December 2019

PR19 final determinations

Policy summary

Ofwat

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PR19 final determinations: Policy summary

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1. PR19 policy overview

1.1 Challenges facing the sector and Ofwat's strategy

Water companies provide essential services that no-one can live without. As part of our strategy we want water companies to provide the very best service for customers, protecting the environment and improving customers' quality of life by providing reliable water and wastewater services, both now and in the future.

The water sector faces profound challenges such as climate change and population growth. Some have also questioned companies' licences to operate. Customers' demands are changing and the services water companies provide must keep pace with them while remaining affordable for all. Companies must also make sure they meet customers' diverse needs, particularly those of customers in vulnerable circumstances.

To meet these challenges will require a step change in company performance, customer service, efficiency and a more resilient and reliable supply of water, and an increased focus by companies on delivering public value. In achieving these goals we will meet the strategic priorities and objectives of both the Welsh and UK Governments. Without this step change, we risk a deterioration in service, unaffordable price increases and continued environmental damage.

The 2019 price review (PR19) sets the price, service and incentive package for water companies for the period 2020-25. It is the single most significant regulatory lever in driving the step change in the industry. To do this, in PR19, we are:

- setting stretching but achievable performance commitments on the outcomes that matter to customers and the environment;
- challenging companies to go further on cost efficiency;
- promoting development of markets including direct procurement of customers for large infrastructure project and bioresources and more strategic approach to water resources
- providing more funding for new investment and innovation; and
- reducing the allowance for the return on capital, reflecting prevailing market conditions.

In combination this allows us to improve outcomes for customers and the environment and build more resilient services, while reducing customer bills by 12% before inflation. This document summarises our policy approach to the PR19 final determinations. The following chapters set out how we developed the methodology for the price control, how the overall price control works and our approach in each of the key areas:

- engaging customers;
- delivering outcomes for customers;
- Securing cost efficiency;
- accounting for past delivery;
- assurance, returns and financeability; and
- addressing affordability and vulnerability

1.2 Background

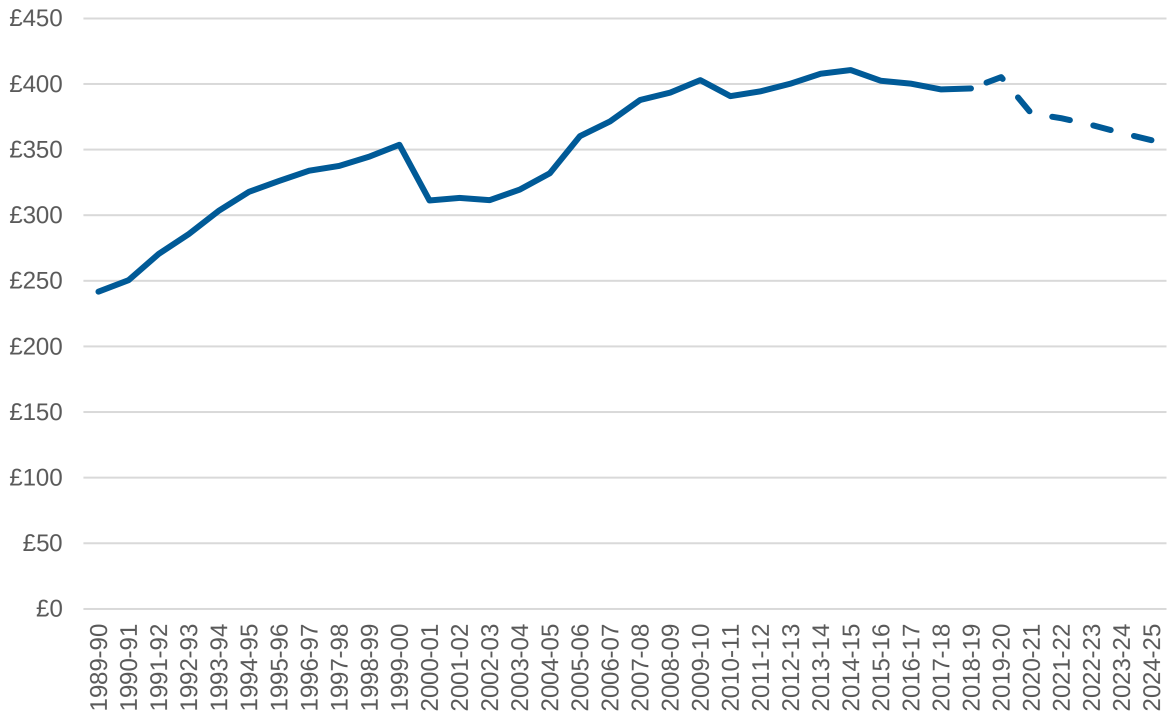
There are 17 monopoly water and wastewater companies. These provide end-to-end services from securing water resources, water treatment and distribution through to retail. Water companies are natural monopolies, with high infrastructure costs in particular across distribution networks. Without regulation and competitive pressure, water companies would be able to increase prices and reduce service quality.

Water bills are material to customers, particularly those on low incomes, with an average household combined water and wastewater bills of £405 in 2019-20. Water companies are also sizeable companies with the total revenue across 17 companies for around £11.6 billion per year for the 2020-25 period (all figures in 2017-18 prices).

Before we discuss our approach to PR19, we briefly outline developments in the sector since privatisation in terms of change in customer bills, the level of investment and financing of this investment.

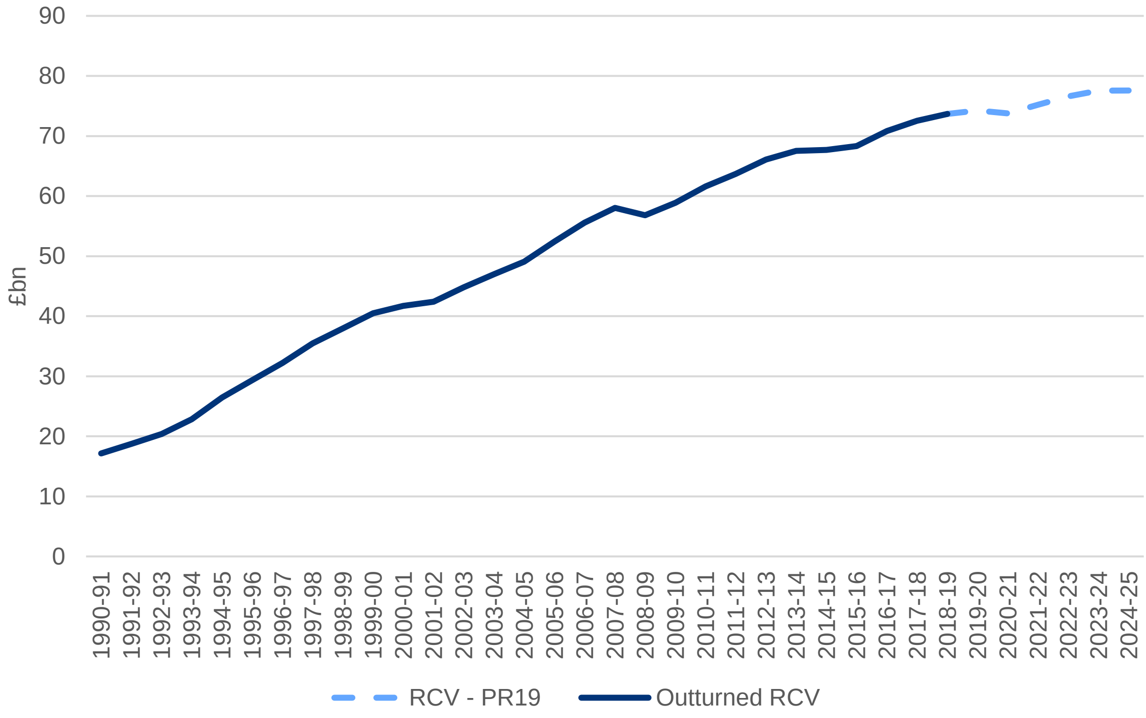
Following privatisation in 1989, real (before inflation) customer bills increased over the first 20 years, followed by period of bills being relatively stable. As a result of PR19, bills are forecast to fall from 2020. By 2025, bills will return to the level that they were in 1999-2000. However, real bills remain about 48% above bill levels in 1989. Affordability is an important issue for the sector – water is an essential service and around 3 million customers struggle to pay their bills.

Figure 1: Development of real water bills since 1989 (average combined bill), 2017-18 prices, CPIH deflated



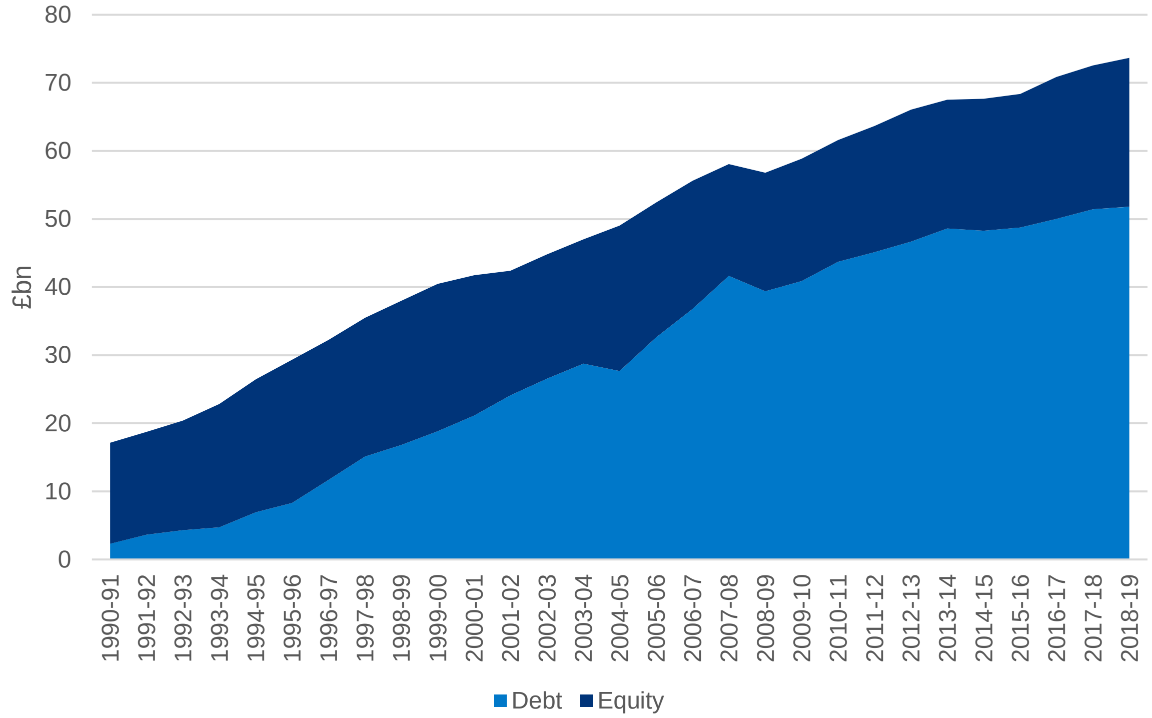
The growth in bills has been associated with improved outcomes and substantial growth in investment and in the regulatory capital value (RCV) of the water sector. The RCV is a measure of the capital base of a company, and reflects the expenditure that is recovered over time from customers.

Figure 2: Development of regulatory capital value since 1990, £ billion, 2017-18 prices, CPIH deflated



Most of this growth in the regulatory capital value has been funded by water companies taking on increasing levels of debt, as shown in figure 3, with little growth in equity – increasing from around £15bn in 1990-91 to £22bn in 2018-19, while debt has increased from £2bn to £52bn over the same period.

Figure 3: Growth of debt and equity since 1990, £ billion, 2017-18 prices, CPIH deflated



The developments since privatisation illustrate the continued importance of new investment to the sector and role of debt as main source of finance for this investment.

The level of gearing for many companies is significantly above that used by Ofwat to set price reviews. The decisions on capital structures and how to finance investment is for companies, within regulatory and licensing framework. We use a notional capital structure to set allowed returns and assess financeability to ensure that companies bear risks associated with their choice of financing structures. This is particularly important where companies have geared up and paid out dividends and loans to shareholders in previous review periods.

The increase in debt also highlights the importance of financial resilience - companies have sufficient capacity to absorb and respond to potential shocks and events.

These developments provide context for the challenges facing the sector which will require further investment to address climate change and population growth. They highlight as well the importance of financial resilience and improving affordability of water.

1.3 Our overall approach to PR19

The PR19 performance commitments set the service levels each of company is expected to meet, while the revenue allowance is derived from efficient total expenditure (or totex) and an allowed return on the company's regulatory asset base. The combination of the stretch from performance commitments and the cost efficiency challenge together provide the overall level of challenge for companies.

Our overall approach to the price review is that:

1. We develop the methodology for the price review, setting out our expectations for company business plans.
2. Companies develop their business plans with their customers.
3. We check and challenge those business plans based on our methodology.
4. We intervene where customers' interests need to be protected and to meet our statutory duties in the round.

Our final determinations for PR19 reflect companies' business plans and our interventions, and our extensive engagement and consultation with stakeholders throughout the process.

Delivering outcomes for customers, the environment and society

Great customer service starts with an in-depth understanding of customers' preferences and priorities. Companies then need to reflect these priorities in their business plans. In particular companies should reflect customer priorities in the bespoke, company specific, performance commitments that they put forward alongside the common performance commitments that we expect all companies to make. Companies should also reflect customer priorities in the level of financial outcome delivery incentives that companies will receive if they exceed or fall short of the commitments that they make on performance.

There was a marked improvement in companies' engagement with their customers as part of this price review, with around 1.5 million customers engaged to develop their business plans. There were some promising signs on approaches to establishing customers' willingness to pay for business plan proposals in comparison to PR14. However, there are significant concerns over the quality of some of the customer research and, in a number of cases, the findings from high quality research are not reflected in company business plans.

Outcomes performance commitments cover key service areas and set out what companies will deliver to customers over the 2020 to 2025 period. Building on experience with PR14, we set 15 common performance commitments that apply to all companies. These common commitments reflect aspects of service that are important to customers, and enable us to better compare companies' performance. They cover a variety of areas, including:

- customer service;
- resilience;
- the environment;
- asset health; and
- support to vulnerable customers.

Companies were asked to develop a set of bespoke performance commitments that reflect local circumstances and customer priorities. In a number of cases, companies have specific performance commitments to encourage the timely delivery of large enhancement schemes - schemes which will deliver significant improvements to customer service, the environment or resilience.

Customers demand good service from their water and wastewater companies. We intervene to make sure that outcome performance commitments are stretching but achievable.

