the results of customer research would be reflected in their price limits. Some companies were therefore surprised when Ofwat intervened to set more demanding performance targets than customer groups had expressed willingness to pay for, based on its comparative analysis of the costs of service provision. Some stakeholders were concerned that this could lead companies to reduce engagement with customers in future price reviews (paragraphs 2.4 to 2.6).

9 **Customer bills have stabilised, but still represent an important component of household spending.** The average annual household bill for water and sewerage was £396 in 2014-15. This is a 40% increase in real terms since privatisation in 1989. Most of the rise happened between 1990 and 1995 under the government's initial price controls; since 1995, the average bill has increased by 9% in real terms. At the 2014 price review, Ofwat determined that average bills should fall by 5% in real terms between 2014-15 and 2019-20, following a 2.6% fall between 2009-10 and 2014-15. Water bills represented around 2.3% of average household spending in 2013, rising to more than 5% for the poorest 10% of households. All companies offer financial assistance measures to their most disadvantaged and indebted customers, which they expect to support 1.8 million people by 2020 (paragraphs 1.3, 2.17 to 2.20, Figures 7 and 8).

10 **Defra has improved its analysis of the costs and benefits of meeting environmental standards, and used it to reduce customer bills.** Ministers can delay or downgrade some water sector obligations to improve environmental water quality if they are disproportionately expensive. Defra analysis influenced the European Union's decision not to set environmental quality standards for three pharmaceuticals in the water environment. The Environment Agency estimated in 2011 that targeting these chemicals with treatment works could have cost the water sector £27-31 billion over 20 years. However, water companies and consumer representatives are concerned that the water sector still bears a disproportionate share of the costs of environmental improvements (paragraphs 2.7 to 2.9).

Promoting efficiency and benefiting consumers

11 **Ofwat's approach to price regulation has encouraged companies to improve efficiency, resulting in lower customer bills.** Allowing companies to keep the difference between Ofwat's price limit assumptions and actual costs gives them an incentive to make efficiency savings. It also reveals important information about costs to inform future price controls. Ofwat allowed for £39 of new efficiency savings in the average annual household bill in the period 2000 to 2005, but this fell to £11 annually for the period 2010 to 2015 (paragraph 3.3, Figure 9).

12 **The reduced scope for efficiency gains from comparative regulation places pressure on Ofwat's approach to costing.** In price reviews prior to 2014, Ofwat set price limits based on its assessments of how far the most efficient companies could improve their efficiency, and how quickly less efficient companies could catch up with them. Partly as a result, company efficiency levels have converged over time, reducing the potential benefits for customers from comparative competition alone. For its 2014 price review, Ofwat set more demanding efficiency targets on the basis of total expenditure assessments and gave companies more responsibility for managing their costs and risks. It also introduced separate price controls for water and wastewater and retail and wholesale provision, to increase comparability across companies. However, Ofwat does not currently analyse in detail how much the different elements that make up water and wastewater services should cost if delivered efficiently. This means that its approach to cost benchmarking does not provide full confidence that leading companies are as efficient as possible (paragraphs 3.4, 3.5).

13 **Between 2010 and 2015, companies benefited from several factors outside their control.** Companies have little influence over some important cost components, meaning they can make unexpected gains or losses regardless of their own actions, with customer bills changing only in future price control periods. In March 2013, Ofwat challenged companies to share some of their gains from factors including low taxation, low borrowing costs and high inflation. It estimates that companies shared £435 million with consumers between 2010 and 2015, through incurring additional costs without reimbursement and passing up benefits, but this is far below the total level of windfall gains (paragraphs 3.2, 3.11 to 3.19, Figures 11 to 14).

- **Debt:** In 2009, when setting price limits for 2010 to 2015, Ofwat assumed higher borrowing costs for companies than actually occurred, because economy-wide interest rates were lower than it had expected. We considered the impact on customers had Ofwat adopted a different approach, based on a method adopted by the energy regulator (Ofgem) in 2013-14 for its 8-year price controls. Ofgem allows a cost of debt that changes based on the borrowing costs of similar companies. This approach removes gains or losses to companies resulting from general interest rate movements, but increases the variability of customer bills. We estimate that, had Ofwat used a similar indexation approach in 2009, total customer bills would have been £840 million lower between 2010 and 2015. Conversely, under Ofgem's approach customers could have faced higher bills if interest rates had risen above their long-term average.

- **Tax:** Cuts in corporation tax rates after price limits were set meant that regulated companies paid up to £410 million less in tax than Ofwat had assumed. This combined with other factors, such as regulated companies offsetting taxable profits with unpaid-for losses from holding companies, to lead to an overall gap of at least £710 million between actual tax payments and Ofwat's assumptions. Ofwat only shares the benefits of lower than expected tax payments with customers if the change is due to a financial restructuring of the regulated water company.

- **Inflation:** Ofwat provides for the wholesale element of water prices to increase in line with inflation each year, as measured by the Retail Prices Index. This is intended to protect companies from the effects of general inflation. However, Paul Johnson's 2015 review of consumer price statistics concluded that the Retail Prices Index was an unreliable and upwardly-biased measure of consumer inflation. The higher volatility of the Retail Prices Index means that customer bills may fluctuate more than overall household prices. It may also make it harder for Ofwat to forecast inflation accurately. Whichever index is used, if inflation is higher than Ofwat expects at the time of a price review (as was the case between 2010 and 2015), companies could make unexpected gains, while they could make unexpected losses if inflation is lower than Ofwat expects.

