National Audit Office

REPORT

Regulating for investment and outcomes in the water sector

Department for Environment, Food & Rural Affairs

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HC 853

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National Audit Office

Regulating for investment and outcomes in the water sector

Department for Environment, Food & Rural Affairs

Report by the Comptroller and Auditor General

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Gareth Davies
Comptroller and Auditor General
National Audit Office

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Key facts[1]

£290bn

amount water companies plan to spend on infrastructure improvements over the next 25 years

5bn litres

estimated daily shortfall in water needed in England by 2050, based on current usage rates

700 years

time to replace existing water mains, at the current rate of 0.14%; the average rate of replacement since privatisation was 0.83%

70%	increase in water companies' spend expected over the next five years (2025–2030) compared with the previous five years (2020–2025)
18,000	projects to be delivered by water companies in the next five years through the Environment Agency's (EA's) 2024 Water Industry National Environment Programme
£27 billion	enhancement spend over the next five years for actions required by EA
30	major water supply projects, including nine reservoirs, where construction is proposed to start over the next 15 years
Three	companies (of 16) in 'cash lock-up' and unable to make certain financial transactions without Ofwat's permission, due to poor credit ratings

1 All monetary figures set out in the Key facts are in 2023-24 prices.

Summary

Introduction

1 Water is essential for human health, the environment and the economy. A shortfall of nearly 5 billion litres of water per day is expected by 2050, based on current usage rates. This is more than a third of the 14 billion litres currently used daily. In England and Wales, the supply of clean drinking water to homes is predominantly managed by 16 companies, of which 11 also supply wastewater services.[2] The work they do, and the amount they charge the public for their services, is overseen by regulators who are responsible for protecting the interests of the public and the environment.

2 In 2023 the government published the *Environmental Improvement Plan*, which sets out targets for the sector to reduce: the impact of sewer discharges; phosphorus in treated wastewater; public consumption per head; and leakage. Companies estimate that almost £290 billion of additional spending will be needed over the next 25 years to meet these targets and address supply and environmental challenges.[3] The ability of the regulatory framework to ensure the sector both delivers value for money and attracts the investment needed is crucial to the sector's success.

3 The Department for Environment, Food & Rural Affairs (Defra) is the government department with policy responsibility for the water sector, and there are three regulators who oversee the companies. The Water Services Regulation Authority (Ofwat) is responsible for ensuring the plans are funded appropriately, and set an expected rate of return to investors commensurate with the risk. Ofwat sets the sector's funding envelope for every company every five years through the price review (PR) process. The Environment Agency (EA) regulates for the impact on rivers and other water bodies and oversees seven long-term plans and planning frameworks that water companies produce and work to. The Drinking Water Inspectorate (DWI) regulates for drinking water quality and sufficiency.

2 As at February 2025 there are 16 water companies. In February 2023 Bristol Water was acquired by South West Water.

3 This £290 billion of additional investment is on top of normal day-to-day spending. It covers work to meet environmental ambitions as well as other sector challenges such as cyber security and net zero. All monetary figures set out in the report are in 2023-24 prices.

Scope of this report

4 This report examines the effectiveness of the regulatory regime in delivering long-term objectives, incentivising operational performance improvements, and attracting the investment needed to meet the government's specified outcomes.

5 We examine the regulatory planning process and methodology underpinning the current price review (PR24), which sets funding over 2025-26 to 2029-30, and assess regulatory performance over the last two price review control periods 2020-21 to 2024-25 (PR19) and 2015-16 to 2019-20 (PR14). This report covers the following.

- Part One sets out the challenges the sector and the regulators currently face to improve performance and consumer trust.
- Part Two assesses how the regulatory framework identifies, plans for and delivers long-term objectives.
- Part Three assesses how the regulatory framework incentivises the operational and financial performance of water companies in the short term and consequences for how attractive the sector is to investors.

6 This report does not directly evaluate the actions of water companies, because they are not our audited bodies. Nor does it consider issues outside the remit of historical regulatory powers, such as executive pay. This report does not consider how water regulation connects with wider issues, such as local authority planning and other sectors that impact on water quality, such as agriculture. It is not a review of specific regulatory decisions, such as enforcement action or setting individual company allowances, or the appeals process. This report also does not examine the differential impact of regulatory decisions, for example on vulnerable consumers.

7 The audited bodies that fall within the scope of this report are Defra, Ofwat, EA and DWI. While Defra and EA have responsibility in England, Ofwat and DWI have responsibility in England and Wales. Geographically, we cover Ofwat's and DWI's work across England and Wales, and Defra's and EA's work across England. We do not assess the actions of the Welsh Government or Natural Resources Wales, whose work is audited by the Auditor General for Wales. An independent Commission, headed by Sir Jon Cunliffe, is currently reviewing the water sector regulatory system. We are aware of their review but have conducted our work separately.

Key findings

The challenges facing the water sector

8 **A significant increase in investment is needed to enable the water sector to address current and future challenges, and this is changing the risk profile of the sector.** In 2023 Defra set out ambitions for the sector to meet the anticipated water shortfall and address environmental concerns. However, Defra did not assess the cost or deliverability of its ambitions, except for storm overflows. Companies estimate almost £290 billion enhancement spend will be needed over the next 25 years and Ofwat estimates a further £52 billion will be needed to deliver up to 30 water supply projects, including nine reservoirs. Over the next five years companies will increase their spending by 70% and spend £47 billion on enhancements (paragraphs 1.3, 1.7 to 1.10, 2.5 to 2.7, 2.39 to 2.40, and 2.42).

9 **Ofwat and Defra recognise that this rise in investment will lead to increases in customer bills.** Water companies fund expenditure by raising debt and equity financing. Customer bills cover operating costs, a contribution towards capital repayments and returns on this financing. In 2023 Defra conducted an impact analysis recognising the impact of the *Storm Overflows Discharge Reduction Plan* for customer bills. Ofwat estimates customer bills will rise on average £31 per household per year over the next five years, before inflation, to fund additional spending. Defra and all of the regulators need to ensure that water companies can attract the investment needed to fund the required improvements and assure customers that their bill rises are justified and that the money will be used correctly (paragraphs 1.8 to 1.10, and 2.8, and Figure 1).

10 **Performance of the sector has led to a decrease in consumer trust.** The UK has one of the highest standards of drinking water quality in the world. However, a survey commissioned by Ofwat and the Consumer Council for Water found consumer trust had fallen across a range of areas including in whether companies acted in the interests of the environment and provided a reliable service. The highest-profile cause of environmental harm is use of storm overflows, where companies release untreated sewage into rivers and seas. Companies have met a target to fit monitors to every storm overflow, and as at January 2025 Ofwat and EA were investigating every wastewater company. Performance in key measures including mains bursts, supply interruptions and pollution incidents has not significantly improved since 2015-16. The average annual dividend was 9% of equity between 2015-16 and 2019-20. This fell to 3.5% between 2020-21 and 2023-24 (paragraphs 1.6, 1.11 to 1.14, 1.19 to 1.20 and Figures 2 to 7).

Long-term planning

11 **There is no consideration of planning solutions at a national level.** All three regulators require water companies to produce individual company plans on specific topics such as drinking water safety. Companies are required to work together, and with EA, to produce regional water resource plans. However, none of the regulators have a duty to ensure there is a coherent national plan for the water sector. Despite increasing pressures on water supply and unprecedented investment in new infrastructure, there is no coherent national system where integrated decision making can take place (paragraphs 2.2 to 2.4).

12 **Defra's regulatory framework for the water sector is complex and there are inconsistencies in approaches and processes.** There are twelve different plans and planning frameworks that companies must develop and work within, such as plans to manage river basins, as well as drainage and wastewater. Delays and changes to guidance, and inconsistent planning assumptions for the most recent price review period, may have affected the quality of water companies' plans (paragraphs 2.10 to 2.12 and 2.29 to 2.31, and Figure 9).

13 **The regulators have inconsistent responsibilities and there are gaps in oversight of the sector.** The DWI has a responsibility to inspect drinking water assets and maintain network security. However, there is not a regulator with comparable responsibility for wastewater assets or network security, including cyber security (paragraphs 2.3 to 2.4 and Figure 8).

14 **EA has duties to the water environment but is not required to balance them with net zero or cost considerations.** EA oversees seven long-term plans and planning frameworks that shape water companies' actions. Over the next five years this includes over 18,000 actions by water companies, and accounts for £27 billion of the sector's anticipated £47 billion enhancement spend. EA is bound by its statutory duties with regard to the sector, which focus on the condition of the water environment. EA does not balance the water environment with customer affordability or net zero when reviewing plans, because it does not have statutory duties to customers or the sector's net zero impact. Companies told us they felt that, in regulatory decisions, EA prioritises meeting legislative water quality targets over innovative solutions with better nature and net zero implications (paragraphs 2.2 to 2.4, 2.11 and 2.13 to 2.14, and Figures 8 and 9).

15 **Ofwat sets how much water companies can charge customers via the price review process, which is complex and difficult for investors to understand.** Ofwat began sharing plans for the 2024 price review process in December 2020, and finalised determinations in December 2024. As part of setting what companies can charge customers, Ofwat sets the sector's funding for day-to-day operations based on the spending of companies who carry out their work at the third or fourth lowest cost. It also sets the expected returns for investment. It uses a large and varied set of mechanisms to adjust allowed costs and provide financial incentives to improve performance. It has also set up an Innovation Fund to encourage companies to innovate, grow capacity, and enhance collaboration. The final methodology for the most recent price review comprised over 60 documents, and around 2,000 pages. Investors told us they found the complexity makes the process hard to understand, and they focus their attention on financial performance metrics. Some companies wait until the planning process and the price review are finished to finalise their funding or operational plans. As a result, company capital expenditure has tended to follow a cyclical pattern within each price review of first increasing and then decreasing, with knock-on effects for delivery of work (paragraphs 2.19 to 2.31, 2.34 and 2.38, and Figures 10 and 11).

16 **Ofwat is introducing new mechanisms to address concerns around delivering long-term projects with existing processes.** Major projects, such as the construction of new reservoirs, will take a long time to deliver and cover multiple price review periods. Ofwat has allowed specific funding in price reviews for companies to develop their plans for these projects. It is setting up new processes to manage the projects outside price reviews. Ofwat expects companies to use competitive procurement where possible to deliver these projects. Ofwat expects that this will reduce risks to both delivery and value for money. However, it raises new risks for both water companies and the regulator as to the skills needed to manage, deliver, and regulate such contracts (paragraphs 2.38 to 2.44).

17 **The regulators do not have a shared understanding of the condition of water and wastewater assets, and the level of funding needed to maintain them.** Ofwat, EA and DWI all have an interest in overseeing the condition of these assets, as they affect how well water companies can carry out their operations, but they do not have a comprehensive set of standards or metrics. In 2024 Ofwat set out plans to work with water companies to develop a shared understanding of asset condition and how it can be improved. Ofwat expects companies to maintain assets through base expenditure. Despite overspending on operational expenditure over the last four years, companies have done less work on specific areas of asset health than Ofwat's expectations. The rate of replacement of water mains has been 0.14% a year over the first four years of the PR19 control period, which – if maintained – would mean the entire network would be replaced once every 700 years. Ofwat allowed expenditure for a replacement rate of 0.4% per year over the PR19 control period and is expecting companies to raise the rate further in future. The average rate of replacement since privatisation was 0.83% or replacement once every 125 years (paragraphs 2.45 to 2.48).

Balancing incentives for short-term performance with financial sustainability

18 **Ofwat has introduced financial incentives to encourage companies to improve performance, which has resulted in penalties for most companies in the PR19 control period.** In PR14 Ofwat introduced Outcome Delivery Incentives (ODIs) to drive performance improvements, offering a financial reward if performance exceeds an agreed level, and a penalty if performance is below the target. Over the PR14 control period, companies received an average net penalty from ODIs of 0.03% of regulated equity, and over the PR19 control period they received a net penalty of 0.67%. Where companies improve but do not meet the target agreed with Ofwat, they are penalised. For example, the companies with the poorest performance on supply interruptions in 2019-20 had reduced the time consumers were without water by 26% by 2023-24 but were penalised £129 million over the period. ODIs reduce returns for companies with the lowest performance, who are likely to need to increase expenditure the most. Ofwat expects that investors will meet the funding shortfall (paragraphs 3.17 to 3.21 and Figures 14 and 15).

19 **Performance has not been consistent or significantly improved in recent years.** Performance of the median company over the PR19 control period has improved in six out of 12 key ODI measures and decreased in six. At the same time, companies have spent 12% more than the allowances set by Ofwat in the first four years of the PR19 control period. Some of the overspend will be due to above-inflation cost increases, including labour and energy, and companies will be able to recover part of their overspend via customer bills (paragraphs 3.13 to 3.14 and 3.16 to 3.18, and Figure 13).

20 **The financial resilience of the sector has weakened.** On average the sector made total operational losses equivalent to 3.4% of regulated equity in the last four years. However, most companies mitigated the operational losses through financing gains due to paying a lower cost of debt, and lower amounts in tax, than Ofwat's assumptions. As a result, the sector made an average return of 2.78% of regulated equity over the last four years, lower than the 4.19% expected in 2019. Shareholders have benefited from an increased value of the company, which is indexed to inflation. The extent to which income from operations covers interest payments has declined since 2016. In 2023-24, 10 companies did not generate enough income to cover their interest payments. Three companies out of 16 are in 'cash lock-up' because their credit rating is lower than Ofwat's minimum required rating. Ofwat has signalled concerns about the financial resilience of 10 of the 16 major companies, up from eight in 2021-22 (paragraphs 3.7 to 3.12, 3.16, 3.22 and 3.34, and Figure 16).

21 **Defra and Ofwat have taken action to enable earlier intervention in the event a company is in financial distress.** Ofwat has extended its powers, including to prevent companies paying dividends when they are below Ofwat's minimum required credit rating. Three companies currently cannot pay a dividend without Ofwat's permission. In addition, recent changes to the special administration regime enable a company's assets to be sold on more easily, and mean that debt investors might receive less than in a normal insolvency. These changes are affecting how investors view the riskiness of the sector. In the event of insolvency, the government can recover its costs associated with special administration through customer bills if it cannot recover the costs elsewhere (paragraphs 3.23 to 3.25, 3.27 to 3.31, and 3.34).

22 **Costs are increasing for customers as the credit-worthiness of the sector has declined.** There has been a perceived decline in the stability and predictability of the regulatory framework, as well as the financial position and performance of companies. One credit rating agency has explicitly linked the rating it gives to individual companies to the stability and predictability of the regulatory environment, which it downgraded in November 2024. Credit-worthiness affects the cost of debt, and this has gone up relative to other sectors for 2025–2030. The higher costs reflect how attractive the sector is to investors and will feed through to customer bills (paragraphs 3.30 to 3.35).

Conclusion on value for money

23 Defra and the water sector's regulators have not encouraged water companies to spend what they need to deliver the performance expected. The sector now faces significant environmental and supply challenges. To meet these challenges, it will need to attract investment and spend at a rate not seen before. The regulators must understand the scale of the challenge in terms of cost and deliverability and the condition of assets across the sector, ensure the sector raises the investment needed and meets government outcomes, and achieve value for money for bill payers.

24 The regulators have taken steps to incentivise companies to improve their performance and align investor and customer interests, but both consumer trust and the financial resilience of the sector have declined. The regulatory framework has contributed to worsening investor perception of the sector. Both consumers and investors must have trust that money is being well spent, and that returns are predictable and appropriate. Defra and the regulators must work to achieve this for the long term.

Recommendations

25 Alongside any recommendations made by the independent Commission, we expect Defra and the regulators to respond to our recommendations below. We recommend the following on roles and responsibilities across the regulatory framework.

a For future plans, Defra needs to understand the costs and deliverability of targets and the impact on customers' bills.

b Defra should consult on options to ensure delivery of a coherent national system plan for water, including balancing trade-offs between different duties.

c Defra should address gaps in responsibilities, particularly around the wastewater network, and ensure regulators work together to achieve the same outcomes for the environment and customers.

d EA must understand whether actions in water company plans are being delivered and having the intended impact and delivering statutory environmental targets.

