July 2019

Trust in water

PR19 draft determinations

Aligning risk and return technical appendix

Ofwat

PR19 draft determinations: Aligning risk and return technical appendix

Contents

Correction

The discussion of uncertainty mechanisms in sections 1.1 and 4.1 was updated on 22 July 2019.

1 Summary

Our determinations aim to align the interests of companies and investors to those of customers by setting the appropriate balance of risk and return. We aim to incentivise companies to deliver stretching levels of efficiency and levels of service that improve over time. Our determinations aim to ensure that investor returns in 2020-25 fairly reflect the levels of service and cost efficiency that are delivered for customers. Where companies deliver against these aims, customers benefit from the service levels that improve over time, and are recompensed where companies fall short, and investors are able to earn a return that is commensurate with the level of risk that underpins their investment.

The allocation of risk to the party best able to manage risk helps to ensure efficient risk management and mitigation. This appendix discusses how we allocate risk between companies and their customers.

This appendix sets out the issues relevant to our assessment and interventions regarding to the risk and return sections of the PR19 methodology (chapters 10 and 11 and appendix 12). We also comment on our assessment of company proposals to meet our expectations to improve trust in the sector which were set out in our 'Putting the sector in balance position statement'.

All of the responses to the initial assessment of business plans, including all of the companies' revised business plans, provided by the 1 April 2019 are taken into account in our decisions where relevant. Where appropriate, we explicitly set out our response to points and issues raised by respondents.

Our decisions also take into account the representations made on the fast track draft determinations where the points and issues raised are relevant to the slow track and significant scrutiny draft determinations. We will deal with the other elements of the representations to the fast track draft determinations as part of the final determinations.

We have not necessarily been able to take full account of all late evidence, submitted after the 1 April 2019 business plans, and we will consider this information for the final determination.

1.1 Risk and return – key components of our draft determinations

We summarise the key components of our draft determinations below:

- Our updated view of the cost of capital for the appointee is 5.25% in nominal terms, equivalent to 3.19% and 2.19% in CPIH and RPI terms.[1] Our updated view of the cost of capital uses a data cut off of 28 February 2019, since when there has been further downward pressure on some key parameters of the cost of capital. We will update our view of the cost of capital for the final determinations using market data up to autumn 2019.
- We have retained a retail net margin cap of 1.0% for household and non-contestable business retail services, with an overall 2.5% cap applying for business retail services which are contestable.
- For wholesale controls our updated view of the cost of capital is 5.14% in nominal terms, equivalent to 3.08% and 2.08% in CPIH and RPI terms.
- Our draft determination includes a company specific adjustment to the cost of capital for Portsmouth Water. We have not accepted the adjustments proposed by Bristol Water and SES Water because we are not convinced there are there are benefits that adequately compensate customers for the increased cost of the uplift. In the case of SES Water we have also not accepted there is compelling evidence of customer support for the proposed uplift.
- We have introduced a separate price control for delivery of the Havant Thicket storage reservoir by Portsmouth Water. This will allow greater transparency and oversight over costs on the project. We have proposed a wholesale cost of capital of 4.77% for this control (in nominal terms), equivalent to 2.72% and 1.72% in CPIH and RPI terms. This lower wholesale cost of capital reflects the relatively lower financing cost of the project relative to the sector over 2020-25, as its debt financing will be based entirely on new debt.
- We have assessed the risk ranges proposed by all companies and intervened to adjust the risk ranges for some companies. We consider that efficient companies should be capable of earning their base equity return. We are consulting on a proposed change to the approach to assessing the financing cost risk range for the final determination.
- The draft determination for Bristol Water includes a bespoke uncertainty mechanism that could lead to a reopening of its determination in 2020-25 associated with uncertainty on abstraction costs charged by the Canal & River Trust.

[1] This adjustment reflects our long-term assumption for CPIH 2.0%, with a 100 basis point wedge between CPIH and RPI.