For internal sewer flooding, pollution incidents and water supply interruptions, we set out our expectations in the PR19 methodology that stretching performance commitment levels should be based on the forward-looking upper quartile service level. That is the level of performance companies forecast will be achieved by 25% of companies in the future. These areas reflect important priorities for customer service and the environment. For all three performance commitments we consider that all companies should be able to achieve the same common performance levels by management and operational improvements. Consequently the level of stretch will be higher for poorer performing companies. We do not consider it is acceptable for some customers to continue to experience lagging performance due to poor operational or management practices.

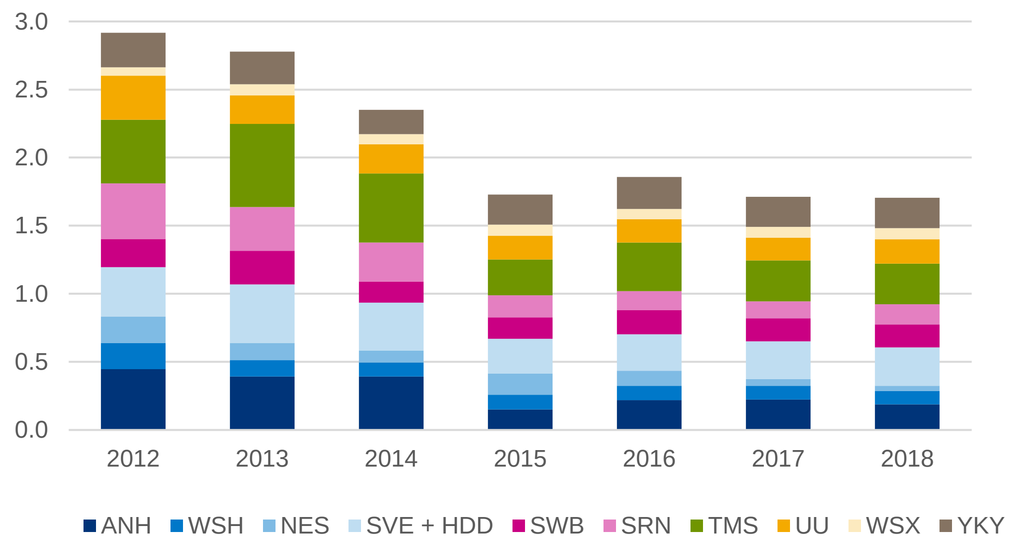
In PR14, all three areas had common commitment levels based on the historical upper quartile performance, i.e. the upper quartile of performance that had been achieved across all companies in the sector. Many companies outperformed even before the start of the price control period, indicating scope for continued improvement and the need to ensure that companies only earn rewards for going above normal practice and performance levels. All this pointed to the need for more stretching commitment levels for these areas of performance in PR19.

Some improvements in performance over the PR14 period have been commendable:

- Significant improvements in supply interruptions with some of the better performing companies improving by more than 50% in the first three years of PR14;
- Average of 26% improvement in internal sewer flooding from 2014-15 to 2018-19; and
- Average of 39% improvement in pollution incident performance from 2013 to 2018.

However the sector's overall performance has stagnated in recent years, as illustrated for pollution incidents in figure 4.

Figure 4: Total number of pollution incidents (thousands)



We have used company forecasts of the forward-looking upper quartile and cross-checked them with historical improvements to set stretching but achievable performance commitment levels. For water supply interruptions we have reduced the level of stretch from the forward looking upper quartile since our draft determinations to be consistent with the pace of historical improvements in this area. We consider that these targets are consistent with the pace of improvements achieved historically using base cost funding.

Reducing leakage is a common priority for customers and is often seen as a prerequisite for customers taking steps to reduce their water consumption. Over the past two decades, despite material technological progress, many companies have made limited progress in reducing leakage, with no overall reduction in leakage at the sector level, despite the sector achieving more than a 30% reduction in the decade following privatisation. The current level of leakage is about 21% of total water supplied by the industry, equivalent to about 53 litre per person per day[1]. In our PR19 methodology, we set companies a challenge to reduce their leakage by 15% within base funding cost allowance. This was similar to what was achieved by the best performer in the industry in the past. In their business plans, all companies accepted the challenge and proposed at least a 15% reduction on an annual average basis. In some cases, companies proposed greater than 15% reductions in their draft Water Resource Management Plans. In a number of cases, companies also sought additional funding to deliver the reduced leakage.

The levels of all other common performance commitments are based on either comparative benchmarking of companies' performance and a consideration of the appropriate performance stretch in the future (for example, per capita consumption) or an implementation of statutory requirements (for example water quality). Asset health performance commitments, such as mains bursts, unplanned outages, sewer collapses and treatment works compliance, are based on maintaining and improving asset health.

Many performance commitments are backed with financial outcome delivery incentives so that customers are receive lower bills if companies do not deliver on their commitments, and companies have incentives to go further for customers if this can be done at lower cost than customers are willing to pay for a greater service level. This is why it is important that we set the appropriate stretch for performance commitments. In setting performance commitments and outcome delivery incentives, we need to guard against the following:

- Performance commitments are too easy to achieve, and outcome delivery incentives for outperformance are set higher than the value customers place on the improved service, as it will lead to excess returns, customers paying higher prices than they need to and customers will be paying more than they are willing to for going above an acceptable level of service;
- Performance commitments are too difficult to achieve and outcome delivery incentive underperformance payments are too high, as companies will be pushed towards delivering too high a level of service, increasing downside risks and making it too difficult for an efficient company to achieve its allowed return on capital.

[1] Leakage, distribution input and population served data from company annual performance reports 2018-19

- Performance commitments are too difficult to achieve and outcome delivery incentives are too low (on either underperformance or outperformance), as they will not form a credible incentive to meet the target level.

Ensuring efficient costs and appropriate investment

Customers should only pay the efficient costs for the service that they receive. This is what would be achieved in a well-functioning market and what we aim to achieve through the cost allowances we provide the regional water company monopolies. To understand efficient costs, we examine base and enhancement expenditure separately. Base costs are routine, year-on-year costs, which companies incur in the normal running of the business to provide a base level of service. This includes on-going improvements to base levels of service.

We include costs driven by population growth within base, given the similarity in the characteristics of the expenditure. Companies experience these costs on a year-on-year basis and these can both be explained by similar cost drivers. Moreover an integrated approach for base and growth costs avoids issues with differences in cost allocation and reporting between operating, capital maintenance and growth related expenditure.

In the water sector, we benefit from 17 companies undertaking similar activities to provide water services and 11 companies doing the same for wastewater services. We forecast efficient base expenditure using comparative benchmarking models using historical and, for retail, forecast water company expenditure.

Productivity growth in the sector has stagnated over recent years, lagging behind the growth in comparator sectors such as manufacturing and construction (see 'Overall level of stretch across costs, outcomes and allowed return on capital appendix'). We consider that the sector needs to do better to improve its productivity to counteract the upward pressure on costs associated with meeting the needs of a growing population and addressing the challenges from climate change such as more unpredictable and extreme weather patterns. We consider the sector can do better, in particular given the move to a total expenditure and outcomes regime, where companies are funded to deliver outcomes rather than outputs and there is no distinction between capital and operating expenditure. To assist the sector to improve productivity, and prepare itself for the challenges ahead, we are providing £200 million of funding to help accelerate the pace of innovation in the sector.

We make three adjustments to modelled cost allowances:

- **Catch-up efficiency** –companies are required to catch up with better performing UK water companies, which results in an efficiency challenge of between 2-4% across the sector. For wholesale water services we use the 4th most efficient company (out of 17 water companies) to set the catch up efficiency challenge. For wholesale wastewater services we use the 3rd most efficient company (out of 11 wastewater companies).
- **On-going efficiency** – this is the additional, frontier shift, efficiency we expect from on-going productivity and technological improvements, which would not be reflected in historical spend. This includes improvements in productivity from the introduction of the totex and outcomes regime; and
- **Real changes in input prices** –the level of input prices increase or decrease faster than our inflation indexation mechanism, in our case, CPIH[2] indexation.

For retail activities, we use comparative benchmarking models based on forward-looking and historical data, because retail services are more dynamic and are likely to experience a faster pace of change than network services. Due to the lack of long-lived infrastructure assets, there is the potential for faster efficiency transformation in retail services, as demonstrated by some companies during 2015-20. It is also an area that we expect efficiency to improve after the introduction of separate retail price controls in PR14 and the opening of the English business retail market to competition in 2017.

We provide additional expenditure allowances for enhancements to services, not covered through on-going year on year expenditure. Enhancement schemes are aimed at making significant improvements to resilience of the network, improvements to the environment or improvements to service to customers. In total we are allowing £13 billion of expenditure to enhance the network. For enhancement expenditure, we use a combination of cost modelling and detailed engineering assessments. Our cost allowances are based on company proposals, adjusted for efficiency. We have awarded cost allowances for all justified and efficient investment. We have given companies several opportunities to justify proposals, including in the light of our detailed feedback, during the price review process.

For both base and enhancement expenditure, companies are able to submit cost adjustment claims if they consider that their individual circumstances are not fully reflected in our assessment.

We set performance commitments on the basis that an efficient company could meet these commitments from its base cost allowance. Where companies go beyond

[2] The Consumer Prices Index including owner occupiers' housing costs.

these service levels, they receive outcome delivery incentive payments. In the PR19 methodology, we were clear to water companies that we expect them to take into account the 15% leakage challenge and the forward-looking upper quartile for selected common performance commitments in their business plans.

As noted above, many companies have outperformed their performance commitments. In PR14 we did not provide additional funding to meet these requirements. These improvements have been delivered by management and operational improvements within cost allowances for most companies. We, therefore, do not consider that an efficient company should require additional funding to meet the upper quartile challenge.

The 15% leakage reduction is greater than most companies have achieved between 2015 and 2019. We acknowledge that this could be viewed as an additional efficiency challenge to some companies, albeit one that most companies have accepted. For companies committing to reduce leakage beyond the industry norm, we accept that this will lead to additional costs and provide additional funding to make this shift. For other companies, we do not consider that this should come at an additional expense to customers and should be viewed as part of the ongoing efficiency challenge.

Overall our cost challenge to company business plans at final determinations is 0.4% on base costs and 4.1% on total costs. Overall the forecasts of six companies are within our efficient base cost allowance. Of these five have accepted our stretch on the three upper quartile common performance commitments and leakage. This suggests that our combined efficiency and service challenge while stretching is achievable. We therefore consider our base expenditure allowances are sufficient for the ongoing improvements in services we expect companies to make. Through the cost sharing mechanism, companies will share the risk of cost out and underperformance with their customers. Companies will therefore only bear a proportion of the costs of any overspending against their expenditure allowance and will give back to customers a proportion of any underspending.

Balancing risk and return

Our determinations aim to incentivise companies to deliver stretching levels of service and deliver services efficiently while meeting their obligations and commitments to customers. Through the use of incentive mechanisms and the allocation of risk to the party best able to manage it we aim to ensure companies will be incentivised to deliver the best outcomes for customers in 2020-25. Our mechanisms ensure that where companies underperform for customers, their returns will be reduced; if they outperform, they will earn additional returns.

Companies will invest £13 billion to enhance services over the next five years, and will need to access capital markets to finance this investment and to refinance debt as it matures. We provide companies with an allowed return on capital as a base return that investors receive on their investment. Our allowed **return on capital** is set by reference to market expectations for the cost of finance in 2020 to 2025. It provides a reasonable return reflecting the significant risk protections inherent in the water sector. We consider the allowed return on capital to be reasonable: too high an allowance may result in customers overpaying and dampen the pressure shareholders place on companies to perform; too low an allowance may mean efficiently run companies could struggle to raise finance.

A number of independent reviews of previous determinations have identified that Ofwat and other regulators have tended to allow over-generous return on capital[3]. The allowed return on capital in our final determination is 2.96%.[4] It reflects benign capital market conditions and changes to the approach for the final determination. It is lower than the 3.19% used in our draft determinations, where we signalled that continued falling interest rates and other market data could lead to lower the allowed return in the final determination. The allowed return is lower than any determination since privatisation[5].

1.4 Ofwat strategy beyond PR19

In October 2019, we published our new strategy: 'Time to act, together'. In this strategy, we set ourselves three goals:

- to transform water companies' performance;
- to drive water companies to meet long-term challenges through increased collaboration and partnerships; and
- for water companies to provide greater public value, delivering more for customers, society and the environment.

The PR19 price review and final determinations are the first steps to implementing our new strategy.

[3] See for example NAO 2015 'The economic regulation of the water sector' and Citizens Advice 2019 'Monopoly Money; How consumers overpaid by billions'.
[4] At the level of the Appointee in real CPIH terms.
[5] The PR14 allowed return on capital which was previously the lowest since privatisation, set on an RPI basis was 3.74%, in equivalent CPIH terms it would be 4.55%.

PR19 helps to transform water companies' performance. Performance commitments target a 41% reduction in supply interruptions and 41% reduction in internal sewer flooding. They also support the environment, targeting a 30% reduction in pollution incidents, reductions in water abstraction with a 16% reduction in leakage and up to 13% reduction in household water consumption.

We are using our price review to introduce markets to drive transformation in performance, by encouraging trading in water resources and bioresources and competitive tendering for major infrastructure development through direct procurement for customers. This will bring about cost efficiencies and encourage higher service levels, while also incentivising innovation

The PR19 final determination will provide companies the revenues they need to meet long-term challenges. Overall we are providing almost £4 billion of investment to improve network resilience. This includes:

- investing more than £1 billion to protect communities from flooding across England and Wales,
- upgrading the 67 mile underground Haweswater aqueduct which brings water from Cumbria to Manchester,
- building a new reservoir in Hampshire to supply customers in the water-stressed south of England;
- investing £305 million for Anglian Water to interconnect its supplies to tackle climate change challenges and reduce customers' reliance on a single source of supply;
- investing up to £480 million for Thames Water to investigate and mitigate risks to the resilience of water supplies in London and to improve the performance of the London water network. This is a conditional allowance and we will return it to customers unless a number of conditions are met, including a commitment from Thames Water's shareholders to make a substantial contribution to the cost of the improvement works.

PR19 also provides an additional £200 million of funding to drive greater innovation and additional £469 million for companies to collaborate on developing new long-term strategic water resources.

PR19 helps water companies deliver greater public value. People increasingly expect companies in all sectors to behave ethically and consider their wider impact on the environment and society. For instance, water companies have committed to achieving net zero net zero emissions in the water sector by 2030, and this is supported by bespoke performance commitments for many companies, for example South East Water commits to reduce carbon by 68% by 2025.