To improve future planning and price reviews, we recommend the following.

e EA, Ofwat and DWI should align deadlines and limit inconsistencies in planning timelines and assumptions.

f Given the limited progress in developing a common understanding of asset health, Ofwat should continue to work with the sector, EA and DWI, reach a conclusion, and deliver its Roadmap for enhancing asset health understanding in the water sector on time.

g Before the development of PR29 methodology, Ofwat should consider whether it can act to simplify the price review methodology. This should include evaluating the impact of outcome incentives on company performance, the impact of cost benchmarking on company behaviours and financial resilience, and the impact of price control deliverables on performance.

h Before the development of PR29 methodology, Ofwat should seek to understand whether successful Innovation Fund projects are being taken up across the sector and the impact.

To ensure the sector can continue to attract investment, we recommend the following.

i Ofwat should develop a view on how to identify and plan for investment needs over the long term and work with Defra and the other regulators to improve transparency and predictability in light of the recent sector downgrades.

Part One

The challenges facing the water sector

1.1 In England and Wales, the supply of clean drinking water to homes is predominantly managed by 16 companies, of which 11 also supply wastewater services.[4] The work they do, and the amount they charge the public for their services, is overseen by government and by regulators. An independent Commission, headed by Sir Jon Cunliffe, is currently reviewing the water sector.

1.2 The Department for Environment, Food & Rural Affairs (Defra) is the government department with policy responsibility for the water sector in England. Water is a devolved policy area, and the Welsh Government is responsible for water policy in Wales. There are three regulators who oversee water companies in England.

- The Water Services Regulation Authority (Ofwat) regulates in England and Wales. It is responsible for ensuring water company plans are funded appropriately and provide a rate of return to investors commensurate with the risk. Ofwat sets the sector's funding envelope for every company every five years through the price review (PR) process.
- The Environment Agency (EA) regulates for the impact on rivers and other water bodies in England. It oversees seven strategic planning frameworks and long-term plans that water companies produce and work to.
- The Drinking Water Inspectorate regulates drinking water quality and sufficiency in England and Wales. It also enforces water companies' obligations to maintain supply and network security under the Security and Emergencies (SEMD) and Network and Information Systems (NIS) directives.

1.3 Water shortages are an impending risk for the UK. Parts of the country face a significant risk from drought, while neighbouring regions have surplus water. Defra estimates that, because of climate change, population growth, and a need to ensure water abstraction remains sustainable, England will face a shortfall of 5 billion extra litres of water every day by 2050, based on current usage. Water quality pollution incidents have increased, and the water sector impacts the ecological health of 44% of water bodies in England.[5]

4 As at February 2025 there are 16 water companies. In February 2023 Bristol Water was acquired by South West Water.

5 The Environment Agency measures the ecological status of all water bodies in England including rivers, lakes, estuaries and coastal waters. Ecological status is assigned using various water habitat and biological quality tests. Using 2019 data on probable and confirmed reasons for not achieving good status, the Environment Agency found that 44% of water bodies were impacted by the water sector as a whole.

1.4 The government is setting out higher standards for the environment. In 2023 Defra published the *Environmental Improvement Plan* and set targets for the sector to reduce leakage and demand, and address sewer discharges and phosphorus in treated wastewater.

1.5 The ability of the regulatory framework to ensure water companies can fund the investment needed to meet targets is crucial to its success. The first part of this section sets out the capital investment challenges facing the sector and the anticipated step change in bills.

1.6 The remainder of this section sets out the challenge for water companies and regulators to win back consumer trust, which stands at its lowest since monitoring began in 2011, according to research conducted by the Consumer Council for Water (CCW) in 2023.[6] A 2024 Ofwat survey found public trust in companies had fallen across a range of issues, including acting in the interest of the environment, and providing a reliable service; 40% of those surveyed also thought that water providers were more interested in profits than providing a good service.[7]

Capital investment challenge and bills

1.7 To solve the current and future challenges, and meet government targets, the water sector estimates it needs almost £290 billion of enhancement investment (targeting improvements in infrastructure) over the next 25 years (**Figure 1**).[8] In addition, there are 30 major capital projects in the pipeline, to enhance water supply, which Ofwat estimates will cost a further £52 billion. Over the next five years (the 2024 price review control period) Ofwat expects water companies to spend £47 billion enhancement expenditure (up around 300% on the previous period), and over £60 billion on normal operations (base expenditure), up nearly 20% on the previous period.[9]

1.8 Water companies will need to finance enhancement expenditure by raising debt and equity investment. This feeds through to customer bills, which cover operating costs; returns for financing used to pay for capital enhancements; and a contribution towards capital repayments. In this way, customers pay for assets over the life of the asset and not when they are built.

6 4,952 consumers were asked if they trusted water companies. Answers were rated on a scale from 1 to 10, where 1 is 'do not trust them at all' to 10 'completely trust them'.

7 Ofwat, *Customer Spotlight: People's views and experiences of water – Wave two*, April 2024.

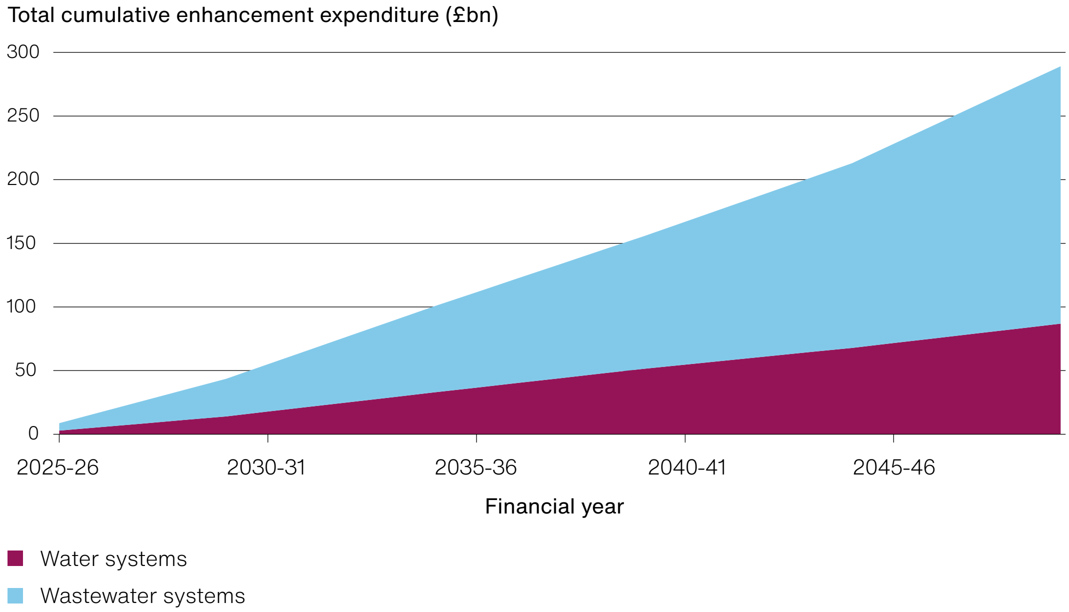
8 This additional investment is on top of normal day-to-day spending and covers work to meet environmental ambitions as well as other sector challenges such as cyber security and net zero. All monetary figures set out in the report are in 2023-24 prices.

9 Unlike the expenditure on normal operations, the £47 billion presented here is before the frontier shift applied by Ofwat in its final determination and allows for comparison with future estimated enhancement and detailed breakdowns. For more detail see Appendix One.

Figure 1

Future cumulative enhancement spending in the water sector in England and Wales, 2025-26 to 2049-50

Companies estimate spending will reach almost £290bn in total on water and wastewater systems over the next 25 years



Notes

1 Enhancement spending data is taken from company long-term spending plans and is an estimate. Enhancement is on top of normal day-to-day spending and also does not include spending on major projects funded outside the price review process.

2 Figures are presented in real terms in 2023-24 prices, using CPIH (Consumer Prices Index including owner occupiers' housing costs).

3 The split between water and wastewater systems is based on how companies have characterised their activity. Water systems include spending on metering and quality, as well as environmental plans. Wastewater systems include spending on resilience, as well as storm overflows and other environmental plans.

Source: National Audit Office analysis of Ofwat and water company data

1.9 Ofwat sets the amount companies can collect from bills for five-year periods, known as price review control periods.

- The 2014 price review (PR14) set bills for 2015-16 to 2019-20 (the PR14 control period).
- The 2019 price review (PR19) set bills for 2020-21 to 2024-25 (the PR19 control period).
- The 2024 price review (PR24) set bills for 2025-26 to 2029-30 (the PR24 control period).

1.10 In the PR24 control period companies are set to spend £109 billion, which is nearly a 70% increase on the PR19 control period in real terms. Ofwat calculates bill rises will average £31 per household, before inflation, each year for the next five years. In 2024-25, the average water and sewage bill for households was £440. The last time bills rose at this rate in real terms was between 2004-05 and 2005-06.

Acting in the interests of the environment

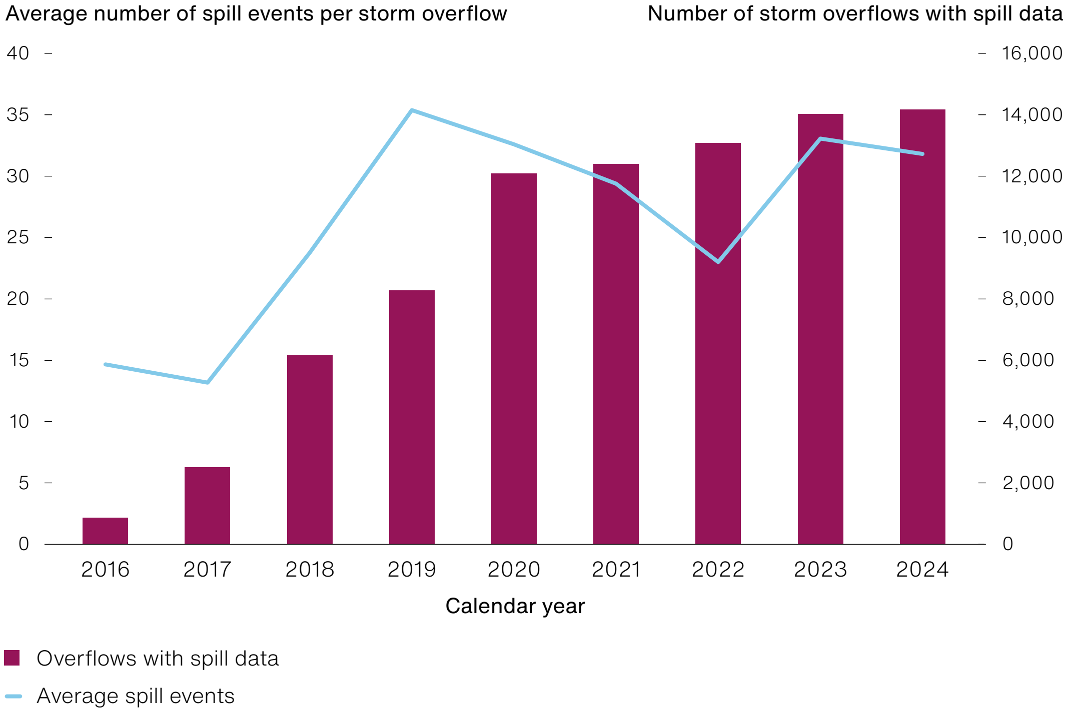
1.11 The water sector has an impact on the natural environment through abstraction and water discharges. A survey commissioned by Ofwat and CCW found that satisfaction with water company performance in protecting the environment was particularly low, falling from 45% in 2022 to 33% in 2023.

1.12 The highest profile cause of harm is use of storm overflows. EA estimates that storm overflows negatively impact the ecological health of around 7% of water bodies in England. They occur when companies release untreated sewage into rivers and seas, which can be to prevent sewage backing up into homes during high rainfall. Spills during dry weather are predominantly caused by blockages in the sewer network. When this happens, sewage is not diluted by rainwater and is much more likely to cause damage to the environment.

1.13 In 2010, just 7% of storm overflows had monitors fitted. In 2023, the sector met a government target to fit monitors for every storm overflow. As a result of the rise in monitoring, as well as higher than average levels of rainfall in 2023 and 2024, the number of reported spill events from storm overflows increased to 14,000 in 2024. The average number of spills per monitor decreased between 2019 and 2022, and rose to 31.8 in 2024 (**Figure 2**).

Figure 2
Storm overflow spill events in England, 2016–2024

The recorded number of storm overflows and the average number of spill events per storm overflow have increased rapidly between 2016 and 2020, and are now stabilising



Notes

1 A spill event is a discharge to the environment, as measured by an event duration monitor (EDM).

2 Prior to December 2023 not all storm overflows had EDMs. The increase in overflows detected will in part reflect the increased monitoring put in place.

3 We have used the measure 'number of storm overflows with spill data' rather than 'number of storm overflows with EDMs' because some EDMs do not produce reliable spill data or because data have not yet been reported in the spill data annual return.

Source: National Audit Office analysis of Environment Agency data

1.14 Both EA and Ofwat can take legal action when a water company causes pollution. As at January 2025:

- Ofwat had open enforcement cases against every major wastewater company in England and Wales pertaining to the management of sewer services and had proposed fines of £168 million for three companies; and
- EA had 393 active investigations open, including criminal investigations into all wastewater companies in England on permit compliance at wastewater treatment works.

1.15 Between 2019 and 2024 water companies paid over £430 million in penalties as a result of enforcement action from EA and Ofwat concerning environmental performance and reporting standards. Of these penalties, £198 million were levied by Ofwat for cases involving misreporting. Of the fines imposed by EA:

- 84% of penalties went to HM Treasury;
- 9% went to Defra's Water Restoration Fund;[10] and
- 7% went towards fixing the issue.

1.16 Of the financial penalties imposed by Ofwat:

- 67% was returned to customers through their water bills; and
- 32% went towards fixing the issue.

1.17 Enforcement-related action can often take years. For example, in 2019 Southern Water agreed actions with Ofwat relating to an enforcement case that started in 2017, about its performance between 2010 and 2017. Southern Water were expected to report on progress against those actions for at least five years, until 2024. Southern Water was fined £90 million in 2021 for breaches of environmental permits between 2010 and 2015, in a case which EA brought to court following an investigation which started in 2016.

1.18 In 2024 Defra set up the Water Restoration Fund to disburse money from water company financial penalties to third parties to make environmental improvements. Defra allocated up to £11 million to the fund initially. The funds remain unused, but Defra told us it is in the process of distributing it.

Providing a reliable service

1.19 The UK has one of the highest standards of drinking water quality in the world. However, over the last two price review control periods, the industry has not been able to deliver significant improvement in several key measures. See **Figures 3 to 6** on pages 19 to 22 which provide the trends for supply interruptions, pollution, mains bursts and leakage, which is an exception.

1.20 Failures in supply affect consumers. For example:

- In May 2024 South West Water's supply in Brixham was contaminated with cryptosporidium. This meant 16,000 customers were required to boil drinking water before consuming it; and
- In December 2024, Southern Water failed to supply water to around 54,500 properties for several days due to a technical issue at its Testwood Water Supply Works.

10 The Water Restoration Fund provides grants for local projects to restore and enhance the water environment using environmental fines and penalties collected from water and sewerage companies in those areas between April 2022 and October 2023.

Figure 3

Water supply interruptions in England and Wales, 2011-12 to 2023-24

Median length of interruption per household has gradually been reducing

Notes

1 Ofwat defines a supply interruption as when a property is without a continuous supply of water for three or more hours. Supply interruptions under three hours are not recorded. The measure calculates the average number of minutes of water supply lost per customer across the whole customer base.

2 Data cover 17 water and wastewater companies between 2011-12 to 2022-23, and 16 companies in 2023-24, although South West Water and Bristol Water continue to report supply interruptions separately. The upper quartile records the fifth best performance in the sector, the lower quartile records the fifth worst performance in the sector.

