

November 2023

Measuring Ofwat's Impact

Ofwat

About this document

This document presents a high-level estimate of Ofwat's impact and the benefits we generate for customers through some of our regulatory interventions.

1. Measuring Ofwat's Impact

1.1 Our Approach

This paper presents an assessment of the benefits that we generate as the economic regulator of the water sector. We have focused on areas of our work where we can more easily quantify the benefits we generate. **The analysis does not, therefore, purport to cover all our activities as a regulator.** Even within the areas we consider, we can only quantify some of the benefits of our work. Nevertheless, we consider this assessment to be a useful illustration of the nature and scale of our impact and the benefits for customers, society and the environment arising from our regulatory activities.

The three areas of work we have focused on are:

- the price review (covering our decisions around allowed total expenditure, the cost of capital and the outcomes framework);
- casework and enforcement activities; and
- our work on developing markets.

The approach considers both our impact on improving performance levels, and therefore improving wider social and environmental outcomes, and our impact on reducing customer bills.

There are several considerations to bear in mind when estimating the scale of our impact in these areas. First, we cannot accurately say what would have happened without our interventions, i.e., there is no counterfactual. We have proceeded with an **assumption that as an alternative to our current regulatory approach, there would be "light touch" regulation**, focussed on activities such as cost benchmarking between companies and providing some degree of challenge and oversight of the sector, but not to the level currently undertaken by Ofwat.

In addition, it is difficult to **isolate the impact of our regulatory interventions on outcomes.** This is for a number of reasons. The first is that we seek to deliver outcomes by incentivising behaviours in companies through our regulatory activities. But ultimately it is companies' behaviours that determine the end outcome. Second, in the absence of genuine counterfactual, it is difficult to control for external factors when assessing our impact. Third, a number of regulatory activities (e.g. the price control, enforcement activities and performance monitoring) may work together to incentivise companies to deliver against an intended outcome (e.g. reduced leakage), and it can be difficult to identify their individual contributions. Finally, there is an issue around the timing of the impact: many of our activities, especially those which have environmental outcomes, such as the schemes being developed through RAPID, are designed to have an impact many years into the future.

1.2 Price review

The vast majority of customers receive their water services from a licensed monopoly company. Due to their monopoly status, it is likely that companies, if unregulated, would not deliver the quality of service their customers want and would charge higher prices for it. For these reasons, in the price review, we set five yearly determinations which:

- cap company revenue at our estimate of the efficient costs for meeting their legal obligations and specified service levels, thereby limiting the amount that customers pay for their services;
- incentivise companies to be even more efficient by providing them with a share of any cost savings that are generated if they spend less than the allowed amount. This also benefits customers in the long term through revealing more stretching benchmarks which we can use for all companies in future price controls; and
- incentivise companies to deliver good outcomes for customers and the environment through our outcomes regime, where we set the desired level of service standards and add associated incentives for both over and under performance.

To estimate the impact of our price review against the alternative of a light-touch regulatory model, initially we assess how much we have reduced the amount customers pay for their services through cost benchmarking.

