December 2022

Creating tomorrow, together:
Our final methodology for PR24

Appendix 8
Outcome delivery incentives

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About this document

This appendix sets out further details of our final methodology decisions for **outcome delivery incentives (ODIs) at the 2024 price review (PR24)**, as summarised in Chapter 5 ('Delivering outcomes for customers') of the PR24 final methodology document.

We set out how we have responded to the comments from stakeholders on our draft methodology proposals, as well as those relating to previous consultations, including the Future Ideas Lab, and those received through the Outcomes Working Group.

Appendix 8 of our draft methodology includes how we have considered stakeholders' views relating to our February 2022 discussion document on outcome delivery incentives.

This appendix focuses on our approach to:

- setting standard incentive rates;
- setting enhanced incentives;
- the incentive design and size for the measures of experience;
- assessing and managing risks;
- incentivising outcomes beyond PR24; and
- implementing payments during the 2025-30 period.

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1. Introduction

Outcome delivery incentives (ODIs) align the interests of companies and their investors with those of their customers. We first introduced ODIs at the 2014 price review (PR14) and developed them further at the 2019 price review (PR19). For the 2024 price review (PR24), we want powerful and streamlined ODIs.

ODIs are the financial consequences to companies of underperformance or outperformance relative to their performance commitment levels (PCLs). They act as an incentive for companies to deliver their committed levels of performance, returning funding to customers for forgone benefits if they deliver less than is expected. Companies that go beyond and deliver greater benefits than expected to customers and the environment can receive outperformance payments.

This appendix sets out further details on our decisions for ODIs at PR24, as summarised in Chapter 5 ('Delivering outcomes for customers') of the PR24 final methodology document. We consulted on our methodology in July 2022 and we have set out how we have responded to the comments from stakeholders on each of the relevant policy areas.

Appendix 8 of our draft methodology includes how we have considered stakeholders' views relating to our February 2022 discussion document on outcome delivery incentives.

All calculations in this appendix relating to the 2020-25 period use our view of outcome delivery incentive payments from our final in-period determinations. This includes all restatements and bespoke adjustments relating to individual performance commitments for both 2020-21 and 2021-22, as of December 2022.

2. Standard incentive rates

In this section we set out our approach to setting standard incentive rates (as opposed to enhanced incentive rates, which we discuss in section 3).

We start by setting out our **overall approach** and then discuss the considerations we will take into account for **setting incentive rates**.

We then consider the following policy issues in more detail:

- **estimating marginal benefits**;
- **incentivising asset health performance**; and
- our **approach to bespoke ODIs**.

2.1 Overall approach

2.1.1 Our final methodology policies

We will generally set standard incentive rates using a bottom-up approach, set at the level of each performance commitment. This should reflect the impacts on customers and the environment from a change in a unit of performance for each performance commitment.

We set out more detail on how we will carry this out in section 2.2, including how we will consider credible estimates of marginal costs and a top-down assessment of companies' overall outcomes packages.

2.1.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

2.1.3 Stakeholder views

Stakeholders generally supported our proposed approach to standard incentives. Ten companies broadly agreed with our proposals, with four of them saying that they supported the simplicity of the approach. CCW said the approach should be based on customer priorities and research.

Bristol Water and South West Water, Hafren Dyfrdwy, Severn Trent Water and South Staffs Water supported combining incentive rates based on a bottom-up approach with a top-down assessment to ensure companies' overall packages are balanced and proportionate.

South East Water asked for clarity on when and how top-down approaches would be used.

2.1.4 Our final decisions and reasoning

In the draft methodology we set out two broad options for setting incentive rates at PR24:

- **Option 1: bottom-up approaches**, set at the level of each performance commitment, primarily based on estimates of customer benefits, or potentially using cost estimates where necessary; and
- **Option 2: a top-down allocation approach**, where incentive rates are derived from a company's overall potential payments, for example as a proportion of a company's regulatory capital value (RCV) divided over a selected performance range, and informed by customers' priorities and regulatory judgement.

We proposed to set standard rates using a bottom-up approach. We retain this view in our final methodology. **We will generally set standard incentive rates using a bottom-up approach**. We consider there are benefits to using a bottom-up approach to setting incentive rates, particularly for customer-facing and environmental performance commitments. A bottom-up approach enables us to set incentive rates based on marginal benefits, which aligns the interests of companies with those of their customers and the environment, so that customers as a whole pay or receive ODI payments that broadly reflect the impact from a unit of outperformance or underperformance. This encourages companies to focus on what matters to customers.

Bottom-up approaches can also be based on marginal cost estimates. This approach should fund the costs of improvements and return that funding to customers for under-delivery. But marginal costs may be challenging to verify and could risk incentivising inefficient improvements if marginal costs are materially above marginal benefits. Conversely, if marginal costs are materially below marginal benefits around the performance commitment level, but increase at higher levels of performance, this could insufficiently incentivise improvements. This is because companies would stop improving as marginal costs increased above the ODI rate even if marginal benefits continue to exceed marginal costs.

We could use marginal cost estimates as a cross-check to marginal benefit estimates, to ensure customers are protected from paying more than they should for performance improvements. Affinity Water, Anglian Water, Dŵr Cymru and Yorkshire Water supported using marginal cost estimates as a cross-check to marginal benefits estimates in this way.

We consider how we intend to use marginal costs to cross check incentive rates based on marginal benefits in section 2.2.

Some respondents supported using a top-down approach, or using a mixture of approaches. We consider that under a top-down approach, incentive rates may not reflect marginal impacts on customers and so may not provide the appropriate incentives on companies to focus on what matters most to customers. They also could vary by company for the same unit of performance due to the relative size of companies' regulatory capital value (RCVs), rather than customer preferences or other factors. While top-down approaches may be appropriate where we do not have good data on marginal benefits or costs, we continue to prefer a bottom-up approach. We set out our detailed approach in section 2.2.

As suggested by some stakeholders, we will use a top-down approach to assess the overall package and to set the levels of caps and collars – we discuss this further in section 5.

2.2 Setting standard incentive rates

2.2.1 Our final methodology policies

All performance commitments will have both financial underperformance and outperformance payments by default. The only performance commitments that will not have outperformance payments will be where it is not possible, such as for statutory compliance performance commitments, or where a bespoke performance commitment is needed to address poor performance in an area.

We want these payments to provide powerful incentives on companies to focus on performance, taking account of the value to customers of each aspect of service. We also want to set rates in a consistent way between companies, while allowing for material differences in customer preferences.

Outperformance and underperformance rates will be symmetrical. We will set standard rates by applying a benefit sharing factor (X%) to the estimate of marginal benefits (MB) to a company's customers of a particular outcome, so that:

$$Standard\ ODI\ rates = MB * X\%$$

We generally expect to set the benefit sharing factor at 70% for all companies. We will calibrate final rates for each performance commitment during the determinations phase of PR24, based on considerations such as:

- the degree of confidence in the estimates of marginal benefits;

- wider benefits or strategic priorities;
- information on marginal costs; and
- our approach to cost sharing rates.

Companies will be able to provide their view of the benefit sharing factor for each performance commitment in their business plans.

2.2.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

2.2.3 Stakeholder views

Nine water companies and CCW broadly supported our proposed approach to setting standard incentive rates. However, Affinity Water, Bristol Water and South West Water, Northumbrian Water, South East Water and Thames Water disagreed with our approach. Sustainability First suggested that the size of incentives may have been insufficient to incentivise investments in performance improvements compared to cost savings during previous price controls.

We received the following comments on **revising the formula to be based on marginal benefits**:[1]

- Bristol Water and South West Water disagreed with removing marginal costs from the formula for setting standard rates, arguing marginal cost estimates could be improved through standardised reporting guidance.
- Affinity Water, Anglian Water, Dŵr Cymru and Yorkshire Water supported cross checking our incentive rates using different sources of information.

We received the following comments on the **benefit sharing factor**:

- Affinity Water, Dŵr Cymru, Thames Water and United Utilities disagreed with using a 70% benefit sharing factor, arguing that not setting benefit sharing factors equal to cost sharing rates would distort incentives on companies, such as by over-incentivising them where marginal costs are low or under-incentivising them where marginal costs are high.
- Affinity Water, Bristol Water and South West Water, and Yorkshire Water asked for more justification for using a 70% benefit sharing factor.

[1] As we set out in section 2.2.4, in our draft methodology we proposed to amend the ODI rates formula from PR19, which included a marginal costs component for underperformance rates.

- South East Water suggested using unaltered marginal benefit estimates with standard incentive rates.

We received the following comments on the **symmetry of rates**:

- Thames Water, South East Water, Southern Water, United Utilities and Wessex Water supported our proposal to set symmetrical outperformance and underperformance rates.
- CCW said that before setting symmetrical rates by default, we should consider the outcomes of the collaborative customer research into ODI rates as customers may prefer underperformance rates to be higher than outperformance rates.

Affinity Water, SES Water, United Utilities and Yorkshire Water **asked for clarity** on how we intend to calibrate ODI rates and the benefit sharing factors.

2.2.4 Our final decisions and reasoning

In this section, we first consider our approach to setting standard incentive rates, based on a share of marginal benefits.

We then set out more detail on:

- calibrating the benefit sharing factor;
- the symmetry of payments and rates; and
- concerns with removing marginal costs from the formula.

We consider there are **advantages to basing the formula solely on marginal benefits**, which should be more robust at PR24 due to a more consistent approach to valuations from the collaborative customer research (see section 2.3). This should also reflect the impacts on customers and the environment from a change in a unit of performance for each performance commitment.

However, we consider it is appropriate for it to be based on a **share of marginal benefits** rather than full valuations because of potential interactions with the cost sharing mechanism. A company may incur marginal costs to improve its performance. Because customers bear a proportion of incremental costs through the cost sharing mechanism, then, if we used 100% of marginal benefits, they could be charged more than their willingness to pay for the short-term benefits they receive from a performance improvement (from their financial contributions to outperformance payments, and their share of cost sharing). In terms of underperformance, using full marginal benefit valuations could overcompensate customers if they also receive a proportion of any cost savings associated with underperformance.

As such, **we will set incentive rates based on the following formula**, which would apply to both outperformance and underperformance rates, where MB is an estimate of marginal benefits and $X\%$ is the benefit sharing factor:

$$Standard\ ODI\ rates = MB * X\%$$

This is a change compared to PR19.[2] We consider it appropriate to revise the formulae in this way because it:

- **aligns the interests of companies with customers**, so that customers as a whole pay or receive ODI payments that broadly reflect the impact on them and the environment (the change in net benefits) from a unit of outperformance or underperformance;
- **removes the formulaic dependency on marginal cost estimates**, where we found wide variations in companies' estimates and which we found challenging to assess;
- **simplifies the formulae compared to PR19** – this increases transparency around what the incentives are trying to achieve, as well as reduces the complexity and challenge for companies and us in estimating and assessing marginal costs; and
- **provides greater flexibility to take account of wider considerations**, including being able to set symmetric rates, take account of credible marginal cost estimates, and incentivise strategic priorities.

If we do not have sufficiently reliable estimates of marginal benefits, for example for asset health, we may consider alternative approaches, including top-down approaches.

While standardised reporting guidance on estimating marginal costs could improve the quality of marginal cost estimates, as suggested by Bristol Water and South West Water, as discussed below we consider they would be better suited as cross-checks to inform the benefit sharing factor rather than automatically included in the ODI rates formula.

Calibrating the benefit sharing factor

As we set out above, we consider that setting the benefit sharing factor at 100% is unlikely to incentivise the right outcomes for customers and the environment due to potential interactions with the cost sharing mechanism.

Some stakeholders suggested that we set the benefit sharing factor equal to a company's cost sharing rates. We do not consider this would sufficiently incentivise companies to deliver performance improvements and we **retain the view that the benefit sharing factor should be higher than companies' cost sharing rates at PR24**. Because companies' cost

[2] At PR19 we used different formulae for outperformance and underperformance rates, with the underperformance rate formula including an adjustment for efficient marginal costs (MC), in addition to marginal benefits (MB) and a company's cost sharing rate (S). In almost all cases, we assumed the cost sharing rate was 50%. $PR19\ outperformance\ rates = MB * S$, $PR19\ underperformance\ rates = MB - (MC * S)$.

sharing rates can be up to 60% (see Chapter 6 of the final methodology), we expect to set benefit sharing factors at 70% for all companies.

This approach should lead to higher levels of service, through stronger incentives on companies to deliver performance improvements. We acknowledge that setting the benefit sharing factor at a higher rate than cost sharing rates could risk encouraging companies to deliver improvements to levels where marginal costs exceed marginal benefits in the short run. This is because companies should be incentivised to improve until their share of marginal costs are greater than or equal to their ODI payments. However, this may not materialise in practice if companies lack management focus on performance or have a poor understanding of their marginal costs. We consider it appropriate to **set relatively high benefit sharing factors** because it:

- **increases the management focus** of companies on improving their performance;
- **helps to stimulate innovation and stretch**, benefiting customers now and in the long term if it enables higher levels of service in future price reviews;
- **reflects wider environmental and social impacts** associated with performance, including strategic government priorities, which may not necessarily be incorporated in the marginal benefit estimates; and
- **provides strong incentives on companies** to meet their performance commitment levels, which we consider reflects customers' and other stakeholders' expectations.

We consider there are merits in retaining some flexibility in deciding the final benefit sharing factors for individual performance commitments. **We will calibrate final ODI rates during the determinations phase of PR24**. We will consider varying the benefit sharing factor for individual performance commitments based on considerations such as:

- **the degree of confidence in the estimates of marginal benefits**;
- **wider benefits or strategic priorities** – to reflect and incentivise wider benefits or strategic priorities, particularly if they are not reflected in the marginal benefit estimates;
- **information on marginal costs** – to protect customers from materially overpaying for improvements, for example if credible marginal costs appear to be well below marginal benefit estimates and are unlikely to increase steeply in the period. We consider this is a higher risk for newer performance commitments, such as operational greenhouse gas emissions, where there may be scope for considerable performance improvements; and
- **our approach to cost sharing rates** – to ensure the benefit sharing factor is materially greater than companies' maximum potential cost sharing rates.

While the marginal benefit estimates for individual performance commitments may vary between companies (for example, due to differences in customers' preferences), we generally expect to set a common benefit sharing factor across companies because we do not expect the above considerations to vary between efficient companies. We will consider views expressed by companies and other stakeholders in our draft determinations.

In all cases, **we will cross-check final rates against potential RoRE to ensure there are sufficient and proportionate incentives on companies** for each performance commitment in absolute terms and relative to other performance commitments. For example, if we consider incentive rates are not sufficient to incentivise improvements based on our observations of previous performance, we could increase them – this may be particularly relevant for asset health-related performance commitments. If we consider the incentive rates from some performance commitments do not sufficiently reflect the relative priorities of customers or other stakeholders, we could also adjust the incentive rates. However, we will also consider whether adjusting incentive rates for these reasons undermines the marginal incentives on companies, which generally should reflect a share of marginal benefits.

Symmetry of payments and rates

All performance commitments will have both financial underperformance and outperformance payments by default. The only performance commitments that will not have outperformance payments will be where it is not possible, such as for statutory compliance performance commitments, or where a bespoke performance commitment is needed to address poor performance in an area.

Where performance commitments have them, **outperformance and underperformance rates will be symmetrical**.

We consider this approach should incentivise companies to outperform where there are clear benefits to do so with limited complexity. It also reflects that, for most common performance commitments, we consider diminishing marginal benefits are unlikely to arise during the 2025-30 period, either because:

- individual incidents measured by the performance commitment impact different customers across the company's network, so an incremental improvement should provide a constant benefit (such as internal sewer flooding incidents); or
- there is scope for significant improvements, so diminishing marginal returns are unlikely to occur in the short term (such as for some environmental performance commitments).

Because we consider that customer views should be focused on aspects of the price review where they can be involved in a meaningful way, we are no longer requiring companies to provide evidence of customer views on whether there should be outperformance payments for common or bespoke performance commitments. Instead, we intend to assess whether there are clear benefits to customers and the environment from outperformance, informed by the collaborative customer research and expert judgement. We consider this is consistent with research that suggests that areas which require technical expertise to understand may be less appropriate for customer research.[3] It also enables us to reflect wider benefits

[3] Blue Marble for CCW, 'Engaging water customers for better consumer and business outcomes', May 2020.

associated with outperformance. This helps to ensure all companies are incentivised to outperform where it is beneficial to do so.

In general, we do not consider it appropriate to set asymmetric standard incentive rates at PR24. While higher underperformance than outperformance rates may reflect customers' expectations, we consider it important to reflect wider benefits from outperformance that may not be reflected in customers' stated preferences for the reasons above.

For reasons set out in section 2.4, we consider the rationale for symmetrical rates also applies for the asset health-related performance commitments for PR24.

In previous consultations, some respondents raised **concerns with removing marginal costs from the ODI rates formula** which included that it would mean companies do not consider marginal costs in their decisions. We consider that removing the marginal cost element from the underperformance rate formula does not prevent companies from considering the marginal costs of service improvements in their operational and investment decisions. This includes considering whether their share of marginal benefits via the ODI rate ($MB * X\%$) outweighs their share of marginal costs via the cost sharing mechanism ($MC * S$). As we set out above, we may vary the benefit sharing factor to reflect wider objectives and priorities and we would expect companies to respond to these incentives accordingly. As set out in Chapter 6 of the final methodology, we will set performance commitment levels that align with our expenditure allowances, rather than attempt to set every performance commitment level at the exact point at which marginal costs equal marginal benefits, which is challenging to achieve.

Some stakeholders also suggested that revising the formula would lead to the loss of marginal cost data. We do not consider that we can verify that marginal cost estimates are sufficiently robust for setting incentive rates. In their responses, some companies recognised the difficulties with estimating robust marginal costs. Companies can continue to collect marginal cost data for other purposes. Where credible marginal cost estimates suggest that customers are at risk of overpaying for improvements (for example, they appear substantially below marginal benefit estimates) then we can account for this when calibrating the benefit sharing factor during the determinations.

2.3 Estimating marginal benefits

2.3.1 Our final methodology policies

For the majority of common performance commitments, we will base **marginal benefit estimates on the collaborative customer research** (see chapter 4 of the PR24 final methodology).

For the biodiversity and operational greenhouse gas emissions performance commitments, we will use credible external valuations. For our approach to the asset health-related performance commitments, see section 2.4.

2.3.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

2.3.3 Stakeholder views

Ten stakeholders **supported our approach** to estimating marginal benefits, with CCW, Hafren Dyfrdwy and Severn Trent Water's Expert Reference Panel (a group set up to challenge Severn Trent Water during the PR24 process) saying the collaborative customer research should improve consistency across companies.

However, nine stakeholders **raised concerns with using the collaborative customer research** to estimate marginal benefits:

- Anglian Water, Dŵr Cymru, Thames Water and Yorkshire Water said we should cross-check the marginal benefit estimates against different sources of information, including marginal costs, noting that marginal benefits can be difficult to calculate or our approach to estimating marginal benefits at PR24 is new.
- Affinity Water, Bristol Water and South West Water, and Dŵr Cymru said that the collaborative customer research may not deliver more robust valuations than willingness to pay research conducted by companies.
- Northumbrian Water, Portsmouth Water and Wessex Water said we should triangulate evidence from a range of sources rather than use a single research project, which could be affected by the timing of the survey.
- Northumbrian Water also said that companies are best placed to own the research, instead of centralised and standardised research.
- SES Water, Thames Water and Wessex Water suggested that our proposed timeline for publishing customer valuations may be too late to feed into setting ODI rates and companies' business plans.

We received the following comments on our **using external valuations for biodiversity and greenhouse gas emissions**:

- Thames Water asked how we would use external valuations for biodiversity and operational greenhouse gas emissions. The company said that the Environment Agency's final guidance for water resources management plans (WRMPs) does not recommend

monetising biodiversity. The company also asked whether incentives rates for operational greenhouse gas emissions will change in future price reviews to reflect the UK government's approach to valuing greenhouse gas emissions.
- Wessex Water suggested we use market-based values for biodiversity and greenhouse gas emissions where they are available as they are more likely to represent the true value of improvements than publicly available societal values.
- Dŵr Cymru highlighted that for biodiversity, our valuations will need to align with biodiversity frameworks adopted in Wales.