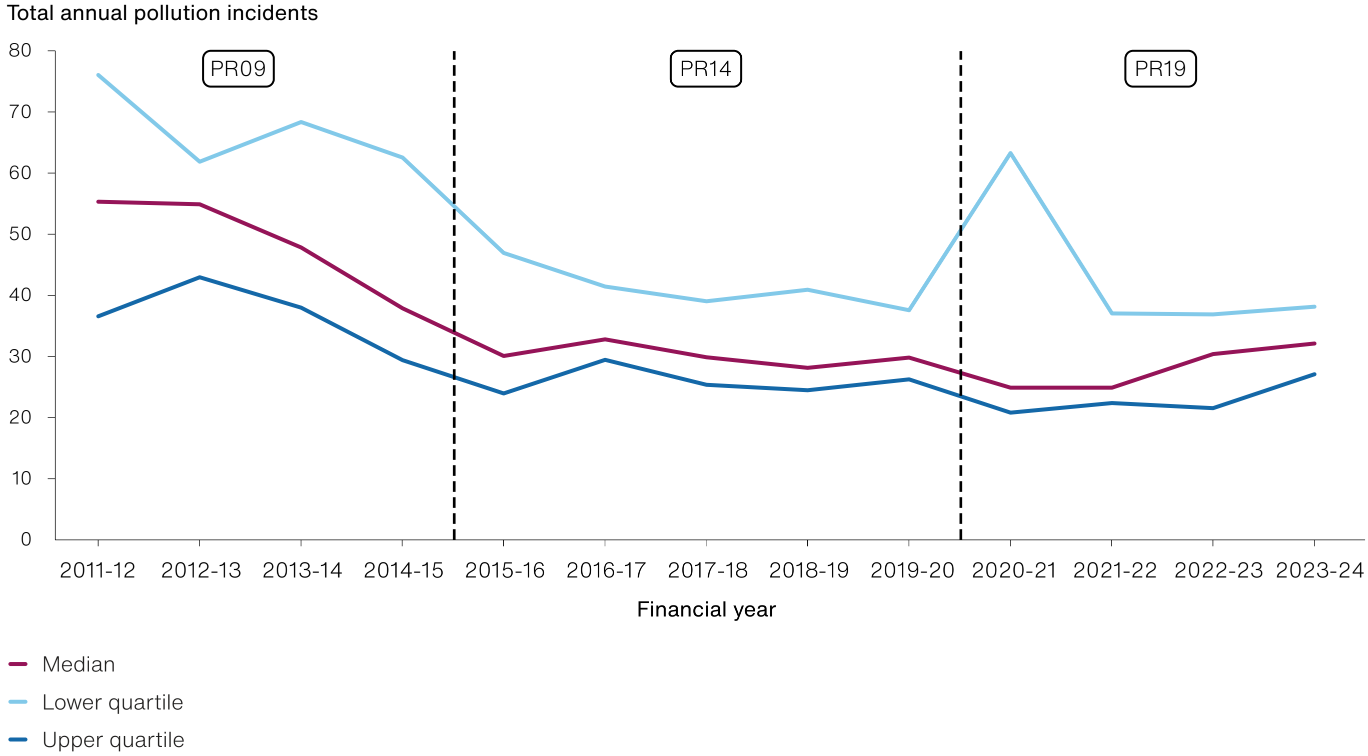
3 PR09, PR14 and PR19 refer to the price review control periods set by Ofwat for 2010–2015 (PR09), for 2015–2020 (PR14) and for 2020–2025 (PR19). Data are only available for the first four years of PR19, from 2020-21 to 2023-24.

Source: National Audit Office analysis of Ofwat data

Figure 4

Total pollution incidents per 10,000 kilometres of sewer in England and Wales, 2011-12 to 2023-24

The median number of pollution incidents has remained around 30 per year since 2015-16



Notes

1 Pollution incidents are discharges or escape of a contaminant from water company sewerage assets that have at least a minor or minimal impact on the environment, people or property.

2 Data cover 11 wastewater companies. Upper quartile records the third best performance in the sector. Lower quartile records the third worst performance in the sector.

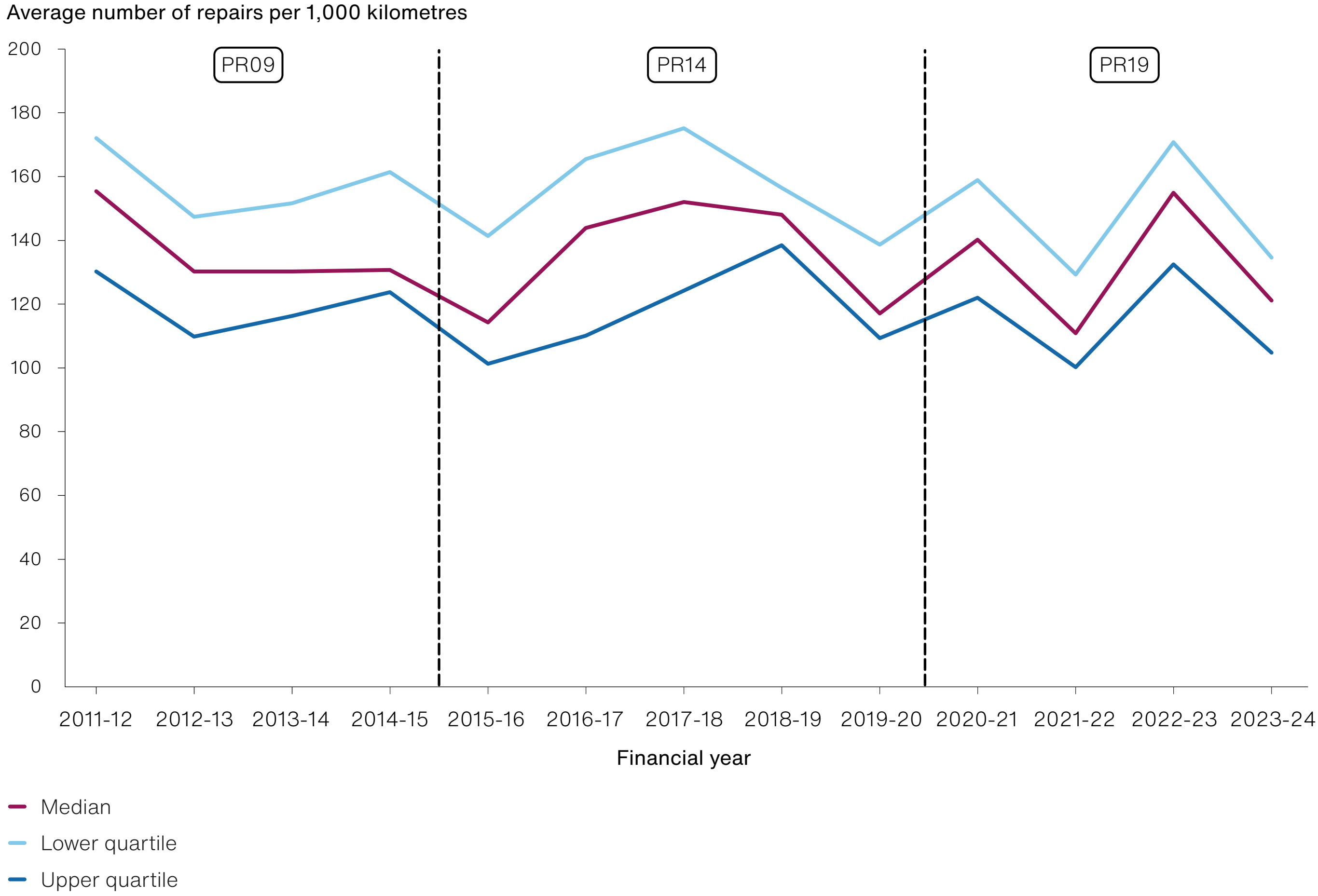
3 PR09, PR14 and PR19 refer to the price review control periods set by Ofwat for 2010–2015 (PR09), for 2015–2020 (PR14) and for 2020–2025 (PR19). Data are only available for the first four years of PR19, from 2020-21 to 2023-24.

Source: National Audit Office analysis of Ofwat data

Figure 5

Average mains burst repairs per 1,000 kilometres in England and Wales, 2011-12 to 2023-24

The median number of repairs has remained around 110 to 155 per year for the past 10 years



Notes

1 Data cover 17 water and wastewater companies between 2011-12 to 2022-23, and 16 companies in 2023-24, although South West Water and Bristol Water continue to report mains burst repairs separately. Upper quartile records the fifth best performance in the sector. Lower quartile records the fifth worst performance in the sector.

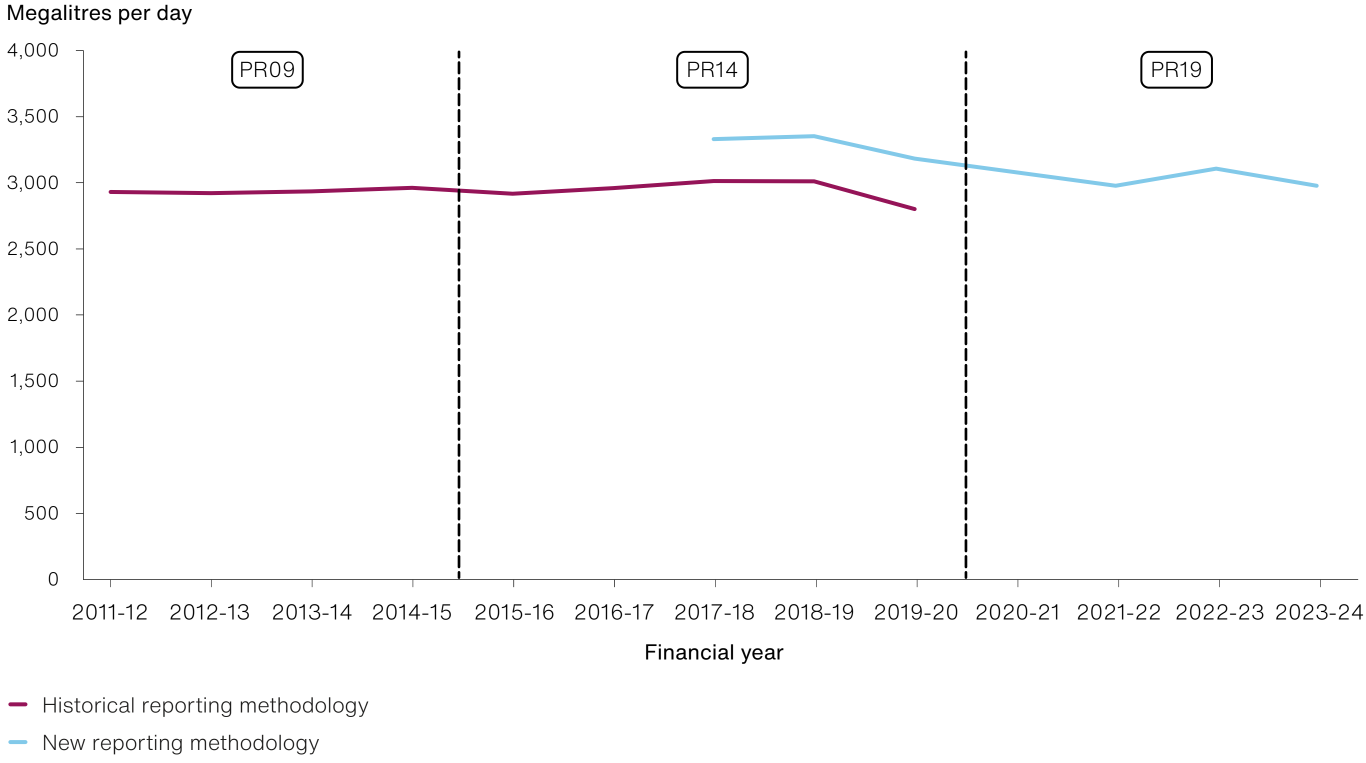
2 PR09, PR14 and PR19 refer to the price review control periods set by Ofwat for 2010–2015 (PR09), for 2015–2020 (PR14) and for 2020–2025 (PR19). Data are only available for the first four years of PR19, from 2020-21 to 2023-24.

Source: National Audit Office analysis of Ofwat data

Figure 6

Total leakage in England and Wales, 2011-12 to 2023-24

Total leakage has reduced by 10.6% over the last six years



Notes

1 Total annual leakage reflects total megalitres per day of leakage for 17 water and wastewater companies from 2011-12 to 2022-23, and 16 companies in 2023-24, although South West Water and Bristol Water continue to report leakage separately.

2 Data using the historical reporting methodology excludes Dŵr Cymru due to leakage misreporting.

3 From 2020-21 data are presented using a new reporting methodology.

4 PR09, PR14 and PR19 refer to the price review control periods set by Ofwat for 2010–2015 (PR09), for 2015–2020 (PR14) and for 2020–2025 (PR19). Data are only available for the first four years of PR19, from 2020-21 to 2023-24.

Source: National Audit Office analysis of Ofwat data

Distribution of profits

1.21 Issues around water companies' financial management, dividends and solvency have been reported on in the press. In 2024, Ofwat and CCW found that 40% of customers they surveyed believed that water companies were more interested in profits than providing a good service, up from 33% in 2023.

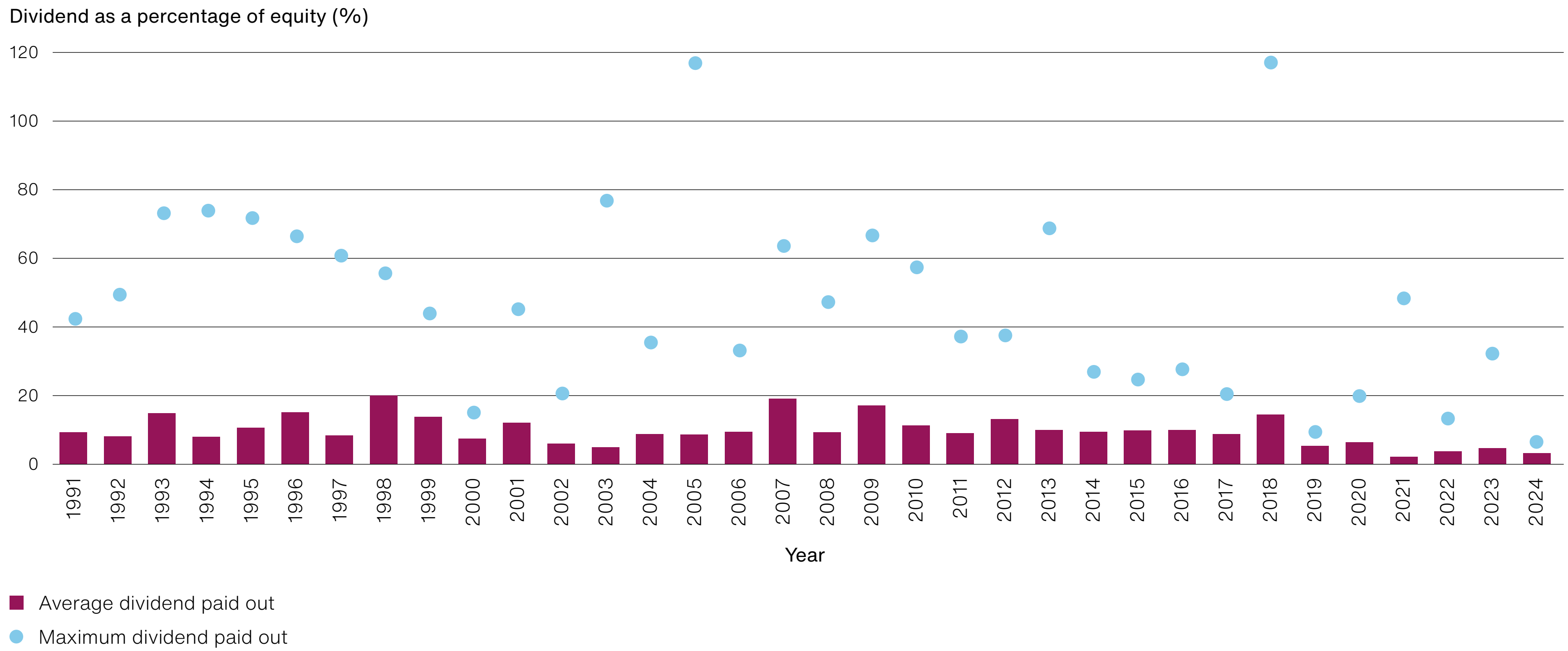
1.22 Some investors have set up complex financial structures and extracted large dividends from the sector.[11] Average dividend yields across the sector peaked at nearly 20% in 1998 (**Figure 7** overleaf). The average annual dividend yield was 9% of equity between 2015-16 and 2019-20, compared with Ofwat's assumption of 4%. On two occasions, individual companies have paid dividends of over 100% of the equity in the company. That is, they paid dividends greater than their equity, but lower than the value of the company. In some instances, these dividends were related to financing decisions for wider corporate structures. Ofwat's powers relating to dividends are set out in Part Three.

11 Complex financial structures may include having separate companies in a common group to carry out work and to raise finance, or where a water company is owned by a company which also owns other, unrelated companies. Equity dividends are paid by the company in the year and includes any special dividends paid in that year

Figure 7

Dividends paid out as a percentage of equity, 1991–2024

In both 2005 and 2018 a water company took a dividend of over 100% of equity



Notes

1 The percentage presented is the proportion of actual regulated equity paid out as dividends. This is not the same as total company value.