Promoting financial resilience

14 **The regulatory framework has helped to establish a favourable climate for financing, benefiting both companies and consumers.** The regulatory capital value of water companies has increased by £49 billion since privatisation. Companies and lenders we interviewed were positive about the relative stability and certainty that the regulatory framework provides. Companies have issued much more debt than equity, meaning that the proportion of debt in their capital structures has risen markedly since 2006. Higher debt levels have caused credit rating agencies to lower their assessment of company creditworthiness, but borrowing costs remain low by historical standards (paragraphs 4.2 to 4.5, Figures 15 and 16).

15 **Ofwat has established strong regulatory protections which reduce the likelihood of company financial failure and its impact on services if it does occur.** The essential nature of water services means that a company's failure could be more serious than in other industries. Ofwat has put in place arrangements to increase the operational independence of regulated companies from companies that own them, aiming to reduce the risk that the actions of holding companies harm consumers. A special administration regime is designed to provide continuity of service if a company cannot pay its debts. In 2015, Ofwat carried out an exercise to assess its ability to respond to a company entering financial distress, although the regime has not yet needed to be used in practice. Special administration could impose costs on customers or taxpayers until a buyer could be found or the company returned to profitability (paragraphs 4.9, 4.10, 4.13 to 4.15).

16 **Despite recent improvements, the information gathered by Ofwat to understand the corporate and financial resilience of the sector to external shocks currently remains limited.** Ofwat has taken important steps to help improve the resilience of water companies, for instance by strengthening the role of non-executive directors on company boards. But much of its systematic information-gathering takes place only at price reviews, when it assesses each company's ability to finance its activities over the next five years. For these assessments, Ofwat assumes that each company has the same financial structure. This helps to ensure that customers do not pay for inefficient financing decisions by companies. But it means that Ofwat's assessment may not reflect a company's true financial resilience. In July 2015, Ofwat launched a consultation on a new approach to financial monitoring. It is considering the consultation responses (paragraphs 4.16 to 4.18).

Conclusion on value for money

17 Economic regulation of utilities involves difficult trade-offs in the context of environmental, technical and financial uncertainty. Since privatisation, Ofwat's price cap regulation has promoted substantial service and efficiency gains to the benefit of consumers, while maintaining a stable and attractive climate for investors. Ofwat has continued to refine and improve its approach to price reviews. Its 2014 review committed companies to improving services further while reducing bills by £3 billion compared to companies' proposals, and by 5% on average over the next five years, increasing value for money for consumers.

18 Within this framework, Ofwat still needs to tackle important issues as it prepares for future price reviews. In particular, companies currently bear several risks associated with factors outside of their control. As a result, we estimate that companies made net gains of at least £800 million between 2010 and 2015 because of unexpected falls in borrowing costs and the corporation tax rate. Customers would have benefitted if they rather than the companies had borne these risks, though they could have lost out if borrowing costs or tax rates had risen. We consider that the price cap regime does not balance risks appropriately between companies and consumers, and so does not yet achieve the value for money that it should.

Diagnosis and recommendations

19 In the UK, there is a broad consensus in favour of independent economic regulation, backed up by legislation and professional norms. This has encouraged a climate in which water companies can finance their investments cheaply and consumers reap the benefits in the medium term. However, the regulatory framework has faced challenges in recent years, partly due to changes in ownership and financing structures across regulated utilities. Our recommendations are designed to build on the strengths of independent regulation and the improvements Ofwat made at the 2014 price review.

20 Defra should:

a **develop further its assessments of the affordability and cost-effectiveness of environmental improvements.** This should include working with the water industry and other sectors to assess how best to comply with environmental standards, and using its analysis to inform decision-making.

21 Before the 2019 price review, Ofwat should:

b **clarify how customer engagement is expected to affect service decisions and price limits.** It should encourage companies to continue to engage with consumers during price control periods. Ofwat could support ongoing monitoring and discussion by providing companies with greater clarity on how it will use customer research alongside comparative information in challenging companies' proposals;

c **improve the transparency of regulated companies' activities, particularly regarding tax matters.** Ofwat should require regulated companies to make information about their financial structures, tax arrangements and performance more accessible to their consumers. It should also explore the possibility of making the tax affairs of water holding companies more transparent. This would increase confidence in the sector and support greater consumer involvement;

d **strengthen its monitoring of the financial and corporate resilience of water companies, building on its consultation on its financial monitoring framework.** This could include setting common standards for company stress tests and increasing their visibility. This would help to ensure that shareholders and lenders understand the risks involved and give Ofwat an early warning of companies suffering financial difficulties; and

e **work with other economic regulators, such as Ofgem and Ofcom, to assess how regulators can best respond to developments that affect multiple sectors.** For instance, changing company debt and ownership structures raise similar issues in many industries, and may be best addressed through a joint approach. This could involve greater sharing of knowledge and skills between regulators, for example through more secondments or through the UK Regulators Network establishing a common pool of experts.

22 For the 2019 price review, Ofwat should:

f **look to increase the pass-through to customers of costs or benefits which are outside companies' control, such as general movements in taxation or borrowing rates.** It should carry out a full assessment of likely impacts, including potential gains to customers through lower prices and to companies through reduced risk, as well as the potential costs of inefficient financial structures. It should use evidence from energy distribution and transmission companies to analyse results under Ofgem's different approach; and

g **improve its understanding of the costs of service delivery, to help it assess what the activities of an efficient company should cost.** This could include costing of the different elements of water and wastewater collection, transportation and treatment. This would complement Ofwat's current benchmarking approach, and help it to respond to the changes in the water industry that could result from greater competition. In developing its approach to costing, Ofwat should take account of the Competition and Markets Authority's findings on Bristol Water's disputed price determination.