PR19 encourages companies to use efficiently delivered nature-based (or 'green') solutions instead of capital (or 'grey') solutions, wherever these are suited to the situation. Water companies will be delivering more green solutions by 2025. We are pleased to see catchment management becoming more of a mainstream activity, with 1,076 new schemes by 2025 – but this is still only scratching the surface of what we think is possible.

Dŵr Cymru currently has among the highest numbers of customers helped through concessionary tariffs, and will continue to help at least the same number of customers in PR19. All the other water companies will increase the number of customers they help by 2025. Dŵr Cymru, United Utilities, South West Water, SES Water and Yorkshire Water will all put shareholders' money into their social tariff schemes. Companies have taken steps to meet our expectations on performance-related executive pay, placing a greater emphasis on customer delivery in their award. Anglian Water and Dŵr Cymru are committing to link 100% of the available performance-related executive pay bonus to performance that matters for customers. Wessex Water states that three quarters or more of the customer and environmental targets must be met for an award to be made.

In parallel, water companies have put forward a range of measures to demonstrate their public interest commitment. These include:

- championing measures to enshrine what it means to operate in the public interest within water companies' business purpose;
- tripling the rate of sector-wide leakage reduction by 2030, as part of a wider long-term strategy to reduce per capita consumption of water and invest in more water transfer and storage;
- making bills affordable as a minimum for all households with water and wastewater bills more than 5% of their disposable income by 2030 and develop a strategy to end water poverty;
- achieving net zero carbon emissions for the sector by 2030, including through greater water efficiency, buying green energy as well as generating renewable energy, planting trees, restoring peatland and working with our supply chain;
- preventing the equivalent of 4 billion plastic bottles ending up as waste by 2030; and
- being the first sector to achieve 100% commitment to the Social Mobility Pledge, to promote opportunity in local communities and increase talent and diversity within companies.

1.5 PR19 journey

1.5.1 The 2019 price review

In a price review, water companies, together with their customers, create plans for the future. We set the framework for these plans and scrutinise and challenge them, in the light of our duties, to make sure they meet customers' needs. Based on these plans and our interventions, we set the five-year price, service and incentive packages for each water company.

The 2019 price review sets the price, service and incentive package for the period 2020-25, and has been delivered in four phases.

1. The development of the PR19 methodology.
2. The initial assessment of business plans and categorisation of plans.
3. The draft determinations.
4. The final determinations.

In each of the first three phases we have consulted widely on our proposed position, receiving representations from companies and a large range of stakeholders. This has all informed the final determinations.

1.5.2 Meeting our duties and the UK Government and Welsh Government strategic policy statements

We must set price controls in accordance with our statutory duties and the strategic policy statements of the UK Government and the Welsh Government.

Our statutory duties[6] require us (in summary) to set price controls in the manner we consider is best calculated to:

- further the consumer objective to protect the interests of consumers, wherever appropriate by promoting effective competition;
- secure that water companies properly carry out their functions;
- secure that the companies are able (in particular, by securing reasonable returns on their capital) to finance the proper carrying out of those functions; and

[6] The general statutory duties for most of our work as an economic regulator are set out in section 2 of the Water Industry Act 1991.

- further the resilience objective to secure the long-term resilience of companies' systems and to secure that they take steps to enable them, in the long term, to meet the need for water supplies and wastewater services.

Subject to those duties, we also have duties to (among other things) promote economy and efficiency and contribute to the achievement of sustainable development.

Throughout the PR19 process and in our final determinations, we have taken full account of and acted consistently with our statutory duties and the strategic policy statements. Drawing directly on our duties and the strategic policy statements, we set four themes for the price review:

- great customer service;
- long-term resilience in the round;
- affordable bills; and
- innovation.

Throughout this review, we have sought to deliver against these four themes. We have also paid special attention to ensuring that companies are incentivised and funded to improve the environment, recognising the stakeholder and customer support for this objective. We have also used the review to encourage companies to put the sector in balance. For example by improving their policies on executive performance bonuses and dividends, to bring greater alignment between the interests of company management and investors, with the interests of current and future customers.

Across the review – the methodology, initial assessment, draft determinations and final determinations – we explain how our decisions reflect our four themes, and accord with our statutory duties and the strategic policy statements. We have sought to strike an appropriate balance, making sure that our decisions reflect and satisfy the various requirements in the round. Throughout this process, we have had regard to the principles of best regulatory practice.

Our duty to protect the interests of customers in both the short and long term is reflected in each of the four themes and, therefore, across the methodology, initial assessment, and draft and final determinations. Where appropriate, we also protect the interests of customers through promoting competition; for instance, through the use of markets for bioresources and our 'direct procurement for customers' policy.

We have taken steps to secure that companies are able to finance the proper carrying out of their functions (in particular by securing reasonable returns on capital). We have done this by making sure that companies' allowed revenues, relative to efficient costs, would be sufficient for an efficient company to finance its investment on reasonable terms and therefore secure that it can properly carry out its functions. We are providing a sufficient funding envelope and incentive regime to enable and incentivise companies to carry out their functions with economy and efficiency in the interests of customers.

Resilience is central to this review. Companies have duties to develop and maintain systems for water supply and sewerage services, which need to be resilient in the long term, recognising the challenges we mention above. We also have a duty to further the resilience objective. We required companies to demonstrate their approach to managing risks to resilience in their business plans. Much of the funding to provide resilience systems and services is included in normal business ('base') operating costs. We provide additional ('enhancement') funding where companies demonstrate that they can achieve real reductions in risk and improvements in resilience. We are strengthening the incentives for companies to increase resilience by maintaining or improving performance through their commitments on asset health. We are also setting stretching commitments on key indicators of day-to-day resilience, such as leakage, supply interruptions and sewer flooding.

We are funding new water resources and promoting long-term planning and investment. Company business plans and draft water resource management plans failed to deliver appropriate new long-term water resource solutions. So we have stepped in, for example, funding the development of strategic regional water resources solutions to help support drought resilience challenges and setting expectations with respect to company resilience action plans. Our performance commitments will also encourage companies to reduce demand for water and pressure on water resources.

1.5.3 The development of the PR19 methodology

We started to develop the PR19 methodology in 2015 when we published the PR14 lessons learnt. At the same time, we published, and consulted, on a discussion document on the challenges facing the sector and how economic regulation could change to meet them. This was followed by a consultation on our proposals for changes to the regulatory framework in December 2015 and our decision in May 2016. This culminated in some key changes to the regulatory framework:

- It strengthens our expectations about companies' customer engagement and the improved outcomes companies should achieve, with even greater emphasis on companies to understand the needs of all their customers and a strengthened role for customer challenge groups (CCGs) in improving the quality of customer research and engagement and how well this is reflected in business plans (as set out in the our customer engagement policy statement and expectations for PR19).

- It moves towards a more credible, robust and legitimate index of inflation – CPIH – for customers' bills and indexation of the regulatory capital value (RCV).
- It promotes markets in water resources and bioresources in England and, where it aligns with Welsh Government policy, in Wales. It does this through:
  - separate binding price controls for bioresources and water resources, which sit alongside the existing separate binding price controls for water and wastewater networks plus and retail activities;
  - information platforms and a bidding framework for water resources and bioresources; and
  - a new water resources access pricing framework (in England only).

- It introduces direct procurement for customers, which encourages the greater use of markets in the financing, design and delivery of new water and wastewater assets by third parties, rather than incumbent water companies.

All 17 water companies agreed to the licence amendments which were needed to support these changes. This reflected the widespread support for the changes to the regulatory framework. This agreement successfully laid the foundations for PR19.

Based on this regulatory framework and on our approach to PR14, we developed and consulted on the PR19 methodology in July 2017. This set out in detail how we intended to undertake PR19. The methodology was widely supported. Taking into account consultation responses we refined and published our final PR19 methodology in December 2017.

1.5.4 Our initial assessment of business plans

In the PR19 methodology and the 'Putting the sector in balance' position statement, we set out a series of expectations and requirements for water company business plans, so companies really stretch themselves to deliver more for their customers, the environment and wider society. These expectations and requirements reflect the four PR19 themes and the strategic policy statements of the UK and Welsh governments.

The initial assessment tested water company business plans against these high expectations. Where companies did not meet our expectations, they needed to resubmit their business plans. Where companies did meet these expectations, they received early draft determinations and financial and reputational benefits.

Reflecting the four PR19 themes, we have assessed business plans against three overarching characteristics across nine test areas:

- high quality;
- ambition; and
- innovation.

The nine test areas cover the four themes together with key aspects of the price control, such as cost efficiency and aligning risk and return.

Based on our assessment against our stretching expectations, we place companies' business plans into three categories out of a possible four, see figure 5.

Fast track status is given to plans that are of high quality and where limited, minor or no intervention is required to protect customers' interests. The threshold to be placed in the fast track category is high and the assessment is made in the round.

Slow track status is given to plans where a level of material intervention is required to protect the interests of customers. We require slow track companies to resubmit their business plans and provide additional evidence.

Significant scrutiny status is given to plans that fall well short of the required quality and where extensive material intervention is required to protect the interests of customers. Our assessment takes into account both the number of areas of concern and the extent of the concerns.

We did not put any companies in the fourth category: **exceptional**. The bar for this category was set very high. While some companies met that standard in some areas, no company demonstrated enough ambition and innovation across its plan as a whole.

Figure 5: PR19 initial assessment company categorisation

Fast track	Severn Trent South West United Utilities	Plans ready to implement. Receive financial benefit, early decisions and early certainty.
Slow track	Anglian Dŵr Cymru Northumbrian Wessex Yorkshire Bristol Portsmouth South East South Staffs SES	Further work to do on plans.
Significant scrutiny	Affinity Hafren Dyfrdwy Southern Thames	Substantially rework and resubmit plans. Increased regulatory scrutiny.

1.5.5 Draft and final determinations

We published early draft determinations for the fast track companies – Severn Trent Water, South West Water and United Utilities – in April 2019. The business plans for these companies set a new standard for the sector. In key areas where these plans fell short, these companies accepted the limited interventions to protect customer interests. Our draft determinations for these companies reflected these limited interventions. These early draft determinations allowed fast track companies to get on with delivering their business plans.

The fast track draft determinations included £198 million of investment to improve service resilience and had bill reductions ranging from 5% for Severn Trent Water to 15% for South West Water. They also included stretching performance commitments, such as:

- a 75% reduction in supply interruptions for United Utilities;
- a 58% reduction in pollution incidents from South West Water; and
- 2,259 km of river and 1,090 hectares of land improved by Severn Trent Water.

Fast track companies has the choice to opt in to early certainty on certain elements of the price control, such as cost claims and performance commitments, and associated financial incentives.

Severn Trent Water opted out of early certainty for a limited number of common performance commitments.

United Utilities opted out of the early certainty principle entirely.

South West Water opted in to the early certainty principle entirely.

Slow track and significant scrutiny companies were required to resubmit their business plans in April 2019 reflecting the detailed feedback we provided. The plans for the four significant scrutiny companies required significantly more work to align to customer interests and these companies needed to substantially revise their business plans.

We published draft determinations for slow track and significant scrutiny companies in July 2019. These draft determinations took into account companies' revised business plans and the representations we had received from the companies and a wide range of stakeholders on our cost, outcome and other analyses underpinning our initial assessment. Overall the draft determinations included £49 billion for 'business as usual' services and new investment, so that companies can deliver more of what customers want and need. Our draft determinations also included £12 billion extra to increase resilience and protect the environment, substantial improvements in services, and an average 12% reduction in bills driven by a lower allowed return on capital.

In response to consultation on our draft determinations we received more than 70 formal representations from each of the water companies and many other stakeholders in the water sector such as the Environment Agency, Natural Resources Wales, Consumer Council for Water, the customer challenge group for each company, investors, environmental and local community groups and a small number of individuals.

While companies raise a number of specific concerns, most companies reduce their requested cost allowance and accept most of our interventions on outcome performance commitments. Some companies raise concerns about the overall level of stretch across costs allowances, performance commitments together with the lower cost of capital, arguing that the draft determinations are not achievable "in the round". There is also concern over how we have taken into account customer support for the companies' plans and the view that we had not achieved an appropriate balance between lower customer bills and long-term investment.

Other representations raise concerns that companies may be incentivised to pursue easier to achieve performance commitments and associated outcome delivery incentives at the neglect of other outcomes that are important to customers. Some stakeholders raise concerns that cost efficiency should not be pursued at the expense of improved service levels, the importance of the final determination business plan reflecting customers' priorities, and concerns that the cost of capital may not adequately reflect the risk in the water sector. Stakeholders also welcome the benefit to customers of the service and incentives packages and the reduction in average customer bills that result from our draft determinations.

We have carefully considered all representations in coming to our final determinations. Overall we are providing a total expenditure allowance of £51 billion. This includes enhancement investment of £13 billion. We are moderating the stretch in cost efficiency and moderating the service levels in a few areas so that the package is still stretching but more achievable. We have checked to ensure that our interventions on performance commitments reflect customer priorities and protect customer interests and meet our duties in round. We have adjusted financial incentives to make sure that companies are not rewarded where they do not deliver for customers. We are further reducing the allow return on capital, taking into account the latest market evidence. Together this has allowed us to maintain an average 12% reduction in bills, before inflation, across the 2020 to 2025 period. We set out in detail our assessment of the overall stretch in 'Overall level of stretch across costs, outcomes and allowed return on capital appendix'.

1.6 How the price control works

Our final determinations set price controls for water companies in England and Wales for the period 2020-25. The price controls regulate the price (revenue) and service package that these companies offer, to make sure that customers are protected.