We received the following **requests for clarity** on our approach:

- Affinity Water, CCW and Yorkshire Water asked how customer valuations from the collaborative customer research will be converted into marginal benefit estimates and incentive rates.
- Anglian Water, Portsmouth Water, South Staffs Water, United Utilities and Yorkshire Water asked how we will take account of companies' own research (other than the collaborative customer research) when setting incentive rates.
- Portsmouth Water asked how ODI rates will between differ companies, while Anglian Water and Thames Water suggested that we account for company scale or differences in regional preferences when setting incentive rates.

2.3.4 Our final decisions and reasoning

In line with our draft methodology, we will use the **collaborative customer research as the basis for marginal benefit estimates for the majority of common performance commitments**.

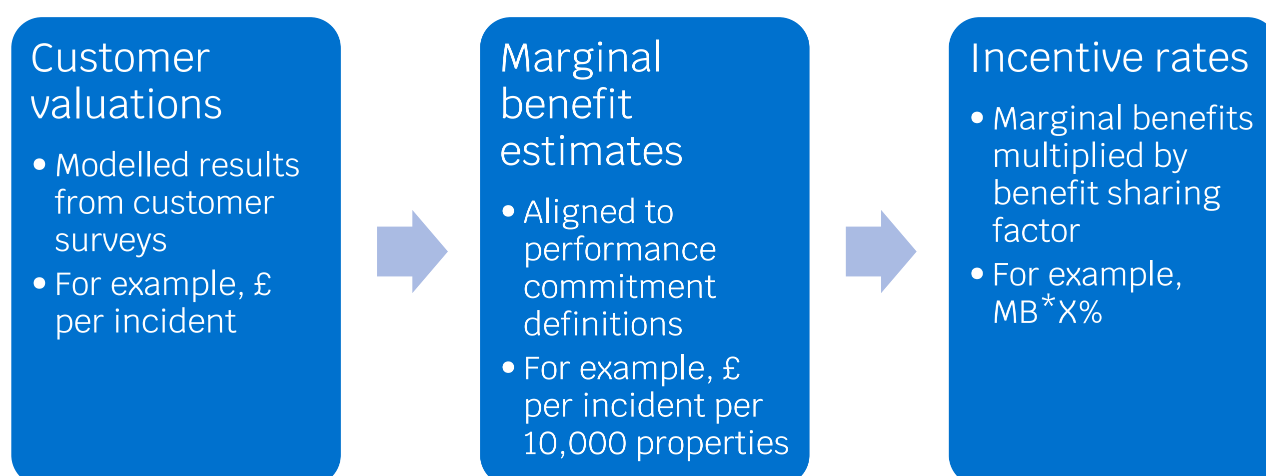
Some stakeholders suggested that the collaborative customer research may not be more robust than companies' willingness to pay research. We consider the collaborative approach should enable us to set comparable values across the sector through a consistent approach. It also enables us to work collaboratively with companies and other stakeholders, to provide marginal benefit estimates that are as robust as possible – we set out considerable detail on the development of the approach on our website, including where we have tested different approaches and considered peer reviews and pilot results. We note that publications related to the development of the collaborative customer research address many of the comments raised by stakeholders in response to our draft methodology.[4]

[4] This includes our consideration, with CCW, of feedback provided by eftec on behalf of Anglian Water, Northumbrian Water, South West Water and Wessex Water. See Ofwat and CCW, 'ODI rates research – eftec report themes', September 2022.

This approach should also be more cost effective than PR19, where companies commissioned individual research projects of varying quality.

Marginal benefit estimates need to align with final performance commitment definitions, by **'mapping' the relationships between customer valuations and the final definitions of performance commitments** – summarised in Figure 2.1. We have been working with companies and other stakeholders over 2022 and since we published our draft methodology.

Figure 2.1 – Process for setting incentive rates using marginal benefit estimates from the collaborative customer research at PR24



As part of this mapping exercise, **we have considered the extent to which incentive rates can vary between companies**. We expect to set different rates where there are material differences in customer preferences. There may be other reasons why incentive rates differ between companies, for example due to a company's topography, network configuration or past performance which may lead to higher likely impacts on customers from the same change in a unit of performance as measured by the performance commitment. **We intend to permit these variations between companies where they do not introduce disproportionate complexity or create perverse incentives** (for instance, where this leads to weaker incentives on companies that have a history of poor performance or inefficient investments).

In response to requests for clarity by some respondents, we note that the mapping exercise should account for the different size and scale of companies. Because most performance commitments are 'normalised' (for example, they are reported per 10,000 properties), then this will lead to different incentive rates between companies because companies have different property numbers, before we apply relevant variations as discussed above. However, we recognise that there may be a tension between providing marginal incentives on relatively small companies that reflect the impacts on customers and the environment, and ensuring the overall risk on companies is proportionate. This is because small companies may be more exposed to individual service incidents due to low property counts or relatively low RCVs. In

most cases, we expect this will be addressed through the mapping process, but as we set out in section 5, we may make top-down adjustments to manage these risks if necessary.

For all valuations derived from the collaborative research, we are able to consider credible external valuations that are consistent with our policy approach – including that they reflect impacts on customers and the environment, and we are able to explain differences in valuations between companies. As set out in Chapter 4 of the final methodology, we will make a judgement on the weight we assign to any company-specific research in our assessment of company proposals. Where we are not satisfied that evidence of customers' views meets the standards we have set out, we may not give that evidence any weight in our assessment of companies' proposals. As set out in sections 2.1 and 2.2, **we will take into account a range of considerations when setting the benefit sharing factor for each performance commitment**, including our confidence in the estimates of marginal benefits.

In terms of **timelines for providing marginal benefit estimates**, we shared the initial results of the collaborative customer research with the collaborative customer research steering group, which includes water companies and customer representatives, in November 2022. We will explain how we have mapped these valuations to common performance commitment definitions to produce indicative rates in early 2023.

We consider this timeline provides sufficient opportunity for companies to include these marginal benefit estimates and indicative incentive rates in their business plans, which are due to be submitted in October 2023. Companies and other stakeholders can also provide further views in response to our draft determinations in 2024.

Approach to external valuations

We will take an **alternative approach for the biodiversity and operational greenhouse gas emissions performance commitments**. This is because the collaborative research is unlikely to give us meaningful customer valuations. Instead, we will take account of credible external valuations – we set out how we intend to derive marginal benefits for these performance commitments in Box 2.1. This could include market-based valuations for both performance commitments, as suggested by Wessex Water.

In response to the remaining comments from stakeholders on our approach to using external valuations:

- We consider it appropriate to financially incentivise improvements in biodiversity through a performance commitment, for the reasons set out in section 4.1 of Appendix 7 – Performance commitments. We consider the relevance of this performance commitment for companies in Wales in the same appendix.

- We expect to revise the incentive rate for operational greenhouse gas emissions at future price reviews, which is likely to take account of changes in external valuations alongside other relevant evidence.

Box 2.1- Estimating benefits for the biodiversity and operational greenhouse gas emissions performance commitments

Biodiversity

We expect to use the upcoming biodiversity net gain market, which is due to open in 2023, as a starting point for marginal benefit estimates. We propose to assess this market price against a range of sources, such as the ENCA (Enabling a Natural Capital Approach) Services Databook, which contains existing sources of biodiversity values, such as £20,000 to £25,000 per biodiversity unit as summarised in an evidence review for Defra in 2021.

We could either set a common incentive rate or vary rates by company, according to a common methodology. Companies are likely to have different types of habitat in their areas, so a common rate may not fully represent these differences. Company rates could be based on an average of habitat-specific benefit values, weighted by either the number of relevant habitats in each company's area, or the type that they expect to develop until the next price review. We would need to balance this approach with the additional complexity. We will consider this as part of our determinations.

Operational greenhouse gas emissions

We expect to use the latest external valuations of marginal benefits as our starting point, such as those used by the UK government for policy appraisals, including the Green Book and related guidance. However, we intend to cross-check this against wider evidence, in line with our overall approach (see section 2.2). In particular, we expect to assess this against the efficient marginal costs revealed by our proposed bidding process for PR24 (see section 5.1 of Appendix 9 – Setting expenditure allowances).

As this is a new common performance commitment at PR24 – only four companies had financial incentives at PR19 – there is a risk that marginal costs are significantly below marginal benefits, as it may have been under-incentivised in previous periods. We may also have credible marginal cost estimates from the bidding process for PR24, or evidence of marginal costs of reducing greenhouse gas emissions from the wider economy, although the water sector-specific ones may be more relevant.

2.4 Incentivising asset health performance

2.4.1 Our final methodology policies

We intend to use an **inferred benefits approach for setting incentive rates for asset health-related performance commitments**. We will estimate the relationship between asset health metrics and end customer outcomes, over the short and long term, and establish a valuation of asset health from the valuations for end customer outcomes. If we consider this does not generate sufficiently reliable and consistent estimates of marginal benefits, or will add disproportionate complexity, we will use alternative approaches, including top-down approaches.

We will set **symmetrical rates for asset health-related performance commitments** and use relatively **tight outperformance caps** to address potential diminishing marginal benefits from outperformance if necessary (see section 5.1 for more details).

2.4.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

2.4.3 Stakeholder views

Stakeholders were divided on **our proposed approach to setting incentive rates** for asset health-related performance commitments, with some preferring the inferred benefits approach and others preferring a top-down RoRE allocation approach:

- Dŵr Cymru, Portsmouth Water, South Staffs Water, Thames Water and United Utilities supported an inferred benefits approach. South Staffs Water said it would be difficult to gain meaningful valuations directly on asset health measures from customers, while Thames Water said that a top-down RoRE allocation approach would be inappropriate for setting ODI rates as it would not reflect customers' preferences and priorities, and would largely depend on companies' RCV levels and estimated performance distributions.
- Bristol Water and South West Water, and Wessex Water preferred using a top down RoRE allocation approach. Wessex Water and Yorkshire Water said an inferred benefits approach would be unlikely to work in practice as it could double count other performance commitments.

Some stakeholders suggested **alternative approaches to setting incentive rates** for asset health-related performance commitments, or made wider proposals:

- Yorkshire Water proposed that we use price control deliverables (PCDs) instead of performance commitments for outputs associated with asset health, which the company said would avoid double counting with customer-facing performance commitments.
- Affinity Water said that it considered our proposals were insufficient in breadth and magnitude to rebalance incentives away from short-term performance and expenditure, which could lead to long-term asset risks.
- Dŵr Cymru said we should use a wide range of evidence when setting incentive rates.

Yorkshire Water **asked for clarity** on the timeline for mapping marginal benefits to asset health-related performance commitments.

2.4.4 Our final decisions and reasoning

In our draft methodology, we recognised that the existence of customer-facing performance commitments, and our commitment to maintaining them over time, should incentivise companies to maintain their asset health to avoid underperformance payments in future periods. However, we said we were concerned companies do not put sufficient weight on the long-term consequences of poor asset health and so we directly incentivise them through asset health-related performance commitments.

We set out four options for setting incentive rates for asset health-related performance commitments:

- **direct customer valuations** – where customers are asked to directly value improvements through customer research;
- **inferred marginal benefits** – by allocating valuations of relevant customer-facing incidents to the metrics measured by asset health-related performance commitments;
- **marginal costs** – where incentive rates are set as a share of the marginal costs of improvements or deteriorations in performance; and
- **top-down approaches** – starting with the total money at stake (usually in terms of a certain return on regulatory equity), payments are divided by a selected range of performance to derive a unit rate.

Approach to incentivising asset health performance

We consider it necessary to **incentivise companies through asset health-related performance commitments**. We are concerned that companies do not put sufficient weight on the long-term consequences of not properly maintaining their assets, such as greater risks of service failures or higher costs to remedy issues, which customers bear in part or in full. Even if companies are exposed to these long-term consequences via future ODI rates on customer-facing performance commitments or the cost sharing mechanism, they

may not put sufficient weight on this. Incentivising asset health performance through ODIs is consistent with our long-term approach at PR24.

Our **preferred approach for setting incentive rates remains an inferred benefits approach**. While we recognise that setting incentive rates to appropriately incentivise asset health performance is challenging, it should lead to rates that are proportionate to the future impacts on customers and the environment. It is also consistent with our approach to other performance commitments.

We do not consider direct valuations are appropriate. It is challenging for customers to properly value the impacts of a company not maintaining its asset health, particularly where the customer impact is likely to be indirect (such as from a sewer collapse). Research also suggests that areas which require technical expertise to understand may be less appropriate for customer research.[5]

While using marginal costs would enable companies to recover the costs of improvements and return unspent costs to customers, we are concerned that marginal cost estimates may be challenging to verify. We consider it will continue to be challenging to collect credible and consistent evidence of short-run or long-run marginal costs at PR24. Even with industry-wide guidance, there are risks to customers. If marginal costs substantially exceed marginal benefits, then this could encourage inefficient investment. If current marginal costs, on which incentive rates would be based, are substantially below marginal benefits, and there are increasing marginal costs in the short run such that they are greater than companies' incentive rates, then companies may be insufficiently incentivised to pursue improvements even though doing so would benefit customers.

We do not consider price control deliverables are likely to be sufficient to incentivise improvements in asset health, as proposed by some respondents. This is because price control deliverables have a different function to performance commitments – they are designed to return funding to customers for non-delivery of specific outcomes or outputs. They also do not incentivise further improvements within the period. We set out our proposed approach to price control deliverables in Appendix 9 – Setting expenditure allowances.

We are working collaboratively with companies and other stakeholders to develop a standardised approach to mapping marginal benefits to asset health-related performance commitments, consistent with our approach to the collaborative customer research. This includes developing consistent assumptions, such as discount factors and the extent that companies already take account of future customer impacts, to avoid double counting. This builds on comparable approaches used by some companies at PR19. We expect to provide indicative rates for asset health-related performance commitments in spring 2023.

[5] Blue Marble for CCW, 'Engaging water customers for better consumer and business outcomes', May 2020.

If we consider this does not generate sufficiently reliable and consistent estimates of marginal benefits, or will add disproportionate complexity, we will consider alternative approaches, including top-down approaches. In line with our approach set out in section 2.2, we will **cross-check incentive rates** against a range of considerations, including assessing the emerging effects of PR19 rates on performance and likely top-down RoRE impacts and make adjustments if necessary. We consider that alongside our intention to set relatively high incentive rates at PR24, this should help to counterbalance any incentives in the price review package which could lead companies to overly focus on short-term performance or expenditure savings.

Symmetry of payments and rates

We will set **symmetrical rates for asset health-related performance commitments** and use relatively **tight outperformance caps** to address potential diminishing marginal benefits from outperformance if necessary (see section 5.1 for more details). We consider this approach is appropriate because it:

- recognises the balance between incentivising companies to invest for the long term, consistent with our PR24 ambitions, and protecting customers from overinvestment due to potential diminishing marginal benefits; and
- removes potential distortions caused by a change in incentive rates either side of performance commitment levels – removing the kink in incentive rates should lead to linear incentives on companies to perform close to their performance commitment levels, which are more likely to reflect marginal benefits.

While there are also distortions arising from outperformance caps, we consider they will be sufficiently beyond performance commitment levels and therefore much less likely to be triggered in the 2025-30 period.

2.5 Bespoke incentive rates

2.5.1 Our final methodology policies

Companies will be able to propose bespoke performance commitments in certain circumstances.

When estimating marginal benefits for bespoke performance commitments, **companies should conduct research that is broadly consistent in approach to the collaborative customer research** for common performance commitments and in line with the results where appropriate. This could be in collaboration with other stakeholders, including

companies. We expect companies to achieve the standards for conducting high-quality research set out in our PR24 customer engagement policy.

2.5.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

2.5.3 Stakeholder views

Wessex Water said that it will be challenging to undertake research on the same basis as the collaborative customer research. United Utilities said it is important to provide early detail on results and methodologies used to calculate incentive rates so that companies can use compatible methodologies for incentive rates of bespoke performance commitments.

Wessex Water also said that companies should be encouraged to use valuations from multiple sources to calculate incentive rates for bespoke performance commitments.

Yorkshire Water asked whether companies could use credible external valuations for the basis of their bespoke incentive rates (such as for embedded greenhouse gas emissions, if proposed as a bespoke performance commitment).

2.5.4 Our final decisions and reasoning

When submitting proposals for incentive rates for bespoke performance commitments, we consider that companies should have regard to our reasoning for incentive rates for common performance commitments (as set out in section 2.2), with appropriate rationale and evidence where an alternative approach is required for local circumstances.

That is, companies should propose bottom-up estimates of marginal benefits that reflect impacts on customers and the environment, and we will set a benefit sharing factor during the determinations phase of PR24. We consider a consistent approach is appropriate because the objectives for common performance commitments also apply for bespoke performance commitments, such as strongly incentivising performance improvements.

When estimating marginal benefits for bespoke performance commitments, companies should aim to conduct **research that is broadly consistent in approach to the collaborative customer research** for common performance commitments, ie focused on the relative impacts on customers. This would help to provide internal consistency within the outcomes framework and align incentives with customers' relative priorities.

This research could be in collaboration with other stakeholders, including companies. We expect companies to achieve the standards for conducting high-quality research set out in our PR24 customer engagement policy position paper. We set out our proposed minimum expectations in relation to bespoke performance commitments in the context of business plan incentives in Appendix 12 – Quality and ambition assessment.

Companies can propose using external valuations in their marginal benefit estimates, if the collaborative customer research approach is unlikely to lead to meaningful valuations from customers, as is the case for the biodiversity and operational greenhouse gas emissions performance commitments.

We provide guidance on producing valuations for bespoke performance commitments in Box 2.2.

Box 2.2 – Guidance on producing valuations for bespoke performance commitments using the collaborative customer research methodology

As set out on our website, our approach to collaborative customer research into ODI rates starts with:

- an **impact-based exercise**, which quantifies the relative impacts of individual incidents on customers and the environment, with an index value for each incident;
- a **compensation-based exercise**, which derives 'anchor' monetary values for specific incidents, which are then applied to all incidents using the impact index.

Where necessary, valuations are then '**mapped**' to the final definitions of performance commitments.

Accent and PJM Economics, which developed the research methodology, suggest an approach to making research for bespoke performance commitment valuations consistent with the approach to common performance commitments.[6] They suggest using an impact-based approach.

For example, a company could replicate the impact-based exercise with an incident covered by its proposed bespoke performance commitment and a selection of impacts, including those used to 'anchor' monetary values in the compensation-based exercise in the collaborative research. Rather than replicate the compensation-based exercise, the company could derive the bespoke performance commitment valuation based on its relative impact compared to a valuation developed through the collaborative research.

While we do not anticipate that bespoke performance commitments should overlap with incidents covered by other performance commitments, the company could replicate the modelling approach developed during the analysis phase of the collaborative research, which we will share with companies. In some cases, companies may be able to use values directly from the collaborative research with additional mapping where appropriate.

We will consider whether further guidance, or discussion through the steering group of the collaborative customer research, is required.

[6] Accent and PJM Economics, 'Outcome delivery incentive research: Design of methodology – Stage 1 report', January 2022, Section 5.4.

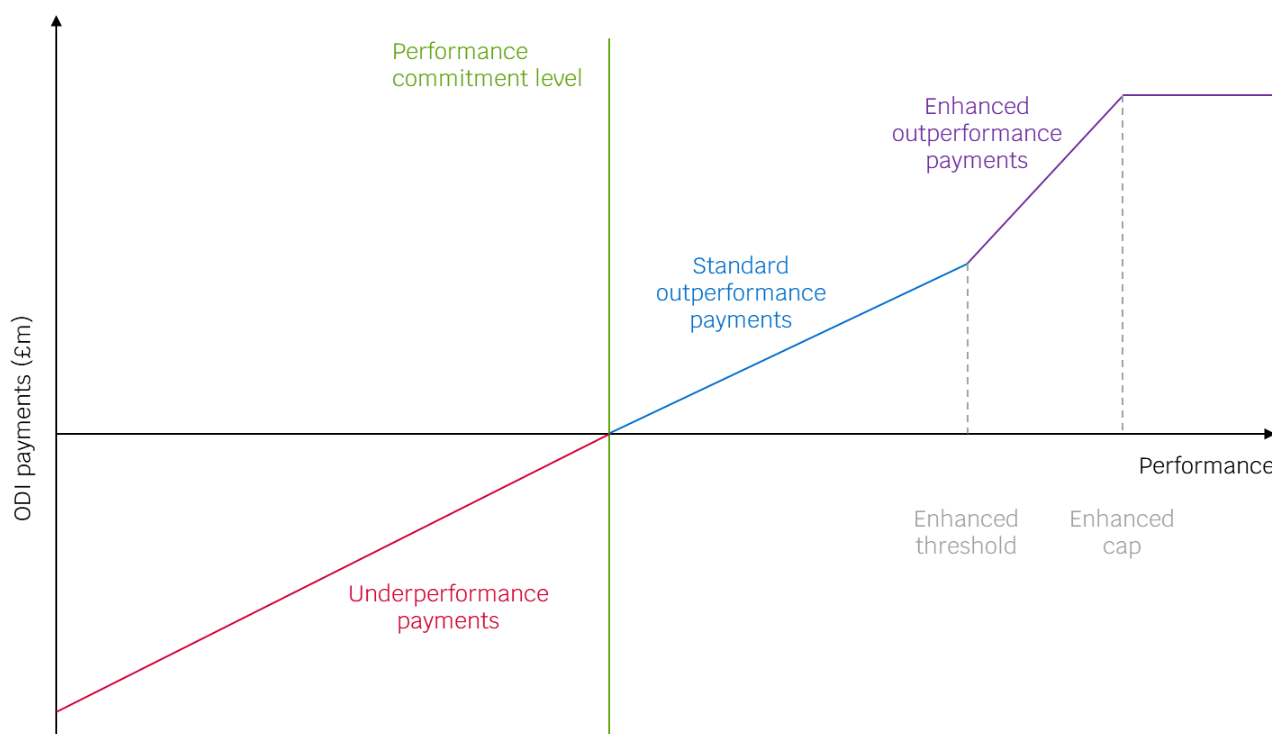
3. Enhanced incentives

We introduced enhanced incentives at PR19. They are designed to encourage companies to innovate to deliver major performance improvements. They can enable us to set more stretching performance commitment levels in future price reviews, benefiting the customers of all companies.