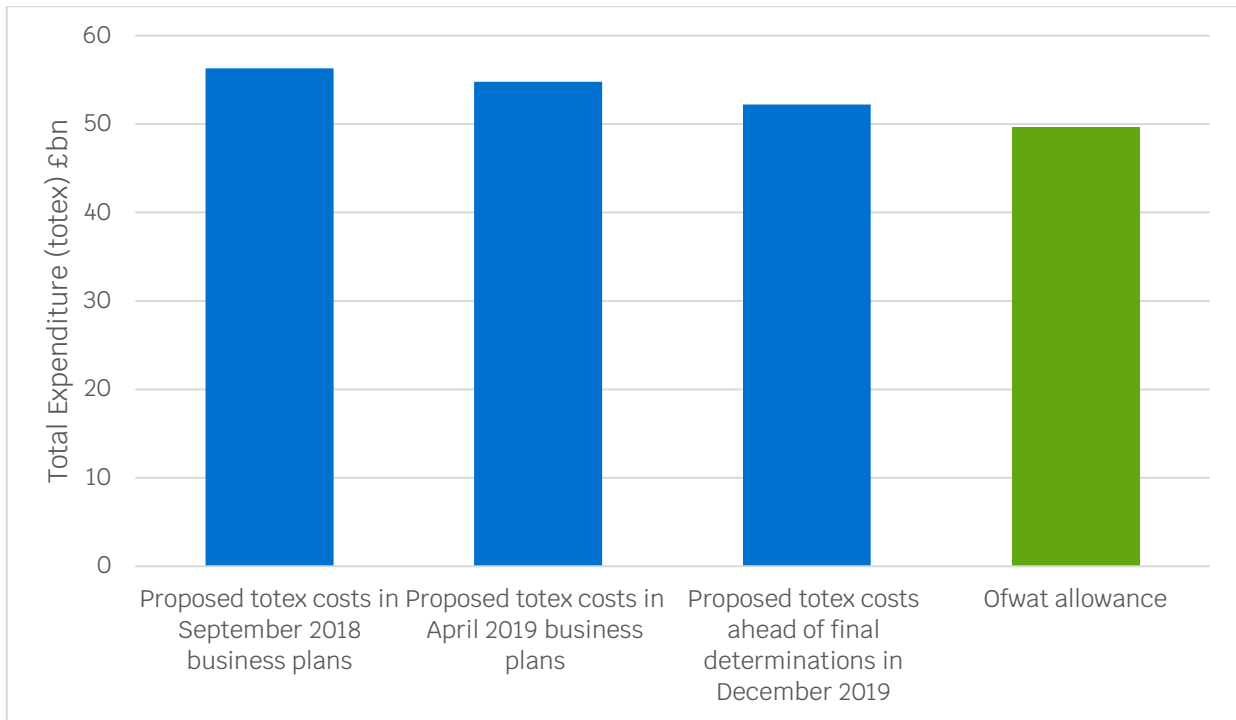
We further assess our impact by considering how we determine the cost of capital as part of the final determinations, compared to the cost of capital requested by the companies. Finally, we calculate the value to customers of our more stretching expectations around performance levels.

1.2.1 Totex

We deliver benefits to customers by applying an efficiency challenge to the proposed totex levels in company business plans, so that customers pay less than they would otherwise, for the service levels we set.

In the graph below we present what companies submitted in terms of proposed totex in the business plans at different stages of the PR19 process, along with the final determinations as published in December 2019.

Figure 1: Companies' proposed costs and Ofwat PR19 final determinations (December 2019)¹



As shown in the graph, comparing the proposed totex in the September 2018 Business Plans and the final determinations, we disallowed £6.7 billion of proposed expenditure over PR19. This £6.7 billion is therefore a measure of the customer benefits resulting from our activities in reducing the amount that customers pay in water bills over the PR19 period.²

A light-touch regulator could be expected to achieve some (but not all) of the gains associated with moving from companies' proposed costs to the final totex allowance as seen in the final determinations. For example, we might expect a light-touch regulator to undertake an "RPI-X approach" based on a high-level assessment of the potential for efficiency improvement.

However, we provide incentives to encourage the submission of more realistic forecasts in the first place, which a light touch regulator may not do as thoroughly. In other words, in the absence of Ofwat, the initial proposed totex figures in the September 2018 business plans could have been greater than the amounts proposed. It is unlikely that a light touch regulator

¹ For this analysis, we have not taken into consideration the CMA appeals and the subsequent changes to the final determinations.

² It is possible that some of the disallowed totex may have related to schemes, which although providing some benefit to customers, we considered too costly and therefore did not deliver value for money to customers. In that case, we would need to net off the benefits from any schemes disallowed or the £6.7 billion would be an overestimate of the benefits we achieved. However, the majority of schemes were mandated through planning processes, and much of the focus was therefore on the right level of costs for delivering the schemes.

would undertake this level of scrutiny. On balance, we have assumed that a light-touch regulator would have been able to achieve 50% of the reduction generated between the initial business plans and the final determinations, and consequently assume that we have generated the remaining 50%, or £3.35 billion, over five years. **This equates to £670 million per year.**

1.2.2 Return on capital

We have, over successive price reviews, set an allowed return to investors expressed as a weighted average cost of capital (WACC), involving debt and equity. These allowances are necessary to provide debt and equity investors with a reasonable return that is commensurate with the level of risk that underpins their investment.

We could take a similar approach to estimating the impact of our interventions to that employed for the totex impacts calculated above. It is however not straightforward to interpret company proposals for the WACC in PR19 business plans as the alternative against which to measure our impact. This is because we provided an 'early view' of the allowed return³, and companies had reputational, financial and procedural incentives to incorporate this into their plans, rather than their central view of the WACC.⁴

Instead, we consider the impact we had on the WACC proposed by companies in PR14, where companies were free to propose figures for the allowed return on debt and equity without incentives being applied. The industry average proposed allowed return on debt was 2.69% (real, RPI), while the equivalent figure for the allowed return on equity was 6.6% (real, RPI)⁵. The PR14 notional gearing of 62.5% generates a company proposed WACC of 4.16%. This is 11% higher than the WACC at the PR14 final determinations of 3.74%⁶. This does not account for the fact that the PR14 proposals were likely to have anticipated a significant degree of check and challenge, leading companies to propose more realistic estimates than would otherwise have been the case.