- We are consulting on bespoke uncertainty mechanisms related to costs associated with Direct Procurement for Customers schemes for Anglian Water, Dŵr Cymru, Southern Water, Thames Water and United Utilities.
- We are intervening to remove revenue brought forward from future customers (through proposed pay as you go (PAYG) or RCV run-off adjustments) for Hafren Dyfrdwy, Southern Water, Wessex Water and South Staffs Water where there is insufficient evidence to support the proposed rates.
- We are intervening to reduce PAYG revenue brought forward from future customers for Affinity Water and Portsmouth Water based on our assessment of financeability for the notional company structure.
- We are intervening to bring forward revenue through an increase in PAYG rates to provide sufficient headroom to a minimum investment grade credit rating for Dŵr Cymru, SES Water and Thames Water.
- Eight companies have RCV growth that exceeds 10% in real terms in our draft determinations. For Portsmouth Water and Affinity Water, our financeability assessment assumes equity contributions are necessary in the notional company structure to finance investment. For Southern Water, Thames Water and Wessex Water our assessment is that notional financeability can be maintained with reductions to the dividend yield we assume for the notional financial structure.
- We welcome views on the dividend assumption we have used for our financeability assessment of the notional company structure.
- We welcome views on the tax reconciliation tool referenced in section 8 and the associated amendments we have made to the cost of new debt reconciliation spreadsheet.

We assess that all companies have made progress in meeting the expectations we set out in our ‘Putting the sector in balance position statement’, though progress is mixed.

- All companies have made firm commitments around transparency of their dividend policies for 2020-25 and have said that their dividend policy will take account of obligations and commitments to customers. However, the majority of companies have not provided sufficient explanation or evidence to explain precisely how they will demonstrate they will meet our expectations. We expect all companies to continue to take steps to meet our expectations. In particular we expect companies to demonstrate transparently that their dividend policy for 2020-25 takes account of obligations and commitments to customers and other stakeholders, including performance in delivery against the final determination.
- We have raised further queries with companies after submission of business plans on performance related executive pay policies. Most companies have

taken steps to demonstrate their performance related pay policies will link to performance that matters for customers, we expect each company and its remuneration committee to ensure its performance related executive pay policy demonstrates a substantial link to performance delivery for customers through 2020-25 and is underpinned by targets that are stretching. Trust and confidence can best be maintained where stretching performance is set by reference to the final determination and taking account of stretching regulatory benchmarks. We expect companies to commit performance targets will be continually assessed to ensure targets will continue to be stretching throughout 2020-25.

- All companies have proposed to adopt a gearing outperformance mechanism, though Thames Water, South Staffs Water and Bristol Water propose amendments to our default mechanism. We have assessed the proposals put forward by these companies, and on balance we not accepted the amendments and propose that these companies should accept our mechanism for the final determination.

1.2 Financial resilience

The PR19 methodology requires companies to provide Board assurance that they will remain financeable on the basis of their actual and notional structures through 2020-25 and maintain financial resilience. These statements were given on the basis of the information in company business plans, all of which were based on the early view cost of capital set out in the PR19 methodology.

The interventions in our draft determinations take account of our assessment of efficient costs and interventions we have made to outcome delivery incentives. As set out above, our updated cost of capital for the draft determinations is lower than our ‘early view’ and recent market data points to the potential for an even lower cost of capital in our final determinations.

We assess that our draft determinations are financeable for the notional company structures. However, we set out that we seek further Board assurance from companies that they will remain financeable on a notional and actual basis in response to our draft determinations. We expect companies to provide further Board assurance to confirm that they can maintain long-term financial resilience, taking account of the interventions we have made to their plans and the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the cost of capital in very recent market data. We have set specific actions for those companies with more limited levels of headroom in their assessment of financial resilience as set out in section 7.

1.3 Document structure

The rest of this appendix sets out our approach to risk and return in our draft determinations. The remainder of this appendix is structured as follows:

- In section 2 we set out our updated assessment of the cost of capital and retail margins which underpins our draft determinations.
- In section 3 we set out our assessment of risk analysis.
- In section 4 we comment on uncertainty mechanisms.
- In section 5 we comment on our overall approach to cost recovery now and in the long term.
- In section 6 we set out our approach to the overall assessment of financeability of our draft determinations.
- In section 7 we comment on the assessment of financial resilience carried out by the companies in their business plans.
- In section 8 we set out our approach to tax.
- In section 9 we comment on the approach companies have taken in meeting our expectations as set out in our 'Putting the sector in balance' position statement.

We provide further detail on our assessment of the cost of capital in the 'Cost of capital technical appendix'. Our assessment of the cost of capital is supported by a reports by Europe Economics and PwC.

2 Cost of capital and retail margins

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

If the cost of capital is set too high, bills may be higher than customers may reasonably expect, company profits may be seen as excessive and the legitimacy of the regulatory regime may be called into question. If the cost of capital is set too low, companies' ability to raise the finance necessary to deliver services that customers expect might be put at risk.

Our PR19 methodology sets out our early view of the cost of capital for the period 2020-25 to facilitate development of company business plans. We confirmed that we would update our assessment of the cost of capital for our draft and final determinations[2].