In this section, we set out our decision to retain enhanced incentives at PR24. We then set out more detailed design issues, including:

- the **scope of enhanced incentives** – the criteria for selecting performance commitments to have enhanced incentives at PR24;
- **enhanced thresholds** – the level of performance beyond which companies are able to earn enhanced outperformance payments for individual performance commitments;
- **enhanced incentive rates** – the incentive rates that companies can earn for performance beyond their enhanced thresholds, which are higher than standard incentive rates to reflect the sector-wide benefits from very high performance;
- **enhanced caps** – these limit the amount that companies can earn in enhanced outperformance payments from individual performance commitments; and
- **realising sector-wide benefits** – through our approach to setting performance levels in future price reviews and ensuring knowledge behind enhanced performance is shared.

Figure 3.1 – Illustrative example of enhanced incentives



3.1 Retaining enhanced incentives

3.1.1 Our final methodology policies

For PR24, we will apply **enhanced incentives to all companies for selected common performance commitments**.

Enhanced incentives will be outperformance only, to incentivise outperformance that will have sector-wide benefits, and we will set them on a **consistent and streamlined basis**.

3.1.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

3.1.3 Stakeholder views

Ten water companies supported our proposal to retain, expand and streamline enhanced incentives for PR24.

CCW said that it supported our proposal, provided that customers support paying more for enhanced outperformance and they find it affordable. Northumbrian Water also said that enhanced incentives could encourage companies to spend more on improvements than the benefits created for customers. Severn Trent Water's Expert Reference Panel also suggested asking customers about retaining enhanced incentives, and said it was concerned that they may encourage companies to spend more on improvements than the benefits created for customers. Affinity Water said there is mixed evidence of whether customers support enhanced incentives.

Dŵr Cymru proposed removing enhanced incentives, saying its customers are sceptical of ODIs in general and removing enhanced incentives would simplify the price review.

Ten stakeholders supported making enhanced incentives outperformance only, agreeing that it reflects the sector-wide benefits from very high performance, which is not the same for underperformance. CCW did not support the removal of enhanced underperformance rates, saying that this would skew the risk and return balance.

3.1.4 Our final decisions and reasoning

In our draft methodology, we set out three options for enhanced incentives at PR24:

- **Option 1: Remove enhanced incentives**. We would not set any enhanced incentives at PR24.
- **Option 2: Maintain enhanced incentives (our PR19 approach)**. Companies would be able to request enhanced incentives for common performance commitments, and we would assess their detailed proposals.
- **Option 3: Expand and streamline enhanced incentives**. We could require all companies to have enhanced incentives on selected common performance commitments, based on a set of criteria. We would streamline how we assess and set enhanced incentives where possible.

We retain our view that it is appropriate to **retain, expand and streamline enhanced incentives for PR24 (option 3)**.

We do not consider option 1 is appropriate, as it would not be as effective in delivering our PR24 ambitions. Enhanced incentives have the potential to **strongly incentivise companies to innovate and deliver major performance improvements**. This can deliver wider environmental and social value, particularly where the performance commitments in scope relate to environmental outcomes.

We recognise that there are other mechanisms that encourage innovation – such as the cost sharing mechanism and innovation fund. However, at this stage we consider that all of our regulatory tools are required to encourage a step change in attitudes in the water sector. We consider these tools to be complementary as enhanced incentives are intended to remunerate companies on delivery of innovation leading to improved outcomes, whereas the innovation fund provides upfront funding and is focused on increasing the capacity of companies to discover and deliver innovations over the long term. The cost sharing mechanism is complementary and focused on encouraging innovations that result in lower costs rather than long-term improvements in performance.

While there is currently limited evidence of the effectiveness of enhanced incentives, as they were only introduced in PR19, we observe that some companies have earned or are close to earning enhanced outperformance payments in the current period. One company, South West Water, achieved enhanced outperformance for internal sewer flooding in 2021-22 by performing 16% above its enhanced threshold, earning a standard payment of £2.6 million and an enhanced payment of £1.0 million. Some companies have also been close to achieving enhanced outperformance payments, notably Northumbrian Water in 2020-21 for water supply interruptions and pollution incidents, and SES Water in 2021-22 for water supply interruptions. We also note that it is relatively early in the 2020-25 period and that we would expect it to take time for companies to discover, test and implement innovations.

We recognise there are potential drawbacks with retaining enhanced incentives, as raised by some stakeholders in their consultation responses. There is a risk that customers pay more for improvements, potentially above their willingness to pay in the short term. Customers may also not support the concept of enhanced incentives. In line with our proposed approach to enhanced incentive rates (see section 3.4), we consider at most customers will pay twice their marginal benefits for a unit of improved performance and should experience most of the benefits in future price control periods. Our analysis in section 3.5 indicates that maximum returns from enhanced incentive payments at PR19 would on average be around 1.1% water or wastewater RoRE per performance commitment.[7] If enhanced thresholds are sufficiently stretching, only a subset of performance commitments should reach their thresholds, and maximum payments would be unlikely.

In addition, it is likely that the new level of performance revealed by enhanced incentives, which will help stretch the sector in future price controls, would not otherwise have been achieved. While we could ask customers about their views on enhanced incentives, we consider doing so would be inconsistent with research that suggests that areas which require technical expertise to understand may be less appropriate for customer research.[8] We also use the findings from our priorities research[9] and the collaborative customer research to ensure that enhanced incentives are on performance commitments that are likely to be of high priority to customers now and in the future. Customers will also be protected from very high payments (see section 5.1).

We now consider the relative merits of options 2 and 3 – maintaining our PR19 approach to enhanced incentives, or expanding and streamlining them.

Expanding enhanced incentives to all companies would give them an equal chance to earn enhanced outperformance payments, which should benefit the customers of all companies regardless of which individual company pushes forward the frontier. This increases the probability of higher performance for all customers.

Stakeholders have suggested that there was substantial complexity and inconsistency during PR19, with some companies receiving different enhanced thresholds, rates and caps for the same performance commitment. For example, in 2020-21, we observe the enhanced thresholds for internal sewer flooding for Severn Trent Water, South West Water and Wessex Water are less stretching than Yorkshire Water's standard outperformance cap. This was primarily caused by enhanced incentives being opt in, and because we set thresholds based on companies' proposals where they were more stretching than our estimates. This risks

[7] For the purposes of this analysis, we assume notional gearing of 55% and use 2021-22 RCVs. We estimate the maximum enhanced payments for each of these performance commitments each year as a proportion of water or wastewater regulatory equity, taking the median company, would be equivalent to 0.3% for water supply interruptions, 7.3% for leakage, 6.0% for per capita consumption, 1.3% for internal sewer flooding and 0.8% for pollution incidents.
[8] Blue Marble for CCW, 'Engaging water customers for better consumer and business outcomes', May 2020.
[9] Yonder for Ofwat and CCW, 'Preferences research', April 2022.

distorting companies' incentives to propose stretching thresholds and potentially provides weaker incentives to improve during the period. We consider prescribing which performance commitments have enhanced incentives, and with a standardised approach to thresholds, rates and caps across companies, should reduce these inconsistencies, simplify the assessment process and be more proportionate overall. It is also more consistent with our approach to common performance commitments and performance commitment levels.

For these reasons, **we will implement option 3 – to expand and streamline enhanced incentives**. We will also set enhanced incentives as outperformance-only. This reflects the sector-wide benefits from very high performance. Underperformance does not have sector-wide dis-benefits in the same way, so we will not set enhanced underperformance rates.

3.2 Scope of enhanced incentives

3.2.1 Our final methodology policies

Enhanced incentives will **only apply to common performance commitments** that meet the following criteria:

- **clear benefits** to customers and the environment from very high performance;
- **well-established performance commitments** that enable us to set robust enhanced thresholds;
- **enhanced performance is achievable for all efficient companies** and we are able to take account of company-specific factors when setting enhanced thresholds, where appropriate; and
- **no perverse interactions** with the wider price review framework, such as increasing the risk that customers pay more than they should for improvements or discouraging companies making themselves accessible to their customers.

We currently expect to set enhanced incentives at PR24 for:

- water supply interruptions;
- leakage;
- per capita consumption;
- internal sewer flooding;
- external sewer flooding; and
- total pollution incidents.

Companies will only be able to earn enhanced payments on total pollution incidents if they have zero serious pollution incidents in the same year.

As part of our determinations, we will review whether these performance commitments continue to meet our criteria.

3.2.2 Changes from our draft methodology

We have amended the first eligibility criteria to explicitly include benefits to the environment as well as customers.

We have refined the third eligibility criteria to clarify that we will take appropriate account of company-specific factors, such as geography or historic expenditure allowances, so that enhanced performance can be achievable for all efficient companies. This change means that we now consider leakage and per capita consumption meet our criteria for enhanced incentives at PR24.

We also clarify that companies will only be able to earn enhanced payments on total pollution incidents if they have zero serious pollution incidents in the same year.

3.2.3 Stakeholder views

Wessex Water suggested that we **amend the eligibility criteria** to reflect environmental and community benefits from very high levels of performance.

Some stakeholders suggested that we **consider additional performance commitments for enhanced incentives**:

- Anglian Water and South East Water proposed leakage, arguing there are clear customer benefits from improving performance beyond the industry frontier.
- Anglian Water suggested per capita consumption, arguing that improving performance would bring significant customer benefits, as with leakage.
- Anglian Water also suggested storm overflows as it is a customer priority, and has environmental benefits.
- Wessex Water suggested river water quality as it is well understood by companies and enhanced incentives would help drive environmental outcomes.
- Thames Water and Portsmouth Water suggested water quality contacts because they consider that it meets our criteria.
- Portsmouth Water suggested mains repairs as it is well-established and has clear benefits to customers.
- The Royal Society for the Protection of Birds (RSPB) suggested we should consider all environmental performance commitments.

Portsmouth Water, South East Water and South Staffs Water said that only one of the four performance commitments we proposed to have enhanced incentives in the draft methodology related to water services, arguing this could lead to an unbalanced package. They suggested we consider more water-related performance commitments for enhanced incentives at PR24.

3.2.4 Our final decisions and reasoning

In this section, we first consider our **revised eligibility criteria for selecting performance commitments** to have enhanced incentives at PR24.

We then set out in more detail our reasoning for:

- leakage;
- per capita consumption;
- total pollution incidents; and
- other performance commitments proposed by stakeholders.

In our draft methodology we said that, consistent with PR19, we considered only common performance commitments should be eligible for enhanced incentives at PR24. This means we should have greater confidence that we will set robust thresholds, as we should be more able to benchmark performance across companies, and that the customers of all companies will be able to benefit from shifting the frontier.

Taking into account feedback from Wessex Water and our new approach to setting enhanced thresholds (see section 3.3), we have **revised the eligibility criteria** as follows:

- **clear benefits** to customers and the environment from very high performance;
- **well-established performance commitments** that enable us to set robust enhanced thresholds;
- **enhanced performance is achievable for all efficient companies** and we are able to take account of company-specific factors when setting enhanced thresholds, where appropriate; and
- **no perverse interactions** with the wider price review framework, such as increasing the risk that customers pay more than they should for improvements or discouraging companies making themselves accessible to their customers.

Alongside our revised approach to setting enhanced thresholds (see section 3.3), this expands the scope of the performance commitments that we consider are eligible for enhanced incentives at this stage compared to our draft methodology:

- water supply interruptions;

- leakage;
- per capita consumption
- internal sewer flooding;
- external sewer flooding; and
- total pollution incidents;

We set out below why we consider leakage and per capita consumption should have enhanced incentives in more detail and our reasoning for enhanced outperformance payments for total pollution incidents requiring zero serious pollution incidents, followed by why we do not consider other proposed performance commitments by stakeholders meet the criteria for enhanced incentives at PR24.

Leakage

In our draft methodology, we said that while some companies had enhanced incentives for leakage and per capita consumption at PR19, we were concerned about a risk of perverse interactions between enhanced incentives and enhancement expenditure allowances, particularly if they differ significantly between companies. Company-specific allowances would make it unlikely for all efficient companies to reasonably achieve enhanced thresholds, particularly if they are set on a consistent basis in line with our draft methodology proposals. We said that this could also lead to some customers paying twice for the same improvements in performance.

We consider that setting enhanced incentives for leakage should **incentivise companies to accelerate the delivery of leakage reductions**, which should be driven by innovation that benefits all customers via knowledge sharing. There are strategic priorities and spillover benefits associated with reduced leakage, and companies have scope for further and faster improvements. The UK and Welsh Governments' strategic policy statements set out expectations for Ofwat to encourage leakage reduction, including to challenge companies in England to halve leakage across the industry by 2050. We therefore see clear benefits from incentivising companies to deliver these leakage reductions further and faster.

While we were concerned about achievability and potential perverse interactions with enhancement expenditure allowances in our draft methodology, we consider our revised approach to setting enhanced thresholds (see section 3.3) helps to mitigate these risks. By using performance commitment levels as a starting point, with a common improvement factor (see Figure 3.2 in section 3.3 which illustrates this approach), enhanced thresholds should be sufficiently stretching and achievable for all efficient companies and adequately reflect relevant company-specific factors. They should also incorporate historic or future enhancement expenditure allowances, ensuring that customers do not pay twice for the same level of improvement.

However, we will protect customers further by setting caps on enhanced payments associated with leakage, on top of the aggregate sharing mechanism. This is because of a potential risk of diminishing marginal benefits from improving leakage to a very significant extent and prevent enhanced payments from overwhelming the aggregate sharing mechanism. We set out further details on enhanced caps in section 3.5.

Per capita consumption

Many of the benefits and risks associated with incentivising reduced leakage also apply for per capita consumption. In addition, companies have made limited progress against their performance commitment levels for per capita consumption in the 2020-25 period and we want companies to go further in the next price control period with a step change in innovation to encourage greater water efficiency.

There may be additional risks with setting enhanced incentives for per capita consumption, which could lead to enhanced payments from sudden changes in consumption due to changes to legislation or regulation relating to household water use, the effect of weather, or the new water efficiency fund (see section 5.4.2 of Appendix 9 – Setting expenditure allowances). While the effects of such external effects could broadly balance out over time for standard incentives, particularly as per capita consumption is measured as a three-year average, this may not be the case for enhanced incentives which are one-sided. We will assess these potential risks when specifying enhanced incentives in the determinations.

Setting enhanced incentives for leakage and per capita consumption helps to address concerns raised by some companies that only one of our proposed performance commitments in the draft methodology related to water services compared to three for wastewater services. We will, in any case, review the balance of risk and return for water-only companies separately from water and wastewater companies (see section 5).

To mitigate the risk that companies will unduly benefit from external factors affecting performance, and to prevent enhanced payments from overwhelming the aggregate sharing mechanism, we will set enhanced caps on per capita consumption (see section 3.5).

Total pollution incidents

At PR24 we will set separate performance commitments for total pollution incidents and serious pollution incidents (see section 4 of Appendix 7 – Performance commitments).

To earn enhanced outperformance payments on total pollution incidents, a company will have to **achieve its enhanced thresholds and have zero serious pollution incidents**. Although this adds some complexity, we consider that even significant progress in reducing overall pollution incidents is not sufficient to merit enhanced outperformance payments if companies have any serious pollution incidents in the same year.

Other performance commitments proposed by stakeholders

We consider **the other performance commitments suggested by respondents are not appropriate for enhanced incentives** as they do not meet our key criteria:

- **operational greenhouse gas emissions**: a newly defined common performance commitment at PR24 with potential perverse interactions with the new net zero bidding process (see section 5.1 of Appendix 9 – Setting expenditure allowances);
- **biodiversity**, **storm overflows** and **river water quality**: new performance commitments at PR24; and
- **water quality contacts** and **mains repairs**: unclear benefits from very high performance.

We will continue to review the suitability of performance commitments for enhanced incentives during the determinations phase of PR24.

3.3 Enhanced thresholds

3.3.1 Our final methodology policies

We will set enhanced thresholds on a consistent and streamlined basis. We will set enhanced thresholds for each performance commitment using each company's performance commitment level as a starting point. We will apply a performance commitment-specific common improvement factor to all companies, and ensure that this is sufficiently stretching by cross-checking against historical and forecast performance, including long-term and statutory targets, with the aim to only reward companies for performance that is delivered through genuine innovation.

3.3.2 Changes from our draft methodology

We have revised our approach to setting enhanced thresholds, enabling us to use a consistent approach for performance commitments that will have company-specific performance commitment levels at PR24.

We also provide more detail on the principles we will use to set enhanced thresholds.

3.3.3 Stakeholder views

Anglian Water, Bristol Water and South West Water said that we should retain the ability for companies to propose enhanced thresholds. Anglian Water and Northumbrian Water said that enhanced thresholds should reflect differences between companies due to prior investments.

Anglian Water, Thames Water, Severn Trent Water, United Utilities and Wessex Water said enhanced thresholds should be realistic, ambitious and proportionate. Thames Water suggested drawing on evidence and lessons from the 2020-25 price control period.

South East Water asked for greater clarity on our approach to setting enhanced thresholds.

3.3.4 Our final decisions and reasoning

In the draft methodology we said that we want to set enhanced thresholds on a consistent and streamlined basis, with the same enhanced thresholds for all companies for each performance commitment. We also said that they should be set at least beyond the current frontier level of performance for each performance commitment, informed by historical and forecast performance.

As set out in section 3.2, we have revised the eligibility criteria for enhanced incentives to include performance commitments that are likely to have company-specific performance commitment levels at PR24, such as leakage and per capita consumption. Alongside this, we have considered how we could revise our approach to setting enhanced thresholds to allow us to set them on a consistent basis, while accounting for relevant company-specific factors.

We have considered the following options for setting enhanced thresholds:

- **Option 1 – our PR19 approach**. For each performance commitment we took the most stretching starting point based on companies' forecasts, then applied a consistent frontier shift and the most stretching profile of forecast thresholds or performance commitment levels. We generally accepted companies' proposed enhanced outperformance thresholds where they were more stretching than our estimates.
- **Option 2 – expected future performance**. Set enhanced thresholds at our 10-15 year view of performance commitment levels.
- **Option 3 – performance commitment levels with a common improvement factor**. For each performance commitment, we would use companies' PR24 performance commitment levels as the starting point, then apply a performance commitment-specific common improvement factor, informed by historical and forecast data and long-term government targets.