At PR19, we are setting wholesale revenue controls covering:

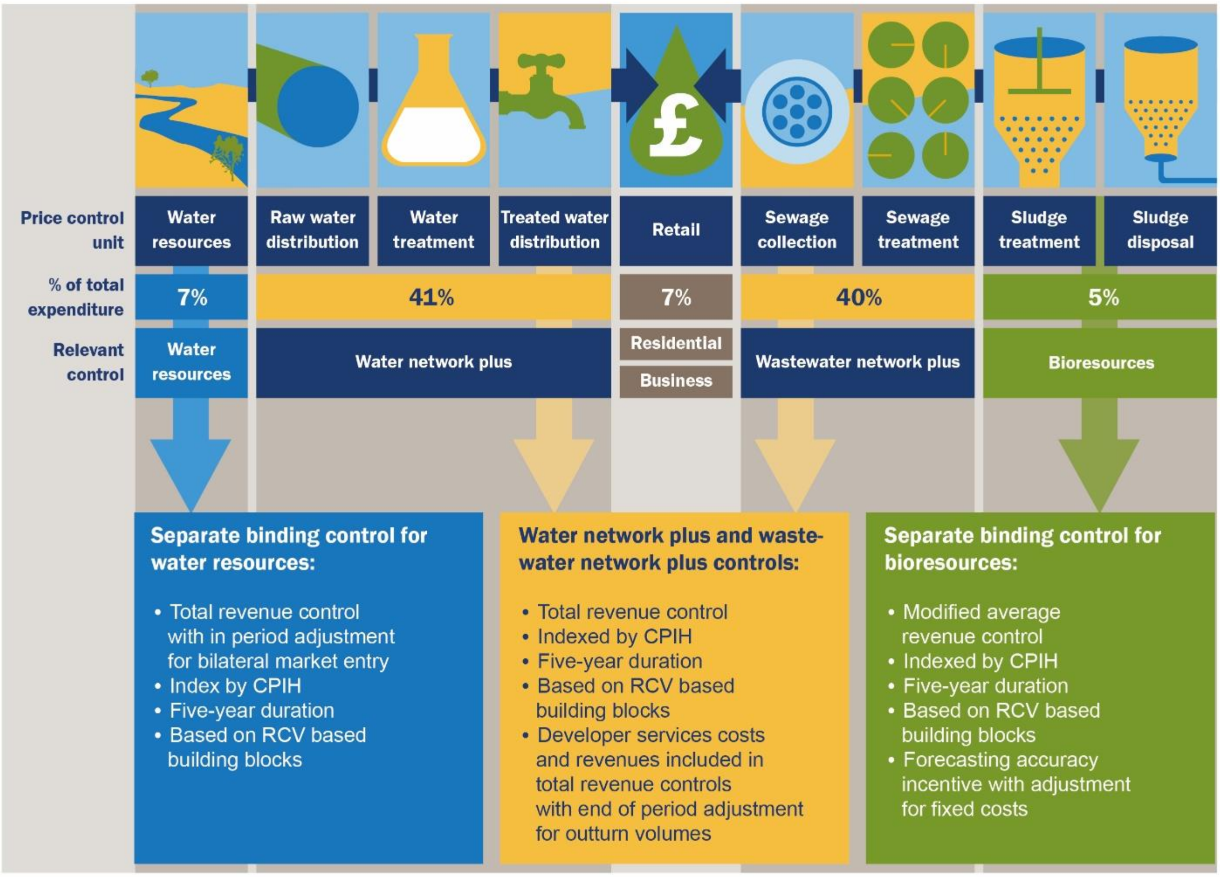
- network plus water;
- network plus wastewater;
- water resources; and
- bioresources.

A key change for PR19 is the creation of separate binding controls for water resources and bioresources to:

- provide sharper incentives for efficiency;
- increase the scope for innovation; and
- promote resilience through the development of markets.

We are also setting separate price controls for retail activities. Retail controls will be set for residential retail customers in England and Wales. For Wales, we are also setting business retail controls because, unlike in England, the business retail market is not fully open to competition. Key features of each control are in figure 6 below.

Figure 6: Overview of the wholesale value chain and form of control



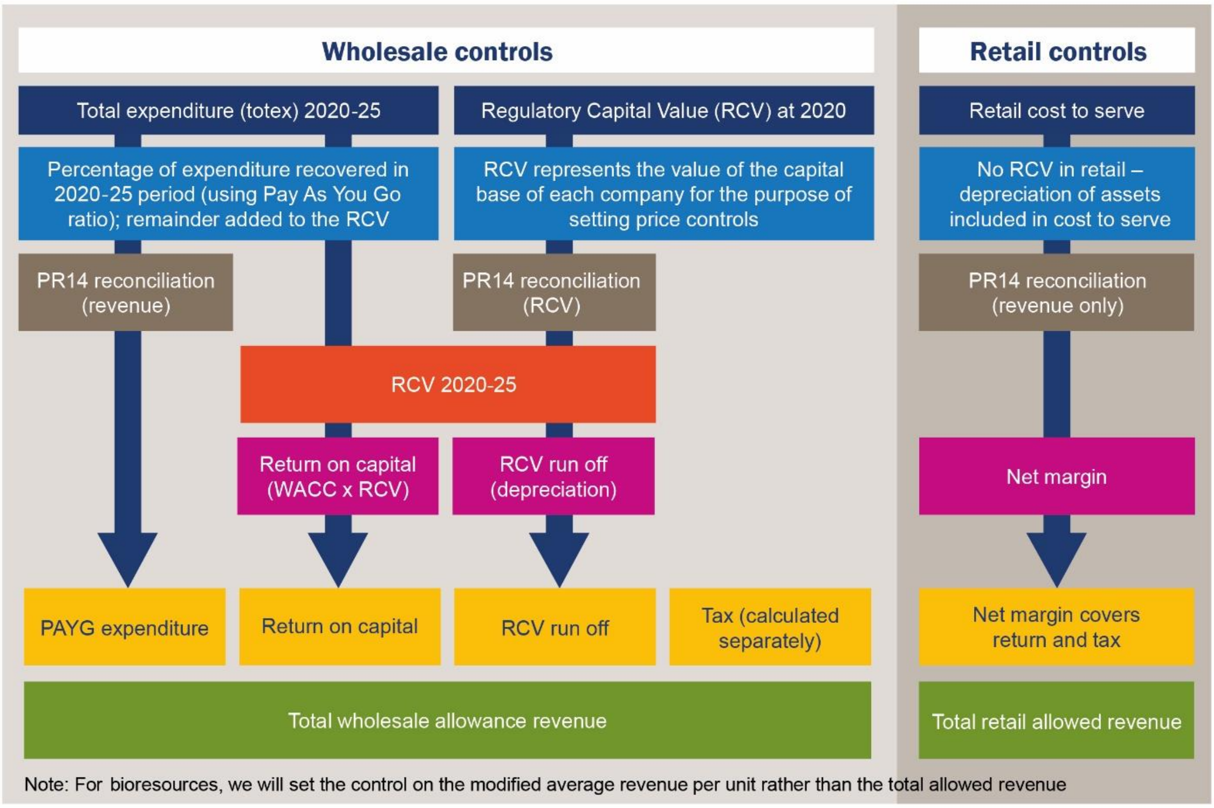
Note: Retail controls will be set for residential retail customers in England and Wales. For Wales, we are also setting business retail controls because, unlike in England, the business retail market is not fully open to competition.

Our final determinations set the price (revenue allowance), service (outcomes package) and incentive package (cost sharing, other reconciliations, form of control) for water companies. Wholesale revenue controls are based on a building block approach based on the RCV (set out below) and retail revenue controls are based on the total cost to serve plus a net margin on costs to cover a return and an allowance for tax (figure 7).

The wholesale controls include:

- **An allowance for PR14 reconciliation** – this reflects the true-up of incentive payments, such as outcome delivery incentives, incurred in the PR14 price control period (2015-20). This is also included in the retail controls.
- **Pay-as-you-go (PAYG) expenditure** – the proportion of total allowed expenditure that is recovered in each year of the price review period.
- **Regulatory capital value (RCV) run off** - is the revenue allowance to reflect the annual depreciation of the RCV. This reflects the long-term nature of the benefit to customers of previous company investment in its assets.
- **Return on capital** – the allowed return for the providers of equity and debt finance.

Figure 7: Calculation of revenue allowances in wholesale and retail controls



Companies have access to a range of risk sharing mechanisms. These share risks with customers and so the final revenue a company receives will not be exactly the same as the revenue set out in our final determinations. These risk sharing arrangements include:

- cost sharing incentives, where wholesale totex out and underperformance of our cost baselines is shared with customers;
- inflation indexation of the RCV and allowed wholesale revenues;

- reconciliation mechanisms, which adjust revenue allowances based on outturn information, including wage rates, new cost of debt, business rates, abstraction charges and tax;
- reconciliation adjustments for volume based controls that apply to the retail and bioresources controls; and
- interim determinations including substantial effects provisions in companies' licences, which allow us to change revenues in certain circumstances if particular thresholds are met.

2. Engaging customers

2.1 Importance of engaging customers

Customer engagement is a vital element of PR19. Companies need to understand what their customers want and what they're prepared to pay for. The risk in a monopoly business is that companies focus on devising a plan that will satisfy the regulator and lose sight of what customers need and want. This is why we designed the PR19 process to place a strong emphasis on the companies conducting rigorous research, and engaging with their customers and reflecting these needs accurately in their plans. Customer engagement therefore provides essential evidence to support companies' proposals in their business plans, such as their performance commitments to customers. The quality and application of customer evidence is one of a range of considerations that inform our decisions.

2.2 Our approach

We expect companies to use a wide range of research techniques and other sources of data to address our principles of good customer engagement and to identify customer preferences. We expect companies to reflect customers' views in their plans, including on performance commitments and outcome delivery incentives. Customer challenge groups provide independent challenge to companies and give independent assurance to us on the quality of a company's customer engagement and the degree to which this is reflected in its business plan. Customer challenge groups are not a substitute for a company engaging with its actual customers and customer challenge groups should not substitute their views for those of customers.

When we assess companies' plans, including on outcomes and on willingness to pay, we pay high attention to the preferences revealed by the company's research where it is of good quality and robust. However, we also take into account information which the customers themselves do not necessarily have access to such as comparative assessments across companies and other sectors. We also consider companies' past performance and other benchmarks. We use this information, in combination with our assessment of the quality of companies' proposals in their business plans (including our assessment of the customer engagement underlying proposals), along with stakeholder representations, to make our final decisions.

2.3 Sector summary

Although we see an improvement in customer engagement in PR19 and some high quality research, the research is not of a uniformly high quality. So in some cases we discount it. Our concerns mostly relate to how companies reflect their customer research in their business plans. In some cases, we find evidence that companies use a high-quality approach to engaging with customers, but we find insufficient evidence that the results of this engagement are reflected in companies' proposals, such as performance commitments and outcome delivery incentives.

We also find a significant divergence between the values customers of different companies give for the same service, which companies are unable to explain. While we would expect some regional differences in willingness to pay for these common services, we do not think it is reasonable for them to vary so significantly.

Good practice includes a clear line of sight from the results of a company's engagement with customers, to the outcomes it includes in its business plan. This is demonstrated by, for example, a company developing its package of performance commitments on the basis of robust customer valuation research, which it has appropriately triangulated[7], to propose incentives that reflect customer preferences and priorities across its package of outcome delivery incentives.

Poor practice includes instances where companies selectively choose particular values from their evidence on customer valuation of willingness to pay for improvements in service performance. Another example is where companies adjust these values with little supporting evidence when proposing outperformance payment rates.

[7] Triangulation is the method used in refining customer valuations across multiple sources of research and data.

Examples of good performance

On affordability, for Hafren Dyfrdwy, the company's acceptability testing and representations from its customer challenge group support an increase in the estimate of the number of the company's customers who will receive affordability support from 11% to 13%. This feeds into a corresponding performance commitment and means more customers will get assistance.

Where companies demonstrate good evidence of customer support, we accept outperformance payments for exceeding performance commitment levels, for example Affinity Water in respect of leakage, Anglian Water for the Water Industry National Environment Programme (WINEP), Hafren Dyfrdwy for the number of lead pipes replaced and length of river water quality improved, and South Staffs Water for unplanned outage and mains repairs.

Examples of poor performance

On water supply interruptions, Dŵr Cymru proposes an underperformance incentive rate that is lower (less penal) than it should be because the company arbitrarily sets it at the lower bound of our reasonable range, rather than using its own research. We are intervening to increase the underperformance rate to that implied by the company's research.

On its systems thinking performance commitment, United Utilities proposes large financial incentives for both underperformance and outperformance against its target level of systems thinking maturity. However, the company's customer research does not ask if customers support specific financial incentives for this commitment, and so we are changing the incentive to non-financial (reputational) only.

3. Delivering outcomes for customers

3.1 Importance of assessing outcomes

The outcomes framework is a key component in driving companies to focus on delivering the objectives that matter to today's customers, future customers and the environment in the 2020-25 period and beyond. Outcomes define the service package that companies should deliver for their customers, and their incentives to do this. We have two key tools to make sure that companies deliver the right outcomes for customers: performance commitments and outcome delivery incentives.

Performance commitments set out the services that customers should receive.

Outcome delivery incentives specify the financial or reputational consequences for companies of outperformance or underperformance against each of these commitments.

The outcomes-based framework gives companies the freedom to innovate and explore to find the most cost-effective way of meeting these outcomes.

Because performance commitments are the means to hold companies to account for their service delivery, it is essential they are clearly defined and measurable. It is also important that performance commitments are stretching, because this pushes companies to continually improve in order to deliver better service to their customers and for the environment.

Properly calibrated, outcome delivery incentives will help align the interests of management and shareholders with customers, because they directly link shareholder returns to the quality of service provided to customers. We protect customers against the risk of companies failing to deliver their commitments through underperformance payments. We use outperformance payments to encourage companies to innovate and stretch themselves, where customers value improved performance.

3.2 Our approach

Components of PR19 outcomes framework

Common performance commitments: performance commitments with common definitions covering customers' key priorities and stretching performance levels.

Bespoke performance commitments: performance commitments that reflect individual companies' circumstances and customers' preferences.

Standard outcome delivery incentives: incentives associated with common and bespoke performance commitments, that aim to align the interests of company management and investors with those of customers.

Enhanced outcome delivery incentives: financial incentives that aim to incentivise companies to improve performance beyond the best level currently achieved by any company to deliver benefits for all customers over the long term.

Customer protection: measures to protect customers in cases where outperformance payments are much higher than expected or otherwise to limit risk exposure for customers or companies.

For 2020-25, we want to build on the success of the outcomes framework by asking companies to make more stretching performance commitments to their customers, have stronger incentives to deliver on their commitments, and better reflect resilience in their commitments.

To better align the interests of company management and investors with those of customers, outcome delivery incentives should, in general, be financial rather than reputational. In addition, financial incentives should be settled annually (or 'in-period') rather than at the end of the five-year period, to bring the financial impact closer in time to the performance that generated it. This focuses management on service delivery and improves companies' accountability to their customers.

It is important that performance commitments are transparent so that we, along with customers, stakeholders, other regulators and companies, can understand, compare and monitor performance. This is achieved by setting performance commitments that are clear, unambiguous, complete and concise with no inappropriate exemptions. In setting performance commitments for each company, we see a limited role for exclusions. For example, while weather is a factor outside company control, the response to managing the risks and uncertainty associated with weather and the operational response to a severe weather incident are within companies' control.