We have revisited evidence on the cost of capital for 2020-25 based on market data available up to 28 February 2019. The resulting cost of capital components we have used to set draft determinations are listed in Table 2.1, alongside our 'early view' estimates.

[2] We applied the early view cost of capital in our draft determinations for the fast track companies (Severn Trent Water, South West Water and United Utilities Water) that we published in April. We apply the cost of capital we have updated in the draft determinations of the slow track and significant scrutiny companies. The cost of capital we determine in our final determinations will apply to all fast track, slow track and significant scrutiny companies.

Table 2.1: Our updated view on the cost of capital for draft determinations

Component	Components of the cost of capital our draft determinations			Early view (CPIH 2%)
	Nominal	Real (RPI 3%)	Real (CPIH 2%)	
Cost of equity	6.56%	3.46%	4.47%	5.03%
Cost of Debt	4.38%	1.34%	2.33%	2.32%
Notional gearing	60%			60%
Ratio of embedded to new debt	80:20			70:30
Appointee cost of capital	5.25%	2.19%	3.19%	3.40%
Retail Margin deduction	0.11%			0.10%
Wholesale cost of capital	5.14%	2.08%	3.08%	3.30%

Our detailed assessment of the cost of capital for our draft determinations is set out in our 'Cost of capital technical appendix' where we also set out how we have considered representations from companies and wider stakeholders. Our assessment is informed by analysis we have carried out, and analysis carried out for us by Europe Economics[3] and PwC[4]. In summary:

- Our assessment of the market evidence since we published our 'early view' of the cost of capital has led to a materially lower estimate of the required **cost of equity**. This is driven primarily by a decline in the risk-free rate[5] and our assessment of beta.[6]

- Our assessment of the **cost of debt** reflects our updated calculation of the split between new and embedded debt, lower market forecasts of the cost of new debt and a lower estimate for the cost of embedded debt. In the case of embedded debt, our lower estimate is due to our decision to place more weight on a benchmark index-based approach. The revised estimate better aligns the embedded cost of debt with the cost of debt incurred by the sector as a whole. The cost of new debt is subject to an indexation mechanism that will be used to conduct a reconciliation at PR24. This will substantially limit risk of customer overpayment due to the forecast being too high and incurring any premium embedded into a forecast, and will mean that companies are protected in the event of increases in the market cost of new debt.

[3] Europe Economics, 'The Cost of Capital for the Water Sector at PR19', July 2019
[4] PwC, 'Updated Dividend Discount Model analysis for PR19', July 2019
[5] As proxied for by yields on UK RPI-linked gilts
[6] A measure of risk faced by investors in UK water, compared to a broad index of UK equities.

- We continue to set the cost of capital by reference to a notional capital structure, and retain our notional company gearing assumption of 60% as outlined in our PR19 methodology.

- On the basis of revised company business plans, the required retail margin deduction[7] has increased slightly from 0.10% to 0.11%. Our early view and current view are calculated according to similar principles. The updated figure reflects the availability of more accurate business plan data in the calculation.

The overall approach to the cost of equity is unchanged from our early view - we estimate the cost of equity using the capital asset pricing model (CAPM). The components that underpin the CAPM have been updated in our current assessment of the cost of capital to reflect our updated analysis and evidence emerging since our 'early view' (until the 28 February 2019 cut-off date).

Our approach to setting the cost of debt is unchanged, taking a weighted average of the cost of new and embedded debt. Having received business plans, our current view focuses on evidence presented in the plans, continued market trends and recommendations from external bodies.

We note that, since our data cut off of 28 February 2019, market data for three key inputs to the cost of capital (the risk-free rate, equity beta, and cost of new debt) have moved lower, suggesting an overall cost of capital that could be around 40 basis points lower than our updated view based on that date.[8] Inputs to the cost of capital may change between now and our data cut off point for final determinations in the autumn. Nonetheless, we expect companies to plan for the reasonably foreseeable cost of capital range which more recent market data currently suggests, and provide board assurance on their financeability on an actual and notional basis over 2020-25 on this basis.

Three companies: Bristol Water, Portsmouth Water and SES Water request a company specific adjustment to the cost of capital. Portsmouth Water's proposed adjustment passed our tests at the initial assessment of business plans (IAP) stage. Bristol Water and SES Water did not pass our tests in our IAP and we set actions for them to either remove their request or provide more compelling evidence to support our test criteria. Both companies retain their request for a company specific adjustment in their revised business plans. However, we do not include company specific adjustments for Bristol Water and SES Water in our draft determinations as

[7] The deduction when moving from an appointee to a wholesale cost of capital, to avoid double-counting investor returns attributable to the retail control.
[8] Calculation based on reperforming our cost of capital calculation with updated data for these inputs up to 28 June 2019, while keeping other inputs unchanged. See our 'Cost of capital technical appendix' for further detail.

the evidence provided in support of the adjustments does not pass our assessment criteria in full. We provide further detail on these issues in our 'Cost of capital technical appendix'.