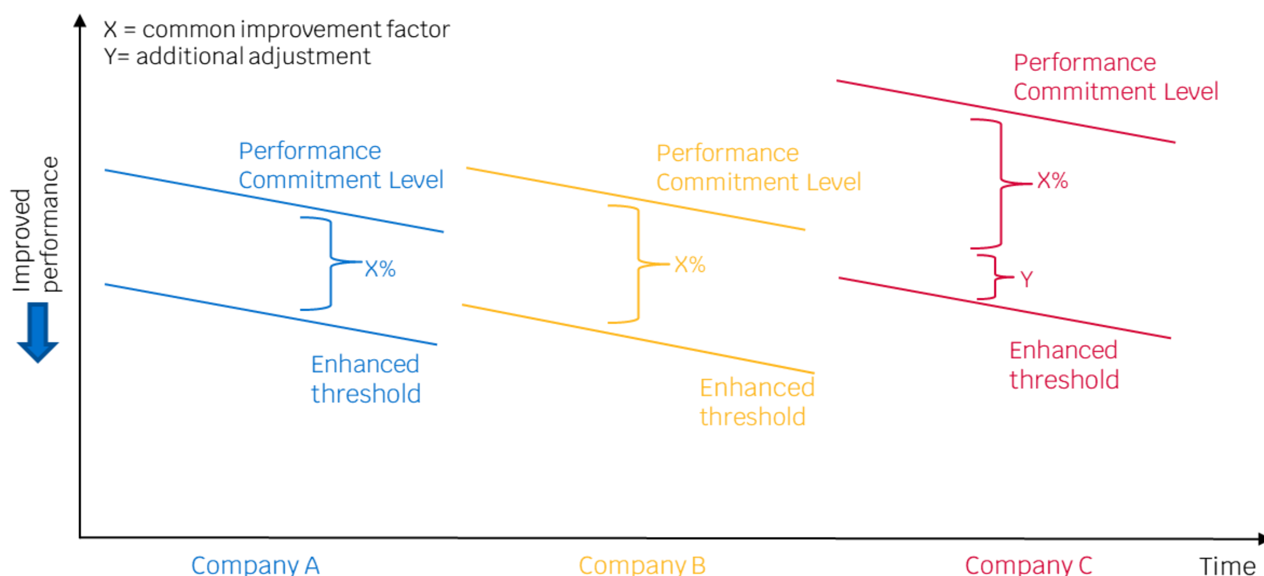
Option 1 would be significantly more involved than options 2 and 3 since it would require using company forecasts and historic data to get a starting point for each performance commitment. At PR19 this approach was also heavily reliant on companies' forecasts. However, since we are extending enhanced incentives to all companies, we would have more forecasts and more historic data compared to PR19, which would help us ascertain a realistic view of the performance frontier for the PR24 price control period.

Option 2 and 3 adjust for company-specific factors associated with performance since they use companies' performance commitment levels to set thresholds. Option 2 is consistent with our focus on the long term and acts to reward companies that accelerate their delivery of future targets. It is also much simpler than option 1 because it makes use of expected performance levels which will already exist. However, these longer-term forecasts may not be reliable. Option 3 strikes a balance between simplicity, since it uses performance commitment levels as the starting point, and setting thresholds which are sufficiently stretching, as we will use a performance commitment-specific common improvement factor.

We will **set enhanced thresholds on a consistent basis by using companies' PR24 performance commitment levels as the starting point, with a common improvement factor applied to all companies** (option 3). Using performance commitment levels as the starting point to set thresholds helps to address the suggestion from some respondents to set company-specific thresholds that account for differences in prior investment. This is because companies' performance commitment levels take account of company-specific factors, including their enhancement expenditure allowances. For leakage and per capita consumption, we will use normalised performance (in megalitres per day, Ml/d) when assessing company performance to ensure appropriate comparisons between companies, before setting out the thresholds in the same unit as companies' performance commitment levels.

We will also use historical and forecast data and long-term government targets to inform the improvement factor, to ensure enhanced thresholds are set at stretching and achievable levels. We **may provide an additional adjustment in addition to the common improvement factor** for companies with performance commitment levels for the 2025-30 period that are significantly behind other companies on a normalised basis, for example due to company-specific factors such as cost inefficiency or historically poor investments. This helps to ensure that companies have enhanced thresholds that reward genuine innovation rather than catching up with the rest of the sector. We illustrate our approach to setting thresholds in Figure 3.2.

Figure 3.2 Example of our approach to setting enhanced thresholds



We provide more clarity on how we will set enhanced thresholds, as requested by some stakeholders. We will use the following principles:

- enhanced thresholds will be sufficiently stretching to drive significant improvements and incentivise innovation;
- we will use company-specific performance commitment levels as a starting point;
- we will use a common improvement factor across all companies for each performance commitment;
- enhanced thresholds are likely to be at least beyond the current frontier for performance commitments with common performance commitment levels;
- we will use historical and forecast data and long-term government targets to inform the improvement factor for each performance commitment, accounting for historical fluctuations in the data; and
- we may provide an additional adjustment to a company's threshold if we consider there is a clear reason for a company to be stretched further.

3.4 Enhanced incentive rates

3.4.1 Our final methodology policies

We will set enhanced incentive rates at twice the size of standard rates. This would multiply companies' standard incentive rates by two.

3.4.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

3.4.3 Stakeholder views

Most stakeholders supported our proposals on setting enhanced rates. Anglian Water said it recognised the rationale for setting enhanced incentive rates at twice the standard rates, but also recommended cross-checking with marginal cost data where appropriate.

Wessex Water said that whether we use company-specific or common rates depends on the differences between companies' standard incentive rates and enhanced thresholds.

3.4.4 Our final decisions and reasoning

In the draft methodology, we considered two options:

- **Option 1 – Use a benchmarking externality (our PR19 approach)**. Conceptually, this estimate should reflect the benefit to all customers when a company delivers excellent performance that leads to more stretching performance commitment levels in future price control periods. It starts with companies' proposed standard incentive rates, and adjusts them based on assumptions about the likely impact of performance changing the sector benchmark at the next price review, diminishing marginal benefits, cost sharing rates and distributional concerns for customers of smaller companies.
- **Option 2 – Set at twice the standard incentive rates**. This would multiply companies' standard incentive rates by two. Depending on whether there are differences in standard incentive rates, we could either set **company-specific rates (option 2A)**, where a company's standard incentive rate is multiplied by two, or a **common rate for all companies (option 2B)**, where a weighted average of all companies' standard incentive rates is multiplied by two.

We proposed option 2 and we retain this view. Option 1 would involve material complexity and relies on a number of subjective assumptions around impact probabilities, diminishing returns and distributional adjustments. While option 1 would likely provide stronger incentives than option 2 (at PR19, on average they were 2.6 times greater than standard incentive rates) it could be significantly above customers' willingness to pay, particularly since we will set relatively high standard rates at PR24 compared to PR19.

Option 2 is simpler and more proportionate than our PR19 approach. It should also ensure that customers do not pay substantially more than their willingness to pay, as reflected by

the marginal benefit estimates in standard incentive rates. While it could be argued to be a more cautious approach, we consider it should still provide strong incentives on companies to innovate while protecting customers because:

- standard and enhanced outperformance payments should still be relatively high, due to our proposals on standard incentive rates (see section 2.2);
- how we set future performance commitment levels enables high-performing companies to earn further outperformance in future price control periods, including through our proposal to use 2024-25 performance commitment levels to inform the starting point for PR24 performance commitment levels (see section 4.4 of Appendix 9 – Setting expenditure allowances); and
- companies can also access the innovation fund.

There is also a risk that the sector-wide benefits through sharing the innovations behind enhanced performance could be delayed, so we consider a more cautious approach is justified to ensure the customers of an individual company do not pay more than they should.

We note Anglian Water's suggestion that we should conduct an explicit cross-check against marginal costs, to ensure improvements are cost beneficial. However, credible marginal cost data for very high levels of performance may not be available, and we consider we are managing these risks by basing our enhanced thresholds in part on long-term targets, which should take account of the costs and benefits of performance improvements. Our more cautious approach to enhanced rates also retains some link to customer preferences, so companies should no longer pursue improvements once marginal costs become much higher than enhanced rates, which are based on a multiple of customer preferences. For leakage and per capita consumption, where there may be a higher risk of increasing marginal costs or decreasing marginal benefits, we provide further protections by setting enhanced caps (see section 3.5).

We will set company-specific rates (option 2A) rather than common rates (option 2B). If there are material differences between companies' standard incentive rates, company-specific rates will more closely reflect the preferences of a company's customers. But it could lead to relatively high contributions to sector-wide benefits from the customers of some companies. Common rates, which would be an average of standard rates weighted by each company's proportion of connected properties, would more closely align the relative contributions with the benefits to all customers (as all customers ultimately gain from the innovation) but they may not provide the same relative incentive on each company. We will therefore set company-specific rates, particularly because they are less complex than an approach based on common rates.

3.5 Enhanced caps

3.5.1 Our final methodology policies

We will **only set enhanced caps for leakage and per capita consumption**. We will **not set caps for the other performance commitments with enhanced incentives**. Payments from enhanced incentives will be included in the aggregate sharing mechanism.

For each performance commitment with a cap, we will set caps for enhanced payments equivalent to 1% of a company's water or wastewater regulatory equity.

3.5.2 Changes from our draft methodology

We will set enhanced caps on leakage and per capita consumption, which we now expect will have enhanced incentives at PR24.

3.5.3 Stakeholder views

Anglian Water, Hafren Dyfrdwy, Portsmouth Water, Severn Trent Water, United Utilities and Wessex Water supported not setting enhanced caps.

Northumbrian Water disagreed with not setting enhanced caps. It suggested setting a cap based on performance levels, for example using long-term ambition levels (as set out in companies' long-term delivery strategies) as this should reflect customers' views and ensure they only pay for performance improvements up to this level.

3.5.4 Our final decisions and reasoning

In our draft methodology, we set out two options for enhanced caps:

- **Option 1 – Remove enhanced caps**. This would not limit the amount that companies can earn from enhanced outperformance payments. Customers would be protected by our approach to setting enhanced thresholds, and our proposed aggregate sharing mechanism (see section 5.1).
- **Option 2 – Maintain enhanced caps**. We would limit the amount that companies can earn from enhanced outperformance payments, alongside our wider protections.

We **proposed to not set enhanced caps and we retain that view for most performance commitments**. As with standard incentives, caps can weaken incentives on

companies to keep outperforming, which may lead to companies with enhanced incentives not fully revealing new frontier performance and therefore limiting the realisation of sector-wide benefits. Enhanced caps would also add to the complexity of our determinations.

We recognise that, given our aggregate sharing mechanism has no hard limit and the sharing thresholds are set at a relatively high level, there is a risk that customers could overpay for improvements, particularly if we set insufficiently stretching performance commitment levels or enhanced thresholds. Very high enhanced outperformance payments could also trigger the aggregate sharing mechanism, which would diminish marginal incentives to outperform on other performance commitments.

We consider these risks are mitigated by only having enhanced incentives for well-established performance commitments, which should result in robust performance commitment levels and enhanced thresholds. We will also set the aggregate sharing mechanism on a net basis (once total outperformance payments minus total underperformance payments exceed the relevant sharing thresholds), which should lessen the impact of enhanced outperformance payments weakening incentives on other performance commitments.

We also note that the performance commitments for which we expect to set enhanced incentives at PR24, but not enhanced caps, have 'natural limits'. This means that beyond a certain point, further outperformance is not possible, such as zero sewer flooding incidents. Using PR19 performance commitment levels, enhanced incentive rates and thresholds for 2021-22, we estimate the most that a company could earn in enhanced payments on water supply interruptions, internal sewer flooding or pollution incidents is around 0.8% water or wastewater RoRE on average per performance commitment each year.[10] Including standard payments up to enhanced thresholds, this rises to around 1.2% RoRE per performance commitment.[11] However, we would only expect a subset of companies to reach enhanced thresholds on a subset of these performance commitments, and in practice it is unlikely that they would reach these maximum payments.

In our draft methodology, we said we could set enhanced caps on leakage and per capita consumption only if they had enhanced incentives, because of potentially much higher annual returns on these two performance commitments. We consider it is necessary to **set enhanced caps on leakage and per capita consumption at PR24**. While both performance commitments have natural limits, they would require substantially higher improvements than other performance commitments. To demonstrate this, we estimate that a 100% reduction from a 2019-20 baseline in leakage and per capita consumption would lead to a median impact of 8.9% and 6.1% return on water regulatory equity, respectively, from

[10] In this section, we calculate RoRE separately for water and wastewater services rather than at an appointee level. For the purposes of this analysis, we assume notional gearing of 55%.
[11] For each performance commitment, and taking the median company with enhanced incentives at PR19, we estimate the maximum combined standard and enhanced payments would be 0.8% RoRE for water supply interruptions, 1.9% for internal sewer flooding and 1.1% for pollution incidents each year.

combined standard and enhanced outperformance payments.[12] As set out in section 3.2, we also consider it necessary to limit the risk that enhanced incentives are triggered by exogenous factors and to reduce the risk of diminishing marginal benefits at very high levels of performance.

In line with our approach at PR19, we will **set enhanced caps at levels that are equivalent to 1% water return on regulatory equity** each year. This will be in addition to standard outperformance payments earned by the company up to its enhanced threshold.

3.6 Realising sector-wide benefits

3.6.1 Our final methodology policies

To ensure that the customers of all companies ultimately benefit from enhanced incentives, **companies that achieve enhanced performance will be required to share the knowledge behind their success**. We will claw back payments if we consider a company's knowledge sharing activities are inadequate.

3.6.2 Changes from our draft methodology

We set out further details on our knowledge sharing expectations.

3.6.3 Stakeholder views

Nineteen stakeholders supported our proposals on knowledge sharing, recognising the benefits of shared knowledge in driving future performance.

Three companies raised the following concerns:

- Hafren Dyfrdwy and Severn Trent Water said that knowledge sharing could dampen incentives for frontier companies as they would only retain an advantage for a limited time.
- Yorkshire Water said that differences between companies mean that knowledge is not immediately transferrable.

[12] For the purposes of this analysis, we assume notional gearing of 55% and use RCV and performance commitment levels for 2021-22.

Anglian Water, Northumbrian Water and South East Water requested clarity on our approach to knowledge sharing, including what would constitute a reasonable level of knowledge sharing and how the clawback mechanism would work.

3.6.4 Our final decisions and reasoning

Knowledge sharing is a key aspect of enhanced incentives. It is how the customers of all companies ultimately benefit. If companies that earn enhanced outperformance payments do not communicate how they delivered this to other companies in a timely manner, there is a risk that other companies do not achieve similar levels of performance.

We therefore **require companies to undertake effective and timely knowledge sharing about how they achieved enhanced performance**. To protect customers, we will claw back payments in future price reviews, or earlier, if we consider a company fails to do this.

Knowledge sharing should take place as soon as possible – by the end of the 2025-30 period or soon after at the latest. We will take account of knowledge sharing when we reconcile incentives payments, and we will claw back enhanced payments made during the 2025-30 period through our PR29 or PR34 determinations unless the company provides sufficient and convincing evidence of knowledge sharing activities.

As requested by stakeholders, we provide greater clarity on our expectations. Because we are expanding enhanced incentives to all companies, we will not require companies to produce knowledge sharing plans within their business plans. Instead, we **expect to see companies carry out effective knowledge sharing activities during the period**.

As part of this, we expect companies to demonstrate how they have:

- shared data, insights, and ideas openly, transparently and accessibly with other companies in the sector;
- taken appropriate account of lessons learned from knowledge sharing linked to the innovation fund; [13] and
- shared knowledge in a timely manner.

By selecting performance commitments in line with the eligibility criteria for enhanced incentives set out in section 3.2, we consider that knowledge sharing is transferrable and should deliver benefits. We must balance incentives to deliver very high performance with ensuring that the customers of all companies ultimately benefit, and we consider our approach does this in an effective and proportionate way.

[13] Ofwat, 'Water innovation competitions'.

4. Measures of experience

In this section we explain our policy approach to the incentive design and size of:

- the **customer measure of experience** (C-MeX), introduced at PR19;
- the **developer services measure of experience** (D-MeX), introduced at PR19; and
- the **business customer and retailer measure of experience** (BR-MeX), which will be introduced at PR24.

We consider the detailed definitions of these performance commitments in Appendix 7 – Performance commitments.

4.1 C-MeX

We introduced the customer measure of experience (C-MeX) in PR19, replacing the service incentive mechanism (SIM) as our primary tool for improving service for residential customers. Companies can receive outperformance payments or incur underperformance payments based on their annual score compared to other companies.

For PR19, payments depend on where a company scores relative to both the median company and either the highest or lowest performing company scores. Companies that score above the median company receive standard outperformance payments of up to 6% of that year's allowed residential retail revenue, while those that score below incur underperformance payments of up to 12%. The median company does not receive any payments.

Companies that compare favourably to other sectors in the UK economy, are a top-three performer in C-MeX and perform above average on complaints, can earn additional higher performance payments that increase their total outperformance payments to up to 12% of allowed residential retail revenue.

4.1.1 Our final methodology policies

We will continue to monitor C-MeX and develop its design and incentive size, working with stakeholders, prior to our draft determinations.

At present, we expect C-MeX to account for **±18% of annual allowed residential retail revenue**, but we will consider this further when reviewing the C-MeX incentive ahead of our draft determinations, and consult with stakeholders.

4.1.2 Changes from our draft methodology

For the final methodology, we increase the indicative range for C-MeX from ±12% to ±18% of annual allowed residential retail revenue.

We will continue to monitor C-MeX and develop its design and incentive size, working with stakeholders, prior to our draft determinations.

4.1.3 Stakeholder views

Thirteen stakeholders, including CCW, broadly supported our proposal to **increase the size of C-MeX incentives**. However, Affinity Water, Dŵr Cymru, SES Water, South East Water, Southern Water and Thames Water disagreed with our proposal.

We received the following comments on the **size of C-MeX incentives**:

- We should increase the size of incentives further, to 20% of residential retail revenue (Wessex Water); or to 0.6% RoRE which is at least as high as Ofgem's incentives for customer satisfaction and complaints[14] because water companies interact more with end customers than electricity distributors (Anglian Water).
- We should make the maximum size of standard outperformance payments equal to those for standard underperformance payments, as this would make risks more symmetrical (Affinity Water and Northumbrian Water).
- We should not increase the size of C-MeX, with arguments including that:
    - incentive rates for other key customer-facing common performance commitments already broadly reflect customers' valuations (SES Water);
    - increasing potential underperformance payments beyond 12% of residential retail revenue would exceed residential retail margins, leading to loss-making retail businesses (Southern Water); and
    - there is no evidence that a higher incentive size is required, or what customers want (Affinity Water and Southern Water).
- When setting the size of incentives for C-MeX we should:
    - use customer valuations to calibrate the size of incentives (Hafren Dyfrdwy, Northumbrian Water, Severn Trent Water and United Utilities);
    - consider other sources of return within the price review, such as BR-MeX (Thames Water) and other performance commitments, totex and financing, to ensure C-MeX does not continue to be dwarfed by other sources of return (CCW); and
    - base it on potential RoRE impacts rather than a proportion of revenue, so that companies' exposure is not affected by differently sized RCVs (Affinity Water).

[14] Ofgem, 'RIIO-ED2 Draft Determinations', June 2022.

We received the following comments on **higher outperformance payments** for C-MeX:

- using the UK Customer Satisfaction Index as a gateway for achieving higher outperformance payments in C-MeX is very difficult for water companies, should be removed or include fewer comparators (Anglian Water, Bristol Water and South West Water, Northumbrian Water, Portsmouth Water and South Staffs Water);
- we should add a new gateway for higher payments for companies to be in the top three for complaints handling (CCW).

We received the following comments on the **relative nature of C-MeX**:

- The Independent Challenge Group for Affinity said it was concerned that even if all companies improve, some companies would incur underperformance payments – it also suggested that companies' scores can be affected by brand awareness, which may not necessarily represent service levels;
- Thames Water suggested an additional mechanism to reward companies that improve their absolute scores even if their relative ranking does not change, which it says is a particular issue for the last-placed company;
- SES Water proposed a symmetrical zone around the median score that would attract neither outperformance nor underperformance payments, which it argued would reduce clustered scores around the median since different scores may not necessarily indicate significantly different customer experience between companies; and
- Northumbrian Water suggested that we work with the lowest ranked companies to understand how they are driving improvement in their retail services.

Hafren Dyfrdwy and Severn Trent Water agreed with our proposal to not make C-MeX act as a gateway to other outperformance payments.

CCW suggested adding a new gateway for standard payments for companies to be above mean average total complaints and show no significant decline in complaints handling.

We received the following **requests for clarity**:

- Bristol Water and South West Water on the basis for changing the C-MeX incentive size.
- Wessex Water requested that we confirm the final design of C-MeX in the PR24 final methodology.