In setting the outcomes package for each company, we seek to balance a number of factors, including:

- reflecting customer priorities, while setting stretching but achievable performance commitment levels (taking the characteristics of different performance commitments into account);
- recognising the variation in current levels of performance across companies and across performance commitments, while ensuring all customers receive an appropriate level of service;
- setting sufficient incentives for good performance by companies and protecting customers from poor performance, while not exposing customers or companies to disproportionate risk; and
- encouraging innovation across the sector, while protecting customers from excessive risk taking.

We assess the quality of evidence provided by each company in relation to how its outcomes package reflects its customers' preferences. As described in section 2, we find variability across the sector in both the quality of engagement that companies undertake to support their proposals and the extent to which companies reflect customers' views in their business plans.

Given the mix of quality and application of customer engagement, we use the customer evidence provided by companies, alongside other sources of information, to make our decisions about performance commitments and outcome delivery incentives. Our decisions are informed by:

- the quality of evidence companies provide to support their proposed performance commitments, performance levels and outcome delivery incentives, including how these reflect customer priorities and how they value service improvements;
- individual companies' current and historical performance;
- a comparative assessment of companies' historical, current and forecast performance, where this information is available; and
- the views of other regulators and stakeholders.

In addition, we look across the combination of performance commitment levels and outcome delivery incentives for each company and across companies. This is something customers were not able to do when giving their preferences. This informs our 'in the round' decisions, that seek to accommodate customer preferences and stretch companies to provide better service/performance, incentivising them to outperform, while protecting customers from poor performance.

3.2.1 Common performance commitments and outcome delivery incentives

For common (and certain other comparable) performance commitments, we use comparative analysis to assess how stretching company proposals are. We assess the evidence provided by companies in support of their proposals.

For outcome delivery incentives, we assess the evidence, including customer support, provided for the type of incentive selected; for example, a non-financial incentive, or outperformance and/or underperformance payments. We use comparative analysis to assess companies' proposed outcome delivery incentive rates. We consider that rates of financial incentives for the same performance commitment might be expected to vary between companies, for example, because of the different values customers place on service improvement. However, we do not consider large variations, which neither we nor companies can satisfactorily explain, to be appropriate. Therefore, in setting outcome delivery incentive rates for common or comparable performance commitments, we assess company's proposals against reasonable ranges for such rates and consider whether to intervene where the proposed rate is outside the range (whether higher or lower).

Where we have concerns with the quality of customer research and/or where comparative assessment demonstrates that the performance levels and outcome delivery incentive rates are not appropriate, we set performance levels or incentive rates that are different from those proposed by companies.

At draft determinations, we set performance commitments based on forecast improvement in business plans and evidence of historical improvement. In particular, we set:

- three common forward-looking upper quartile performance commitment levels for water supply interruptions, internal sewer flooding and pollution incidents;
- more than 15% reduction in leakage and up to 13% reduction in per capita consumption on the basis of improvement from historical levels, and consistent with Government expectations in England and Wales;
- statutory compliance levels for water quality and water treatment compliance; and
- asset health performance commitments based on historical levels and targeted progressive improvements.

At final determination, we carefully considered company arguments to reduce stretch, in particular around the achievability of performance commitment levels in the early years of the period, along with representations from other stakeholders on the level of stretch. We continue to use statutory compliance, forward-looking and historical improvements to set performance commitment levels. After further considering the overall stretch and historical trends we are, for example, moderating the stretch on water supply interruptions and mains repairs, and reducing the leakage challenge for some companies (although it is still at least 15%). We are also relaxing the deadband around the water quality compliance performance commitment level.

More details of our approaches to setting the performance commitment levels for each of the common performance commitments can be found in ‘Delivering outcomes for customer policy appendix’.

Our key decisions on performance commitment levels for final determinations are summarised in table 1 below.

Table 1: Final determination decisions on key performance commitment levels

Category of performance commitment	Performance commitments included	Decision on performance commitment levels for final determination (change from draft determination)
Common performance level across industry	water supply interruptions; internal sewer flooding; and pollution incidents	Retain draft determination levels for internal sewer flooding and pollution incidents, based on forward-looking upper quartile. Relax **water supply interruptions** 2024-25 level from 3 minutes to 5 minutes with consequent adjustment to the profile of levels from 2020-21 onwards.
Reducing water demand	leakage; per capita consumption	A small number of company-specific adjustments to performance commitment levels.
Asset health	mains repairs; unplanned outage; sewer collapses; sewer blockages; external sewer flooding; low pressure; water quality; customer contacts; taste and odour and discolouration	Some company-specific adjustments to performance commitment levels for each asset health performance commitment, with the exception of **mains repairs**, where we relax the draft determination level for each company to account for interaction with leakage reduction.
Statutory commitments	water quality compliance (CRI – DWI's compliance risk index); treatment works compliance	At draft determination we set 100% compliance targets for these performance commitments. We make no change on treatment works compliance at final determination. We relax the deadband around the 100% target for **CRI**, to reflect the overturning of the proposed ban on metaldehyde by the High Court.
Resilience	risk of severe restrictions in a drought; risk of sewer flooding in a storm (non-financial incentives)	We make a small number of company-specific adjustments to performance commitment levels.
Vulnerability	priority service registers (non-financial incentives)	We retain the target to register a minimum of 7% of households, but relax data checking target for "contacts" with customers on the register from 50% to 35%, in particular to reflect experience from other sectors.

3.2.2 Bespoke performance commitments and outcome delivery incentives

Bespoke performance commitments are designed to reflect the challenges that different companies face and their own customers' preferences and circumstances. Bespoke performance commitments are more flexible and open to innovation than common performance commitments, because they do not require the development of sector-wide common definitions and measures and so are able to target particular issues relevant to the company's customers.

By their nature, bespoke performance commitments may be unique to a company or similar to ones used by only a few companies. They may also involve companies developing new definitions, which means that we may not have historical data or the ability to compare across companies. This makes it challenging to assess how stretching the performance levels are and the appropriateness of any financial incentives. In order to address these challenges, we triangulate across multiple sources of evidence to assess companies' proposals. Our starting point is the quality and strength of customer support and willingness to pay for the performance commitment and any financial incentives associated with it. We combine this with an assessment of the technical evidence supporting the performance commitment, including any sector comparators or similar performance commitments, and historical evidence and precedents, where available.

Some bespoke performance commitments, for example on asset health, reducing void properties and carbon reduction, are similar across multiple companies. These similarities mean we are able to make comparisons across the sector when setting performance commitment levels and outcome delivery rates.

3.2.3 Enhanced outcome delivery incentives

Enhanced outcome delivery incentives on common performance commitments aim to encourage companies to improve performance beyond the best level currently achieved by any company, to deliver benefits for all customers over the long term. This is likely to involve innovation and risk-taking by companies as they seek to significantly improve their performance. We can then set new, improved performance levels in future price controls to benefit the customers of all companies. In making decisions on this issue, there is a need to trade off encouraging innovation (across the sector) and who pays (the customers of one company).

Our threshold for when enhanced outperformance payments can be earned is set to make sure that only significant outperformance, beyond the industry frontier, achieves enhanced outperformance payments. Our enhanced outperformance payment rates take into account the wider benefits that may accrue to customers in the long term from shifts in performance driving the industry forwards in the next price control period. We set rates to make sure that customers of one company are not paying disproportionately for benefits to the whole sector.

To protect customers from companies taking too many risks to gain enhanced outperformance payments, we introduce enhanced underperformance payments. These are higher underperformance payments that are triggered if the company's performance falls below the industry lower quartile performance. Our threshold for enhanced underperformance payment rates is set at the current lower quartile of industry performance.

Our enhanced outperformance cap restricts any company earning outperformance payments above 1% return on regulated equity for any single performance commitment in any one year. This will make sure companies do not focus too much on enhanced outcome delivery incentives at the expense of other performance commitments.

3.2.4 Customer protection

We required companies to propose approaches to protecting customers in case their outcome delivery incentive payments turn out to be much higher than expected. However, we do not consider the measures companies proposed in their business plans to be sufficient to protect customers, and so we are putting in place the following customer protection measures:

1. Sharing with customers, through bill reductions, 50% of their incremental outperformance payments once the outperformance payments in any year reach 3% of their wastewater or water return on regulatory equity for that year.
2. Placing caps on potentially financially significant performance commitments. These include where there are large potential outperformance payments or where there is considerable uncertainty, for example, where current industry data is likely to be unreliable or sparse.

In making these decisions, our principal focus is on making the appropriate trade-offs between preserving adequate incentives for stretching performance and potential impacts on the level and volatility of customer bills. However, we also consider whether there is a need to limit companies' exposure to downside risk, for example, we place collars on a number of financially significant performance commitments, where there are large potential underperformance payments or considerable uncertainty. We have particular regard to the early years of the period, where there are significant increases in stretch on some performance commitments. We review the overall impact of the outcomes decisions for each company in order to assess whether our decisions result in companies being exposed to a disproportionate level of downside risk.

3.3 Sector summary

From a sector viewpoint, our key interventions on companies' proposals in their business plans include the following.

- On common performance commitments, we are increasing the stretch of most companies' proposed performance levels relative to their business plans, setting common performance levels for a number of performance commitments and company-specific levels in other cases. This is often accompanied by an increase in the strength of the outcome delivery incentives (underperformance payments) for underperforming against these stretching targets.
- We are increasing the stretch and coverage of performance commitments focused on asset health to drive improvements in this area, particularly where companies have had past performance issues.
- We are rebalancing companies' packages across water or wastewater where the company's proposed focus is unbalanced towards one or the other, to encourage more focus on areas that customers prioritise the most, or where the company focuses too much on areas of existing strength rather than on improving areas of weakness.
- We are removing (or reducing the financial incentives in relation to) performance commitments where customers' support or other evidence for them is weak.
- We are introducing performance commitments to protect customers against delayed or poor delivery of schemes or other spending that is being funded through cost adjustment/cost enhancement claims. We also support new performance commitments that will encourage innovative schemes for customers (for example, on support for vulnerable customers) or the environment (for example, on natural capital approaches to delivery), or that will potentially move the industry performance frontier.
- We are placing caps and collars on a number of important performance commitments to limit risk exposure to unexpectedly high or low performance for customers and companies.

  The overall effect of our interventions is generally to increase companies' financial exposure to potential underperformance against the measures in their outcomes package – through a combination of increased stretch and strengthened financial incentives, while ensuring that an efficient company will still be able to finance the proper carrying out of its functions in the interests of customers. However, this varies by company and in some cases we have also increased the financial opportunity from potential outperformance. In some instances, we have had reason to intervene more in some companies' plans than others. High performing companies have the opportunity to earn some outperformance payments at current levels of performance, as we set some performance commitment levels on a common basis. We are satisfied that our decisions are consistent with our duties, taken in the round.

4. Securing cost efficiency

4.1 Importance of cost efficiency and direct procurement for customers

Residential customers are dependent on their water company – they cannot choose their supplier. It is vital that companies take action to drive efficiency in their businesses, and that business plans are efficient and demonstrate that companies are providing their customers with value for money. Customers should not carry the cost of inefficient services.

At PR14, we introduced a totex and outcomes framework. The framework gives companies the flexibility to decide how best to deliver their services, and to come up with the most cost-efficient and innovative solutions. This framework, along with a focus on innovation and the greater use of markets at PR19, offers significant scope for companies to reduce costs. Consistent with that, our PR19 methodology involves us setting stretching but achievable targets to incentivise companies to deliver an improvement in efficiency, relative to past periods.

At PR19 we are introducing a new tool, direct procurement for customers, to increase the efficiency of large capital investment. Direct procurement for customers means companies tender for large discrete projects to be delivered by firms other than themselves. Such competitive tender processes will cover designing, building, financing, operating and maintaining large new assets, such as treatment works or large transfer pipelines. The resulting spend will be recovered by the firm delivering the project outside the price control, as we expect the tender process itself will control costs.

Direct procurement for customers has the potential to benefit customers by providing an option for delivering the largest and most expensive new assets at lower cost, allowing scope for greater innovation, and allowing new providers to bring fresh ideas to the delivery of key projects. This initiative requires companies to consider using direct procurement for customers to deliver large-scale projects efficiently, contributing to affordable bills for customers and improving the delivery of projects, which in turn will improve the customer experience.

4.2 Our approach

Building blocks of PR19 cost efficiency framework

Base wholesale and retail costs: For companies' day-to-day operational and maintenance costs, and costs to accommodate growth, we use econometric models to benchmark historic costs and set efficient cost allowances.

Enhancement expenditure: We use company forecast data and compare costs for similar activities to allow each company efficient costs for investment to enhance services for customers and the environment.

Cost adjustment claims: Companies can present evidence of unique operating circumstances, legal requirements or atypical expenditure which drive higher efficient costs for the company relative to its peers.

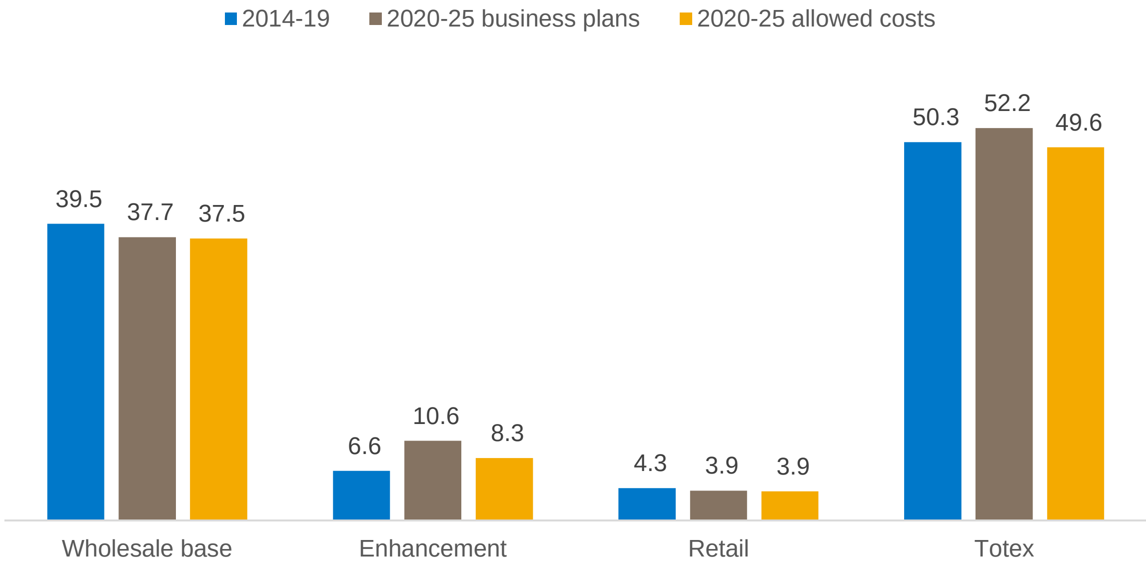
Direct Procurement for customers: For schemes forecast to cost at least £100 million, we expect companies to assess whether direct procurement for customers would be an efficient mechanism for delivering the investment. We allow companies to recover the costs of running the procurement process.