2 The maximum represents the maximum dividend paid out by any one company in that year. This means the point estimates may relate to different companies in different years.

3 Companies may choose to pay out dividends in one year and then pay out nothing in the following years.

4 Data for each year are as at 31 March that calendar year.

5 Data cover companies in England and Wales.

Source: National Audit Office analysis of Ofwat data

Part Two

A regulatory framework to enable long-term planning

2.1 This section of the report sets out:

- whether the regulatory framework, under the Department for Environment, Food & Rural Affairs' (Defra's) stewardship, is set up to manage the challenges of the sector;
- whether the long-term planning framework translates ambitions into achievable plans and how progress is monitored;
- how well the price review cycle and methodology, particularly the process leading up to the 2024 price review (PR24), works to set funding; and
- how the regulatory framework is adapting to facilitate long-term planning, and to understand and assess asset health.

Defra's regulatory framework and long-term ambitions

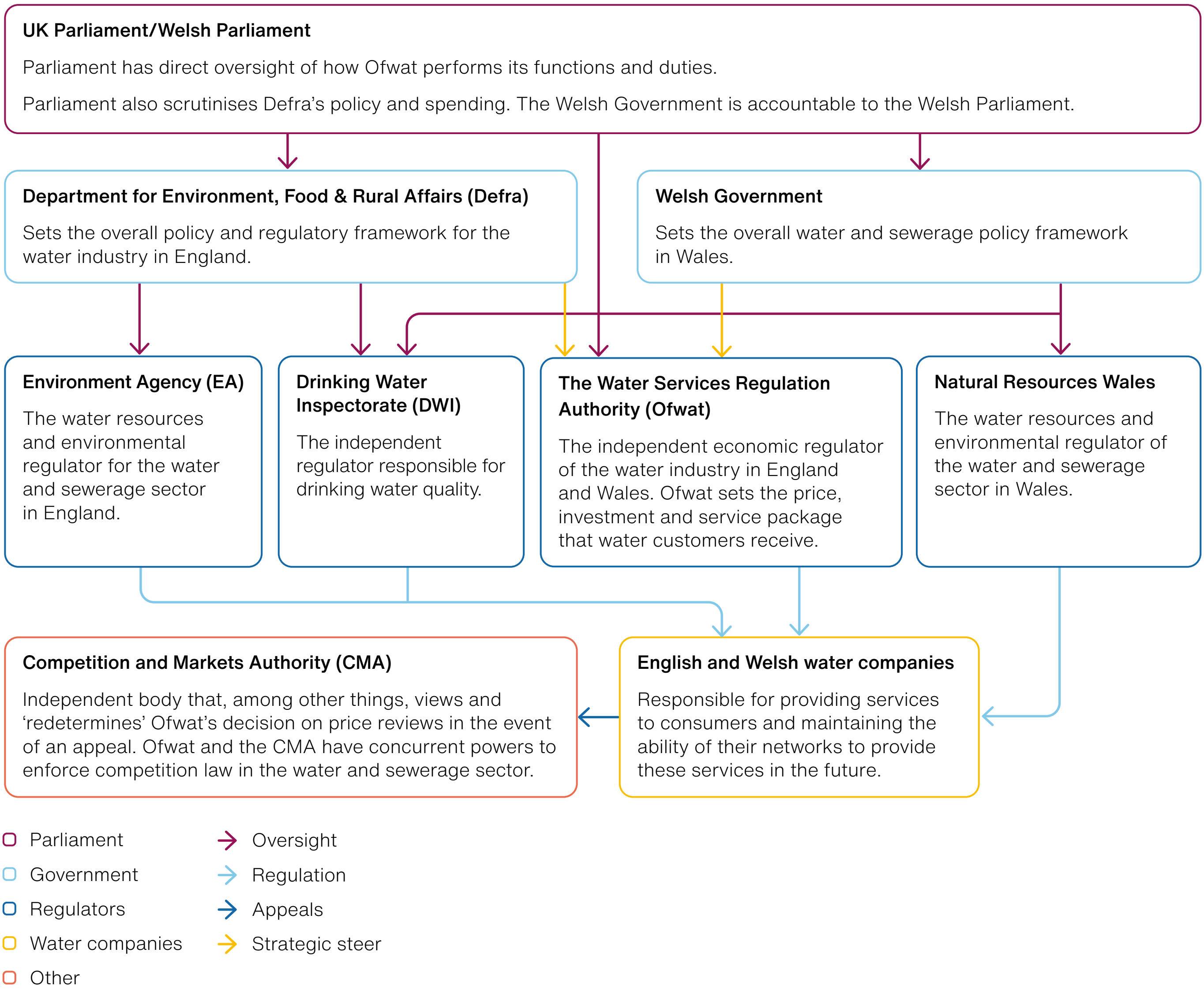
Defra's regulatory landscape, roles and responsibilities

2.2 Defra has overall responsibility for setting the policy and regulatory framework for water in England. It oversees multiple regulators of water companies (**Figure 8** overleaf).

- The Water Services Regulation Authority (Ofwat) is the independent economic regulator of the sector in England and Wales, funded by licence fees recovered from companies, and accountable to Parliament. Its duties include, but are not restricted to, ensuring water companies properly deliver their services, and securing the long-term resilience of companies' systems.
- The Environment Agency (EA) regulates water resource management, including water quality, pollution, and flood defence in England. It is an arm's-length body, accountable to Defra. Its statutory duties in relation to water companies include ensuring compliance with environmental regulations.
- The Chief Inspector of Drinking Water (DWI) is appointed as a regulatory inspectorate authority with the primary purpose of enforcing the quality of public water supplies in England and Wales. The DWI operates as a business unit within Defra and carries out investigations and enforcement action to ensure compliance with water quality and network requirements.

Figure 8
Regulatory landscape for the water sector in 2024

The regulatory landscape is complex, with multiple regulators



Notes

1 The Environment Agency regulates English water companies' operations and Welsh water companies' operations that are based in England. Natural Resources Wales regulates Welsh water companies' and English water companies' operations that are based in Wales.

2 As at April 2025 the Chief Drinking Water Inspector (head of the Drinking Water Inspectorate) for England and Wales are the same person. However, this is not required to be the case, as they are separate appointments, with Welsh Ministers appointing the Chief Drinking Water Inspector for Wales.

Source: National Audit Office analysis of publicly available information

2.3 Planning and regulating for water resources is split across regulators. Water companies produce plans and are required to work together, and with EA, to produce regional water resource plans. EA assesses plans at company level, and Ofwat reviews the costs of the plans. EA's statutory duties do not include an explicit duty to protect the interests of consumers, but Ofwat's do. EA asks companies to provide best-value solutions and is obligated to ensure its duties are met. This includes duties to ensure water companies plan to provide secure supplies of water to consumers. EA has no obligation to balance environmental outcomes with affordability for consumers or net zero. There are increasing pressures on water supply and unprecedented investment in new infrastructure, but there is no coherent national system where integrated decision making on trade-offs between investment decisions can take place.

2.4 There are further areas where regulator responsibilities cause tensions, overlap, or have gaps.

- **Net zero:** Ofwat must have regard for the government's net zero target through its consumer, resilience and sustainable development duties. In contrast EA must enforce legislative water quality targets, but does not have a statutory duty to help the sector deliver net zero targets. As a result, while EA's guidance references consideration for nature-based solutions and optimising carbon emissions, it does not monitor the net zero impact of the actions it asks water companies to take. Companies told us they felt that, in regulatory decisions, EA prioritises meeting legislative water quality targets over innovative solutions with better nature and net zero implications.

- **Environment:** Both EA and Ofwat have responsibilities for enforcement relating to serious environmental issues, which means that both regulators can take enforcement action for violations stemming from the same action, as set out in Part One.

- **Abstraction:** EA grants licences to water companies to carry out water abstraction. DWI also considers abstraction based on the impact the source has on the quality of the water, and the need for additional treatment. EA manages abstractions to address environmental issues but does not consider the impact on the costs of treatment to ensure drinking water quality.

- **Network security, including cyber security:** DWI is responsible for checking that water companies have taken the appropriate action to maintain network security and information systems in the supply of drinking water quality. No one has an equivalent responsibility for wastewater.

- **Wastewater:** No regulator has a responsibility to inspect wastewater assets. EA's responsibility is to conduct inspections only to assess compliance with environmental permits; Ofwat is not an inspectorate; and DWI's remit pertains only to drinking water assets. EA and Ofwat recognise there is a gap, and they are working on improving how they gain assurance, but plans have not yet been put into action.

Defra's long-term ambition

2.5 Defra set out long-term ambitions for the future of water in three key documents: the *Environmental Improvement Plan*, the *Storm Overflows Discharge Reduction Plan*, and the Strategic Policy Statement to Ofwat.

2.6 Defra published the *Environmental Improvement Plan* in January 2023. The Plan sets out statutory and non-statutory targets for the water sector including:

- reducing phosphorus loadings from treated wastewater by 80% by 2038;
- cutting leakage by 50% by 2050; and
- reducing the use of public water supply per person by 20% from 2019-20 baseline by 31 March 2038.

2.7 Defra set these targets without direct consideration for consumer bills or affordability. In its accompanying impact assessment, Defra stated that funding will be negotiated between water companies and Ofwat and "costs to the water industry [will be] passed on to customers in their bills". It did not attempt to quantify these costs. Defra also did not consider the availability of a supply chain and deliverability of the targets.

2.8 Defra updated and published the *Expanded Storm Overflows Discharge Reduction Plan* in September 2023, which set targets for water companies to reduce environmental harm from storm overflow discharges to zero by 2050. Defra conducted a cost analysis for the *Storm Overflows Discharge Reduction Plan*. The assessment found that the total estimated costs were £46 billion, and the total benefits Defra could monetise were £3.4 billion in 2019-20 prices, or £55 billion and £4 billion, respectively, in 2023-24 prices. Defra estimated the impact on consumer bills as an average of £16 per year between 2025-26 and 2029-30 in 2023-24 prices, with additional increases out to 2049.

2.9 Defra publishes a Strategic Policy Statement for Ofwat, last published in 2022. It set out four overarching priorities that Ofwat is required to deliver against alongside its statutory duties. These are underpinned by over 50 additional items that Defra expects Ofwat to act on, which were not prioritised. EA and DWI do not receive strategic steers.

Implementation of the regulatory framework

Translating national ambitions into water company actions

2.10 For PR24, there are 12 different plans and planning frameworks that companies must develop and work within (**Figure 9** on pages 30 and 31). Actions companies must take in the upcoming five-year control period, to ensure they can deliver long-term plans, are set out in the Water Industry National Environment Programme (WINEP) and company business plans to support Ofwat's price review.

2.11 EA is responsible for overseeing seven frameworks and plans covering flood risks, water supply, wastewater management, and drainage management. DWI oversees three, covering drinking water quality and security. In PR24 Ofwat asked companies to submit a long-term delivery strategy covering all their work and their five-year business plan (Figure 9).

2.12 The long-term planning framework is complex.

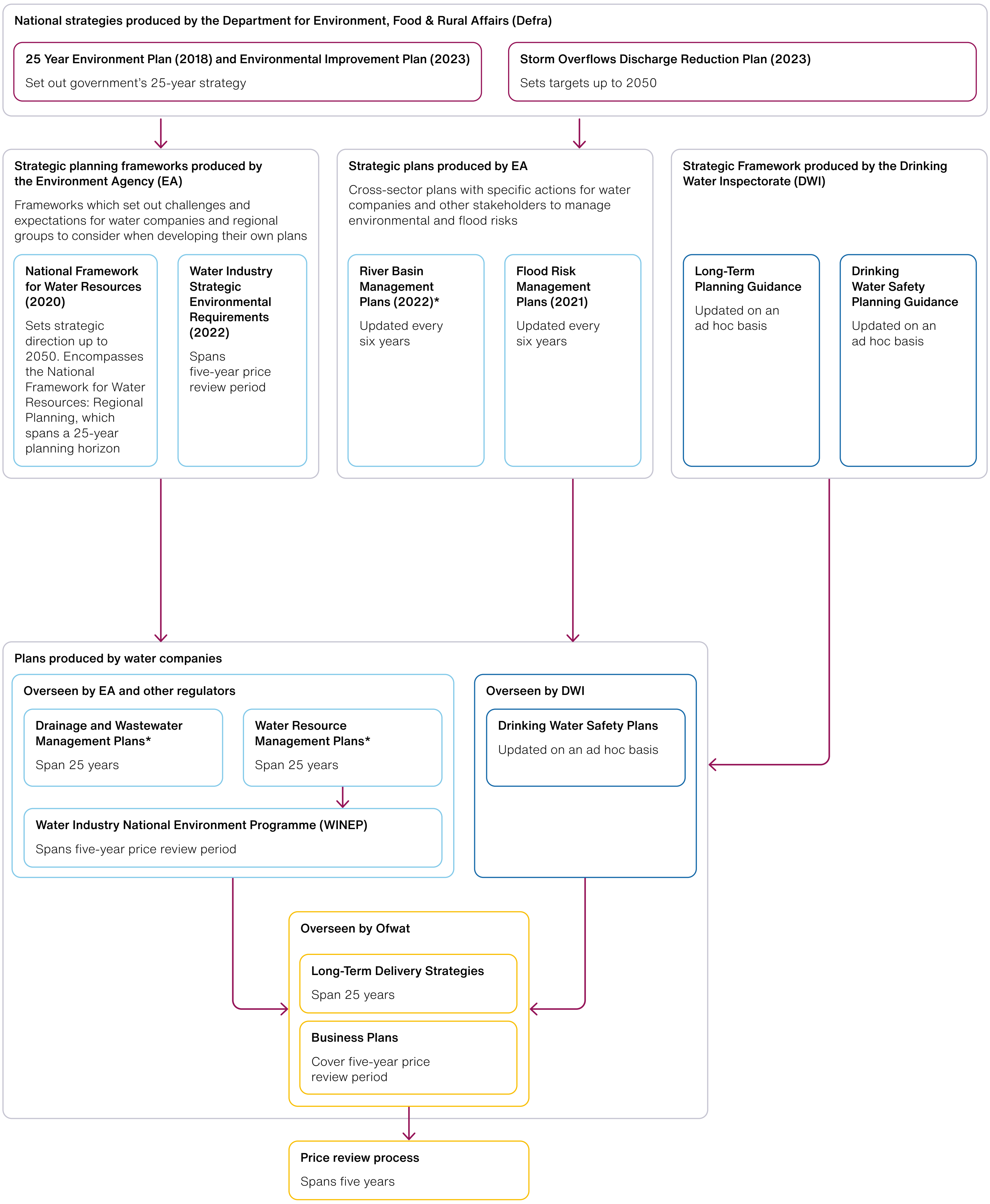
- In some cases, EA clearly sets out objectives and actions that need to be taken. For example, the River Basin Management Plans (RBMPs) and Flood Risk Management Plans (FRMPs) both set out objectives and actions to meet them.
- In other cases, regulators issue guidance and expect the water companies to develop their own plans. For example, EA jointly issues guidance for Water Resources Management Plans (WRMPs) with Ofwat. DWI issues guidance on long-term planning for the quality of drinking water supplies.
- The extent to which Defra and regulators have oversight of the plans varies. For example, Ofwat and EA are statutory consultees to WRMPs, and DWI is a non-statutory consultee.
- Plans are updated on differing timeframes. For example, companies produce Drainage and Wastewater Management Plans (DWMPs) and WRMPs every five years, while RBMPs and FRMPs are produced every six years. For PR24 Ofwat requested a long-term delivery strategy that spans to 25 years.
- In the lead up to PR24, planning assumptions across and within plans were occasionally inconsistent. For example, EA's WRMP guidance suggested that companies plan for one set of climate change assumptions for supply and a different set of climate change assumptions for demand.

2.13 EA works with water companies to agree actions at a local level to support the long-term plans in the WINEP, which covers a five-year period. For 2025–2030, the WINEP details around 18,000 actions that water companies must undertake. Of the £47 billion enhancement costs for the PR24 control period, Ofwat has estimated that £25 billion will be spent on actions in the WINEP. This includes £13 billion for storm overflows.

Figure 9

Water company plans and planning frameworks in 2024

Water companies must complete six different plans



- Strategies produced by Defra
- Planning frameworks and plans produced and overseen by EA
- Plans overseen by DWI
- Plans and processes overseen by Ofwat

Notes

1 Plans marked with an asterisk (*) indicate they are signed off by the Secretary of State for Environment, Food & Rural Affairs.