4.1.4 Our final decisions and reasoning

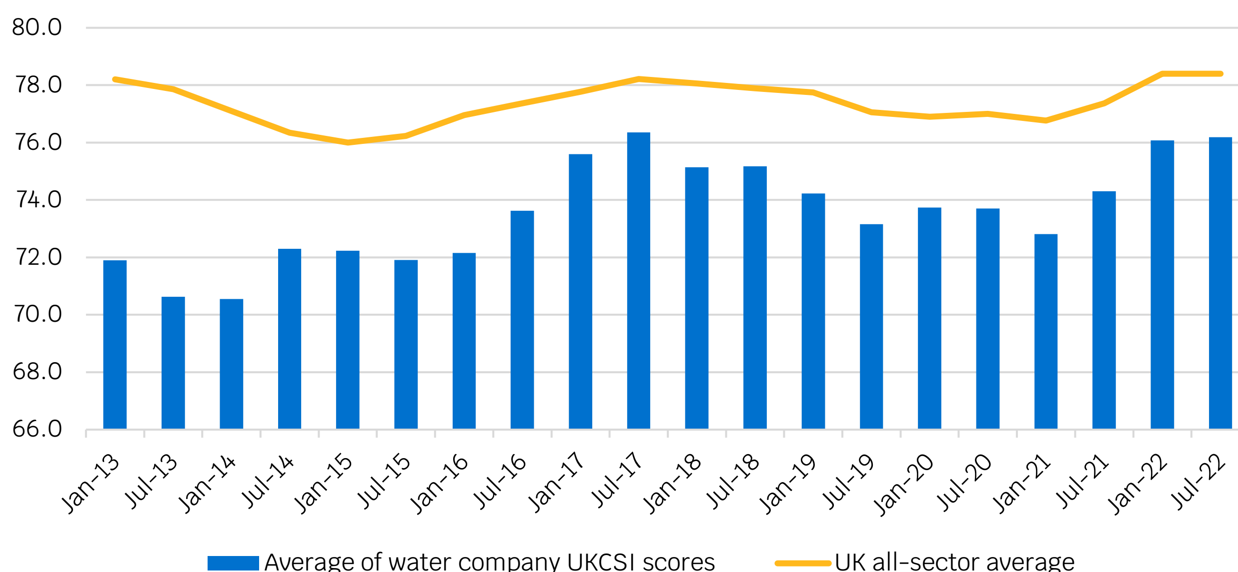
We have reflected on the feedback provided by stakeholders, and further assessment, including of the second year of C-MeX performance in 2021-22.

We will **review the design of C-MeX prior to our draft determinations**. This will include considering the merits of a relative incentive and the requirements for higher payments within C-MeX. We will continue to monitor how C-MeX is working and will develop its detailed design, working with stakeholders, prior to our draft determinations. As part of this review, we will also consider the detailed points raised by stakeholders in response to our draft methodology.

We also consider that **customer service in the water sector needs to improve – and we expect a step change in customer service** for all customers, and especially those who are worst served. The need for this step change has been evidenced by our joint research with CCW into customer experiences of sewer flooding, which showed the need for urgent action from water companies to improve their service to these customers.[15] Moreover, there are signs that water companies can improve their customer service compared to other sectors – in its review of retail services efficiency, PwC found that the average speed to answer calls is higher in the water sector compared to the cross-sector median, and that the water sector has higher call abandonment rates than any other comparative sector.[16]

While the UKCSI suggests that customers are more satisfied since we introduced C-MeX, water companies still score below other sectors. As Figure 4.1 shows, water companies scored 76.2 on average compared to the UK all-sector average of 78.4.

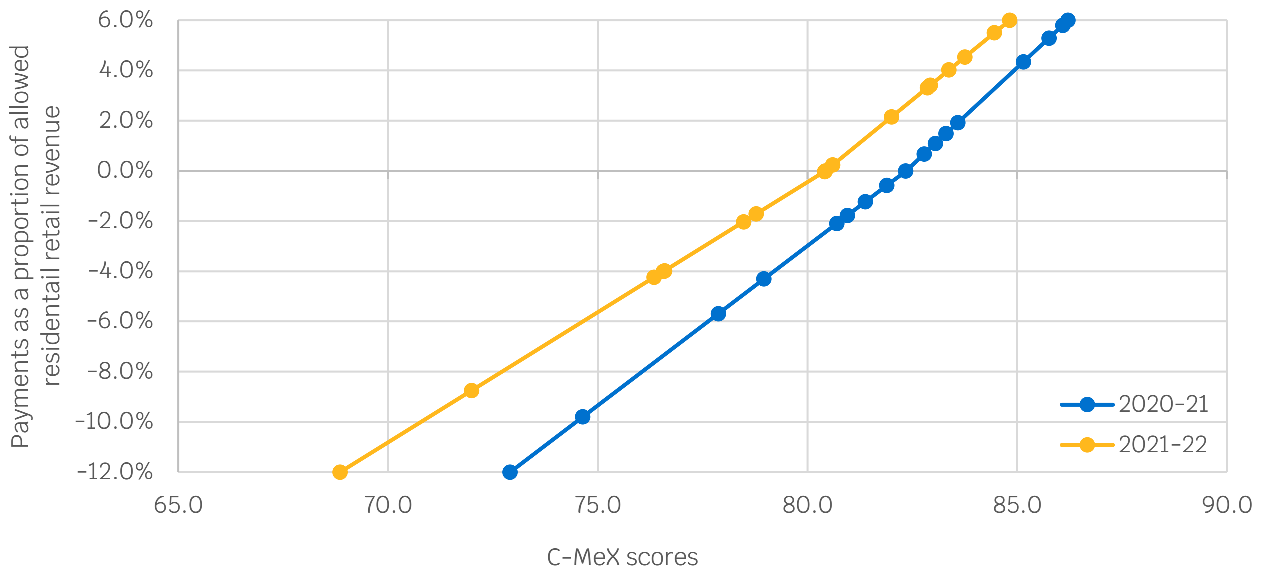
Figure 4.1 - Average UKCSI scores for water companies in England and Wales



In addition, when comparing C-MeX scores between 2020-21 and 2021-22, we observe they have declined for all companies, as shown in Figure 4.2, with the mean average score dropping from 81.6 to 79.6 out of 100.

[15] CCW and Ofwat, 'Customer experiences of sewer flooding: A joint report by CCW and Ofwat', May 2022.
[16] PwC (for Ofwat), 'Retail services efficiency review', December 2022, p. 73.

Figure 4.2 - C-MeX scores and incentive payments as a proportion of allowed residential retail revenue in 2020-21 and 2021-22



As shown in Figure 4.3, we estimate that the current incentive range is equivalent to around ±0.33% RoRE on average, based on analysis of allowed revenues and RCVs over 2020-25. This varies between companies based on the relative sizes of their allowed retail revenue and RCVs, from Dŵr Cymru with a range of ±0.25% to Hafren Dyfrdwy with a range of ±1.07%.

Figure 4.3 – Maximum potential payments for C-MeX at PR19 over the 2020-25 period, as a proportion of notional regulatory equity (weighted average based on companies' RCVs)

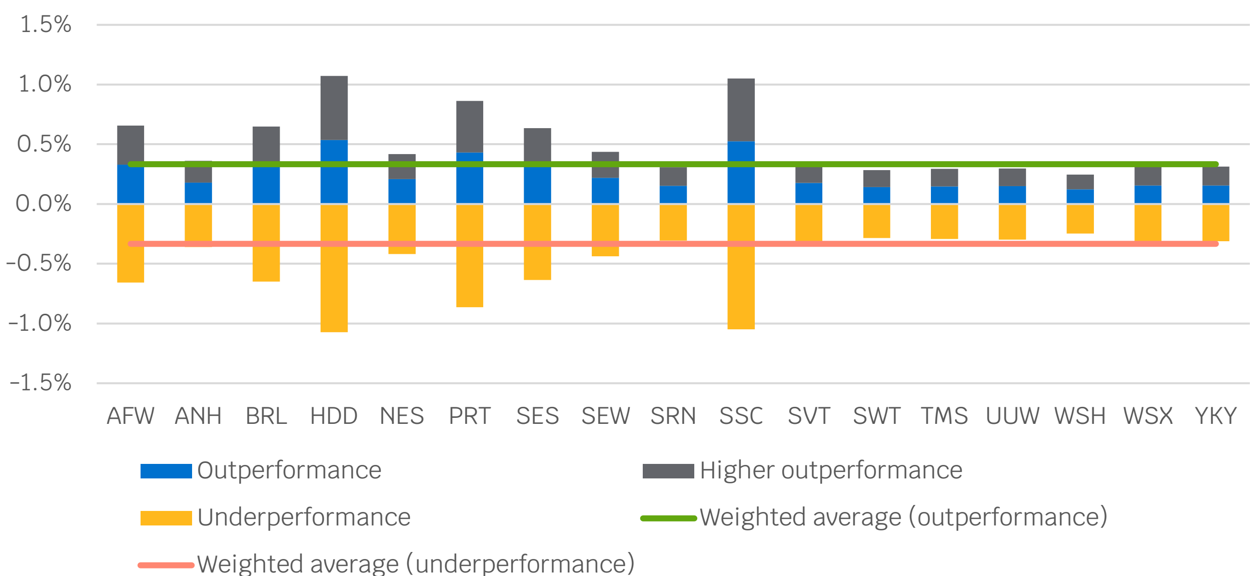
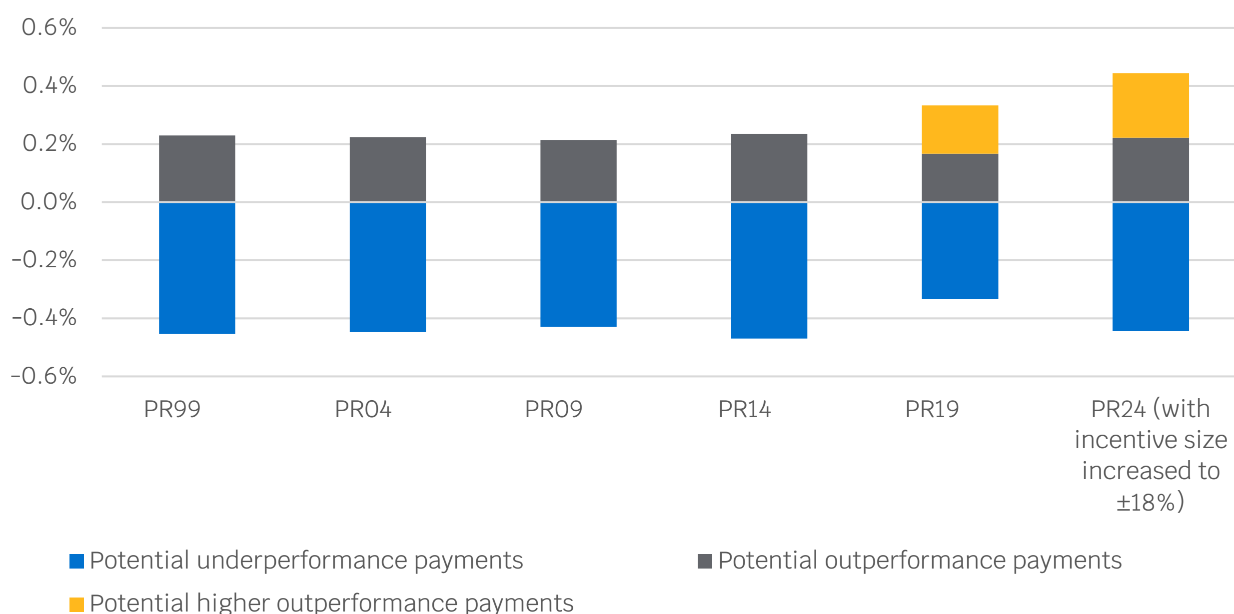


Figure 4.4 shows that, for over 20 years, the overall incentive size for customer service incentives has had similar RoRE impacts on average.[17] While companies have been able to achieve higher outperformance payments since we introduced C-MeX, there has been a small decline in terms of RoRE in relation to potential downside returns (accounting for changes in notional gearing over time).

Figure 4.4 – Maximum potential payments for selected customer service incentives over time, as a proportion of notional regulatory equity (weighted average based on companies' RCVs)



To more closely align the potential RoRE impact of C-MeX standard payments with historical RoRE impacts, and to encourage a step change in customer service, we expect C-MeX to account for **±18% of annual allowed residential retail revenue** at present. We will consider the C-MeX incentive size further when reviewing C-MeX ahead of our draft determinations.

We consider this change reflects the broad support we received from stakeholders regarding our draft methodology proposal to increase the size of C-MeX incentives. While Southern Water suggested that increasing the size of incentives in C-MeX beyond ±12% would exceed the allowed margin in our residential retail controls, we note that companies can also earn returns from additional sources, such as from retail totex and the delivery of wholesale services. We also want to incentivise companies to improve their customer service. We will consider points related to the size of C-MeX incentives raised by stakeholders as we review and finalise C-MeX.

[17] We note that the overall incentive size for customer service incentives has been broadly the same for over 20 years. SIM, which operated until PR19, had maximum financial impacts of +6% to -12% of residential revenue, and the Overall Performance Assessment, which was first introduced at the 1999 price review (PR99), had maximum financial impacts of +0.5% to -1% of total revenue.

In our draft methodology we noted that the number of complaints that CCW directly receives from residential customers about water companies, which are more likely to relate to material issues, rose in the first year of C-MeX by around 6%.[18] New data shows that the number of complaints has decreased by around 13.6% in 2022.[19] While C-MeX has only been in operation for two years, this could indicate that it is having a positive effect, but we will keep monitoring this and consider this further in our review of C-MeX.

Alongside the price review, and as we review C-MeX over the course of 2023 and 2024, we will consider other tools available to us, such as our proposed customer-focused licence condition to improve outcomes for all customers.

4.2 D-MeX

We introduced the developer services measure of experience (D-MeX) in PR19 to incentivise improved levels of service for developer services customers. Companies can receive outperformance payments or incur underperformance payments based on their annual score compared to other companies.

For PR19, payments depend on where a company scores relative to both the median company and either the highest or lowest performing company scores. Companies that score above the median company receive standard outperformance payments of up to 6% of that year's actual developer services revenue, while those that score below incur underperformance payments of up to 12%. The median company does not receive any payments.

4.2.1 Our final methodology policies

We will continue to monitor D-MeX and develop its design and incentive size, working with stakeholders, prior to our draft determinations.

4.2.2 Changes from our draft methodology

We will continue to review the effectiveness of D-MeX and will develop its detailed design and incentive size prior to our draft determinations.

[18] From 6,385 complaints in 2019-20 (CCW, 'Right First Time: A review of water companies' complaint handling in England and Wales', 2020, p. 33) to 6,776 complaints in 2020-21 (CCW, 'Household customer complaints about water companies', 2021, pp. 44-45).
[19] CCW, 'Household customer written complaint handling by water companies in England and Wales', 2022, pp. 40-41.

4.2.3 Stakeholder views

We received the following comments on the **size of D-MeX incentives** at PR24:

- Portsmouth Water and Independent Water Networks argued for proportionate incentive sizes between the experience measures.
- Independent Water Networks suggested not increasing the size of incentives for D-MeX would encourage incumbents to focus more on C-MeX rather than D-MeX.
- Affinity Water suggested setting the incentive size for D-MeX based on potential RoRE impacts rather than a proportion of revenue, so that companies' exposure is not affected by differently sized RCVs.

We received the following comments on the **design of the D-MeX incentive** at PR24:

- Fair Water Connections said we should review the incentive design of D-MeX, and suggested that D-MeX is deterring competitive provision by basing incentive payments on a multiple of their developer services revenue (which leads to lower potential payments in areas with high activity of self-lay providers).
- Independent Water Networks and the Independent Networks Association argued it is not too early to consider changes to D-MeX, and that there are issues with the current structure of the mechanism, including with the quantitative component – they suggested we could set more stretching levels of service targets, for example based on the upper quartile of current industry performance.

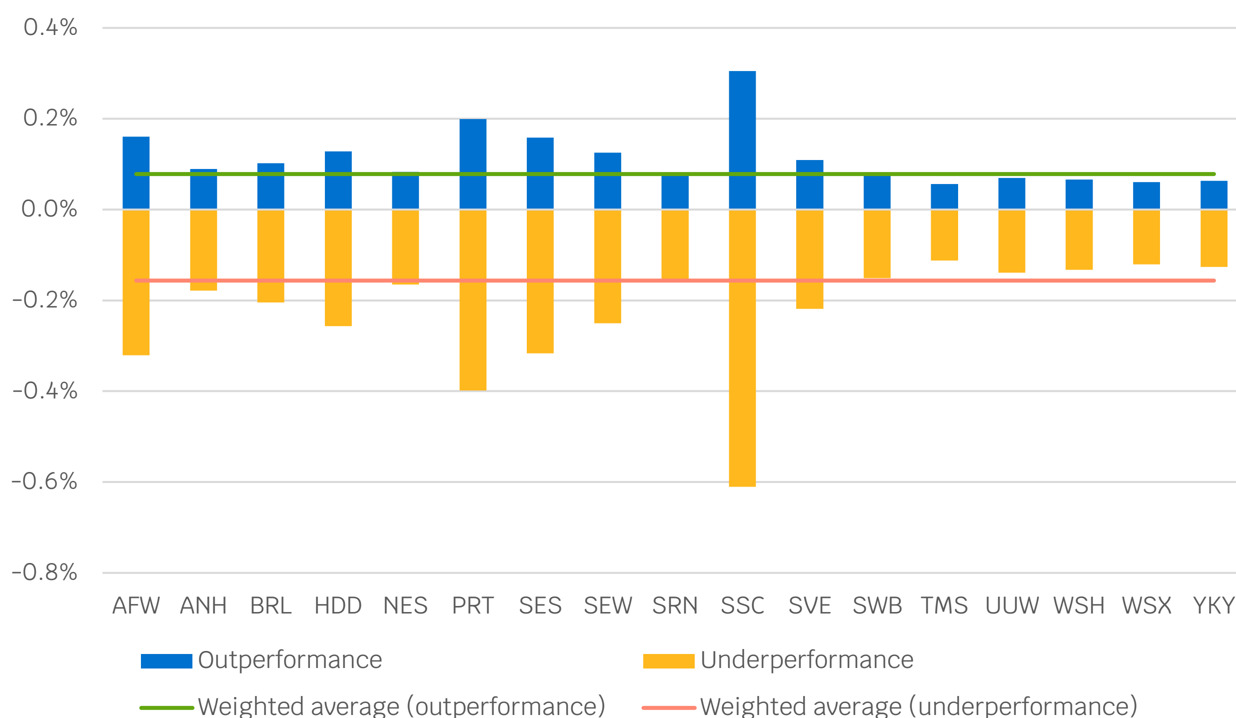
4.2.4 Our final decisions and reasoning

We have reflected on the feedback provided by stakeholders, and further assessment, including of the second year of D-MeX performance in 2021-22.

We will **review the design of D-MeX prior to our draft determinations**. Alongside our review and development of C-MeX and BR-MeX, we will continue to monitor how D-MeX is working and will develop its detailed design, working with stakeholders and informed by market developments, prior to our draft determinations. As part of this review, we will also consider the detailed points raised by stakeholders in response to our draft methodology.

We estimate that the maximum range of potential D-MeX payments as a proportion of notional regulatory equity over 2020-21 and 2021-22 was around +0.08% to -0.16% RoRE (based on a sector weighted average based on companies' RCVs). Due to variations in the relative sizes of companies' developer services activity and RCVs, this ranges from Thames Water with the smallest range of +0.06% to -0.11% RoRE to South Staffs Water with the largest range of +0.31% to -0.61% RoRE, as shown in Figure 4.5.

Figure 4.5 – Maximum potential payments for D-MeX at PR19, as a proportion of notional regulatory equity over 2020-21 and 2021-22 (sector weighted averages are based on companies' RCVs)



We observe small improvements in companies' performance between the 2019-20 shadow year, when there were no financial incentives, and 2020-21 when they came into effect – average scores increased from 81.8 to 82.2, with some companies showing substantial improvements. We see further improvements in 2021-22, with average scores rising to 83.7. This may suggest less need to increase the size of D-MeX incentives in our final methodology. We will **continue to consider the incentive size of D-MeX** as part of our wider review prior to our draft determinations.

4.3 BR-MeX

We discuss our proposals in relation to introducing a new incentive for business customer and retailer measure of experience (BR-MeX), to apply to companies with systems wholly or mainly in England, in Appendix 7 – Performance commitments.