We have therefore proceeded on the assumption that in the absence of the approach taken at PR19, the counterfactual WACC would have been 11% higher than our PR19 final determination WACC (which was 2.96% in CPIH terms⁷), therefore generating a counterfactual WACC of 3.29%.

The difference between this higher counterfactual WACC of 3.29% and the final determinations WACC of 2.96% (0.33%) is then applied to the sector's projected market value, taking into account the accumulated capital investment over PR19 (the Regulatory Capital

³ Ofwat, 'PR19 final methodology: [Appendix 12: Risk and return](#)', December 2019, Table 1

⁴ Ofwat, 'PR19 final methodology: [Appendix 13: Initial Assessment of Plans](#)', December 2019, Table 3,

⁵ Ofwat, 'Setting price controls for 2015-20 – risk and reward guidance', January 2014, Tables 4 and 5

⁶ Ofwat, '[Final price control determination notice: policy chapter A7 – risk and reward](#)', December 2014, Table A7.10

⁷ Ofwat, '[PR19 final determinations: Allowed return on capital technical appendix](#)', December 2019, Table 1.1

Value). This generates our estimate of the benefits of Ofwat's impact on the cost of capital, **resulting in a yearly average benefit over the five years of ca. £290 million per year.**

This approach assumes that the counterfactual light-touch regulator is not in a position to scrutinise the company-proposed WACC. If there was some degree of challenge (as with the totex figure), this may overstate our impact somewhat. However, this is likely to be outweighed by the fact that companies' PR14 proposals were likely to be reduced downward in anticipation of a more significant degree of check and challenge by Ofwat. Therefore, we have made no further adjustments to our estimate.

1.2.3 Improved services for customers

We reward/penalise companies for delivering certain commitments to outcomes (performance commitments) through outcome delivery incentives (ODIs). These assign a financial value to over or underperforming the expected level set for an outcome, like a reduction in leakage, for example. These are based on customers' willingness to pay for the outcome.

To calculate our added value through stretching the performance levels that we expect companies to achieve, we take the difference in the proposed service levels in companies' business plans and the levels set in the final determinations. The difference between these is our impact through the price review process on performance levels, which we convert into a financial value by using the ODI rates. This calculation compares the final performance commitments with those proposed by the companies in April 2019.

We calculate that the benefits to customers generated through stretching the performance levels that we expect companies to achieve over the 5-year period is £340 million or **around £70 million per annum**. Areas where we significantly increased the level of stretch expected of companies in their performance levels included the number of pollution incidents, the number of water mains bursts and internal sewer flooding.

However, prior to April 2019, we had already pushed the water sector to make significant improvements in reducing leakage, seeking a reduction of 16% by 2025, and for companies who had performed much worse than average on leakage, we set tougher performance commitments. These improvements were included in the April 2019 business plans, and so the £70 million figure above does not include this additional stretch on leakage⁸.

⁸ Furthermore, the £70 million figure is likely to be an underestimate as the ODI rates are lower than customers' actual willingness to pay levels. This is because we assume that if a company under- or overachieves an outcome, it is likely to have under- or overspent, and customers' bills will already be affected through the cost-sharing mechanism. We make an adjustment to the ODI rate to account for this, such that the combined impact of cost sharing and the ODI payment is the same as the willingness to pay.

1.2.4 Price review impact

Aggregating these three impacts we estimate an **overall benefit of at least £1.030 billion a year arising from our price review**, which is reflected in both lower bills for customers and improved outcomes. As set out above, these estimates reflect one view of what might have happened if there were "no Ofwat", that is, if the business cases of companies had been subject to less scrutiny by a light-touch regulator, who was able to achieve a more limited reduction in total expenditure through benchmarking, used a WACC based on company proposals and did not seek further performance improvements from companies beyond what was proposed by companies.

It is important to note this estimate is partial. It does not include wider aspects of the price review, e.g., the benefits that the incentive mechanisms have in revealing better benchmarks for future price controls, any customer and environmental benefits generated through the innovation fund (£200 million ring-fenced from the total amount allowed to companies for a competitive allocation to fund innovation projects), improvements generated through the C-Mex and D-Mex incentive mechanisms⁹ and work undertaken to facilitate markets, e.g., the bioresources market (see section 1.4 below).