Our final determinations set the allowed costs for each company, providing a strong incentive on companies to be efficient. We consider our cost allowances to be achievable, when compared to costs incurred historically (figure 8). The final determinations will incentivise companies to innovate, which will pave the way for a more efficient, higher performing sector.

These total expenditure figures of £49.6 billion quoted here do not include:

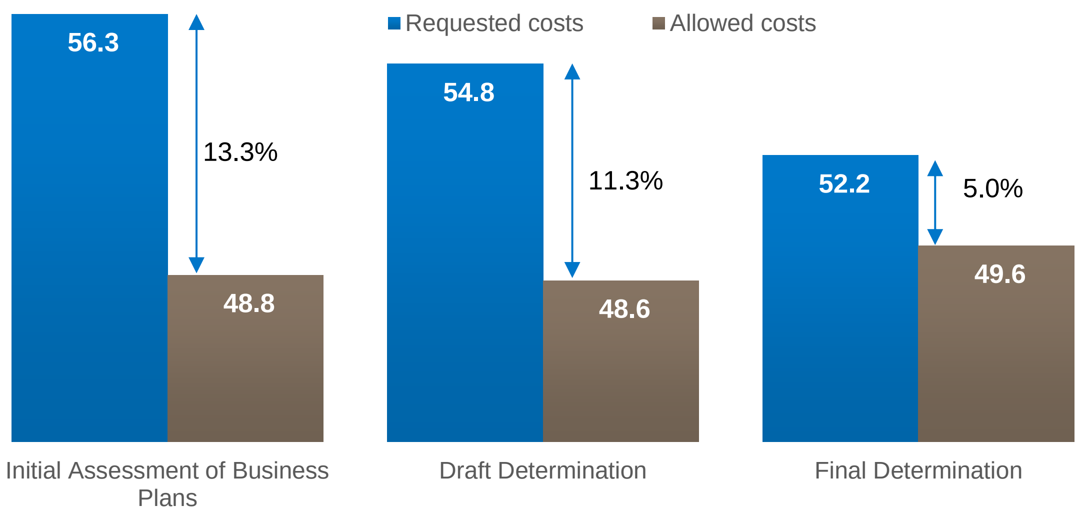
- the conditional funding of £480 million we are providing to Thames Water to improve the resilience of water supplies in London and to improve the performance of the London water network;
- the £469 million we are providing through a gated process for the development of strategic regional water resources solutions to help support drought resilience challenges; and
- £200 million of funding we are providing for the innovation fund.

Figure 8: Comparison of PR19 cost allowances to historical costs, £billion



Our cost challenge during PR19 has encouraged most companies to scrutinise further their business plans and remove costs that customers should not be paying for. Companies have benefited from our feedback from the two stages of the price review process: the initial assessment of business plans, and draft determinations. During this process, we have also reviewed representations and amended our modelling approach where appropriate. This increases the amount allowed at final determination. Across the industry, both these effects lead to the gap between the amount requested by companies and our allowance reducing significantly since the initial assessment of business plans and draft determinations (figure 9).

Figure 9: Change in company requested totex costs, and allowed totex costs, during the PR19 process, £billion



To set efficient cost allowances, we use information from both within and outside the water sector. Where possible, we use comparative assessments. To do this, we split costs into different areas and use econometric models for the majority of the value of proposed costs: namely the on-going operation and maintenance costs and any costs to accommodate growth.

We include costs driven by population growth within base, given the similarity in the characteristics of the expenditure. Companies experience these costs on a year-on-year basis and these can both be explained by similar cost drivers. Moreover an integrated approach mitigates for known reporting differences between operating, capital maintenance and growth related expenditure across companies. For example some companies reported zero costs under historical new connections capex because they reported the costs as opex instead.

Our wholesale econometric models use eight years of historical expenditure data and derive best fit equations using explanatory cost drivers. We consider how our econometric equations explain companies' historical costs, and rank companies in order of efficiency – the most efficient company being the one whose costs are proportionally lowest when compared with our model's prediction. We use this ranking to set our assumptions of the extent that companies can catch up with the best performing companies.

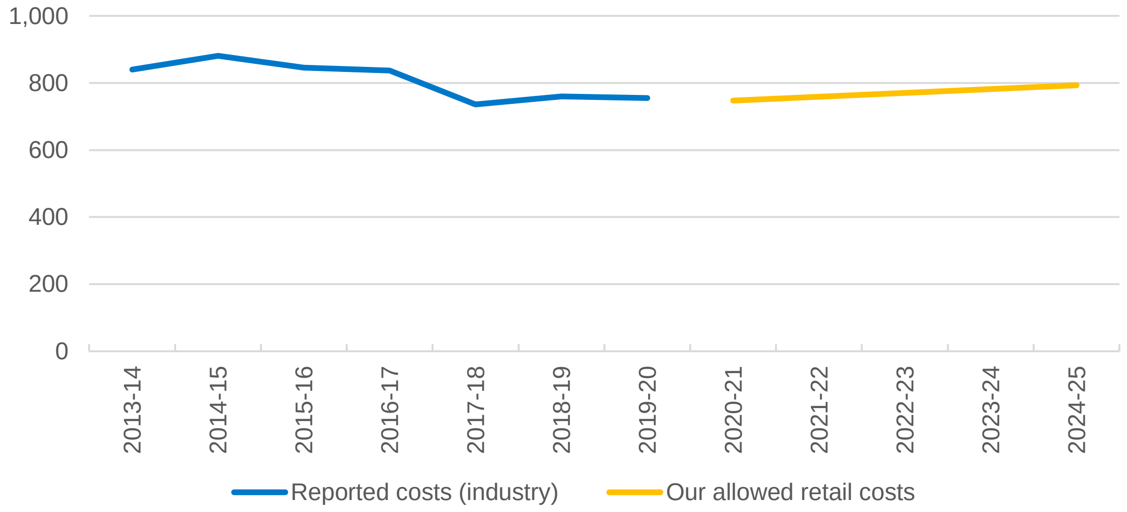
We assume that all 17 water companies can attain the same efficiency as the fourth most efficient company, and that all 11 wastewater companies can attain the same efficiency as the third most efficient company. Our assumption balances the need to stretch the industry to deliver efficiencies, with setting realistic targets. Whilst we considered instead assuming that companies could achieve the same efficiencies as the frontier companies, we adopt a conservative approach, which is significantly less challenging on a percentage basis than the upper quartile efficiency challenge during PR14.

We have shared our econometric models transparently with companies throughout the process. All our models were first made available to all companies during the consultation process in March 2018, and updated versions of these models were shared at our initial assessment of business plans and at draft determinations.

Since we introduced separate residential retail controls in 2014, we have seen evidence that companies are increasingly focused on outcomes and efficiency in delivering their retail services. This trend is continuing. Projected costs for the 2020 to 2025 period in residential retail are generally decreasing compared to current levels of expenditure. So for residential retail costs we have econometric models using both historical and forecast data.

For our retail control we calculate the upper quartile efficient level of performance, which corresponds to the level that the most efficient 25% of companies achieve in their retail costs. We apply the average of the historical and forward-looking upper quartile efficiency challenges to set residential retail allowances for the 2020 to 2025 period. Due to the lack of long-lived infrastructure assets, there is the potential for faster efficiency transformation in retail services, as demonstrated by some companies during 2015-20. We therefore consider that using forward-looking business plans to inform the efficiency challenge is appropriate given the pace of transformation in retail services (figure 10). The majority of companies submitted forecasts that are significantly more efficient than historical expenditure.

Figure 10: Industry reported total retail costs and our retail allowance, £ million

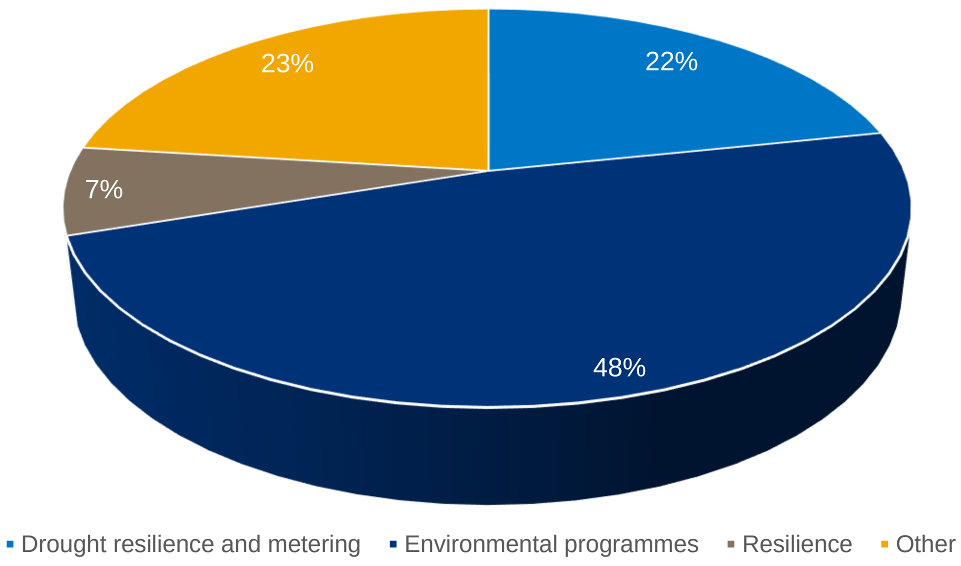


We set our cost allowances in each area of wholesale base costs and residential retail costs by putting our 2020-25 estimates of the explanatory cost drivers into the model equations and applying the catch-up efficiency challenge.

We also look beyond the sector and expect water companies to be as efficient as other leading businesses. We assume a further challenge of 1.1% per year to our base cost allowances to reflect cost efficiency trends in the wider economy. We also use trends and forecasts for the wider economy to adjust for real input price increases where prices are expected to grow by more than our CPIH inflation indexation.

In addition to the day-to-day costs of operating and maintaining their existing assets and services, each company proposes investment to enhance services for customers and the environment. Enhancement funding can be for environmental improvements required to meet new statutory obligations, improving service quality and resilience, and providing new solutions for water provision in drought conditions (figure 11).

Figure 11: The split of companies' proposed enhancement costs between different cost categories



We use company forecast data and compare costs for similar activities to allow each company efficient costs for its enhancement programmes. We use benchmarking for most of the environmental programmes, most of the costs to improve drought resilience, and metering programmes, which cover 70% of enhancement proposals. Where we do not have comparative data, such as in the area of resilience, we assess the detailed proposals and make efficient allowances based on the quality of company evidence. We only make an allowance for proposals (or partial proposals) where we have sufficient evidence to determine an appropriate value for the investment. However, in exceptional circumstances, if we are concerned about consumer impact as potentially crucial investment has not been evidenced appropriately, we set up a bespoke gated process to allow the company to provide further evidence. This bespoke process has been applied for two conditional allowances relating to water supply infrastructure in London proposed by Thames Water.

We assume a further challenge of 1.1% per year to some of our enhancement allowances, where we have comparative models, to reflect cost efficiency trends in the wider economy.

As part of our methodology, companies also raise cost adjustment claims where they consider that they have unique or atypical material costs, which would not be adequately captured in benchmarking. We consider these claims and make efficient allowances where appropriate, which increases our view of efficient costs for the company. We accept or partially accept nineteen claims on a variety of issues, for example we accept Dŵr Cymru's claim related to maintaining reservoir safety and Southern Water's claim related to improving bathing water beyond statutory requirements

Our assessment of all the components detailed above results in our view of efficient totex for each company for the period 2020-21 to 2024-25.

We apply an incentive to encourage companies to deliver their business plan proposals efficiently. Companies share a proportion of any cost overrun or efficiency gain underspend with their customers. Our incentive allows companies flexibility to innovate and enable them to deal with a degree of uncertainty and change across the 2020 to 2025 period too.

For discrete schemes that companies forecast will cost at least £100 million over their life, we expect companies to assess whether direct procurement for customers would be an efficient mechanism for delivering the investment. For any schemes likely to use direct procurement for customers, we allow companies the costs of any initial design, and the costs of procuring and managing the contract. We also include a mechanism so that if direct procurement for customers does not proceed, the company can claim the efficient costs of carrying out the scheme itself from its customers.

4.3 Sector summary

As a result of companies reducing the costs they initially propose and our updated modelling approach, many companies now appear relatively efficient compared to what we saw earlier in the price control process (table 2). Whilst nine companies requested costs more than 10% more than our allowance at draft determination, only Anglian continues to have as large a totex gap at final determination. Conversely two companies, Portsmouth Water and Hafren Dyfrdwy are getting more than requested as our overall approach rewards efficient business plans, which means that some efficient companies may receive more in allowances than requested in their business plans.

Whilst the gap has reduced significantly for base costs, a large difference remains between Ofwat's view and companies' views for enhancement costs. We continue to challenge these costs as companies typically only demonstrate the need for part of their requested discretionary investment and request expenditure which we consider funded through our base costs allowances. This leads to a greater totex challenge across the sector.

Table 2: The results of our cost efficiency assessment

Key:

Key:	Company's costs are less than 4% above either our view of costs or historical costs
	Company's costs are between 4% and 10% above either our view of costs or historical costs
	Company's costs are more than 10% above either our view of costs or historical costs

Company	Base costs		Totex costs	
	Our view of costs compared to company view	Company view of costs vs historical costs (2015 -2020)	Our view of costs compared to company view	Company view of costs vs historical costs (2015 -2020)
Anglian Water				
Hafren Dyfrdwy				
Northumbrian Water				
United Utilities				
Southern Water				
Severn Trent Water				
South West Water				
Thames Water				
Dŵr Cymru				
Wessex Water				
Yorkshire Water				
Affinity Water				
Bristol Water				
Portsmouth Water				
SES Water				
South East Water				
South Staffs Water				

Direct procurement

Only two companies' September 2018 business plans clearly support delivery of a project through direct procurement for customers in the 2020 to 2025 period: United Utilities, with the Manchester and Pennines resilience scheme, and Southern Water, with the Fawley desalination scheme. Anglian Water and Dŵr Cymru both now agree to seek delivery of schemes through direct procurement for customers.

Other potential projects have been identified, including strategic regional schemes. We expect companies to ensure that they consider direct procurement for customers for these projects and any other major schemes which may arise to make sure that they are delivered in the way that has the greatest potential to provide the best value for customers. For more information see 'Cost efficiency technical appendix', and 'Delivering customer value in large projects'.