In our draft methodology, we proposed that maximum outperformance and underperformance payments for BR-MeX should be broadly proportional to the activities that are incentivised by C-MeX. We noted that the ratio of revenue recovered from business customers was around 25% of the revenue collected from residential customers and therefore proposed that the overall RoRE impact for BR-MeX should be around 25% of the current standard payments for C-MeX. We therefore proposed an incentive range based on

+0.5% to -1.0% of wholesale revenue collected from business customers. We noted this equated to a potential impact of between around +0.05% to -0.10% RoRE.[20]

4.3.1 Our final methodology policies

We are **minded to retain the high-level incentive design and incentive size set out in the draft methodology**. The detailed incentive design will be subject to development and testing throughout 2023 and we will be engaging with industry stakeholders throughout the process.

We are minded to retain the incentive size at +0.5% to -1.0% of wholesale revenue recovered from business customers. We will continue to consider whether this remains appropriate as we finalise the incentive design of BR-MeX as part of our draft determinations.

4.3.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

4.3.3 Stakeholder views

The majority of respondents did not provide detailed comments on the size of the BR-MeX incentive. We address points raised by respondents on the performance commitment design in section 3.3 of Appendix 7 – Performance commitments.

Where respondents did provide comments, they included:

- The UK Water Retailer Council and Water Plus supported our proposed incentive size but suggested that it should scale if we also increase the size of the C-MeX incentive at PR24.
- The Strategic Panel noted it is important that the strength of the incentive is calibrated appropriately including with Market Performance Framework (MPF) performance incentives on companies.

Everflow suggested that if the incentive is based on relative performance, all companies must be meeting a minimum standard to produce an acceptable median, given that if all companies are substandard then it said a relative incentive would not be appropriate. CCW

[20] We note that our proposed RoRE range for BR-MeX is broadly proportional to the estimated RoRE range for C-MeX standard outperformance and underperformance payments when it was first introduced. This is because the estimated residential retail revenue and wholesale revenue collected from residential customers totalled £56.5 billion over 2015-21 (in 2017-18 prices) while over the same period, the wholesale revenue collected from business customers was £15.2 billion – or around 25% of the overall revenue relating to residential customers.

said that companies should be required to meet a high threshold of performance with regards to both retailer and business customer feedback in order to earn outperformance payments.

Northumbrian Water and Southern Water stated they disagreed with our proposed incentive size. Northumbrian Water said that their non-household operations are different to households in practice and water companies have smaller teams dedicated to dealing with retailers and business customers as contact volumes are lower. The company proposed a smaller range of +0.3% to -0.6% of non-household revenue, which it said was based on the split between Dŵr Cymru's residential and business retail revenue controls. Alternatively, the company suggested that we undertake customer research to establish the value that business customers place on wholesaler performance.

4.3.4 Our final decisions and reasoning

Our draft methodology proposed that the overall incentive design for BR-MeX would be broadly equivalent to D-MeX and the standard payments for C-MeX. We proposed that companies would receive incentive payments based on their relative performance.

We are **minded to retain the high-level incentive design set out in the draft methodology**, and are minded to base outperformance and underperformance payments on each company's score compared to the median score. We will consider this further and refine the design throughout the development process and we will set out the detailed design in our draft determinations. We note the points raised by Everflow and CCW regarding the incentive design and will consider them as we look to develop and test the incentive design throughout 2023 and 2024. We set out more detail on our approach to developing BR-MeX in section 3.3 of Appendix 7 – Performance commitments. We note the point raised by the Strategic Panel and we will consider any interactions with the MPF when developing the incentive.

In terms of the size of incentives, we consider it is important that water companies are incentivised to focus appropriate resources on the experience of business customers. Water companies play a key role in facilitating the delivery of a good business customer experience and our monitoring of the business retail market, as well as our review of incumbent company support for effective markets (Project RISE), concluded that water companies' support for the market needs to improve. We do not consider the methodology employed by Northumbrian Water to be appropriate for calculating the appropriate incentive size given the BR-MeX incentive applies only to those companies that operate in England. We consider it more appropriate to calculate the incentive size based on the data available from English water companies.

We are therefore **minded to retain the incentive size at +0.5% to -1.0% of wholesale revenue collected from business customers**. This equates to an estimated +0.05% to -

0.10% return on regulatory equity. Given the different volumes of activities between serving residential customers, which includes retail as well as wholesale services, and business customers, which only relates to wholesale services, we estimate this is broadly proportionate to the RoRE impact for C-MeX at PR19.

We note this is a new incentive and we will continue to consider the incentive size of BR-MeX as part of the incentive's development over 2023 and 2024, further considering stakeholder responses to our draft methodology in this review.

5. Assessing and managing risks

In this section we set out our approach to:

- **customer and company protections** from very high incentive payments – which includes the use of exclusions, caps and collars on individual performance commitments, and aggregate sharing mechanisms;
- **the use of deadbands** on individual performance commitments, which remove financial incentives for performance within a specific range; and
- **estimating ODI risk** at PR24.

5.1 Customer and company protections

5.1.1 Our final methodology policies

We intend to manage ODI risk primarily at an aggregate level. We will use an **aggregate sharing mechanism that shares net ODI payments between customers and companies** once they reach certain thresholds each year. As a starting point, companies can earn or incur up to +3% or -3% return on regulatory equity (RoRE) without any sharing of payments, beyond which payments are reduced by 50%. Beyond +5% and -5% RoRE, payments are instead reduced by 90%. We may adjust these thresholds to ensure the overall level and balance of risk is appropriate, informed by the latest performance data, companies' business plans and representations on our draft determinations.

In addition to aggregate protections, we will also **make targeted use of caps and collars on individual performance commitments**. This includes performance commitments:

- that are **new or bespoke** and therefore more uncertain;
- where the **benefits from high outperformance are uncertain**, to protect customers and avoid over-incentivising companies; or
- that have the potential to be a **significant source of skew** in the outcomes package.

We will determine the scope and level of targeted caps and collars during the PR24 determinations, taking into account the balance of risk. We will set the levels of caps and collars using a 'top-down' approach with reference to the expected RoRE.

We will assess the overall balance of risk, and make any changes as necessary, such as adjusting the aggregate sharing thresholds and the scope of caps and collars.

5.1.2 Changes from our draft methodology

While we will continue to primarily manage outcomes risk at an aggregate level during the determinations phase of PR24, we clarify that we will set wide caps or collars on individual performance commitments where needed to provide an appropriate balance of risk.

5.1.3 Stakeholder views

CCW, Hafren Dyfrdwy, SES Water, Severn Trent Water and United Utilities agreed with our **proposal to set caps and collars on a targeted basis**. The majority of companies, however, disagreed with not setting caps and collars on payments associated with some well-established performance commitments, or suggested that we should widen the scope of the criteria for setting caps and collars. Wessex Water suggested not setting caps or collars on any performance commitment, as they should have clear benefits and robust performance commitment levels.

We received the following detailed comments on our proposed approach to caps and collars:

- On **why they disagreed with us setting caps and collars on a targeted basis**, some stakeholders argued that:
  - it would put excessive risk on companies (Anglian Water, Bristol Water and South West Water, and South East Water); or
  - certain performance commitments could dominate the outcomes package, diverting attention from other performance commitments (Anglian Water, Bristol Water and South West Water, and South East Water).
- On **extending the scope of caps and collars**, some stakeholders proposed that we include performance commitments that:
  - are likely to be volatile measures, such as the compliance risk index (Anglian Water, Dŵr Cymru and SES Water);
  - are significantly affected by exogenous factors outside the control of companies, such as extreme weather, which could include water supply interruptions and sewer flooding (Anglian Water, Dŵr Cymru, Northumbrian Water, Southern Water and South Staffs Water);
  - have natural limits on outperformance, to provide balanced risk for individual performance commitments (Dŵr Cymru, SES Water, Southern Water); or
  - are of low priority to customers (CCW).
- Northumbrian Water, United Utilities and Wessex Water suggested **reducing the scope of caps and collars** in some cases, as some new performance commitments are already reported by companies (such as operational greenhouse gas emissions) while Affinity Water suggested that we **retain flexibility on the scope** of performance commitments until the determinations.

- On the **levels of caps and collars**, SES Water suggested that we retain flexibility until the determinations. United Utilities proposed that we base caps and collars for asset health-related performance commitments on a symmetrical range, as it considers diminishing marginal benefits are unlikely for these performance commitments.
- Bristol Water and South West Water disagreed that companies may have incentives to let their performance deteriorate once collars are breached, with no reasons given.

Ten water companies and CCW supported our **proposed aggregate sharing mechanism**, to protect customers and companies from very high total payments each year. Wales Environment Link agreed with aggregate outperformance sharing beyond +3% RoRE but disagreed with providing downside protections for companies, arguing that companies should bear the full consequences of underperformance.

We received the following detailed comments on our proposed aggregate sharing mechanism, which we proposed would apply annually on a symmetrical basis, with primary thresholds at ±3% RoRE and secondary thresholds at ±5% RoRE:

- Portsmouth Water suggested that it **could lead to high-performing companies experiencing weaker protections** from third-party events.
- On **adjusting the sharing thresholds** during the determinations, Affinity Water asked for clarity on the criteria we will use to adjust the sharing thresholds and sharing rates while SES Water said that targeted interventions may be more effective.
- On the **levels of the sharing thresholds**, SES Water suggested basing them on historical performance, which the company said could lead to them not being symmetrical. Dŵr Cymru and Thames Water suggested narrower sharing thresholds of ±2% and ±4% – Thames Water said narrower thresholds would reduce their financial exposure and Dŵr Cymru said this would account for not having caps and collars on performance commitments affected by extreme weather events. Dŵr Cymru also observed that if we reduced notional gearing as proposed in our draft methodology, we would need to further narrow the thresholds. However, Wessex Water suggested wider thresholds, to put more risk on companies.
- On the **scope of the mechanism**, Affinity Water and South East Water proposed to include payments relating to C-MeX and D-MeX, and United Utilities suggested including other sources of risk and return, such as from totex and financing.

Frontier Economics (commissioned by Northumbrian Water, South East Water and Yorkshire Water) also produced a report for the Future Ideas Lab which considered different approaches for managing risk from extreme events, principally in relation to weather, at PR24.[21] It included a recommendation to automatically suspend incentive payments for an

[21] Frontier Economics (commissioned by Northumbrian Water, South East Water and Yorkshire Water), 'Managing extreme weather event risk in the regulatory framework', October 2022.

initial period of two weeks after an extreme event occurs, with companies able to fully recover efficient expenditure arising from dealing with the event from customers.

5.1.4 Our final decisions and reasoning

In this section, we set out:

- our **overall approach to allocating outcomes risk**;
- our **approach to caps and collars**; and
- the **aggregate sharing mechanism**.

Overall approach to allocating outcomes risk

ODIs encourage companies to manage their own performance but also to assess and manage external risks that affect service. We want to ensure that companies are strongly incentivised to do this and are not disproportionately exposed to financial risk. We also need to protect customers from outperformance payments that are higher than expected.

We aim to allocate risks to those best able to mitigate or manage them. This leads to better outcomes for customers and the environment. Our price reviews recognise that companies bear risk, including some external risk, and so have a degree of variability in their returns that is outside of their control. Our aim is for an efficient company to have a reasonable prospect of receiving its allowed return on its overall price review package, including from outcome delivery incentives (see Appendix 10 – Aligning risk and return).

But we limit the exposure of customers and companies to very high ODI payments for a number of reasons, including:

- to limit the **overall size of the package**, so that companies are not exposed to disproportionate risks and customers do not have incentive payments that are higher than expected;
- to mitigate **potential skew in the package**, which undermines the balance of the price review package; or
- to reduce the **risk of mis-specified incentives**, which could lead to companies focusing on performance changes of relatively limited value, or customers overpaying for improvements.

We also want to minimise undue complexity and regulatory burdens associated with implementing and administering the framework.

We can manage the exposure of customers or companies to these factors through a number of tools within the outcomes framework:

- **aggregate mechanisms to manage risk at a company level**, which reduce or remove the size of incentive payments beyond certain aggregate thresholds that are based on estimated levels of return on regulatory equity;
- **caps and collars on individual performance commitments**, which limit financial impacts of performance beyond a given threshold; and
- **exclusions within performance commitment definitions**, which can include upfront clauses that exclude the impact of certain events from a company's reported performance, or automatically disable incentive payments following certain events (as suggested in the report by Frontier Economics).

We intend to **primarily manage ODI risk at an aggregate level, with targeted use of caps and collars**. This maintains stronger incentives on companies to manage their performance, it reduces complexity relative to relying mainly on caps and collars or exclusions, and is consistent with a more mature and robust framework, which gives us greater confidence in how we set performance commitment levels and incentive rates.

We do not consider that **providing exclusions within performance commitments is an appropriate way to manage risks** for the reasons set out in section 2.4 of Appendix 7 – Performance commitments. While we provide limited exclusions for some performance commitments, we consider our other tools are better placed to manage outcomes risk arising from performance commitments.

Customers and companies are also protected by existing provisions in companies' licences to account for relevant changes in circumstances, such as through interim and substantial effects determinations (for more details, see Appendix 10 – Aligning risk and return).

We will assess the overall balance of risk, and make any changes as necessary, such as adjusting the aggregate sharing thresholds and the scope of caps and collars. We set out our approach in more detail below, including how we have adapted our approach based on feedback from stakeholders and further performance data. We also address specific comments raised by stakeholders.

Caps and collars

Caps and collars limit the financial impacts of performance beyond a given threshold. We used them at PR19, primarily to limit the financial materially of individual performance commitments and to account for considerable uncertainty around the data, particularly for new performance commitments. We found caps and collars complex to set during PR19.

For PR24, we are likely to have greater confidence in how we define performance commitments and set their performance commitment levels and incentive rates. This reflects the growing maturity of the outcomes framework, including access to more consistent data, which reduces the risk of mis-specification.

We also observe that caps and collars can distort company behaviour. Over 2020-22, we found that companies performed beyond their respective cap or collar for 11% of the time for performance commitments with caps or collars. We estimate this equates to forgone underperformance payments to customers of £132 million (compared to £409 million that were paid). Conversely, only £19 million of outperformance payments were forgone (compared to £356 million that were paid). This suggests that once a collar is reached for an individual performance commitment, companies may have an incentive to let their performance deteriorate because they are financially indifferent to declining performance beyond the collar. Similarly, once a cap is reached, companies will have limited financial incentive to improve further, even if there are benefits to customers and the performance of other companies suggests that further outperformance is possible. We found similar evidence in our review of PR14.[22]

Some companies said they were concerned that not setting caps or collars on well-established performance commitments would expose them to the impacts of exogenous events that had significant impacts which are hard to fully mitigate. Some companies suggested that water supply interruptions, sewer flooding, storm overflows and pollution incidents could be more susceptible to these events. We consider companies should be incentivised to mitigate the impact of exogenous events on customers. But we acknowledge that some performance commitments can expose companies to excessive levels of risk and may create a material imbalance in the overall outcomes package.

Some respondents to the draft methodology also suggested that setting caps and collars on a targeted basis could lead to some performance commitments dominating the outcomes package. For the majority of performance commitments, their incentive rates should reflect the relative priorities of customers, and the relative benefits of improvements, so certain performance commitments being a large part of the outcomes package is desirable.

Based on stakeholder feedback, we have extended our principles for setting caps and collars compared to the draft methodology. We will **make targeted use of caps and collars on individual performance commitments**. This includes performance commitments:

- that are **new or bespoke** and therefore more uncertain;
- where the **benefits from high outperformance are uncertain**, to protect customers and avoid over-incentivising companies;
- that have the potential to be a **significant source of skew** in the outcomes package.

In line with these principles, we expect to set caps and collars on all performance commitments that are new, bespoke or measure asset health. At this stage, we also expect to set a wide collar on the water supply interruptions performance commitment to address the

[22] Ofwat, 'PR14 review', January 2022, pp. 40-42.

potential it may have to skew the outcomes package. We will finalise the scope and level of targeted caps and collars during our determinations.

This approach suggests that we will **apply caps and collars on standard incentive payments for the following common performance commitments** at PR24 (we set out our approach for caps on enhanced incentives in section 3.5 of this document):

- water supply interruptions (collar only);
- biodiversity;
- business demand;
- operational greenhouse gas emissions;
- bathing water quality;
- river water quality;
- storm overflows;
- mains repairs;
- unplanned outage; and
- sewer collapses.

While we expect to set caps and collars on most bespoke performance commitments, we may not set collars on bespoke performance commitments that address poor performance in an area and are underperformance-only.

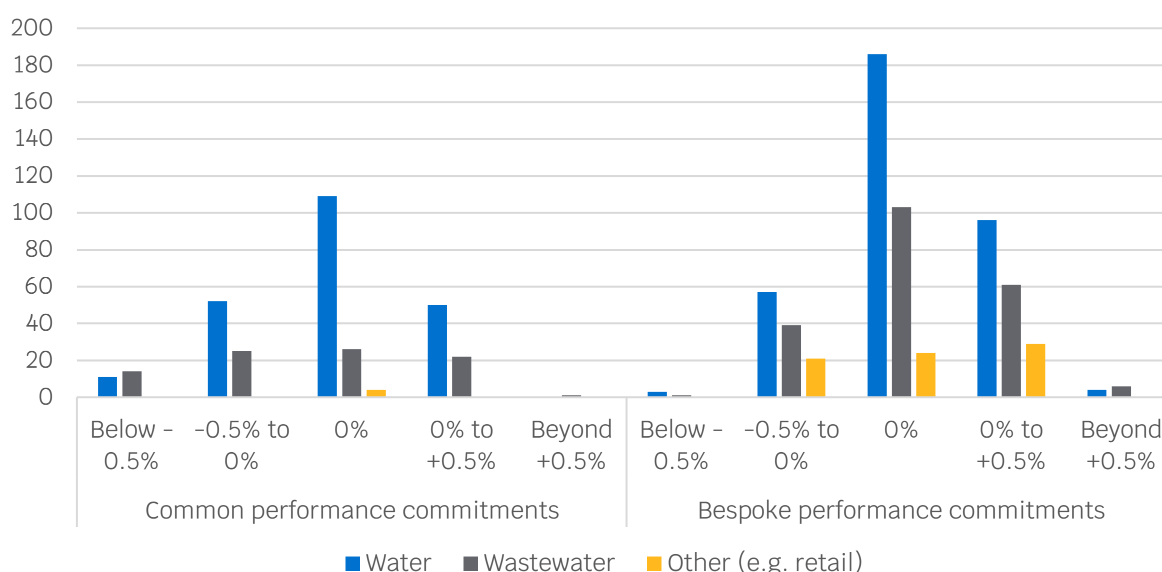
Some respondents suggested that we retain flexibility over which performance commitments should have caps or collars, and reconsider whether to set them on new performance commitments based on long-running datasets. While we will have flexibility over which performance commitments will have caps or collars, and their levels, we will follow our final methodology principles, as set out above, in our determinations. While the underlying data behind some new performance commitments are long-established (such as measures by the Environment Agency and Natural Resources Wales) or reported by companies in recent years (such as operational greenhouse gas emissions), since they have not been financially incentivised in previous price reviews there is a risk that performance commitment levels may be set too high or too low, so we consider caps and collars are necessary to protect customers and companies at PR24.

Where we decide to use them, we will **set the levels of caps and collars using a top-down approach** with reference to an expected return on regulatory equity (RoRE), rather than based on probability estimates which can be complex to estimate in an objective manner. We may cross-check this against historical performance and overall risk ranges to ensure companies are adequately incentivised.

As a starting point, we expect to set **most caps and collars at levels equivalent to ±0.5% RoRE for individual performance commitments**. For well-established common performance commitments with collars only, such as water supply interruptions we expect to

set collars at a higher level. As Figure 5.1 shows, only 15 out of 428 performance commitments had ODI payments that were beyond ±0.5% RoRE either in terms of water RoRE, wastewater RoRE or appointee RoRE in 2020-21 and 25 out of 428 in 2021-22.[23] Of those performance commitments that exceeded our proposed thresholds in either year, we expect 17 of them will not be subject to caps or collars under our PR24 approach. The remaining 10 performance commitments would be affected by caps or collars if they are included at PR24, either because they are bespoke performance commitments or the common water supply interruptions performance commitment. This suggests that caps and collars will only rarely be triggered so companies have incentives to improve performance in all but exceptional circumstances. This also suggests that using ±0.5% water or wastewater RoRE as a starting point for most performance commitments should also prevent those performance commitments from overwhelming the aggregate sharing mechanism.