2.1 Havant Thicket

At the IAP stage we agreed that Portsmouth Water would receive remuneration for its construction of the Havant Thicket reservoir as regulated activities. Portsmouth Water will recover its costs for delivery of the scheme from Southern Water under the terms of a bulk supply agreement that will be subject to commercial terms that are yet to be agreed.

Our decision for draft determinations is that Havant Thicket will be treated as a separate control belonging to Portsmouth Water, which will last for 10 years. Further details about the operation of the separate control are set out in the 'Havant Thicket policy issues appendix' and 'Portsmouth Water draft determination summary'.

We have assumed a revenue allowance of zero in Portsmouth Water's determination as we assume the revenues Portsmouth Water receives from Southern Water are sufficient to meet the costs it incurs. However, for the purposes of assessing the financeability of Portsmouth Water's determination, we need to make forecasts about the efficient capital investment, operational, and financing costs for delivery of the scheme. We intend that these costs will be used as a reference point when the two counterparties agree the value and profile of bulk supply payments to be made by Southern Water.

We have determined a standalone cost of capital for this project given its specific circumstances. As it is a new project, we have indexed the shadow RCV by CPIH. Our wholesale cost of capital for Havant Thicket is 2.72% in CPIH-deflated terms, compared with the wholesale cost of capital of 3.08% for the sector.

The equity component of our cost of capital estimate for Havant Thicket is 4.21% in CPIH-deflated terms (consistent with our wholesale allowance for the sector). In practice, the commercial agreement governing the terms of the bulk supply between the two counterparties could result in 'economic profit', increasing the return on equity that Portsmouth Water could earn. [9] Our cost of capital estimate for Havant Thicket does not reflect any assumptions about economic profit.

[9] i.e. a bulk supply price more than covering our assessment of efficient costs on the project.

The overall cost of debt estimated for the control over 2020-25 is 1.72% in CPIH-deflated terms, which is lower than our updated sector allowance of 2.33%. The different cost of debt estimate reflects two factors:

- **No embedded debt:** much of the development and construction expenditure for the project occurs after 1 April 2020. For this reason, and given an opening RCV of zero, we do not consider it appropriate to include an assumption for embedded debt.
- **Company-specific adjustment:** For our initial assessment of plans we allow Portsmouth Water an uplift of 30 basis points on its cost of debt, reflecting the evidence that it faced higher borrowing costs as a small company and that it passed our assessment criteria.[10] We consider that Portsmouth Water will remain a small company in terms of the relative size of its RCV after the project is complete, therefore the finding of our assessment is unaffected. This suggests an uplift to Portsmouth Water's cost of debt is appropriate if it is to finance the construction of Havant Thicket – though we recognise that other financing models may be viable.[11]

Uplifting our base estimate for the cost of new debt (1.33%) by 10 basis points to reflect issuance and liquidity costs (in line with the sector allowance), and an additional 30 basis points to account for the company-specific adjustment, gives a figure of 1.72% in CPIH-deflated terms.

We consider it may be appropriate to apply our cost of new debt indexation mechanism to all of the debt in the project's notional financial structure. Adoption of the mechanism would impact on the terms of the bulk supply arrangement between Portsmouth Water and Southern Water, and potentially impact on the calculation of any economic profit that is shared between Portsmouth Water shareholders and its customers in the construction phase.

The operation of the mechanism is relevant to the calculation of the sharing of economic profit between Portsmouth Water investors and its customers; itself determined by the commercial terms of the bulk supply agreement between Portsmouth Water and Southern Water. Therefore we seek views on how the mechanism might apply in the context of a separate ten-year control.

[10] Ofwat, 'PR19 IAP: Technical Appendix 4 – Company specific adjustments to the cost of capital', January 2019

[11] For instance, it is in theory possible that Southern Water could finance the project, deducting these costs from its bulk supply charge.

3 Risk analysis – return on regulatory equity

Our PR19 methodology sets out that we expect each company to demonstrate a clear understanding of risk to the delivery of its business plan and to provide clear evidence of the risk management measures it has in place. We set out that we expect companies to analyse the impact of upside and downside risk under the notional capital structure by reference to the return on regulatory equity (RoRE).