2 Not all plans and planning frameworks are statutory. Non-statutory plans listed above are: the National Water Framework for Water Resources; the Water Industry National Environment Programme (WINEP); the Water Industry Environmental Requirements, and the Drinking Water Safety Plans. They may however include statutory components or commitments.

Source: National Audit Office analysis of publicly available information

2.14 With the exception of the WINEP, neither EA nor Ofwat can confirm the amount of expenditure that results from any given plan across all companies, but Ofwat estimates that more than £27 billion in total comes from meeting water environment obligations, including the £25 billion on the WINEP. Ofwat has also allocated £518 million of funding for enhancements to meet net zero.

Assuring actions occur as planned

2.15 Over the PR14 and PR19 control periods, Ofwat and EA have had limited oversight of whether companies carry out the work as expected.

2.16 Before PR14, Ofwat used independent reporters to validate work carried out by water companies. Following recommendations from a 2011 independent review Ofwat has broadly relied on self-reporting from companies and EA and DWI for further assurance.[12] Rather than measuring performance against outputs, such as length of pipe installed, it adopted an outcomes-based approach. Ofwat monitors total expenditure and provides financial incentives for performance against targets. In practice, this has led to some disagreement between Ofwat and companies where Ofwat has refused to give additional funding for work which it considers has already been funded but not carried out. In addition, Ofwat has continued to ask for independent assurance on a limited number of individual projects during the PR14 and PR19 control periods.

2.17 EA monitors the actions set out in the WINEP at a local level. It verifies completed actions through a two-stage process. However, this is often limited to review of reports produced. Out of the 8,780 actions in the PR19 control period that water companies said have been completed so far, EA conducted site inspections on 1%. Across all plans and the WINEP, EA does not have enforcement powers for actions that have not been completed. It can only act once a permit is issued and compliance is assessed. This creates potential for serious environmental damage to occur before EA can intervene, and is not as cost effective as earlier intervention. Ofwat can take action where a company is breaking a licence condition, or a statutory or other requirement Ofwat is responsible for enforcing, or where a company is likely to break one.

2.18 Ofwat is expanding its assurance by introducing broad Price Control Deliverables, which will require companies to report on progress against a delivery plan for activities such as mains renewals, storm overflows and phosphorus removal. Ofwat will recover funding if projects do not go ahead, or if progress is slower than agreed. It is also seeking independent assurance on water companies' delivery of enhancement schemes, as part of annual performance reporting. EA is increasing inspections to 4,000 by the end of March 2025, 10,000 in 2025-26, and 11,500 in 2026-27 to ensure water company compliance. It is also planning a joint delivery monitoring framework with Ofwat to oversee the delivery of water companies' commitments under the WINEP.

12 Department for Environment, Food & Rural Affairs, *Review of Ofwat and consumer representation in the water sector*, July 2011.

The price review process and its implications

Introduction to the price review

2.19 Water companies are monopoly suppliers to most consumers.[13] Ofwat limits the prices they can charge, by setting price limits for fixed five-year periods and has carried out seven price reviews since privatisation. At each price review, water companies submit business plans to Ofwat, describing how they plan to meet their obligations for the next five years. Ofwat challenges these business plans, based on factors such as the justification for the level of expenditure and its assessment of the scope for efficiency improvements.

2.20 Through this process Ofwat determines the funding level for every company and the consequent returns they can expect, the level of service they should provide, and the prices they can charge customers.

2.21 Ofwat sets the sector's funding using benchmarking techniques, with an additional efficiency target. For base expenditure, this is based on the company who carries out their work at the third or fourth lowest cost. Ofwat uses a wider variety of tools to assess enhancement expenditure, but this is often set based on the companies who spend the average amount. Companies with costs higher than the benchmarked allowance bear some of this cost as a loss. Companies who operate at costs lower than the benchmarked allowance are deemed to make efficiency gains and can retain some of this as profit.

2.22 Ofwat's benchmarking methodology adjusts for some company differences such as size, population density and length of mains. It does not allow for differences such as soil type, wages and regional costs of construction, although companies can request specific cost adjustments that Ofwat considers. It also does not adjust for performance, as it has found no clear link between performance and spending, and therefore does not routinely allow additional spending for poor performers to catch up.

2.23 Companies are expected to fund their investment through debt and equity. Through the price review, Ofwat sets a return for the cost of both debt and equity and uses a weighted average to set overall allowed returns. It weights the average based on a notional ratio of debt to overall company value. The allowed return factors in market risks, though it is hard to understand exactly how the adjustment reflects the market's view of the regulatory framework or the challenges the sector is facing.

2.24 Returns are factored into bills, and this allows Ofwat to split the costs of investment across the generations that benefit from past and future investments.

13 The market for business retail services was opened in 2017. This means that businesses are free to choose their supplier from retail companies who compete to offer services such as billing and meter reading. Water and wastewater services continue to be offered by the major companies.

2.25 Once funding is set, there have been limited opportunities for water companies to obtain funding approval outside of the price review control process. Ofwat operate an 'uncertainty mechanism', where companies can ask Ofwat to reset their prices, if changes lead to a significant reduction in revenue or increase in costs. The threshold for the process is 10% of annual turnover.

2.26 There have also been mechanisms to allow water companies to increase bills if costs were different to expectations, either as a percentage of overall additional costs or an explicit re-adjustment for specific costs such as paying interest on debt.

2.27 In parallel to the price review, Ofwat runs some targeted initiatives. For example, in 2020 Ofwat set up an Innovation Fund worth £238 million in 2023-24 prices to encourage companies to innovate, grow capacity, and enhance collaboration across companies and the water sector. It is funded by household water bills and costs around £1.80 per household annually. In 2024, Ofwat reported funding 93 projects, 12 of which have concluded. Projects funded covered alleviating disruption during water supply incidents, encouraging customers to reduce demand, and repairing leaks. Ofwat is increasing the fund to £400 million in PR24 and working to share learning. It is not clear to what extent innovations are being adopted across the sector, and Ofwat has committed to carrying out a full and independent evaluation of the fund in 2025.

Process for the 2024 price review

2.28 Ofwat starts the price review process early to allow companies more time to prepare. One cycle starts almost as soon as the last one ends. Ofwat began sharing plans for PR24 in December 2020 and final determinations were published four years later. There is therefore limited time for Ofwat to assess the effectiveness of prior cycles. For example, the review of the 2014 price review (PR14) was published in January 2022, though Ofwat had used informal learning from PR14 and PR19 in developing the PR24 methodology.

2.29 The plans and planning frameworks that each regulator oversees broadly work to a five-year timeline. This allows new plans to inform company business plans, and thus the level of funding which is allocated in the price review. **Figure 10** on pages 36 and 37 illustrates the complexity of the timeline in the run up to PR24, including the timings for EA and DWI planning frameworks. There were several delays in processes and late regulatory changes, which would have put pressure on companies' ability to plan and to reflect actions in business plans.

2.30 Ofwat incentivises companies to produce good-quality and ambitious business plans in part by changing their allowed return based on the quality of the plans. In 2024, plans Ofwat deemed outstanding were rewarded with an increase of 0.3% in return on equity, while inadequate plans were penalised with a reduction of 0.3%.

2.31 Some companies raised concerns with us that the late regulatory changes put pressure on their ability to produce good-quality and ambitious plans. This could have resulted in a less favourable assessment from Ofwat, affecting their ability to get an increased return. The scoring is not transparent and could not be replicated by a third party. Similarly, Ofwat's investor surveys have consistently described Ofwat's reports as difficult to understand, and asked for clearer summaries.

2.32 For the PR24 control period, Ofwat has stated there will be in-period reopening mechanisms for key regulatory requirements that were announced after business plan submissions or for areas of key uncertainty, such as cyber security.

2.33 If a company does not accept its price determination, Ofwat is obliged to refer the entire disputed determination to the Competition and Markets Authority (CMA) for it to redetermine the price control. In PR14 one company asked to be referred to the CMA. In PR19 four companies asked to be referred. In each case, the CMA made some changes to Ofwat's original determination. For PR24, six companies have asked to be referred. Five have been referred, and the sixth has been deferred at the request of the company concerned. The CMA process normally takes six to 12 months.

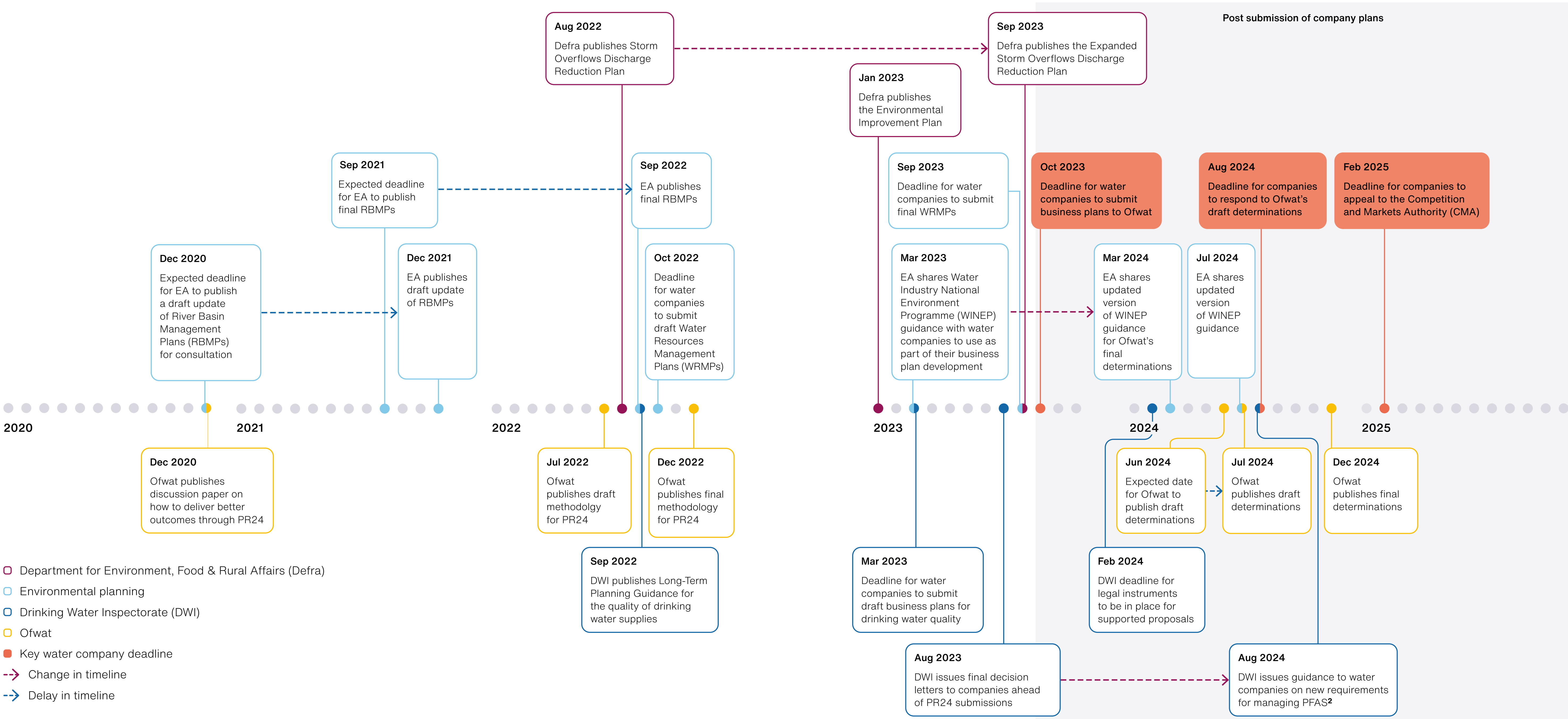
Funding methodology

2.34 Further to the planning methodology outlined above and policy changes depicted in Figure 10, the methodology to determine funding and returns is also complex. The final methodology from December 2022 comprised over 60 documents and around 2,000 pages. This does not include changes made later in the process. For draft and final determination, Ofwat uploads around 100 documents on the day of release. Ofwat does this to provide transparency and certainty for the market. It also provides specific briefings for investors which Ofwat's investor surveys suggest have been well received. However, investors told us that they found the complexity makes the process hard to understand or challenge. As a result, they often focus on key metrics such as dividends and the return for investors.

Figure 10

Timeline for the 2024 price review (PR24), 2020–2025

PR24's timeline is indicative of a normal price review; however, this time the Environment Agency (EA) and the Drinking Water Inspectorate (DWI) issued guidance after Ofwat's deadline for business plans, impacting companies' ability to submit accurate five-year business plans



Notes

1 Ofwat's delay in publishing water companies' draft determinations was due to the General Election in June 2024.

2 PFAS is the abbreviation used for Per- and polyfluoroalkyl substances.

Source: National Audit Office analysis of Department for Environment, Food & Rural Affairs, Environment Agency, Drinking Water Inspectorate and Ofwat documents

2.35 Ofwat conducts five separate price controls: water resources, water network plus, wastewater network plus, bioresources, and retail. Each will include some of the following elements.

- **Setting funding:** Ofwat requires detailed modelling of individual cost elements, and benchmarking to mimic competition. Ofwat told us that, in PR24, 75% of capital expenditure was benchmarked.[14] Some costs were benchmarked to the companies that spent the third or fourth least on activities, and some to the median company.
- **Mechanisms to allow for uncertain costs:** Ofwat uses a variety of methods to share cost increases or decreases between customers and companies. Some costs are updated at the end of the price review, and changes in costs added to the next price review. Others are reviewed annually. Costs are shared between customers and companies at different rates, depending on the precise mechanism. Ofwat also applies an overarching mechanism to cost sharing. There are 10 mechanisms for cost sharing in PR24 that apply to every company, and three additional company-specific mechanisms.
- **Tools to link performance to funding:** Ofwat sets performance commitments for every company. In PR14 there were over 500 commitments across the sector as companies had different commitments for the same or similar measures. In PR24, Ofwat has set 24 measures with common commitments but also allowed companies to set a limited number of individual commitments. It then set financial consequences of under-performance or out-performance relative to company commitments, and an overarching adjustment to limit company losses or gains in the event of materially different sector performance than expected. Ofwat has put in place a broad mechanism where water companies which fail to deliver projects in time will return funding to customers.

2.36 The costs of conducting a price review are substantial for both companies and regulators. We asked companies for their estimate of how much the PR24 process would cost them. Their responses ranged from £5 million to £11 million per company, noting this was a large increase on the previous price review. In the period from April 2020 to July 2024, Ofwat spent £41 million on PR24. This compares with a total expenditure of £109 billion for the PR24 control period.

2.37 In 2020-21 the CMA estimated the total cost of redetermination for four companies at £32 million (£38 million in current prices).[15] It allowed companies to add £8 million (£10 million in current prices) of this cost to customer bills and expected companies to fund the rest themselves.

14 Capital expenditure is money spent on assets or projects which are expected to last for a long period of time, as opposed to day-to-day spending.
15 This covered the CMA fee, Ofwat expenses, and the expenditure incurred by companies such as spend on legal and economic advisors.

Long-term capital planning

2.38 The planning and price review processes are designed to provide water companies with certainty over what they are expected to do, and assurance that the work is funded over a five-year period. This is so that they can manage their work over that period. Although the price review process does do this, in practice, some companies do not raise funding until after final determination, and some are hesitant to contract with third parties before knowing their funding. As a result, company capital expenditure has historically tended to follow a cyclical pattern within each price review of first increasing and then decreasing (**Figure 11** overleaf). This has implications for the supply chain, which then experiences cyclical demand, and creates uncertainty as to whether the work is deliverable.

2.39 As at December 2024, the sector is proposing up to 30 major water supply projects, which are critical to ensuring the nation's future supply of water in the long term and will take multiple price reviews to construct. Construction on these projects will start over the next 15 years. A reservoir near Portsmouth is already under construction.

2.40 The 30 projects include nine reservoirs. Eight of the 30 projects will require collaboration between water companies to deliver them.[16] However, not every project in the pipeline is expected to proceed. Some projects are being developed as alternatives to preferred projects. At least one proposed project has already been removed from the RAPID (Regulators' Alliance for Progress for Infrastructure Development) programme as it was not suitable for delivery. Ofwat has told us that it currently estimates that the projects in the pipeline will meet 50% of the 5 billion litres per day supply–demand gap. Defra currently expects plans to reduce water consumption and leakage to address at least 65% of the gap.