Figure 5.1 – Number of performance commitments by payment range each year over 2020-22 (as a return on water, wastewater or appointee notional regulatory equity)[24]



We consider basing the levels of caps and collars on a top-down approach strikes the right balance in terms of incentivising improved performance while protecting customers and companies from excessive payments with minimal complexity.

For the majority of performance commitments, we expect to set caps and collars **over a symmetric range, with an asymmetric range for performance commitments with clear diminishing marginal benefits**. As we set out in section 2.4, we consider this could be likely for asset health-related performance commitments, where there could be diminishing marginal benefits associated with very high outperformance. For individual asset

[23] In this analysis, we primarily use appointee RoRE for payments associated with companies' retail price controls.
[24] Each data point represents how a company has performed each year for each performance commitment. For example, we separately count how a company performs against its water supply interruptions performance commitment for 2020-21 and 2021-22.

health-related performance commitments, we are considering setting caps at +0.25% RoRE and collars at -0.5% RoRE. We estimate that this slightly strengthens incentives on asset health-related performance commitments compared to PR19. While we could set this symmetrically, as proposed by United Utilities, we are concerned by the risk of potential diminishing marginal benefits for very high performance on these performance commitments – instead of asymmetric rates, we consider relatively narrow caps provide stronger incentives on companies around their performance commitment levels while also protecting customers (see section 2.4 above).

While we could use historical performance distributions to set the levels of caps and collars, relying solely on historic performance is complex. However, we can use them as a cross-check for some performance commitments.

Aggregate sharing mechanism

We will use an **aggregate sharing mechanism that shares net ODI payments between customers and companies** once they reach certain thresholds each year. This acts as a form of protective backstop to reduce (but not remove) the financial impacts of very high or very low performance. Our approach extends the outperformance-only sharing mechanism for all companies from PR19 (and is similar to Hafren Dyfrdwy's unique two-sided sharing mechanism).

The aggregate sharing mechanism has the following key design features:

- **Two-sided protections**. This provides protections to both customers and companies from very high outperformance or underperformance payments and aligns with our intention to set caps and collars on a targeted basis.
- **Primary and secondary thresholds**. Unlike the PR19 mechanism, we will provide stronger protections beyond a secondary threshold. We consider this strikes a balance between both 'hard' aggregate caps or collars and unlimited exposure at less protective sharing rates, to ensure there remains some incentive on companies to manage the potential impacts of very high or very low performance.
- **Apply on a net basis**. The sharing mechanism will come into effect once net ODI payments meet the relevant sharing thresholds. This simplifies our PR19 approach, which was set on a gross basis, and aligns with our intention to protect both customers and companies from excessive risk exposure, as well as our wider approach to communicating risk and return. We note Portsmouth Water's point that applying the aggregate sharing mechanism on a net basis could lead to companies that have very high outperformance payments receiving relatively weak protections from an individual incident compared to companies with very high underperformance payments, because a higher performing company's starting position would be further away from the underperformance sharing threshold. However, we want to minimise undue complexity, and companies with

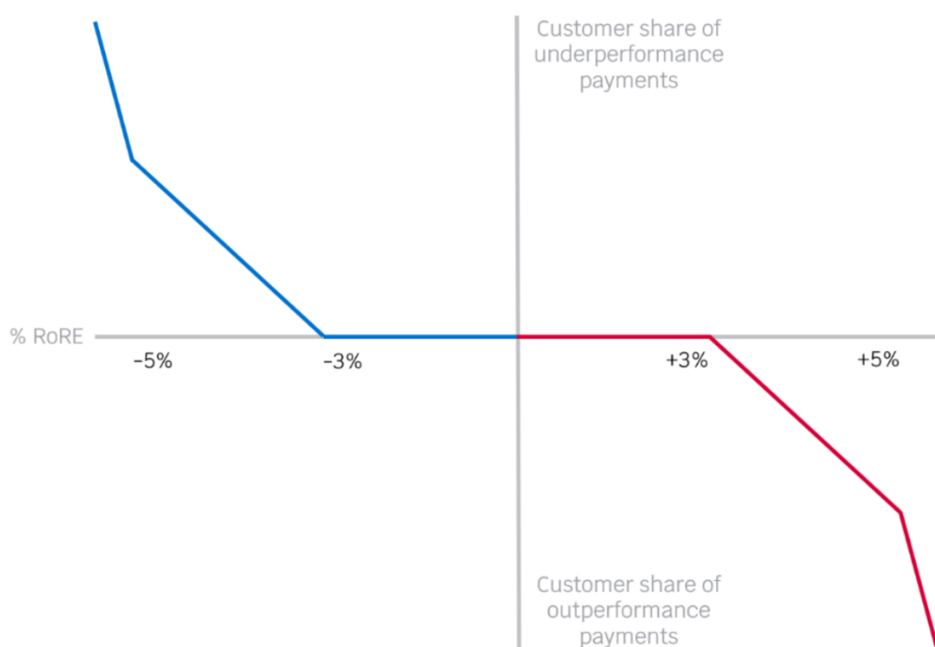
consistently poor performance are also more likely to face higher levels of scrutiny and potential enforcement action.

- **Apply separately for wholesale water and wastewater payments only**. This ensures that water only companies and water and wastewater companies should receive similar levels of protection. We exclude payments associated with the measures of experience because they have their own maximum limits, as at PR19.

We have considered whether we should change the **scope of the mechanism**, as proposed by some respondents. We do not consider it necessary to include C-MeX, D-MeX or BR-MeX within the mechanism at this stage, as they have their own maximum limits. If this changes after we review their design, we may change our approach. It would also be practically challenging to include C-MeX, because it does not have its own RCV, which is the basis of the sharing thresholds for water and wastewater incentive payments. As we set out in Appendix 10 – Aligning risk and return, we consider it is more targeted and effective to only include outcome delivery incentives in the mechanism. Including totex or financing returns could dilute companies' incentives to improve their outcomes performance and cost risk is already shared through the cost sharing mechanism. It is also unlikely to be practical to implement, as we reconcile ODIs annually, but totex is reconciled at the end of the period, to allow changes to the timing of expenditure. We note companies can propose additional voluntary sharing mechanisms for their overall returns – see Chapter 9 of the final methodology.

We illustrate how this new mechanism will work in Figure 5.2. As a starting point, **companies can earn or incur up to +3% or -3% RoRE without any sharing of payments**, beyond which payments are reduced by 50%. Beyond +5% and -5% RoRE, payments would instead be reduced by 90%. Currently, 3% RoRE equates to an average household bill impact of £19 per year (or nearly 6% of a household customer's average combined bill).

Figure 5.2 – Illustrative aggregate sharing mechanism



We will use **±3% RoRE for the primary sharing threshold.** This is consistent with our approach to the outperformance sharing mechanism at PR19. It also aligns with the outer band of the indicative range for ODIs applied at PR19 and which we intend to carry forward to PR24, suggesting companies will generally be exposed to the full financial consequences of their performance up to this threshold, and only shared in exceptional circumstances.

We will use **±5% RoRE for the secondary 90% sharing threshold** because we consider it represents a possible but very unlikely level of net ODI payments. Only one company has reached this level over 2015-22. This was Hafren Dyfrdwy in 2020-21 for its wastewater performance.[25] It therefore retains powerful performance incentives on companies without introducing unacceptable levels of risk to them and protecting customers from very high bill levels (the second threshold would be triggered if outperformance payments get to around 10% of an average bill).

We have considered the impact of changes to notional gearing at PR24 on the levels of the aggregate sharing thresholds, as raised by respondents. By expecting a lower level of gearing for a notional company, the relative impact on investors from outcome delivery incentives would be weaker, all else being equal.[26] We want to maintain the impact of performance as a proportion of RoRE, rather than the absolute amount, so that investors continue to focus on improving the performance of companies and delivering for customers and the environment. We therefore maintain the starting point for the sharing thresholds at ±3% and ±5% RoRE.

We may adjust the **aggregate sharing thresholds to ensure the balance of risk and return is appropriate**. This means that the aggregate sharing thresholds may vary by company, based on analytical evidence and representations during the determinations phase of PR24. Some respondents to our draft methodology suggested setting asymmetrical, narrower or wider aggregate sharing thresholds than we proposed. We clarify that our aim is to set the sharing thresholds at symmetrical ranges, but we will review the risk profile of companies' outcomes packages and adjust them if necessary. The ±3% and ±5% thresholds are starting points and may be narrower or wider based on our assessment for the determinations.

This includes **considering whether there are material differences between the overall risk for water services and wastewater services**. Currently, we observe that mean

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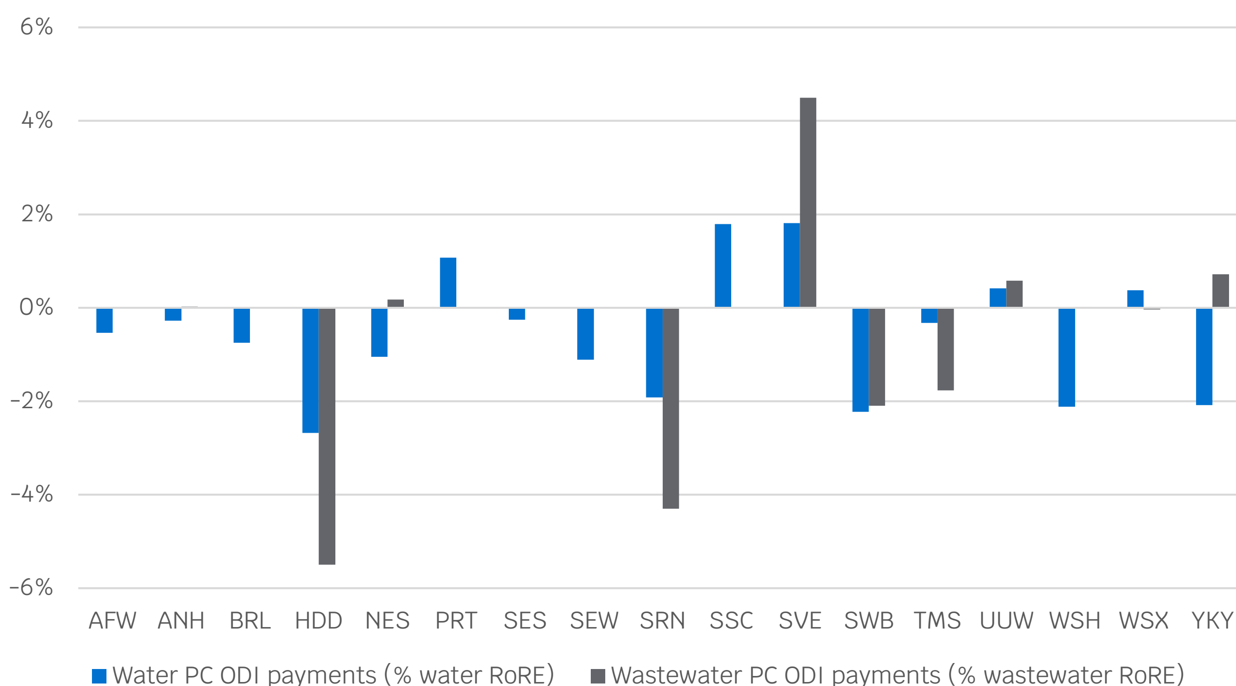
[25] This is primarily because Hafren Dyfrdwy started the 2020-25 period with an exceptionally small wastewater RCV compared to other companies – in 2020-21 it was only £1.5 million (in 2017-18 prices). While the aggregate sharing mechanism can help to protect the company and its customers from the volatility caused by its relatively small RCV, we expect this to decline by PR24 due to expected RCV growth during this period. The company's wastewater RCV is due to increase to £11.2 million by 31 March 2025 (Ofwat, 'PR19 final determinations: Hafren Dyfrdwy final determination', December 2019, p. 54).

[26] If we were to keep the overall level of incentives the same in £m terms, then reducing notional gearing from 60%, as at PR19, to 55% at PR24 would lead to lower sharing thresholds expressed as a return on regulatory equity. This is because return on regulatory equity is calculated by dividing potential payments (x) by the notional equity of a company's regulatory capital value ($1 - g$, where g is notional gearing): $x/((1 - g) * RCV)$. If g reduces from 60% to 55%, then with a higher denominator ±3% and ±5% RoRE would be ±2.75% and ±4.58% RoRE.

average returns in the first two years of the 2020-25 period for water services (-0.58% water RoRE) are not dissimilar to those for wastewater services (-0.70% wastewater RoRE).[27] As Figure 5.3 shows, performance varies between companies. We note that this analysis is only based on two years of performance and we will keep this under review and consider the most recent performance data during our determinations.

Figure 5.3 – Net in-period ODI payments for water and wastewater performance commitments over 2020-22 by company (as a return on water or wastewater notional regulatory equity)



5.2 Deadbands

5.2.1 Our final methodology policies

We will not use deadbands for most performance commitments because they substantially weaken incentives on companies for performance close to their performance commitment level.

We will **only set a deadband on the compliance risk index performance commitment**, reflecting stakeholders' feedback, including from the Drinking Water Inspectorate, that it is challenging to achieve full compliance, particularly because performance against the

[27] We also estimate that median performance for the first two years of the 2020-25 period is not dissimilar between water services (-0.53% water RoRE) and wastewater services (+0.01% wastewater RoRE).

measure can be affected by customers' internal pipes or fittings, responsibility for which is not within the statutory functions of water companies.

5.2.2 Changes from our draft methodology

We will set a deadband on the compliance risk index.

5.2.3 Stakeholder views

CCW and Blueprint for Water supported not setting deadbands on any performance commitment, stating that they weaken incentives on companies.

Portsmouth Water, Wessex Water and Yorkshire Water agreed with not setting deadbands for the majority of performance commitments (not including the statutory compliance performance commitments) while SES Water said we should not rule out setting deadbands on new performance commitments or to manage company-specific risks.

Almost all companies disagreed with our proposal to remove deadbands on the two statutory compliance performance commitments (the compliance risk index and discharge permit compliance), arguing that:

- It would increase the downside risk on companies as there would be no deadband or potential outperformance payments to counterbalance potential underperformance payments (Affinity Water, Bristol Water and South West Water, Portsmouth Water, South East Water, Thames Water, Wessex Water and Yorkshire Water).
- Companies are already incentivised to achieve full compliance through reputational incentives and risk of enforcement action by the other regulators (Affinity Water, Dŵr Cymru and South Staffs Water).
- It would create unnecessary regulatory burdens from processing small payments, if there are no deadbands (Anglian Water).

For the **compliance risk index**, the Drinking Water Inspectorate, Water UK and 16 water companies disagreed with removing deadbands, arguing that:

- Companies would be exposed to factors that are outside of their control but are measured by the compliance risk index, such as customers' plumbing, pipes and tap fittings that contain high levels of nickel, copper or lead (the Drinking Water Inspectorate, Water UK, Affinity Water, Anglian Water, Hafren Dyfrdwy, SES Water, South East Water, United Utilities and Yorkshire Water).

- Expecting 100% compliance is unreasonable, unlikely or prohibitively expensive (Anglian Water, Dŵr Cymru, Hafren Dyfrdwy, Northumbrian Water, Severn Trent Water, South East Water, South Staffs Water, Southern Water, Thames Water and Yorkshire Water).

For **discharge permit compliance**, the Environment Agency agreed with removing the deadband,[28] while 10 out of 11 wastewater companies disagreed. United Utilities suggested that extreme weather events can affect compliance and are outside of a company's control, while Yorkshire Water said that if the performance commitment definition changes to include additional aspects of permit compliance, this would lead to additional risk for companies.

Some stakeholders suggested **alternative proposals**, such as setting narrow deadbands (Affinity Water, Southern Water and Thames Water) or outperformance payments for achieving full compliance to balance the risk of underperformance payments (Northumbrian Water, Portsmouth Water and Wessex Water). While preferring a deadband, Southern Water and Yorkshire Water suggested we could set relatively low underperformance rates for performance close to full compliance.

5.2.4 Our final decisions and reasoning

Deadbands remove financial incentives for performance within a specific range around a performance commitment level. Deadbands substantially weaken incentives on companies and reduce transparency around companies' performance.

At PR19, we only set deadbands on a small number of performance commitments. Of the common performance commitments, this only included common statutory compliance performance commitments (compliance risk index and discharge permit compliance).

In our draft methodology for PR24, we proposed to not set deadbands on any performance commitment, including the statutory compliance performance commitments. As part of this, we considered two options for setting deadbands for the **two statutory compliance performance commitments**:

- **Option 1 – narrower deadbands**. This would reflect our expectation of gradual improvements over time and builds on our approach at PR19. We would base the level of the deadband on recent performance.
- **Option 2 – no deadbands**. This would align with our expectation that companies should be financially incentivised to meet their statutory compliance, with underperformance payments to customers where companies fall short.

[28] In the Environment Agency's response to our October 2022 consultation on serious pollution incidents and discharge permit compliance.

Our preferred option was to set no deadbands on either performance commitment. We said that while setting narrower deadbands would sharpen incentives compared to PR19, removing deadbands would strengthen incentives on companies further and that we considered this would align with customer expectations on water companies. We also said that it reflected that the compliance risk index is no longer a new metric, as at PR19.

We will **not set deadbands for the majority of performance commitments**, because we consider this retains incentives on companies to improve their performance. This is consistent with our approach at PR19, and only a few stakeholders disagreed with this approach for performance commitments not relating to statutory compliance measures.

We consider our approach to each statutory compliance performance commitment in turn.

Compliance risk index

We estimate that not setting a deadband on the compliance risk index PC would increase the financial exposure of companies by around 0.19% in water RoRE.[29] While we consider that companies should face strong incentives relating to drinking water quality standards, we recognise that full compliance can be challenging to achieve, particularly because performance against the measure can be affected by customers' internal pipes or fittings, responsibility for which is not within the statutory functions of water companies. As such, we consider it would be inappropriate to financially incentivise water companies to replace customers' internal fittings through the compliance risk index performance commitment.

We will set a deadband on the compliance risk index that reflects the historic level of failures caused by customers' internal fittings. We will work with the Drinking Water Inspectorate and set the level of the deadband in our draft and final determinations based on the latest available data. We would expect to see an improving profile over the 2025-30 period. This helps to mitigate the risk that the deadband could embed the current level of failures caused by customer-side failures, even if they reduce over time.

We consider the alternative proposals made by stakeholders would not sufficiently incentivise companies, would be at odds with customers' expectations or add undue complexity.

Discharge permit compliance

Unlike the compliance risk index, **we will not set a deadband on discharge permit compliance**. Because this performance commitment measures discharges from companies'

[29] For the purposes of this analysis, we use the median of companies' potential additional ODI payments in RoRE terms based on the performance difference from the deadband level to the performance commitment level. We assume notional gearing of 55% and use 2021-22 water RCV.

treatment works, we consider that companies are capable of full compliance and underperformance also has clear impacts on customers and the environment.

We have also observed that some companies have achieved full compliance every year over 2018-2022. In 2020-21, 10 out of 11 companies performed within their deadbands, falling to 3 out of 11 in 2021-22. This suggests that there is scope for improvements and setting no deadband should more strongly incentivise companies to meet their performance commitment levels. In terms of potential impacts, based on PR19 underperformance rates, we estimate that removing the PR19 deadband for discharge permit compliance increases potential underperformance payments by a median value of 0.07% wastewater RoRE across all companies.[30]

In response to Yorkshire Water's concern that changes to the performance commitment definition to include additional aspects of permit compliance could lead to additional risk on companies, we will assess this as part of setting companies' determinations, including their expenditure allowances, and will also take this into account when considering changes to performance commitment definitions (see section 2.5 of Appendix 7 – Performance commitments for our approach to changing performance commitments).

We recognise removing deadbands may increase the downward skew of companies' outcomes package, as suggested by some stakeholders and we will consider this in the context of companies' overall packages.

5.3 Estimating ODI risk

5.3.1 Our final methodology policies

We will use a light-touch approach to estimating outcomes risk at PR24, informed by historical performance. Companies can still undertake their own risk analysis in their business plans and use the overall indicative range for ODI returns to inform their analysis.

5.3.2 Changes from our draft methodology

We confirm that we will take a light-touch approach to estimating outcomes risk at PR24.

[30] For the purposes of this analysis, we use the median of companies' potential additional ODI payments in RoRE terms based on the performance difference from the deadband level to the performance commitment level. We assume notional gearing of 55% and use 2021-22 wastewater RCV.