5. Accounting for past delivery

5.1 Importance of past delivery

We have two objectives in the past delivery area. First, we aim to accurately reconcile the incentives we set as part of the PR14 price control to ensure that customers only pay for the service that they received. This ensures that companies accurately account for the impact of their 2015-20 performance on customers. It is therefore a vital part of supporting the regulatory process, and of properly incentivising companies to deliver for customers at PR19 and beyond.

Second, through the PR19 process, we have assessed the companies' evidence that their business plans are deliverable. This has allowed us to identify, and help mitigate, potential risks to customers from companies not being able to deliver on their plans. Ways of mitigating the risks include introducing stronger incentives to deliver, and requiring companies to develop action plans to support delivery. The process is therefore an important tool for challenging companies to ensure that they can deliver for customers. The delivery of price control commitments and their licence and statutory obligations remains companies' responsibility.

5.2 Our approach

PR14 reconciliations

In PR14, we set mechanisms to incentivise companies to do the right thing for their customers. These financial incentives cover cost efficiency, outcomes performance, revenue forecasting, customer service, water trading and land sales[8]. In setting the 2019 final determinations, we are applying reconciliation adjustments to revenues for the 2020 to 2025 period and to the RCV to take account of these incentive mechanisms. We are also applying adjustments to reflect performance in the final year of the 2010-15 period, which could not be fully taken into account in PR14, because the outturn data for 2014-15 was not available at the time of the PR14 final determinations.

To complete the reconciliations, we are following the 'PR14 reconciliation rulebook' (the 'reconciliation rulebook'), which we originally published in 2015 and subsequently updated. The reconciliation rulebook sets out the methodology

[8] These mechanisms are explained in the 'Accounting for past delivery technical appendix'.

companies should have used to calculate these adjustments. It describes the approach to reconciling the mechanisms, setting out how we treat inflation, tax, the time value of money and mechanism-specific issues. We are making reconciliations for the 2015-20 period, using outturn performance for 2015-19 and forecast performance for 2019-20.

We are also including reductions in allowed revenues following enforcement action against Thames Water and Southern Water through the reconciliation process.

Deliverability

In our initial assessment of business plans, we reviewed the deliverability of the plans for 2020-25, taking into account companies' past performance in costs, outcomes, major incidents and customer complaints handling. Where we had concerns about companies' evidence on deliverability, we required them to submit additional evidence along with an action plan for continuous performance monitoring and improvement for the 2020-25 period.

5.3 Sector summary

The net value of the PR14 reconciliations we are including in the final determinations is - £1,753 million adjustment[9].

The value of the adjustments is broken down in table 3 below:

- The totex cost sharing adjustment is for the out and/or under performance of cost allowances shared with customers. This shows that overall companies have outperformed their cost allowances, with this outperformance shared with customers.
- The outcome delivery incentives adjustments are the financial out and under performance payments for exceeding or not meeting required performance levels, including for the service incentive mechanisms. This shows a small net underperformance payment at a sector level for end of period reconciliations, reflecting performance issues for several companies. Offsetting this, companies have generally received outperformance payments for in-period incentives.
- The revenue adjustments return over recovered revenue and allow under recovered revenue to be collected to/from customers for the wholesale and retail controls. The wholesale revenue forecasting incentive mechanism and the

[9] See the 'Accounting for past delivery technical appendix' for the value of individual reconciliations.

residential retail revenue mechanisms do this while providing incentives to companies to accurately collect revenues.

- The other adjustments are for water trading, the 2010-15 blind year reconciliation, land sales, an agreed adjustment to the Thames Tideway Tunnel RCV, and – for Southern Water – the impact of enforcement actions[10] (excluding fines payable to the Treasury).

Table 3: Sector level PR14 reconciliations in the final determinations (£ million)

Reconciliations	Upward adjustments	Downward adjustments	Net adjustments
Totex cost sharing	611	-771	-160
Outcome delivery incentives	467	-532	-64
Revenue	183	-228	-45
Other reconciliations	30	-1,513	-1,484
Total	1,291	-3,044	-1,753

We engaged early and consulted with stakeholders from 2015 onwards to ensure that the PR14 reconciliation process was effective. We published the 'Consultation on the PR14 reconciliation rulebook' in March 2015, 'The PR14 reconciliation rulebook policy document' in July 2015, 'Update to the PR14 reconciliation rulebook policy document' in February 2016, and updated versions of the 'Ofwat PR14 reconciliation rulebook' in February 2016, October 2016 and our final version in December 2017. The process has worked well, and we are building on this success for the PR19 reconciliations.

In general, the companies' PR14 reconciliations submissions have been high quality at each point in the process. In our initial assessment of business plans, we gave 11 companies the top grade available for their reconciliations, and no companies were given the worst grade. This has allowed us to focus on a few key policy issues in completing these reconciliations.

The evidence companies provided to demonstrate the deliverability of their plans has been more mixed. Seven companies achieved the best grade in the initial assessment of business plans, and six received the worst grade. For the draft determinations, we assessed the action plans submitted by companies in response

[10] Our enforcement action on Thames Water relating to its leakage performance resulted in customer rebates that are recovered through the totex and revenue reconciliation adjustments.

to required actions following our initial assessment of business plans. Where we still had concerns about deliverability following our assessment of the evidence, we intervened to strengthen incentives. For example, South West Water was required to introduce a new financial performance commitment to attain a four star rating with the Environment Agency. We are maintaining these interventions for the final determinations. We are also including an additional performance commitment on customer complaints for Bristol Water as it proposes in its representation. In areas where we had lesser concerns and companies submitted action plans in response to advisory actions, we are not making further interventions at final determination.

Examples of good performance

Wessex Water and South Staffs Water both make claims for additional revenue under the wholesale revenue forecasting incentive mechanism. Wessex Water made us aware of the reason for this claim (the uncertainty around the connection of the Hinkley Point C nuclear power station) at PR14, engaged early and provided high quality evidence. We are therefore able to include Wessex Water's claim in full.

The driver for South Staffs Water's claim arose after the December 2014 final determination, but the company also engaged with us early. Following the exclusion of elements of the claim at draft determination, the company provides further high quality evidence to support its case in its representation. Because the claim still includes some elements relating to infrastructure charges and an error relating to mains requisition charges in its PR14 business plan, which are outside of the scope of the mechanism, for final determination we are including £12.5 million of the company's updated £16.9 million revenue claim.

Examples of poor performance

Thames Water included a proposal in its business plan to change the elements of a performance commitment related to delivering the Counters Creek flood alleviation scheme. The proposal would have returned unspent funding, but would have resulted in no underperformance payment.

The company has not delivered the strategic sewer, which is central to the Counters Creek scheme. It has neither provided sufficient and convincing evidence that it understands the flooding risk for customers nor that its current approach sufficiently protects customers. We still consider the performance commitment to be appropriate, and consider that the scheme has been cancelled for reasons within Thames Water's control. We are therefore rejecting the company's proposal and intervening to impose a £149 million underperformance payment, to ensure that customers are compensated not only for the unspent money, but also for the foregone benefits.

5.4 Reconciling PR19 mechanisms at PR24

Because of the changes to our approach for PR19, there are more mechanisms to reconcile within and at the end of the 2020-25 period. To enable companies to understand our proposed approach, we published a number of illustrative models alongside the draft determinations in April 2019, and again in July 2019, to show how the reconciliation might work. We have taken stakeholders' feedback on the policy and the models on board and are publishing updated illustrative models alongside the final determinations.

We will formally consult on a PR19 reconciliation rulebook early in 2020. We plan to assess companies' PR19 blind year adjustments after outturn figures for 2019-20 are published in July 2020. There is merit in applying the PR19 blind year adjustments as soon as practicably possible, that is, over the remaining years of the 2020-25 period. Therefore, we have provided for a blind year adjustment in the revenue forecasting incentive formula set out in the notifications of companies' final determinations of price controls. We will consult on how we should go about applying the PR19 blind year adjustments in our forthcoming PR19 reconciliation rulebook.

6. Assurance, returns and financeability

6.1 Importance of risk and return

Our approach to aligning risk and return, now and in the long term, supports the key themes of PR19. Our determinations aim to incentivise companies to good quality service and deliver services efficiently while meeting their obligations and commitments to customers. The determinations we have set ensure that efficient companies are able earn a reasonable return and are able to finance the proper carrying out of their functions.

Our determinations are underpinned by incentive mechanisms that aim to align the interests of companies and their investors with those of customers. The incentive mechanisms provide outperformance and underperformance adjustments that are calibrated to reflect the levels of service and cost efficiency that are delivered for customers. Through the use of incentive mechanisms and the allocation of risk to the party best able to manage it we aim to ensure that companies will be incentivised to deliver the best outcomes for customers in 2020-25.

6.2 Our approach

The allowed return on capital

The allowed return on capital is an important component of overall allowed revenue and customer bills. It is necessary to provide debt and equity investors with a reasonable return: one that is commensurate with the level of risk that underpins their investment.

Our allowed return on capital is a weighted average of the allowed return on equity and debt, based on a notional capital structure. It is set with reference to recent data and market expectations for the cost of finance between 2020 and 2025, following established regulatory practice.

The allowed return on capital we use in our final determinations applies to all fast track, slow track and significant scrutiny companies. It is based on market data available up to September 2019. This data indicates the appropriate figure is lower than those we set out in our draft determination and PR19 methodology.

Our allowed return of 2.96% (in CPIH-deflated terms) lies broadly in the middle of the range recommended by our consultants, Europe Economics: 2.45% to 3.41%.[11]

The fall in our allowed return is about half of the potential reduction we trailed at our draft determination. It reflects updated market data and changes we are making in response to representations on our allowed return for draft determinations.

Risk analysis

As part of their business plans, we asked companies to prepare an analysis of risk based on potential variances in their performance over 2020-25. Our determinations include incentives for all companies to improve their service delivery for the benefit of customers and the environment. Outperformance payments are available for the best companies that deliver frontier-shifting performance. For PR19 we increase the proportion of revenue at risk from service performance through outcome delivery incentives. This rewards companies to deliver stretching levels of service and protects customers by lowering revenue allowances where companies underperform. We have increased the cost sharing incentives to ensure inefficient companies carry a greater share of the cost of underperformance.

We have carefully considered concerns raised in representations about the overall balance of risk and return. We have considered this in the context that the allowed return is based on market data that includes share price information for listed water and wastewater companies. This data supports our view that allowed returns are sufficient to reward investors for the risks they face in a sector that already benefits from significant risk protections[12].

Our final determinations reflect revisions to our allowed costs. The costs we allow are sufficient for efficient companies to deliver their obligations and commitments to customers. We make some more minor adjustments to the incentive package for cost items that are more uncertain; we adopt bespoke cost sharing rates for business rates and Environment Agency abstraction charges, and include a limited number of bespoke mechanisms that allow price limits to be reopened in limited circumstances for some companies.

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[11] Europe Economics, '*The allowed return on capital for the water sector at PR19'*, December 2019
[12] These protections include appointments that confer effective monopolies for specified geographic regions; our commitment to remunerate efficient investment in the RCV as at 31 March 2020; price limit reopeners; inflation indexation; totex cost sharing; allowances for special cost factor claims; outcome delivery incentives; and reconciliation mechanisms for wholesale revenue, the cost of new debt and tax.

As section 3 explains, we place caps and collars on potentially financially significant performance commitments. We also require companies to share with customers, through bill reductions, 50% of their incremental outperformance payments once the outperformance payments in any year reach 3% of their wastewater or water return on regulatory equity for that year. And to mitigate extreme cashflow and bill volatility, our final determinations offer companies the option, where outcome delivery incentive adjustments exceed ±1% of notional equity, to ask us to defer the excess to a subsequent year. We will consider such a request in light of the company's expected performance and our statutory duties in the round.

Our final determination includes a revised approach to the allocation of allowed costs between those recovered in the 2020 to 2025 period and those allocated to the RCV. This approach better reflects our cost challenge and, overall for the sector, this is beneficial for companies compared with the draft determination. Taking account of views in representations, we also place more weight on companies' views of cost and revenues for developer services using company-specific unit rates. This also aligns our allowance with the developer services reconciliation, and ensures that companies can operate consistently with our charging rules for developer services.

For our final determinations, we revise our calculation of expected risk ranges with respect to the base return on regulatory equity. Our assessment, which is grounded in evidence of sector performance against our past determinations, indicates there is more scope for outperformance than companies suggest in their submissions. The risk ranges vary between companies primarily reflecting the outcome delivery incentive package of each company and because of differences in allowed costs.

Financeability

Companies in the water sector must be able to finance their investment programmes and replace existing debt as it matures. It is important that companies are able to access finance on reasonable terms if they are to meet their obligations and commitments to customers.

Our financeability assessment considers whether the allowed revenues, relative to efficient costs, are sufficient for an efficient company to finance its investment on reasonable terms and to carry out its functions in the long term, so protecting the interests of existing and future customers. In carrying out our financeability assessment, we assume that an efficient company will be able to deliver a level of performance that is consistent with our efficient cost allowances, and that there is no outperformance or underperformance with respect to the levels of service provided to customers.

We carry out the financeability assessment on the basis of the notional capital structure that underpins the allowed return on equity and debt in our allowed return on capital. Companies are responsible for their own choices around capital and financing structure, within the framework of the price review, licences and company law, and they bear the consequences of their decisions. Companies are entitled to determine the financial structure appropriate to their circumstances, provided they bear the associated risks. For example, if a company's choice around financing structure results in it incurring higher debt costs than reflected in our view of efficient allowed returns, the company will bear this cost. This approach is consistent with meeting all of our statutory duties and with the approach we and other regulators have taken in previous reviews.

We consider that equity investors have a role to play in financing investment that supports significant growth of the asset base. Therefore, for purpose of financial modelling, we restrict dividends in the notional structures for those companies with real RCV growth that exceeds 10%. We consider that this best aligns the interests of companies and their investors with those of customers, and is appropriate before taking further steps to address a financeability constraint.

Consistent with our PR19 methodology, we advance revenue from future customers by bringing forward revenue from the RCV where a financeability constraint arises. This reflects that the proportion of allowed returns in cash and the return from indexation of the RCV has shifted over recent price reviews toward a larger proportion from indexation and smaller proportion in allowed returns. Bringing forward revenues and the transition to CPIH from RPI both help increase the proportion of cash returns. While some representations on our draft determination challenge this approach (on the basis that some credit rating agencies do not adopt such adjustments in their calculation of some metrics used to assess credit quality), we consider it to be appropriate and beneficial to customers compared with alternative approaches. As this revenue is advanced from future customers, we do not expect companies to use such advanced revenue to support unsustainable dividend policies. In our final determinations, the level of revenue brought forward is no higher than would be brought forward by a full transition to CPIH indexation at PR19 for all companies except South East Water[13].