2.41 Ofwat recognises that such projects need greater certainty than the five-year price cycle offers. It also recognises that the water companies have delivered very few projects of this size and scale in the last 30 years and therefore do not necessarily have the depth of skills or experience to do so in the volume now expected. To mitigate these risks Ofwat has:

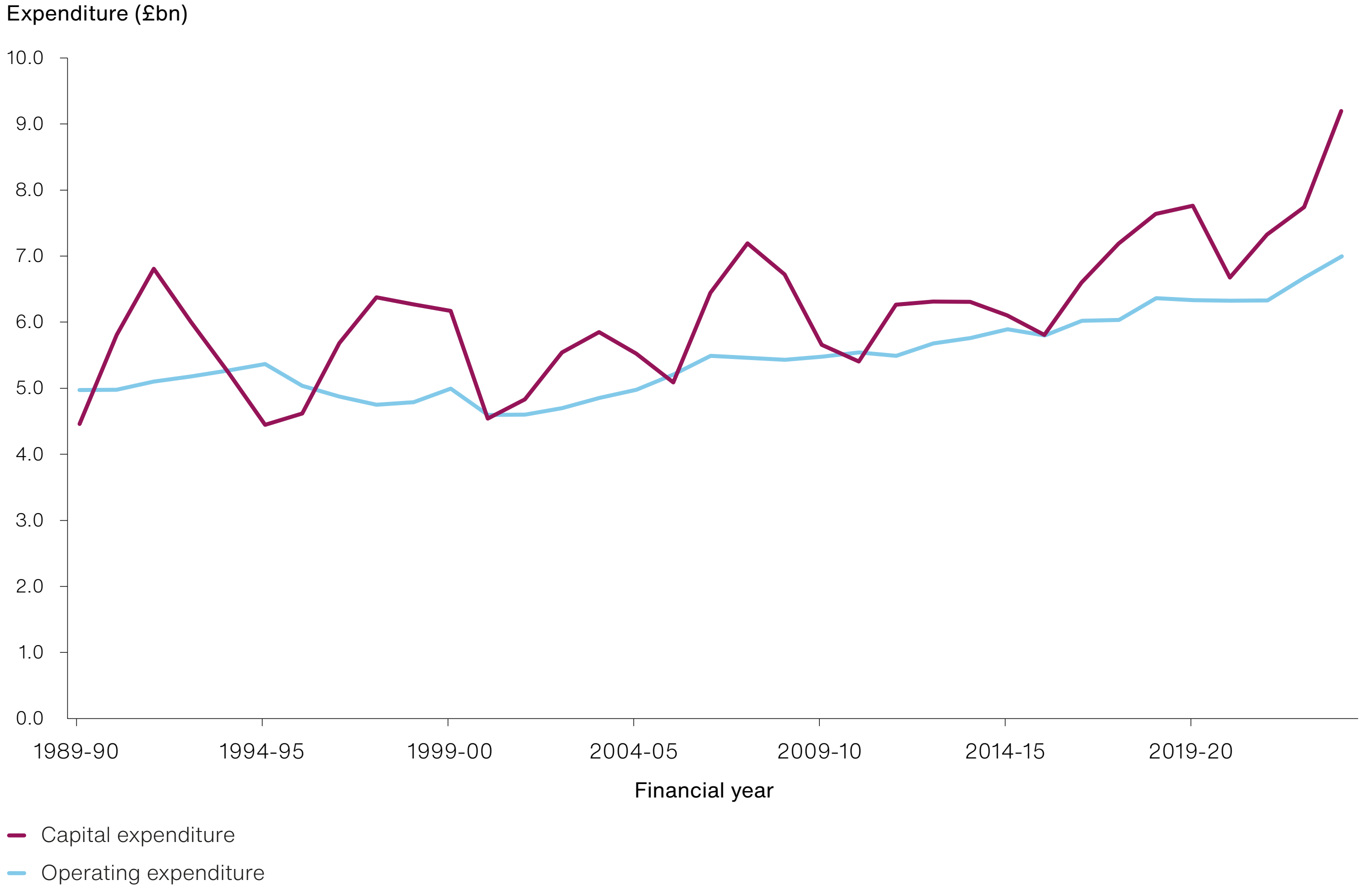
- set up the RAPID programme in 2019, in conjunction with EA and the DWI, to support and accelerate the development of new water infrastructure, and design future regulatory frameworks to support relevant projects;
- made funding available to water companies in the short term to investigate and develop strategic water resource solutions to increase future water supply; and
- decoupled the funding for long term projects such as reservoirs from the price review process.

16 There are six project types: Transfer, Treatment, Reservoir, Desalination, Water Recycling and Quarry Conversion.

Figure 11

Capital and operating expenditure for the whole water industry in England and Wales, 1989-90 to 2023-24

The peaks and troughs in water company capital expenditure coincide with the price review cycle



Note

1 Expenditure is presented in real terms in 2023-24 prices, using CPIH (Consumer Prices Index including owner occupiers' housing costs).

Source: National Audit Office analysis of Ofwat data

2.42 Ofwat has allocated £2 billion to these projects to cover their development costs in 2025–2030. Ofwat estimates that companies will spend £52 billion over the lifetime of the projects, and that in most cases these costs will be funded outside of the price review process.

2.43 Ofwat expects water companies to use competitive procurement models where possible, both to reduce costs to customers and to seek to bring in skills and investment from outside the current water sector. Ofwat expects water companies to use third parties to design, build, finance and operate 24 of the 30 projects, but retain the project under the water company's own regulatory licence. It expects three of the 30 projects will have a separate licence and be regulated separately from the water company. Only one project to date (Thames Tideway Tunnel) has used the separate licence model.

2.44 Ofwat expects the RAPID process and the use of competitive procurement to reduce risks around value for money and delivery. However, given the scale and the early stage of all of these projects, there remains considerable uncertainty. Ofwat told us there is also a risk that water companies may not currently have the procurement skills to run a competitive tender and manage and deliver contracts for this scale and duration, as this is very different from their day-to-day operations. Ofwat is also developing its capacity to manage the regulation of these projects.

Asset health

2.45 Water companies have a large and extensive network of assets that they are responsible for maintaining, including reservoirs, treatment works, pumping stations, and water supply and sewer pipes. Ofwat, EA and DWI all have an interest in overseeing the health of these assets, as they affect how well water companies can carry out their operations.[17]

- DWI has set out the need for companies to better understand and prioritise asset health, and its Compliance Risk Index.
- Ofwat funds companies, through base expenditure, to maintain their assets.
- EA has not set specific expectations in its planning frameworks for what companies should do.

17 'Asset health' is a term used to describe the age and condition of the property and equipment a company uses to carry out its day-to-day operations.

2.46 The regulators do not have a comprehensive set of asset-health-related metrics. In 2021, the CMA highlighted the risks to customers arising from deteriorating or inadequate water infrastructure, and noted that measuring asset health in the sector is challenging. They suggested that Ofwat consider developing indicators to be able to triangulate forward-looking metrics with its econometric modelling. In 2023, the National Infrastructure Commission called on Ofwat to take a lead on asset health and to develop consistent forward-looking metrics. Ofwat's current performance commitments for asset health are lagging measures that retrospectively measure failure, such as sewer collapses and mains repairs. While company boards focus on performance commitments, Ofwat's own research in 2021 suggests only a minority focus on asset health and operational resilience.

2.47 Ofwat does monitor mains replacement rates as a measure of asset health, and companies are doing less work in this area than expected. In PR19, Ofwat allowed expenditure for a replacement rate for water mains of 0.4%, but the actual rate is currently 0.14% a year. This means the industry is replacing the entire network once every seven hundred years. The average rate of replacement since privatisation has been 0.83%, with an implied asset life of 125 years. However, it has not been consistent across this period and the average rate of mains renewals has been 0.32% a year across the PR09, PR14 and PR19 control periods. Ofwat expects companies to raise the rate to an average of 0.45% per year in the PR24 control period, and to move towards a more sustainable rate of replacement of water mains, which they expect would be 0.6% to 0.8% a year, and an average asset life of 125 to 160 years.

2.48 Ofwat, due to their role in determining the sector's funding levels, has been working across multiple price reviews to improve its understanding of asset health but still does not have sufficient monitoring that ensures appropriate long-term expenditure and maintenance. Ofwat published a targeted review of asset health in 2017 to understand how companies were approaching the measurement and management of asset health, followed up by work on asset management maturity in 2021. In December 2024, Ofwat published the *Roadmap for enhancing asset health understanding in the water sector,* which notes that companies do not have consistent data or standards across the sector.[18] The roadmap sets out plans to develop more standard definitions in 2025, and work with water companies in 2026 and 2027 to understand asset condition and their funding. This is to be concluded by 2027-28.

18 Ofwat, *Roadmap for enhancing asset health understanding in the water sector,* December 2024. Available at: https://www.ofwat.gov.uk/wp-content/uploads/2024/12/PR24-final-determinations-Roadmap-for-enhancing-asset-health-understanding-in-the-water-sector.pdf

Part Three

A regulatory framework to incentivise operational and financial performance

3.1 Ofwat expects the sector to spend £47 billion on enhancements in the coming five years, part of expected infrastructure spending of £290 billion in the next 25 years. It also expects companies to spend a further £52 billion on large water supply projects. Therefore, the sector's ability to attract funding from investors to finance this work will be critical to the sector's success.

3.2 Part Three of this report evaluates:

- the regulatory framework's track record for attracting investors;
- how regulators' actions to incentivise performance have affected the sector's financial position, particularly over the last four years; and
- how Ofwat has responded to the current financial resilience of the sector and how this has affected investor perception of the regulatory environment.

The regulatory framework's track record for attracting investors

3.3 **Figure 12** overleaf illustrates how the value of the sector has grown and changed since privatisation. Water companies have funded most of the growth from debt, not equity.

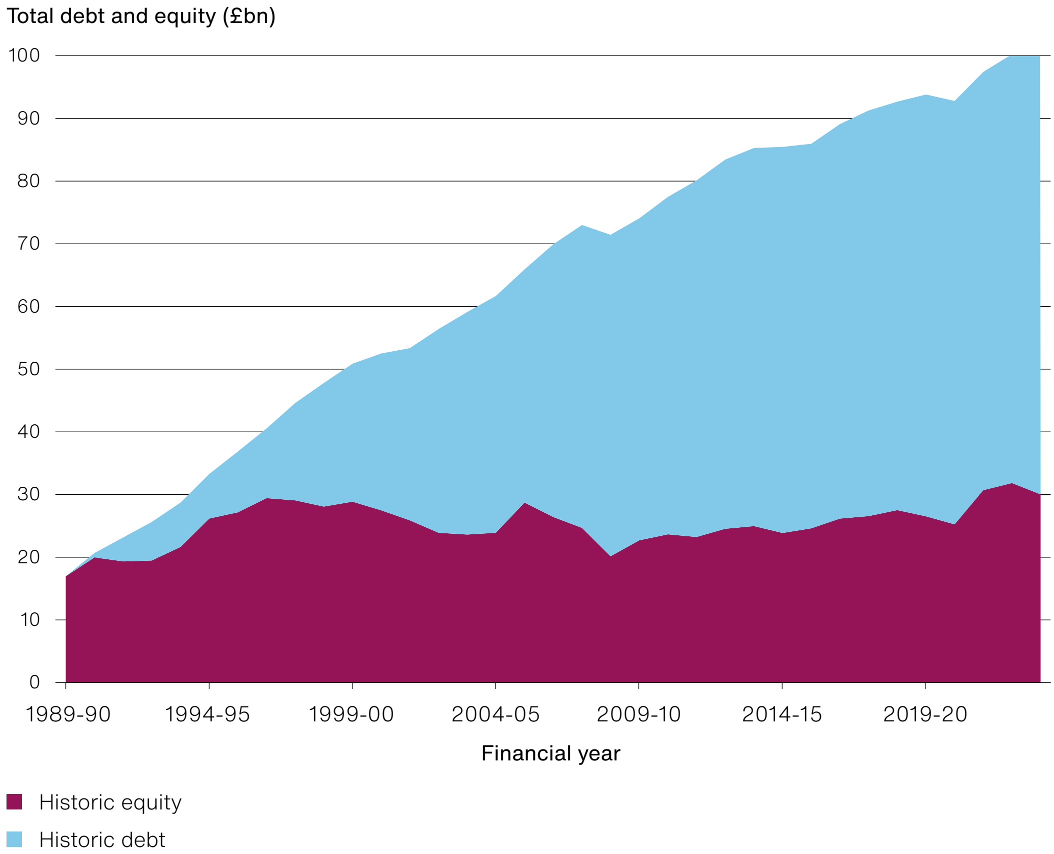
3.4 Gearing, which is the ratio of debt to overall company value, currently stands at just under 70% for the sector and has been at approximately this level since the late 2000s. For some companies it is currently close to 80%.

3.5 Ofwat's funding methodology uses a weighted average cost of capital (WACC) between debt and equity, using a set gearing ratio. By increasing debt above Ofwat's gearing assumption, companies have been able to increase their equity returns, at no extra cost to the consumer over the price review control period, because the returns to debt investors are usually lower than the returns to equity holders. In the 2019 price review (PR19) Ofwat's gearing assumption was 60%. For the 2024 price review (PR24) it is 55%.

Figure 12

Equity and debt in the water sector in England and Wales after removing the impact of inflation, 1989-90 to 2023-24

There has been limited change in equity in the sector once the growth of equity due to inflation is removed



Notes

1 Figures are presented in real terms in 2023-24 prices, using CPIH (Consumer Prices Index including owner occupiers' housing costs).

2 Debt data were provided by Ofwat. Equity was calculated by deducting net debt from regulatory capital value, provided by Ofwat.

3 The UK water sector was privatised in 1989, and 1989-90 was the first financial year when water companies' financial metrics were collected post-privatisation.

Source: National Audit Office analysis of Ofwat and water company data

3.6 Ofwat has estimated that, to deliver the £47 billion enhancement spending required in the next five years, companies should expect to fund around £13 billion via new equity. Companies estimated a lower amount, £7 billion, and suggested they might fund spending through using existing reserves or not taking dividends. Even more investment will be needed in future price review periods. The sector has raised around £5 billion in equity since 2021, outside of changes made relating to wider corporate structures.

Financial performance

3.7 Ofwat has a duty to secure the long-term resilience of companies' water and wastewater systems, including by promoting long-term planning and investment by water companies. It has published stand-alone financial resilience monitoring reports annually since 2016. In 2024 Ofwat categorised 10 of the sector's 16 companies as 'elevated concern' or 'action required', reflecting Ofwat's concerns about their long-term financial resilience. This is an increase from the eight out of 16 it had rated as 'elevated concern' or 'action required' in 2021-22.

3.8 Ofwat increases monitoring of and engagement with companies in the 'elevated concerns' and 'action required' category. It seeks to influence company behaviour, through active engagement with the company and its investors, but generally takes limited formal action. An exception to this was in 2024, when it appointed an independent monitor to report on Thames Water's progress.

3.9 There is no single metric which can accurately capture a company's financial resilience. We have examined companies' financial performance, as measured by Return on Regulated Equity (RoRE) and a company's ability to pay its debt interest from operating profits, as measured by the Adjusted Interest Cover Ratio (AICR). We know these measures are monitored by investors and by financial markets.

Return on regulated equity

3.10 RoRE is Ofwat's measure that acts as a proxy for company profitability. It is assessed by comparing a company's income after costs to shareholders' equity in the regulated business (known as regulated equity).[19]

3.11 Ofwat sets the RoRE it expects investors to make through the price control. The actual return equity investors make depends on the company's operational performance, including its spending and its service delivery, and wider financial costs. In PR19, Ofwat set expected returns for equity investors at 4.19% above inflation. Over the first four years of the price review control period the average return was lower, at 2.78%.[20] In PR14, Ofwat set expected returns for equity investors at 5.65% above inflation, and the average return over the control period was 6.30%.

19 RoRE is a financial metric that measures how effectively a company generates profit from the money invested by its shareholders, calculated by dividing a company's income after costs by its shareholders' equity. It shows how much profit a company earns for each pound of shareholder investment.
20 Data are not yet available for the fifth year of the PR19 control period.

3.12 In the PR19 control period, companies have not achieved returns through operational performance. In the first four years of the PR19 control period, companies made an operational loss equivalent to 3.4% of regulated equity on average. This predominantly came from overspending (1.99%) and outcome-related penalties (0.67%). It also includes retail and other under-performance (0.74%). Companies have mitigated these operational losses with financing gains to make the average return of 2.78%. Returns have come from paying less debt interest and less tax than Ofwat's initial assumptions.