5.3.3 Stakeholder views

Five companies **agreed with our preferred 'light-touch' approach** to estimating ODI risk, with Hafren Dyfrdwy and Severn Trent Water suggesting other approaches would limit company ownership and risk yielding incorrect results, Yorkshire Water suggesting it should simplify the process and provide consistency across companies, and SES Water and United Utilities suggesting it would be proportionate.

We received the **following comments on a light-touch approach**:

- the methodology should be transparent and companies should be able to challenge assumptions (Dŵr Cymru, SES Water and Yorkshire Water); and
- we should take into account companies' risk analysis (Affinity Water, Bristol Water and South West Water, Hafren Dyfrdwy, SES Water, South Staffs Water and Wessex Water).

Four companies **supported a refined PR19 approach** to estimating ODI risk, where we would provide guidance and consistent assumptions for companies, with Anglian Water saying it would lead to more comparable incentives for all companies on common performance commitments. Affinity Water, South East Water and Thames Water argued it would lead to more accurate estimates than a light-touch approach since companies are best-placed to assess risks.

Bristol Water and South West Water **supported an approach based on company-led Monte Carlo analysis**, arguing it would allow for the development of scenario analysis while acknowledging it would be sensitive to assumptions.

Northumbrian Water disagreed with any option and said we should instead take account of companies' evidence.

We received the following **detailed comments on estimating ODI risk** from stakeholders:

- we may understate risk due to optimistic assumptions, for example that downside scenarios for individual performance commitments are independent, and our approach should consider correlations between performance commitments (Affinity Water, South East Water and Wessex Water);
- it should be informed by company-level and industry-level analysis using historical information and forward-looking analysis (Bristol Water and South West Water);
- we should take account of changing risks and not assume that future risks are the same as current risks (Wessex Water); and
- using RoRE to estimate ODI risk is appropriate but may not take into account non-ODI risks or the measures of experience (South East Water).

5.3.4 Our final decisions and reasoning

In previous price reviews, we have estimated risk ranges relating to ODIs primarily to signal the amount of revenue at stake to companies and their investors. It has also helped us to understand whether the levels of risk in ODI packages are excessive or unduly skewed.

During PR19, we used companies' probability estimates, at both the level of their proposed performance commitments and at an aggregate level. Companies generally took different approaches to estimating risk, which were hard to compare and verify. We reviewed these estimates and adjusted them where necessary. We took an approximate approach to estimating and presenting aggregate risks, applying scaling factors to bottom-up estimates informed by what companies proposed in their business plans.

For our draft methodology we commissioned PwC to review potential methodologies for estimating ODI risk at PR24. PwC considered a range of options, with potential variants. In our draft methodology, we put forward three broad options for estimating ODI risk at PR24:

- **Option 1 – Light-touch approach**. Companies would not provide probability estimates in their business plans. Instead, we would estimate probable performance primarily based on historical performance and companies' forecast performance levels. We would take a proportionate approach to aggregating risks. For the purpose of estimating risk in their business plans, companies could assume potential returns of ±1% to ±3% of regulatory equity.
- **Option 2 – Refined PR19 approach**. We would provide guidance to companies to help them provide more comparable probability estimates for individual performance commitments, as well as consistent assumptions for how they should model aggregate risks in their business plans. We could provide some parameters based on our analysis of historical performance based on a range of techniques.
- **Option 3 – Company-led Monte Carlo analysis**. We would provide guidance and consistent assumptions ahead of business plan submissions for companies to use when they model risks using Monte Carlo approaches in their business plans.

Our **preference was a 'light touch' approach and this remains our view**. For PR24, we want to change how we model and estimate ODI risk. This includes adapting our approach to reflect more common and standardised performance commitments at PR24. We also need to consider how to aggregate ODI risks. For example, reasonable downside scenarios for individual performance commitments are very unlikely to happen at the same time. Simply adding up the financial impacts of these individual risks will significantly overemphasise the likelihood of these risks occurring at a company level, giving an inaccurate picture.

We consider a light-touch approach would reflect the greater data availability, more common and standardised performance commitments, and align with our aim of streamlining the

price review process. It should also be proportionate and practical to implement for us and companies.

In response to concerns raised by stakeholders, we confirm that **we will set out our risk estimation methodology in the draft determinations**, with companies and other stakeholders able to provide their views on the inputs, outputs and assumptions that we use.

Our risk analysis will primarily be based on historical data, because for the majority of performance commitments this should be reflective of companies' potential performance. We will also have regard to future risks and scenarios, taking account of expected performance in companies' business plans and long-term delivery strategies.

We will consider how we estimate aggregate risk, including how we take into account potential correlations between performance commitments. As we set out in Appendix 10 – Aligning risk and return, we will produce overall risk ranges, which will include other sources of risk such as expenditure and the measures of experience.

6. Incentivising outcomes beyond PR24

In this section we look at how the ODI framework could provide stronger incentives on companies to deliver long-term benefits.

6.1.1 Our final methodology policies

We are **committed to maintaining the outcomes framework in future price reviews**. We expect the outcomes we are incentivising at PR24 to be of enduring importance to customers and the environment, and therefore we expect them to be financially incentivised in future price reviews.

We expect future performance commitment levels, which drive future ODI payments, to be set using a sector benchmark. This means top performers in the current period should continue to earn outperformance payments in future periods.

For PR29, we **expect to maintain our broad approach to setting incentive rates**, such as using a bottom-up approach based on a share of marginal benefits.

6.1.2 Changes from our draft methodology

We confirm that we expect to maintain our broad approach to setting future incentive rates.

6.1.3 Stakeholder views

In the draft methodology we asked whether there would be benefits to customers in providing greater certainty over incentive rates at PR29 in some instances.

Thirteen stakeholders supported providing **greater certainty on our approach to future incentive rates**, saying that it would be in the interest of customers, with Hafren Dyfrdwy and Severn Trent Water saying it would support them to work with third parties to deliver long-term outcomes. Some stakeholders also recognised that providing greater certainty over the value of future rates would reduce flexibility to reflect changes in customer preferences over time.

Some stakeholders **supported providing certainty on the value of future incentive rates**, suggesting long-term incentive rates across multiple periods would be in the interest of customers:

- Affinity Water, Thames Water and CCW said that doing so would support companies to take long-term decisions based on customer preferences and where benefits occur over multiple periods.
- Bristol Water and South West suggested committing to incentive rate bands and an established methodology for determining future rates.

Dŵr Cymru and Severn Trent Water's Expert Reference Panel said they do not support providing more clarity, saying that it would not be in the interests of customers to limit flexibility on incentive rates at PR29 at this stage.

6.1.4 Our final decisions and reasoning

We consider there are merits in providing long-term certainty about the outcomes framework, so that companies have the confidence to invest and explore new ways to deliver performance improvements over multiple price reviews.

We are **committed to maintaining the outcomes framework in future price reviews**. We expect the outcomes we are incentivising at PR24 to be of enduring importance to customers and the environment, and therefore we expect them to be financially incentivised in future price reviews. We expect future performance commitment levels, which drive future ODI payments, to be set using a sector benchmark. This means top performers in the current period should continue to earn outperformance payments in future periods.

Over and above this, we could provide greater certainty over incentive rates for future price reviews. Doing so could reduce our flexibility to reflect changes in customer preferences over time. In our draft methodology we said that we were not minded to provide greater certainty over the value of incentive rates in PR29 and that we were open to proposals to provide greater clarity over our intended approach in PR29 where it can be demonstrated that this would clearly be in the interests of customers.

We received mixed feedback from stakeholders on this issue and we have considered different options for PR24:

- **Option 1: No additional certainty**. This would provide us with the most flexibility but may discourage investment in solutions that take several periods to deliver benefits to customers and the environment.
- **Option 2: Maintain our broad approach to setting incentive rates**. This would provide additional certainty for companies to deliver outcomes over the long term while providing flexibility to adapt to change, including changes in customer preferences.
- **Option 3: Provide the value of future incentive rates**. We could use the same values from PR19, or signal incentive rates bands, as suggested by Bristol Water and South West

Water. This would provide the most certainty, if it is credible, but may not reflect future changes in circumstances or customer preferences.

In addition to committing to the outcomes framework in future price reviews, we consider option 2 has merits.

Some stakeholders proposed specifying the value of incentive rates for biodiversity and operational greenhouse gas emissions because they are not directly linked to customer preferences. While these performance commitments will not have incentive rates directly based on customer preferences, we also consider there are risks as those two measures are relatively new and external valuations may change over time. This could therefore lock in values that underplay future benefits.

As such, for PR29, we **expect to maintain our broad approach to setting incentive rates**, such as using a bottom-up approach based on a share of marginal benefits.

7. Implementing payments

In this section, we look at the following in turn:

- the **timing and form** of incentive payments;
- the **price control allocations** of incentive payments;
- **targeting incentive payments** to individual customers; and
- **our approach to reconciliation**.

7.1 Timing and form of incentives

ODIs can either be paid shortly after companies report their annual performance, with payments applied to allowed revenues in one or more subsequent years during the 2025-30 period ('in-period') or at the next price review, with payments spread over multiple years in the following price control period ('end of period').

During PR19 we expanded in-period adjustments to all companies, compared to four companies in the 2015-20 period, and payments for only 66 out of 464 performance commitments were set as end-of-period.

7.1.1 Our final methodology policies

We expect to **apply all ODI payments annually through in-period revenue adjustments**.

We will only consider end-of-period payments for bespoke performance commitments where a company can demonstrate that the impacts on customers are expected to be realised over multiple price control periods and end of period assessment would not significantly reduce management focus on the relevant service areas or add disproportionate complexity.

7.1.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

7.1.3 Stakeholder views

Ten companies supported our proposal to retain in-period incentive payments, saying that they sharpen incentives on company management to deliver for customers and enable financial incentives to be passed onto customers earlier.

However, some stakeholders raised concerns with our approach to the **timing of payments**:

- Dŵr Cymru said that in-period payments will impact bill volatility and Affinity Water said that applying in-period adjustments over five years with suitable adjustments for the time value of money would mitigate bill volatility.
- Affinity Water, Thames Water and Northumbrian Water suggested applying incentive payments at the end of the period for new environmental performance commitments, such as biodiversity and operational greenhouse gas emissions, to support long-term planning and to allow time for them to understand their performance. The RSPB also said that annual payments may not reflect when environmental activities yield benefits.
- CCW asked whether in-period payments are appropriate for sewer flooding because performance can fluctuate each year depending on the weather, which could risk companies earning outperformance payments without significant improvements.
- Wessex Water said that the continued focus on in-period incentives does not align with taking a long-term approach.
- Southern Water proposed giving customers the choice of whether underperformance payments should be provided through bill reductions or reinvested to improve performance, arguing that bill reductions are relatively small when shared between customers.[31] Northumbrian Water also suggested that customers may prefer service improvements instead of underperformance payments being returned to them through lower bills.

7.1.4 Our final decisions and reasoning

We consider there are key benefits to retaining ODI payments as in-period revenue adjustments. We consider that in-period adjustments significantly sharpen incentives on companies and benefit customers, as payments are made closer in time to when customers receive the level of service. While it is relatively early in the 2020-25 period, we have observed a greater focus on company performance within companies, especially at board level, driven by stakeholder attention around the annual determinations process and related publicity. This also heightens transparency for customers and other stakeholders around company performance. End-of-period payments would be more easily obscured by other revenue adjustments. While there is greater complexity than applying adjustments at the end of the

[31] Southern Water, 'Levelling up water company performance', September 2022.

period, this should lead to improved outcomes for customers and the environment, as companies focus more on their performance.

We accept that annual performance reporting for sewer flooding may fluctuate due to external factors, as noted by CCW. While this may mean a company incurs outperformance payments due to these factors, they can also incur underperformance payments. We consider in-period payments helps to keep the focus of companies on improving their performance and managing these risks.

While in-period incentive payments may increase bill volatility, as suggested by some respondents, annual payments help to sharpen incentives on companies' management to improve their performance – the bill volatility reflects the service that customers as a whole receive from companies. However, where bill volatility is material, companies have the flexibility to use a range of tools to reduce or mitigate bill volatility, including the ability to request deferrals within the outcomes framework, the revenue forecasting mechanism and their approach to setting charges.

We disagree with Southern Water's proposal to not apply underperformance payments each year. Doing so would undermine a key part of the outcomes framework which links in-period revenue to recent performance and our expectation that customers pay for a certain level of service and companies should bear the consequences when this performance is not achieved. The company's proposal, which would in effect move the timing of underperformance payments to the end of the period, would divorce this relationship. Companies are already able to invest to improve their performance, but they can fund this without relying on deferred underperformance payments.

Affinity Water, Northumbrian Water, Thames Water and the RSPB suggested that ODI payments for new environmental performance commitments should apply at the end of the period to support long-term planning and to allow time for them to understand their performance. We consider that end-of-period payments would not provide as strong an incentive to improve performance in these areas. It is also not clear how end of period payments would support long-term planning.

As such, we will **apply all ODI payments annually through in-period revenue adjustments**.

We will only consider end-of-period payments for bespoke performance commitments where a company can demonstrate that the impacts on customers are expected to be realised over multiple price control periods, and that it does not significantly reduce management focus on these service areas or add disproportionate complexity.

7.2 Price control allocations of incentive payments

7.2.1 Our final methodology policies

We will set **standardised price control allocations for all companies for the common performance commitments**. Companies can propose price control allocations for bespoke performance commitments.

7.2.2 Changes from our draft methodology

We may take a different approach for the serious pollution incidents and discharge permit compliance performance commitments.

7.2.3 Stakeholder views

There were no stakeholder views on this issue.

7.2.4 Our final decisions and reasoning

Because we set separate price controls in our price reviews, we need to allocate incentive payments between a company's price controls. This can be based on the activity or impact of the outcome that is being incentivised.

At PR19, we set the same price control allocations for the majority of common performance commitments. However, where they did differ, this led to large variations between companies for the same common performance commitment on some occasions. For example, some companies allocated incentive payments associated with per capita consumption to a combination of the water resources, water network plus and residential retail controls while others allocated them fully to a single control. In other cases, the proposed price control allocations were relatively small and unlikely to be materially significant and as such added unnecessary complexity.

For PR24, we consider there are benefits in **standardising price control allocations across companies**. This should lead to consistency between companies and help to simplify the price review process. We have published the price control allocations for each performance commitment as part of each definition on our website.

The only potential change since our draft methodology relates to the serious pollution incidents and discharge permit compliance performance commitments. For water and

wastewater companies, these performance commitments can relate to both water and wastewater assets.

Because around 90% of serious pollution incidents since 2019 have related to wastewater assets,[32] we could allocate 90% of payments to the wastewater network plus control (and 10% to water network plus). Incentive payments would be fully allocated to water-only companies' water network plus controls. However, if future incidents only relate to wastewater assets there is a risk of distorted impacts on companies' price controls. If we consider this a material issue at PR24, we could either set separate water or wastewater performance commitments for these two performance commitments or enable the price control allocation for these performance commitments to be dynamically allocated (similar to how D-MeX operates in 2020-25).

Companies can propose price control allocations for bespoke performance commitments.

7.3 Targeting incentive payments

7.3.1 Our final methodology policies

We will **not consider whether payments should be targeted to individual customers through the price review process**.

7.3.2 Changes from our draft methodology

Having considered stakeholder responses, our policy positions remain as stated in the draft methodology.

7.3.3 Stakeholder views

Northumbrian Water said that underperformance payments could be paid back to the generality of customers or those most affected, which will generally be a very small subset of a company's customer base, and suggested that we give companies the flexibility to target remedies.

[32] Based on category 1 and 2 pollution incidents ('serious pollution incidents') from 2019-2021 across England and Wales. Data provided to us by the Environment Agency and Natural Resources Wales.

7.3.4 Our final decisions and reasoning

We adjust a company's total revenue allowance, and therefore the bills of all of a company's customers, to reflect the delivery of outcomes above or below what customers as a whole have paid for. This can be seen to reflect the change in risks averaged across all customers from a change in performance. Companies reflect this change in total revenue in their annual charges, which must comply with our charging rules.

Currently, customers as a whole generally experience the same bill impact as a result of ODI payments rather than receiving targeted payments. While ODI payments do not directly compensate individual customers for service failures that affect them, there are other mechanisms that exist, such as the statutory guaranteed standards scheme where customers are entitled to payments when a company fails to meet a particular standard of service.

We will **not consider whether payments should be targeted to individual customers through the price review process**. We are exploring what could and should be done in this area outside of the price review, including through charging rules.

We note that companies can compensate affected customers over and above existing mechanisms. In doing so, companies would need to ensure any targeted payments comply with their legal and regulatory obligations, including their licences and our charging rules.

7.4 Approach to reconciling incentive payments

As set out in the PR19 reconciliation rulebook, we make adjustments to ODI payments to account for inflation, taxation and the time value of money.

Companies can also request abatements or deferrals under certain circumstances.

7.4.1 Our final methodology policies

We will **retain our overall approach to reconciliation**, which builds on our policy and modelling approaches from PR14 and PR19.

We will **continue to allow companies to request to defer the impact of ODI payments between years** to help manage extreme cashflow and bill volatility.

We will **continue to consider how we can streamline the overall in-period determinations process** prior to our draft determinations.

7.4.2 Changes from our draft methodology

We will not set a threshold for when we will consider allowing deferrals.

7.4.3 Stakeholder views

We received the following comments on the **threshold for considering deferrals**:

- Affinity Water, Hafren Dyfrdwy, Severn Trent Water, Severn Trent Water's Expert Reference Panel, South Staffs Water and Northumbrian Water disagreed with specifying a threshold for considering deferrals based on RoRE, arguing that it:
  - would reduce our flexibility;
  - could limit options for promoting bill stability, including being able to take account of customer and stakeholder views on bill profiles;
  - would have different impacts depending on the size of a company's RCV.
- Dŵr Cymru proposed reducing the threshold to ±0.5% RoRE while SES Water said a ±1% RoRE threshold appears reasonable.

Yorkshire Water requested clarity on any process to allow performance commitments to be deferred to end of period due to unforeseen circumstances.

On **streamlining the overall in-period determinations process**, Dŵr Cymru and Wessex Water suggested adopting a similar approach to that of the revenue forecasting incentive, with greater ownership by companies through the charges process.

Yorkshire Water requested clarity on any process to allow performance commitments to be deferred to end of period due to unforeseen circumstances.

7.4.4 Our final decisions and reasoning

In our draft methodology we proposed to **retain our overall approach to reconciliation**, which builds on our policy and modelling approaches in PR14 and PR19.

Deferrals

In the draft methodology, we asked whether we should specify criteria for when we would consider allowing deferrals, such as ±1% RoRE at an appointee level, as at PR19.

We received mixed feedback from stakeholders, with some suggesting that we retain the flexibility to consider companies' arguments for deferring payments between years, including potential bill impacts on customers.

We also observe that in the first two years of the 2020-25 period, there have been relatively few deferred payments – the most notable deferrals include Severn Trent Water (around 1.3% appointee RoRE in 2020-21 and 0.9% RoRE in 2021-22), Portsmouth Water (0.6% RoRE in 2020-21 and 2021-22) and Wessex Water (0.4% RoRE in 2021-22). We also note that companies have not always requested deferrals when they could have due to performing beyond the ±1% threshold, in part taking account of wider drivers on allowed revenues, and we have used our judgement when deciding whether to defer payments.

Given this, and to simplify and streamline the framework, we will not specify a threshold for considering when to defer payments between years. We will **continue to allow companies to request to defer the impact of ODI payments between years**. We note that companies have other tools to manage extreme cashflow and bill volatility concerns and we consider this will give more ownership to companies to consider multiple drivers on customer bills when they request deferrals.

In terms of providing clarity on when we would change incentive payments to end of period during the 2025-30 period, as requested by Yorkshire Water, we consider it would depend on the specific circumstances and any other relevant considerations at the time.

Streamlining the in-period determinations process

In the draft methodology, we asked **how we could streamline the overall in-period determinations process**, building on the more standardised approach to performance commitments and ODIs at PR24. We suggested this could include a 'lighter touch' approach, similar to how the revenue forecasting incentive (RFI) currently operates, where companies have ownership for operating the models and setting their charges in line with licence conditions, and we check this during the period and apply necessary adjustments at the following price review. We said this would need to be balanced by the need to protect customers and ensure incentives are properly applied.

As set out in section 7.1, we received broad support from stakeholders for retaining in-period incentive payments. We consider there are opportunities to streamline the in-period process, building on the maturity of the framework and learning from the experiences of ourselves and companies, so **we will continue to consider how we can streamline the overall in-periods determination process** prior to our draft determinations.

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

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