1.3 Casework and Enforcement

Our casework and enforcement activities in recent years have led to money being returned to customers where water companies breach their obligations and as such have delivered poor outcomes for customers. They also improve company performance and deter further harmful behaviour across the sector. As a result, the impacts of our casework and enforcement activities last longer than the year in which any remedies were imposed.

The benefits from deterrence effects arising from our casework and enforcement activities are difficult to assess. So in this section we focus on quantifying the benefits generated by our casework and enforcement activities that come from the repayments made to customers because of companies failing to meet their obligations. We consider the period 2018-19 to 2020-21¹⁰.

The table below sets out these repayments.

⁹ The customer measure of experience (C-MeX) and developer services measure of experience (D-MeX) were introduced in PR19 and are financial and reputational incentive mechanisms designed to provide customers in the water sector with excellent levels of service.

¹⁰ Any fines imposed go the Government's Consolidated Fund and are excluded from this assessment.

Table 1: Enforcement cases reported from March 2018 to April 2021

Description	Amount repaid to customers in period 2018/19 – 2020/21
Investigation into Thames Water's failure to meet its leakage performance commitments	£120 million
Investigation into Southern Water's wastewater treatment sites and the company's reporting of relevant compliance information to us	£123 million
Investigation into whether Thames Water is contravening obligations in its Licence and the Wholesale Retail Code	£11 million
Total	£254 million

From the aggregated figure we obtain an annual average impact of **£85 million**. Again, this is an underestimate as we are not capturing any deterrence benefits in this estimate.

1.4 Developing, Creating and Supporting Markets

We use markets and competition to improve customer outcomes. Competition can benefit customers by leading to lower prices, higher quality services, and greater choice as well as drive innovation and growth.

In this section we focus on just one area where we have encouraged markets and competition, namely the bioresources market.

Our PR19 Impact Assessment estimate presented a potential net present value of our proposals of between £320 million to £1.5 billion over 30 years. We estimate these benefits could arise from companies trading sludge, minimising the costs associated with treatment as well as developing innovative solutions and new technologies. Other benefits we included were the potential reduction in the UK's greenhouse gas emissions and increased resilience through enhanced integration between organic waste operators.

We take the lower bound of our estimate which, if delivered at a constant level over the 30 years, would equate to customer benefits of **£15 million** per year.

So, we estimate the **impact of our work in creating, supporting, and improving markets as at least £15 million**. Again, this estimate is only partial as there will also be benefits from other areas such as the Developer Services Market, the Business Retail Market and Direct Procurement for Customers for infrastructure development, which we exclude from this analysis.

1.4 Conclusion

This work attempts to capture and quantify some of the benefits that Ofwat brings. Overall, we estimate that, on average, the yearly **customer benefits from the activities we have considered are worth at least £1.130 billion a year, against an average annual budget over 2018/19–2020/21 of ca. £30 million. Based on a figure of 28.4 million households in England and Wales, this equates to a benefit of approximately £39 per household¹¹**. These benefits are seen in the form of lower bills for customers and through improved performance, compared to what water companies were proposing.¹²

As noted above, this is only a partial estimate of our impact in the areas we have considered, and there are many areas where we make a difference which are not reflected in this report. For example, by conducting customer research and reviewing company performance in sewer flooding we have placed a spotlight on the issue and pressed companies to deliver better service. Our Innovation Fund is encouraging companies and their partners to develop and implement new ways of tackling some of the major challenges the sector faces such as responding to climate change, cutting leakage and reducing the use of storm overflows.

We will continue to push the sector to deliver improvements, and as we do so we will refine how we measure and evaluate the impact of our interventions.

¹¹ [Household and resident characteristics, England and Wales - Office for National Statistics \(ons.gov.uk\)](https://ons.gov.uk)

**Ofwat (The Water Services Regulation Authority)
is a non-ministerial government department.
We regulate the water sector in England and Wales.**

Ofwat
Centre City Tower
7 Hill Street
Birmingham B5 4UA
Phone: 0121 644 7500

© Crown copyright 2023

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit nationalarchives.gov.uk/doc/open-government-licence/version/3.

Where we have identified any third party copyright information, you will need to obtain permission from the copyright holders concerned.

This document is also available from our website at www.ofwat.gov.uk.

Any enquiries regarding this publication should be sent to mailbox@ofwat.gov.uk.

OGL