The impact of overspending on RoRE

3.13 Ofwat told us spending patterns in the PR14 control period illustrate what has been the usual five-year spending cycle: companies have commonly underspent in the first few years of the cycle as they ramp up investment and engage the supply chain, and they then overspend in the last few years once contracts are in place. In the PR14 control period, the total cumulative over-spend was less than 1% of allowed spend (**Figure 13** overleaf). In the PR19 control period, companies have overspent every year so far (2020–2024) totalling £5 billion, around 12% of allowed expenditure. Some of the overspend will be due to inflation – see section below.

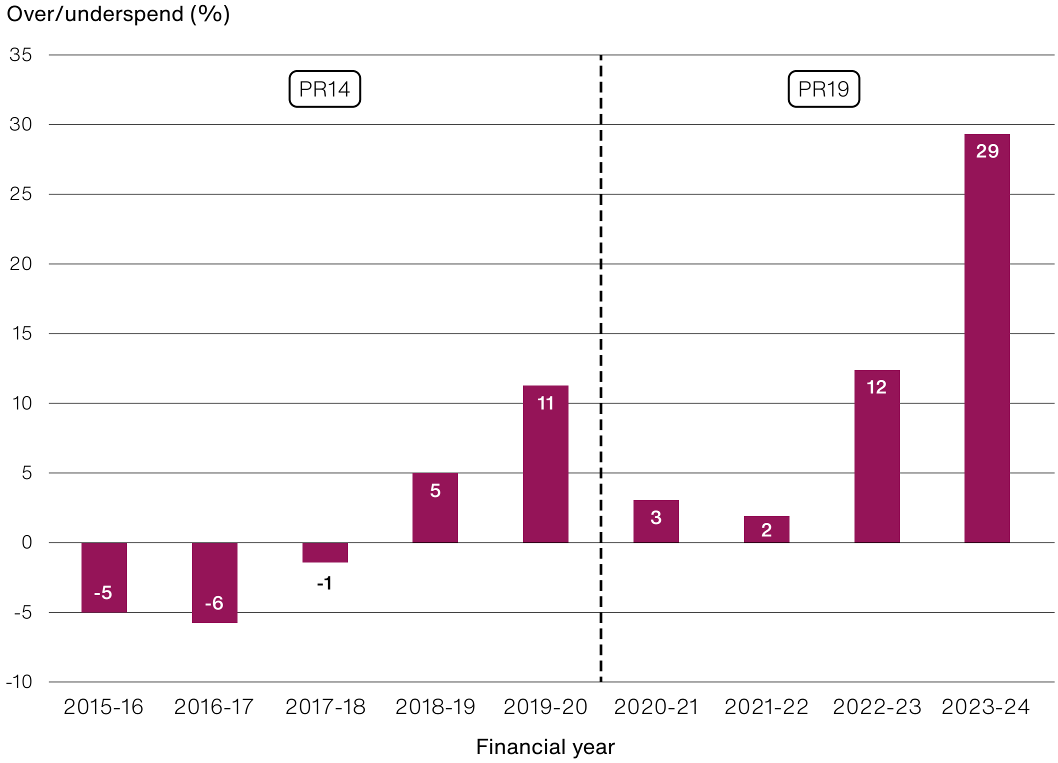
3.14 Companies are allowed to recover part of their overspend via customer bills based on the cost-sharing rates set out in their determination. The remaining overspend reduces company/investor returns. Cost-sharing rates set at PR19 varied across companies. Ofwat allowed companies who it assessed as producing high-quality plans and who accepted its view of costs at initial assessment to recover 50% of overspend from customers. Others were allowed to recover less. The most disadvantageous cost-sharing rate was given to Thames Water, who was allowed to recover 25% of its overspend. Ofwat cited the quality of Thames Water's plan and lack of engagement as the reason for this rate.

3.15 The CMA noted that "the wider range of sharing rates applied in PR19 will reduce companies' incentives to outperform and will also expose companies to higher risks from underperformance". For the companies that appealed, the CMA retained cost sharing but with a smaller range, and consistently across companies. Ofwat has offered greater consistency across companies in cost sharing for PR24.

Figure 13

Actual expenditure compared with total expenditure allowances in England and Wales, 2015-16 to 2023-24

Companies have overspent every year in the 2019 price review control period (PR19)



Note

1 PR14 and PR19 refer to the price review control periods set by Ofwat for 2015–2020 (PR14) and for 2020–2025 (PR19). Data are only available for the first four years of the PR19 control period, from 2020-21 to 2023-24.

Source: National Audit Office analysis of Ofwat data

The impact of inflation on returns for equity investors

3.16 Inflation during the PR19 control period has been higher than the long-term average, and higher than expected at the start of the period. Inflation affects water company financial performance, and returns for equity investors, in several different ways.

- **Expenditure:** Water companies operational spending includes labour and energy, both areas where inflation has been higher than average. This is partially behind the overspend set out in Figure 13, but Ofwat has not yet separated the effect of inflation from other causes. In recognition of recent high inflation, Ofwat has extended the mechanisms in PR24 to allow companies to share the effects of cost increases and decreases with bill-payers for costs which are beyond companies' control. It estimates that around 55% of total expenditure will be covered by these mechanisms, up from 30% in PR19.
- **Cost of debt:** The interest payments associated with company debt can be fixed or linked to inflation. Ofwat sets an overall allowance for cost of debt based on its assumption about the mixture of fixed and inflation-linked debt a company has. Most companies had more fixed debt than Ofwat's assumption in PR19, which means that their cost of debt was lower. As a result, the sector increased their return by 0.61% on average in the first four years of the PR19 control period. This is part of the financing gains set out in paragraph 3.12.
- **Company value:** The overall regulated capital value of each company increases by inflation every year. The rise in the value of the company benefits equity investors (shareholders) in two ways. First, the share of equity rises because debt does not increase with inflation. Second, the company will benefit from increased future returns as the return is set as a proportion of the value of the company. In November 2024, Ofwat published average inflationary growth rates of between 5.5% and 6.3% per year for individual companies for the first four years of the PR19 control period, based on companies' reported data.

The impact of outcome incentives on RoRE

3.17 Ofwat introduced Outcome Delivery Incentives (ODIs) in PR14 to encourage companies to improve performance in key areas. The mechanism works by rewarding a company who exceeds its performance commitment level, as set by Ofwat, with a financial reward (outperformance payment) and financially penalising a company that does not make its performance target (underperformance penalty). This should align the interest of investors (seeking a higher return), with the interests of customers who want improved services.

3.18 Some companies we spoke to were very positive about ODIs, and we saw evidence that the incentives were driving positive customer-focused behaviours. However, ODIs have not delivered sustained or consistent performance improvements across the different metrics.

- Between 2019-20 and 2023-24 data are available for nine measures, and median performance improved in five out of nine key measures and got worse in three.[21]
- Over the first four years of the PR19 control period, 2020-21 to 2023-24, the median performance improved in six out of 12 key measures, and decreased in six.[22]

3.19 Financially, ODIs have created winners and losers (**Figure 14** overleaf). Over the PR14 control period, companies received on average a net penalty of 0.03% of their returns from ODIs. Over the first four years of the PR19 control period, they received a net penalty of 0.67%.

3.20 Ofwat reviewed the impact of ODIs in the PR14 review published in January 2022. The review found that, while companies increased their focus on outcomes, many companies reported they remained focused on short-term delivery despite the outcomes framework's long-term focus on asset health. In PR19, Ofwat set stretching targets for the sector. In seven of the eight measures we reviewed, the poorest performers at the start of the price review control period improved their performance, but fell short of their target, and therefore lost money (**Figure 15** on page 51). The poorest performers improved more than the sector median in six out of eight measures.

3.21 ODIs reduce returns for companies with the lowest performance, who are likely to need to increase expenditure the most. Companies may recover a portion of any additional expenditure by cost-sharing with customers, but increased returns are not guaranteed. Ofwat's expectation is that investors should put in additional money in the short term if needed to fund improvements, and they will be incentivised to do this to reduce financial penalties from poor performance.

21 Performance improved in consumption, unplanned outages, internal sewer flooding, sewer collapse, and wastewater treatment works permit compliance. Performance declined in mains repairs, pollution incidents, and drinking water quality compliance risk index. Performance stayed the same for supply interruptions. Data for 2019-20 were not available for customer service, priority services for consumers in vulnerable circumstances, and leakage.

22 Performance improved in priority services for consumers in vulnerable circumstances, leakage, consumption, mains repairs, internal sewer flooding, and sewer collapses. Performance declined in customer service, supply interruptions, drinking water quality compliance risk index, unplanned outages, pollution incidents, and wastewater treatment works permit compliance.

Figure 14

Financial rewards and penalties from Outcome Delivery Incentives as Return on Regulated Equity (RoRE) in England and Wales, in the 2014 price review (PR14) and the 2019 price review (PR19) control periods

Two companies made a net financial reward in the first four years of the PR19 control period

Notes

1 Return on Regulated Equity (RoRE) is a financial metric that measures how effectively a company generates profit from the money invested by its shareholders, calculated by dividing a company's income after costs by its shareholders' equity.

2 RoRE provides a common measure for water companies, regardless of their size, to compare the amount of financial penalties/rewards generated through Outcome Delivery Incentives.

3 PR14 and PR19 refer to the price review control periods set by Ofwat for 2015–2020 (PR14) and for 2020–2025 (PR19). Data are only available for the first four years of the PR19 control period, from 2020-21 to 2023-24.

Source: National Audit Office analysis of Ofwat data

Figure 15

Lowest-performing companies in England and Wales and their Outcome Delivery Incentive (ODI) penalties, 2020-21 to 2023-24

Water companies that were in the lower quartile in 2019-20 received under-performance penalties but made improvements in the first four years of the 2019 price review control period

Performance metric	Change in performance for lowest performing companies in 2019-20 to 2023-24	Performance trend indicated by change	ODI under-performance penalties from 2020-21 to 2023-24
	(%)		(£mn)
Supply interruption	-26	Improvement	-129
Customer service	-10	Deterioration	-100
Internal sewer flooding	-33	Improvement	-94
Total pollution incidents per 10,000 kilometres of sewer length	-28	Improvement	-85
Mains burst repairs	-9	Improvement	-14
Leakage as a percentage reduction	-7	Improvement	-10
Sewer collapses per 1,000 kilometres of sewers	-45	Improvement	0
Unplanned outages	-7	Improvement	0

Notes

1 Under-performance penalties are rounded to the nearest £1 million and are presented in real terms in 2023-24 prices, using CPIH (Consumer Prices Index including owner occupiers' housing costs).

2 Lowest performing companies are those whose performance was in the lowest 25% of all 17 companies for each performance metric in 2019-20. Companies in the lower quartile therefore vary across the different metrics.

3 Change in performance compares the average performance of the lowest performing companies in 2019-20 against their average performance in 2023-24.

4 Customer service compares average performance in 2020-21 with that in 2023-24 due to a lack of data for 2019-20 following a change in methodology.

5 Leakage as a percentage reduction from 2019-20 baseline compares average performance in 2020-21 with that in 2023-24. Northumbrian Water and South Staffordshire Water report this on a regional level.

6 Average performance change for unplanned outage is expressed as a percentage of companies' peak week production capacity.

Source: National Audit Office analysis of Ofwat data

Adjusted Cash Interest Cover Ratio

3.22 Companies' ability to generate enough income from operations to cover their interest payments is measured by their Adjusted Cash Interest Cover Ratio (AICR).[23] The ratio has been declining since 2016 (**Figure 16**). In 2023-24, 10 companies could not cover their interest payment with cash from operations. Although this does not directly mean companies are unable to pay their debts, it does imply that companies are increasingly at risk.

Investor perceptions

3.23 Both equity and debt investors require a return for their investment allowing for the risk associated with the investment. Equity investors take returns through dividends, as well as capital growth, and both debt and equity investors consider solvency and wider credit-worthiness when assessing the risks associated with their investment. This section of the report sets out how each of the three points has been affected by regulatory decisions and the current state of the sector.

Dividends

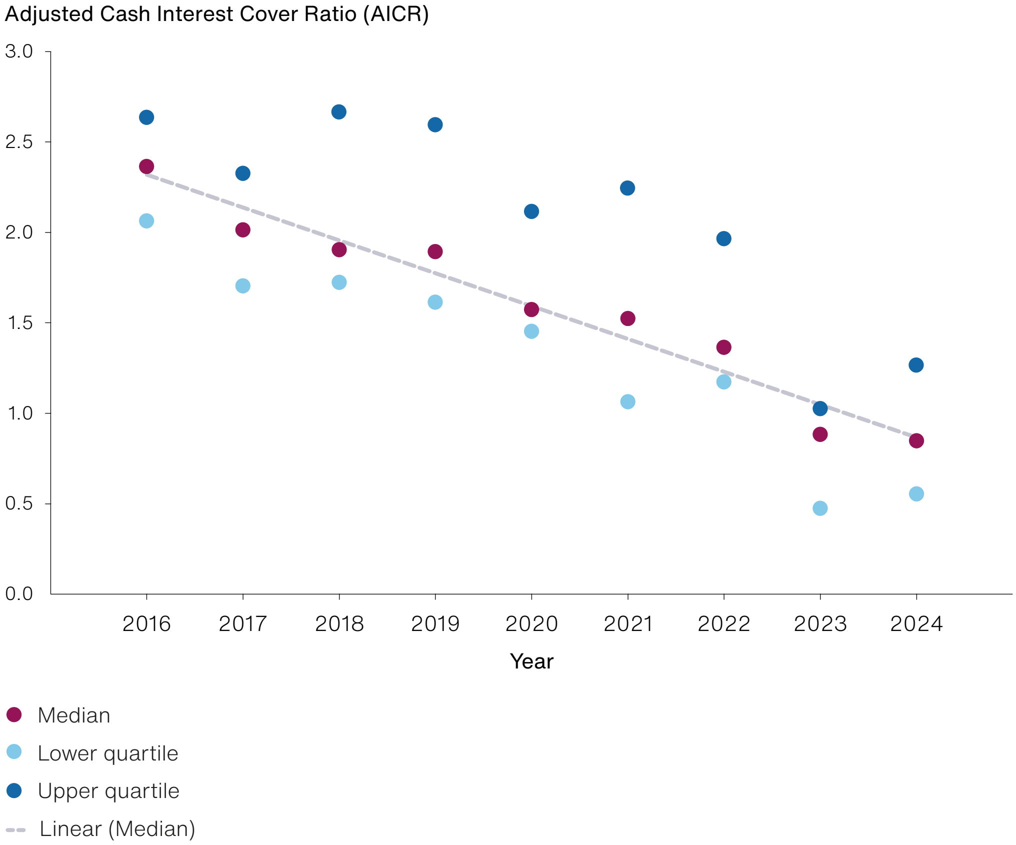
3.24 Ofwat has taken a series of actions intended to reduce the risk of inappropriately large dividends. These include the following:

- Introducing licence conditions that separate regulated functions from other companies in a business structure. These have included requiring Boards to be able to act independently of parent companies (in 2002), and requiring dividends to be at a level that does not impair the ability of the company to finance its work (in 2007).
- Introducing a 'cash lock-up' provision, where companies are unable to make certain financial transactions, such as paying dividends, without Ofwat's permission at times of financial distress. This was introduced for one company in 2007, and then – following 2019 and 2022 consultations – for all company licences by 2024.
- Requiring companies to have a dividend policy that explicitly links dividend payments to the water company's performance and financial resilience (introduced in 2023 and added to all licences by February 2024). In December 2024 Ofwat announced it would use this power to impose a penalty for the first time.

23 Adjusted Cash Interest Cover Ratio is a measure of the cash generated in the year from operations which is available to make interest payments. It is calculated after deducting nominal amounts to account for reductions in the value of water company assets over time (called 'RCV run-off').

Figure 16
Adjusted Cash Interest Cover Ratio (AICR) for companies in England and Wales as at 31 March, 2016–2024

There has been a gradual decline in AICR across the sector since 2016



Notes

1 The Adjusted Cash Interest Cover Ratio (AICR) is a debt and profitability ratio used to determine how easily a company can pay interest on its outstanding debt. An AICR lower than one means companies cannot cover their interest payments with cash from operations.

2 The linear trendline provides a line of best fit across water companies' median AICRs from 2016 to 2024 with an R^2 value of 0.9554.