[13] For South East Water, a part of the revenue brought forward reflects that its RCV run-off was the lowest of the companies in its business plan.

Financial resilience

We expected companies' business plans to demonstrate that their actual financial structure allows them to maintain financial resilience for the 2020 to 2025 period and in the long term, taking account of their overall assessment of risks related to their capital structure, as well as any potential cost shocks.

The allowed return on capital for the 2020 to 2025 period reflects market expectations (including an allowance for embedded debt) and is low compared to previous reviews. In this context, some companies with high levels of debt have already taken steps to restructure their debt financing arrangements and/or reduce gearing levels (the ratio of debt to equity finance). A number of companies have set out proposals to improve financial resilience between 2020 and 2025 by restricting dividends, injecting new equity or other capital restructuring measures. Some companies propose to do this by raising additional debt above the level of the financial ring-fence.

While companies are responsible for their choice of capital structure and should bear the consequences of their capital and financing choices, we remain concerned that some companies are not taking adequate steps to protect and maintain their financial resilience. Our final determinations for certain companies highlight that they need to accelerate their plans or take additional action to improve financial resilience.

We will continue to engage directly with companies where we consider that there is a risk to their financial resilience because of financing choices that leave them with more limited financial headroom. We will continue to monitor the information that all companies provide about their long-term financial resilience in their annual performance reports. And we will continue to challenge companies to demonstrate that their actions allow them to maintain financial resilience, to meet their statutory and other legal obligations, and to meet their customer commitments.

Assurance

Securing confidence and assurance is a key part of building and maintaining the trust of water companies' customers and other stakeholders, including Ofwat.

In PR19, we asked company Boards to provide assurance statements to demonstrate ownership of, and accountability for, key areas of their business plans.

Our assessments of what Boards were, and were not, willing to provide assurance of delivered insights into the quality and governance of company plans. Most companies were able to provide us with appropriate assurance in their September and April business plans.

In PR19, we also requested business plan information to be subject to assurance processes to ensure it was accurate and consistent. Following our initial assessment of business plans, all but three companies met our expectations for data assurance, quality and consistency; a significant improvement on PR14. This helped us to effectively challenge and compare company proposals.

All companies provided assurance that their business plans were financeable, and allowed them to maintain financial resilience, in the context of the cost of capital set out in our PR19 methodology. However, in the context of our draft determinations and evidence of further downward pressure on market returns, we asked companies to provide additional assurance that their plans would remain financeable and maintain financial resilience, taking into account the reasonably foreseeable range of plausible outcomes of their final determination.

When commenting on this issue, companies raise concerns in representations about the level of the anticipated return and the level of stretch in our draft determinations. Taking account of the changes we have made in our final determinations, we consider our determinations to be achievable and financeable for efficient companies with a notional capital structure. However, in some cases, companies may need to take steps to improve the financial resilience of their actual structures.

Boards will continue to play a vital role in the assurance of the data and information companies provide. We are currently developing our approach to the assurance of data and information for the next price control period and will provide more details in early 2020.

Putting the sector in balance

The public service nature of the water sector means that companies should be transparent about performance-related executive pay, dividends and financing arrangements, and show how these align to delivery of services to customers.

In July 2018, we published 'Putting the sector in balance', a position statement that made targeted amendments to the PR19 methodology that aim to encourage companies to take customers' interests more fully into account. It set out our expectations for company policies on dividends and performance-related executive pay for 2020 to 2025. We have encouraged companies to take steps to meet our expectations through the PR19 process. The position statement also encouraged companies to offer voluntary sharing mechanisms, for example, where they outperform our allowed return on debt.

All companies have taken steps through the PR19 process with the aim of meeting our expectations. Our challenge to the companies has evolved to take account of good and best practice among the companies we regulate. Companies need to implement their commitments and continue to develop best practice in their application of dividend and performance-related executive pay policies, to ensure they align with customers' interests in the 2020 to 2025 period. This includes ensuring that these policies include performance targets that are set by reference to the final determinations.

We do not regulate the level of dividends or specify the terms of dividend policies. But we do expect companies to take decisions on dividends having regard to all relevant factors, particularly their wider obligations and responsibilities, and to be transparent about both their dividend policies and how such judgements are made.

Our determinations propose a base dividend yield of up to 4% as a reasonable level for companies that have little real RCV growth and that perform in line with our determination over the period 2020-25. This level takes account of both the allowed return on equity and indexation of the RCV by inflation. Where a company must finance real growth of the asset base or where long term financial resilience is at risk, companies may need to reduce this base dividend or investors may need to invest more equity. In the application of their dividend policies we expect companies to be clear about how dividends declared or paid take account of all relevant factors and the delivery of companies' obligations and commitments to customers and other stakeholders.

For performance-related executive pay, we look to companies and their remuneration committees to ensure performance targets are substantially linked to stretching delivery for customers, and that these targets are rigorously applied.

Our final determination includes a mechanism for companies to share the benefits of high levels of gearing with customers. We have amended the mechanism set out in our draft determination[14] to include a glide path to the trigger level for the mechanism in the 2020 to 2025 period. This amendment sharpens the marginal incentives for highly geared companies to reduce gearing.

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[14] We originally consulted on the mechanism 2018. For details of the consultation on the original mechanism see Ofwat 'Putting the sector in balance: position statement on PR19 business plans'

6.3 Sector summary

Our CPIH-deflated allowed return on capital is 2.96% for the appointee and 2.92% for the wholesale controls. For the retail controls, we allow a margin on sales, which we are setting at 1.0%.

We are allowing Portsmouth Water and South Staffs Water a company-specific adjustment to the allowed return on capital, calculated as 33 basis points on the allowed return on debt.

We are accepting uncertainty mechanisms in the final determinations for Anglian Water, Affinity Water and Bristol Water. These address uncertain cost items that are specific to each company's circumstances, and that are not allowed in full in our final determinations. For Bristol Water we include a mechanism related to possible changes to abstraction costs from the Gloucester and Sharpness Canal, and in the cases of Affinity Water and Anglian Water we include mechanisms to provide protection from additional costs resulting from the absence of, or delays in introducing, a ban on the outdoor use of metaldehyde. In addition, we are including uncertainty mechanisms for five companies to address the possibility that, in some circumstances, 'direct procurement for customers' schemes might need to be brought back in-house. We are also amending the PR24 totex reconciliation mechanisms for all companies, in respect of Environment Agency abstraction licence costs and business rate costs in excess of or lower than the amounts included in companies' totex allowances.

We consider the final determinations for all companies to be financeable on the basis of the notional company structure, taking account of revenues advanced, where needed to ensure efficient companies can continue to access finance on reasonable terms. Our final determinations revise or include new adjustments to bring forward revenue from future customers to address a notional financeability constraint for 12 companies. We accept that proposals put forward by Severn Trent Water and United Utilities, to give effect to a full transition to a CPIH basis, are supported by customer preferences. And we accept an increase in RCV run-off rates for Dŵr Cymru in support of its voluntary contribution to its social tariff, as set out in its representations.

Examples of good performance

Financial resilience

Dŵr Cymru, Hafren Dyfrdwy, Portsmouth Water, Severn Trent, South West Water and United Utilities all indicate that they will maintain gearing at or below 65% through the 2020 to 2025 period.

Companies with high levels of gearing may need to take steps to improve financial resilience between 2020 and 2025. Notably, SES Water reports that it has reduced its gearing from about 77% to about 61%, and commits to maintain gearing below 70% throughout the 2020 to 2025 period.

Putting the sector in balance

Companies have taken steps to meet our expectations on performance-related executive pay in the 2020 to 2025 period. Anglian Water and Dŵr Cymru are committing to link 100% of the available performance-related executive pay bonus to performance that matters for customers. Wessex Water states that three quarters or more of the customer and environmental targets must be met for an award to be made. South West Water proposes that an annual bonus would only be paid if at least 90% of a basket of customer outcome delivery incentives are achieved.

United Utilities proposes to provide £71 million of voluntary funding to its CommUnity Share scheme which will provide a financial assistance scheme for customers in need of financial support. Where dividend distributions to shareholders exceed a pre-defined level, United Utilities will match these with additional contributions to the CommUnity Share scheme. Wessex Water proposes a sharing mechanism which will reinvest 20% of net outcome delivery incentive payments in community projects.

Examples of where improvement is required

Financial resilience

Yorkshire Water proposed steps to improve financial resilience in its business plan, but delays implementation in its representation.

Through the price setting process, we have challenged Affinity Water to demonstrate the steps it is taking to improve financial resilience.

These companies, together with Southern Water and other companies with high levels of gearing (such as Anglian Water and Thames Water), may need to bring forward proposals to strengthen their financial resilience.

Putting the sector in balance

Thames Water proposes a gearing outperformance sharing mechanism that results in lower sharing with customers than our default mechanism. We do not agree that the company's mechanism provides benefits for customers that are equivalent to the mechanism which applies in the final determination.

7. Addressing affordability and vulnerability

7.1 Importance of assessing affordability and vulnerability

Water is an essential service and affordability is an important issue for the three million customers who struggle to afford their water and wastewater bills in England and Wales. In addition, some customers may experience circumstances that make them vulnerable. Customers in such circumstances require sensitive, well designed and flexible support, suited to their non-financial needs. In keeping with the UK and Welsh Governments' strategic policy statements, we are setting companies stretching but achievable targets for how they support customers who struggle to access services or pay for bills.

Customers must receive services that are sensitive to their needs and that offer value for money, both now and in the long term. Customers' satisfaction, both with the services they get and their ability to pay bills, is the key to their trust and confidence in water and wastewater services. If the sector is to build and maintain customers' trust and confidence, water companies must thoroughly understand who their customers are and the specific needs of different types of customer. Companies can use this information to make sure the vital services they provide are accessible to all customers who need them, including those whose circumstances make them vulnerable.

Ahead of the price control, we set an expectation for customer challenge groups to explicitly comment on and challenge their companies in this area. They have done so and we have taken their evidence into account.

7.2 Our approach

In PR19, we expect companies to understand and address customers' affordability concerns. We also expect companies to develop effective measures to help customers who find themselves in circumstances that make them vulnerable. Although we distinguish between customers in circumstances that make them vulnerable and those who are struggling to pay, we appreciate that there will be customers affected by both circumstances.

Affordability

Company proposals for addressing affordability centre on a number of performance commitments measuring a range of deliverables: from the volume of customers receiving affordability support, to awareness of affordability support, and satisfaction with and sufficiency of the help given. We are not setting a common affordability performance commitment, because there are sufficient existing incentives for companies to have appropriate targets in this area. We have challenged companies to increase the number of customers they are helping at this price review.

All companies propose bespoke performance commitments covering affordability, and many have multiple commitments. A good performance commitment in this area is one that clearly demonstrates the company is:

- stretching itself to help as many customers as possible;
- supporting customers in a way which is tailored to their situation; and
- providing customers with the right amount of help.

Examples of good performance commitments include those that track the proportion of customers who are on, or who have completed, affordability schemes that continue to pay their full bill (Southern Water and Hafren Dyfrdwy). The information these performance commitments generate will help companies better understand how their support impacts their customers, and highlight where schemes may need improvement.

Poor performance commitments in this area generally do not include stretching targets, or their purpose and meaning is unclear. For example, the target is less stretching than what customers had indicated they were willing to pay for.

Where companies do not propose stretching targets, we are increasing performance commitment levels to reflect the maximum level of customer support indicated by customer research. Where companies propose performance commitments that are unclear, our performance commitment definitions clarify what is being measured, to ensure this is meaningful for customers.

As well as performance commitments, company plans also include a number of actions not related to performance commitments, including identifying and tackling financial vulnerability earlier using new technology and data. We outline these actions in our final determinations to ensure that water companies and their stakeholders have a record of what they have said they will achieve beyond performance commitments.

Bill profiles

In our initial assessment of business plans, we saw companies taking a number of different approaches to profiling their bills. Where possible, we are harmonising the sector by setting bill profiles that result in flat nominal bills, thus giving customers the most stable possible picture of what they will be paying between 2020 and 2025. We have done this because most company research indicates that it is what customers want and that it will help people, particularly those on a low income, plan their finances.

Vulnerability

In company business plans, there is significant variation across the industry in the proposed reach of priority service registers (records of consumers who have expressed a need for specific help or services). In addition, the information in company business plans does not provide sufficient and convincing evidence that companies currently have, or will maintain, up-to-date data on their priority services register membership. Therefore, we are introducing a reputational common performance commitment for the priority service register. The common performance commitment requires companies to:

- achieve a minimum level of 7% of households on the priority service register by 2024-25;
- achieve actual contact with 17.5% of households on the priority service register in the first year of the 2020 to 2025 period (based on one year's data) and 35% of households on the priority service register every two years for subsequent years of the 2020 to 2025 period; and
- attempt contact with 45% of households on the priority service register in the first year of the 2020 to 2025 period (based on one year's data) and 90% of households on the priority service register every two years for subsequent years of the 2020 to 2025 period.

We also want to ensure that companies provide high quality services to customers on the priority service register and to other vulnerable customers. Our final determination includes performance commitments for nine companies to track and improve customer satisfaction with priority services, and eight performance commitments for companies to achieve and maintain the British Standards Institution standard for inclusive service provision (BS18477.) These performance commitments will ensure that, not only do more customers receive vital priority services, but those services will be of a higher quality.

The Consumer Council for Water plans to track the types of customers being signed up to priority service registers, the type of support they get and whether particular types of customers in need could be missing out. We will work with the Consumer Council for Water to understand the findings from these exercises and establish how they might be used to help companies improve.

7.3 Sector summary

Our final determinations include 25 performance commitments across the industry related to supporting customers who are struggling to pay their bills. The common performance commitment setting the minimum number of customers on the priority service register, along with other bespoke performance commitments, will ensure that companies do more to identify and support customers whose circumstances make them vulnerable.

In addition to the performance commitments related to affordability and vulnerability outcomes for customers, our determinations promote affordability through our cost efficiency challenge. The lower allowed return also promotes overall affordability and creates scope for lower bills.

Water companies will grow the number of customers on concessionary tariffs from less than a million to over 1.4 million by 2025, on top of putting around 70,000 customers on payment matching schemes and giving hardship funds to around 20,000 customers. We will also see an expansion in the types of support companies offer, with many committing to introducing additional schemes such as payment matching and payment holidays.

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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