3 Ofwat expects that AICR as at 31 March 2025 may be higher than previous years. This is because 31 March 2025 is the end of the 2019 price review price control period, which is when companies are able to increase customer bills to reflect some additional costs.

4 Quartile data represent 17 water companies from 2016 to 2023, and 16 companies in 2024 as Bristol Water was acquired by South West Water in February 2023. Data for each year are as at 31 March that calendar year.

Source: National Audit Office analysis of Ofwat data

3.25 The average annual dividend yield was 3.5% of equity between 2020-21 and 2023-24, down from 9% of equity between 2015-16 and 2019-20. Five companies did not pay any dividends in 2024, and one company has not paid dividends for six years. However, some companies have paid dividends over the period 2020–2024, despite making limited or no profit.

3.26 In some cases, investors told us they had not received a dividend in recent years, even though the regulated water company had paid dividends to the wider corporate group structure. While Ofwat has visibility of wider corporate structures, it has no powers over those entities beyond the regulated utility.

Solvency

3.27 If a water company becomes insolvent, the government (or Ofwat, with the government's consent) asks the courts to appoint an administrator to ensure customers continue to receive services while it looks to sell the business. In March 2024 the government amended the Special Administration Regime (SAR) to enable a water company's assets to be sold on more easily, while leaving the debt behind to be dealt with separately by the Special Administrator. This means debt investors might receive less than in a normal insolvency, although the usual hierarchy of debt will be respected.

3.28 In the event of a water company being taken into special administration, the government may provide financial assistance to manage the administration and to cover operating expenses. The government can change the licence of the relevant water company to require it to recover government funds through customer bills. This applies only if they have not been recovered elsewhere in the process.

3.29 Over the course of the PR19 control period, a number of companies in the sector have become less financially resilient. In particular, media coverage concerning the financial health of Thames Water came to the forefront in June 2023. In October 2024, a short-term rescue plan was agreed, but the company's long-term future is still not secure. The risk of insolvency has reduced debt investor confidence, particularly when combined with the change in SAR which came into effect in 2024.

3.30 The Department for Environment, Food & Rural Affairs (Defra) and Ofwat provided limited commentary on Thames Water's issues with equity and liquidity during 2023 and 2024, stating that they were a matter for the company and its shareholders. In August 2024 Ofwat first took public action after Thames Water breached its licence. Some investors have told us that the lack of public clarity on how Defra and regulators could or would respond to the increasing risk of insolvency for Thames Water reduced confidence.

Credit ratings

3.31 Credit ratings are produced by independent rating agencies. Ofwat requires most water companies to hold ratings by at least two different agencies. It specifies a minimum investment credit rating that it expects companies to hold. If they fall below that level, Ofwat will apply ‘cash lock-up’ to prohibit certain transactions, such as paying dividends, without Ofwat’s permission.

3.32 Ratings agencies assess the regulatory framework as well as individual companies. Moody’s downgraded its assessment of the stability and predictability of the regulatory environment for the sector in 2018, citing factors including Ofwat’s proposals for PR19 and the political environment. In 2024-25, two out of three credit rating agencies downgraded the UK water sector based on its regulatory predictability. Moody’s cited factors including the impact of increased enforcement, demanding targets on cashflows, and the uncertainty associated with the government review of the sector. Moody’s now describes the regulatory framework as generally independent and developed, and with above-average predictability and reliability. This has changed from a description of independent and transparent, with well-established, published regulatory principles which are generally consistently applied.

3.33 The rating of the sector has an impact on individual business risk, which ratings agencies balance with financial performance when considering the ratings for individual companies. This means that a company could be downgraded despite having no change in its performance, based on the regulatory environment being downgraded. Moody’s downgraded two companies at the same time as it downgraded the sector and had eight more companies under a review or negative outlook, implying their credit rating might be downgraded in the future. Companies can take action to improve their credit ratings. For example, by increasing the proportion of equity in the company and reducing their gearing.

3.34 As at November 2024, the credit ratings for six companies were lower than they were in 2015, and nine companies were on a negative outlook, meaning ratings agencies expected their credit ratings to get worse. One credit ratings agency has downgraded a further four companies since November 2024. Recent downgrades for companies have cited the stability and predictability of the regulatory environment, as well as company expected returns, liquidity and gearing as areas for concern. The position of companies across the sector has also become more varied. Three companies are in ‘cash lock-up’ due to poor ratings, while at the same time two companies have credit ratings that are three levels above Ofwat’s minimum expected grade. Ofwat increased its expected minimum grade from 1 April 2025.

3.35 The recent credit rating downgrades reflect the declining credit-worthiness of the sector. Lower credit ratings generally lead to higher costs of debt, reflecting the fact that debt investors see the market as less attractive to invest in. A higher cost of debt is also less attractive to equity investors as it increases the costs that must be paid before they receive a return. Ofwat sets its allowance for the cost of debt using a benchmark of companies (wider than just the water sector) that meet its expected investment credit rating. It then makes an adjustment to reflect the cost of debt for the water sector, based on where water companies have recently been able to issue new debt, compared to this benchmark.

- For PR19, and in the PR24 methodology in 2022, Ofwat initially allowed a cost of new debt of 0.15% below the benchmark.
- For final determinations in PR24 Ofwat is allowing a cost of new debt 0.3% above the benchmark.

This means that bill-payers will be paying 0.45% more on all new debt that companies take on, regardless of changes to underlying interest rates, compared to what was expected in 2022.

Appendix One

Our audit approach

Our scope

1 This report examines the effectiveness of the regulatory regime in incentivising the industry to achieve the outcomes the government has set the sector and attracting investors.

2 We have examined the regulatory planning process and methodology underpinning the current price review, 2025–2030 (PR24), and assessed regulatory performance over the last two price reviews and related control periods: 2020–2025 (PR19) and 2015–2019 (PR14) through the industry's ability to attract investment, and its financial and operational performance. The areas we focused on included:

- the challenge the sector is currently facing to restore consumer trust, and therefore the challenge facing the regulators;
- the long-term objectives set by the government and the regulatory framework by which water companies are expected to deliver them; and
- how the regulatory framework incentivises the operational and financial performance of water companies in the short term, and the consequences for how attractive the sector is to investors.

3 This report does not directly evaluate the actions of water companies, because they are not our audited bodies. Nor does it consider issues outside the remit of historical regulatory powers, such as executive pay. This report does not consider how water regulation connects with wider issues, such as local authority planning, nor other sectors that impact on water quality, such as agriculture. It is not a review of specific regulatory decisions, such as enforcement action or setting individual company allowances, or the appeals process. This report also does not examine the differential impact of regulatory decisions, for example, on vulnerable consumers.

4 The audited bodies that fall within the scope of this report are the Department for Environment, Food & Rural Affairs (Defra), Ofwat, the Environment Agency (EA) and the Drinking Water Inspectorate (DWI). While Defra and EA have responsibility in England, Ofwat and DWI have responsibility in England and Wales. Geographically, we cover Ofwat's and DWI's work across England and Wales, and Defra's and EA's work across England. We do not assess the actions of the Welsh Government or Natural Resources Wales, whose work is audited by the Auditor General for Wales.

5 We reached conclusions based on our analysis of evidence collected during fieldwork carried out between June 2024 and February 2025.

6 Throughout the report, financial years are written as, for example '2023-24': and run from 1 April to 31 March.

Our evidence base

Interviews

7 We held 17 teach-in meetings with Ofwat, five with Defra, five with EA and five with DWI. Participants were chosen based on their job roles and expertise. We designed the teach-ins to provide an understanding of:

- the regulators' role and responsibilities, and how they work together to regulate the water sector; and
- the risks and challenges faced by regulators.

Data gathered during teach-ins was used to triangulate evidence from other sources and to highlight topic areas for further research. We held follow-up semi-structured interviews with audited bodies on topics such as the price review methodology, enforcement action, long-term projects and asset health.

Engagement with third party stakeholders

8 We engaged with a range of third-party stakeholders to ensure we understood a range of different perspectives on the regulation of the water sector. This included water companies, investors, consumer groups, environmental groups, academics, and government bodies.

9 We invited 16 water companies to attend roundtable discussions. These were:

- Affinity Water;
- Anglian Water;
- Dŵr Cymru;
- Hafren Dyfrdwy;
- Northumbrian Water;
- Portsmouth Water;
- Severn Trent Water;
- SES Water;
- South East Water;
- South Staffordshire Water;

- South West Water (which acquired Bristol Water in February 2023);
- Southern Water;
- Thames Water;
- United Utilities;
- Wessex Water; and
- Yorkshire Water.

10 We held roundtable discussions with representatives of 12 water companies and Water UK (the trade association representing water companies). We designed the roundtable to understand their perspectives on:

- outcomes and performance of the sector;
- long-term planning; and
- the approaches and coordination of different regulators in the system.

11 We also invited written submissions from water companies and trade associations to provide further thought. We received 15 submissions from water companies and trade bodies. We analysed these alongside written notes from the roundtable discussions to identify key themes and areas for further research.

12 We also conducted a site visit to Northumbrian Water's operational centre for Essex and Suffolk to understand how the water company worked.

13 We met with 10 chairs of water companies' Independent Challenge Groups. We also invited them to provide further thoughts in written submissions and analysed these alongside meeting notes to identify key themes and areas for further research.

14 We held semi-structured interviews with 11 market experts and water investors, including debt investors and fund managers. We asked water companies and the Global Infrastructure Investor Association to invite investors to speak with us, and met with current water sector investors. No prospective investors spoke to us. We analysed interview notes to identify key themes and areas for further research.

15 To inform our scoping of the report and understand key challenges facing the sector, we met with government bodies, consumer groups and environmental groups. These included:

- CCW (Consumer Council for Water);
- Green Alliance;
- Citizens Advice;
- the Aldersgate Group;

- the Office for Environmental Protection; and
- the National Infrastructure Commission.

Document review

16 We reviewed a range of published and unpublished documents to develop our understanding of the challenges within the sector and how the regulatory framework incentivises performance and long-term investment. We reviewed:

- published documents from PR14, PR19 and PR24, including methodologies, draft and final determinations, and Competition and Markets Authority redeterminations (where applicable);
- published documents from the National Infrastructure Commission and the Office for Environmental Protection related to the water sector;
- documents provided by regulators on strategic priorities, staffing, costs and skill capacity, as well as specific documents on Ofwat's RAPID (Regulators' Alliance for Progressing Infrastructure Development) programme;
- water companies' annual reports and governance documents; and
- strategic planning frameworks and plans such as Water Resources Management Plans (WRMPs) and Drainage and Wastewater Management Plans (DWMPs), to understand the consistency of population, timeline and climate assumptions.

We reviewed each document against our overarching audit questions.

Quantitative analysis

17 We conducted quantitative analysis of water companies' operational and financial performance to understand how this has changed over time.

Operational performance

18 We used Ofwat's data on company performance focused on performance measures and Outcome Delivery Incentives (ODIs) related to Ofwat's price review control periods PR14 (2015–2020) and PR19 (2020–2025) to track performance across price review control periods. Performance data covered 17 major water and wastewater companies up until 2023-24, at which point the number of major water companies reduced to 16 companies as Bristol Water was acquired by South West Water.

19 We conducted quartile analysis to understand the range of water company performance and identify potential outliers. This involved calculating the lower quartile (25th percentile); median (50th percentile); and upper quartile (75th percentile) for different performance metrics. We also tracked average performance of companies in the lower quartile over time to see how average performance changed from the beginning of the PR19 control period (2019-20) to 2023-24.

Financial performance

20 We conducted quantitative analysis to understand water companies' financial performance. We used data collected by Ofwat on companies' debt, equity and dividends to analyse gearing and dividend yield. We analysed data from the point of privatisation (1989-90) to 2023-24.

21 We conducted analysis of companies' financial penalties and rewards generated through ODIs. To ensure these were comparable across companies we presented these figures as return on regulated equity.

Financial resilience

22 There is no single metric to measure financial resilience. We have reviewed two metrics: Return on Regulated Equity (RoRE) to represent water companies' profitability, and Adjusted Cash Interest Cover Ratio (AICR) to represent companies' ability to pay debt interest. We analysed these metrics from the start of the PR14 control period (2015-16) to four years into the PR19 control period (2023-24, the latest available data).

23 There are limitations to these measures, as AICR does not present other ways in which companies can finance their debt interest, and RoRE does not represent returns on investment, for example through company structure or growth. However, these measures are used by investors and financial markets to understand risk, and therefore provide accurate proxies for understanding financial resilience.

Enforcement

24 We also conducted quantitative analysis of EA, DWI and Ofwat enforcement data to understand the level of enforcement action against water companies and level of financial penalties imposed.

Water company spend

25 We also conducted quantitative analysis of spend data within water companies' submissions and draft and final determinations for PR19 and PR24 to understand changes in levels of expected spend and required investment over the short and longer term.

26 Ofwat reports spend data in a number of different ways, including before and after it applies overall adjustments known as 'frontier shift'. We report enhancement spend for the PR24 period before frontier shift is applied, as these data have more detail. This includes information on specific spending such as for storm overflows and for the whole Water Industry National Environment Programme (WINEP). We report operational spend, and comparisons with the PR19 control period, based on figures after frontier shift has been applied. Enhancement spend after frontier shift has been applied is £46 billion rather than £47 billion.

Inflation

27 To present spending figures over time consistently, we have adjusted all financial data in the report for inflation and adjusted to 2023-24 prices. We have done this on the basis of the Consumer Prices Index including owner occupiers' housing costs (CPIH). Inflation has been calculated using the financial year average inflation. Ofwat moved to CPIH because it felt CPIH better reflects the inflation rate that customers face, and because it is now the Office for National Statistics' lead indicator for inflation. However, Ofwat has inflated figures using the Retail Price Index (RPI) up to 2019-20, and CPIH from 2020-21. Therefore, our figures may not match those published by Ofwat.

Surveys

Trust and Perception Survey

28 In 2022 Ofwat commissioned the research agency Savanta to conduct a survey across England and Wales to understand how people view their water company and their perceptions of the water sector. The survey was run online from 9 December to 23 December 2023 and had a total of 2,016 respondents. The sample was weighted to be nationally representative. The questionnaire is available at: https://www.ofwat.gov.uk/publication/trust-and-perception-survey-questionnaire/

Consumer Spotlight survey

29 Ofwat and the Consumer Council for Water (CCW) jointly commissioned a survey to understand and monitor people's views of the water sector. The research was conducted over two waves. Wave one was conducted from 23 November to 14 December 2021, in which Savanta surveyed 2,951 adults across England and Wales via an online survey. Wave two was conducted between 4 and 18 December 2023, with 2,095 respondents. Both samples were weighted to be nationally representative. The questionnaire is available at: https://www.ofwat.gov.uk/publication/ccw-and-ofwat-customer-spotlight-savanta-online-questionnaire/

Water Matters survey

30 CCW has conducted an annual survey of consumer views and experiences of the water sector in England and Wales since 2011. The 2024 survey consisted of 4,952 telephone interviews with household water bill payers, which took place between 26 June 2023 and 25 January 2024. The sample was representative. The questionnaire is available at: https://www.ccw.org.uk/app/uploads/2024/05/Water-Matters-2024-Data-Report.pdf

31 We reference survey results in our report, specifically the average score for consumer trust in water and wastewater companies, which has fallen to the lowest score ever recorded. Consumers were asked to give a score out of 10 for how much they trust their water/sewerage company. ‘Neutral’ is measured as someone scoring between 5 and 7; ‘trust’ is a score of between 8 and 10, and ‘don’t trust’ represents a score of between 1 and 4. The average score for England and Wales is 6.37, which is the lowest score since 2011.

Investor survey

32 Ofwat conducts an annual survey of investors to assess their understanding and views of the regulatory framework. Responses were collected from 11 November to 11 December 2023. Ofwat sent the survey through its investor relations distribution list to 377 investors. It received 58 responses – a 15% response rate (the prior year response rate was 11%). Respondents were asked to use the Likert scale to rate the extent to which they agree with the following statements.

- “Ofwat’s regulatory framework aligns the interests of regulated companies and their investors with those of customers over the long term.”
- “Ofwat is listening to investors.”
- “Ofwat engages consistently and sufficiently with all types of investment stakeholder (debt, equity and analysts).”

Expert challenge panel

33 We tested our findings with an expert challenge panel made up of people with expertise in economics and utilities regulation. We asked them to advise on the factual accuracy and clarity of findings and the balance of stakeholder perspectives. The National Audit Office considered these views but remains solely and fully responsible for the content of the report.

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