Our aim is for our determinations to be stretching, to encourage companies to improve efficiency, and we expect to see levels of service improve over time. An efficient company, with a notional capital structure, should be able to achieve a RoRE that is equivalent to the cost of equity that is allowed in our cost of capital over the period of the price control.

Where a company outperforms its cost allowance or service levels it should earn a higher return; where a company underperforms its cost allowances or service levels it should earn a lower return. By ensuring an appropriate calibration of regulatory incentive mechanisms, we aim to ensure the interests of companies and their investors are aligned to those of customers.

The PR19 methodology proposes to increase the proportion of revenue at risk from service performance through outcome delivery incentives (ODIs) and to sharpen the cost sharing incentives to reward the most efficient companies, with inefficient companies bearing a greater share of underperformance. These changes to the methodology, which include greater use of in period reconciliation adjustments, encourage companies to focus on delivery for customers and the environment. However, the use of caps and collars on individual performance commitments will limit overall risk exposure. We discuss these further in the 'Delivering outcomes for customer's policy appendix'.

The increase in risk exposure through ODIs and cost sharing rates is controllable by companies and their management; companies have the opportunity to outperform, delivering higher levels of service and cost efficiency to customers and so earn outperformance payments as well as underperformance payments. As companies have significant control over their ODI performance, and totex cost sharing rates are determined as part of the price setting process we do not consider the increased revenue at risk warrants an increased return on equity. If this were the case, it would be reflected in the market data on beta.

In recognition that our methodology increases the revenue at risk from service and efficiency performance, at a time when market expectations for the cost of capital are

lower than any previous price review, we set a lower gearing assumption for the notional company in our 'early view' cost of capital. The effect of the lower notional gearing assumption is to increase cash flow headroom to service efficient debt costs compared to the position if notional gearing levels were unchanged from PR14. However, the sharpening of incentives does not mean the sector as a whole should expect to receive returns that are skewed to the downside – rather that companies should expect to be rewarded for the provision of high quality, efficient services and that inefficient companies should bear a greater proportion of underperformance.

It is possible that companies with a track record of high levels of performance, expect to continue to deliver sector leading levels of performance, and in so doing may have a higher probability of earning returns that are higher than our cost of equity. Equally companies with lower levels of performance might expect to continue to perform more poorly than their peers, with expected returns skewed to the downside. Presentation of RoRE analysis allows companies to take account of such factors, as it relates to each company's expected performance against the allowed cost of equity under the notional financial structure.

The PR19 methodology sets out a prescribed suite of financial risk scenarios. Companies are required to use P10/P90 confidence limits to establish the levels at which to model the impacts of our prescribed scenarios on RoRE. These limits reflect the company's view of the plausible bounds of performance. P90 is the performance threshold at which there is only a 10% chance of outturn performance being better; P10 is the performance threshold at which there is only a 10% chance of outturn performance being worse. Companies are required to assess the potential impacts of scenarios relating to:

- Revenue;
- Costs;
- Outcome delivery incentives;
- Customer measures of experience (C-MeX) and Developer measures of experience (D-MeX);
- Cost of new debt; and
- Water trading incentives.

3.1 Initial assessment of business plans

We assessed the evidence provided by companies in support of their risk analysis in our initial assessment of business plans. In general, we found companies had clearly set out their downside and upside P10/P90 risk ranges, explaining their rationale,

and making use of historical data, forecast data and expert judgement. A number of companies used Monte Carlo analysis to underpin their assessment.

Where companies provided insufficient evidence on their measures to manage and mitigate risks, we set actions for them to explain how their risk management measures are relevant to, and effective in, managing exposure to risk on the basis of the RoRE analysis presented in their plans.

For some companies, we found there was a lack of evidence supporting the presentation of RoRE ranges, particularly regarding an expected downward skew to totex performance and in respect of revenue risk, with some companies indicating a significant exposure to revenue risk. We set out the reasons why we consider revenue risk to be relatively low in this sector in PR19 Initial assessment of plans – Technical appendix 3: Aligning risk and return to our initial assessment of business plans. The document also sets out evidence on cost performance ranges from previous price review periods, which demonstrates that, on average, companies have in previous regulatory periods outperformed the cost benchmarks we set (as they are incentivised to do).

In their representations to the fast track determinations, a number of companies[12] raised concerns that RoRE ranges represent an asymmetric skew on expected returns. Some companies cited challenges associated with our assessment of cost and ODIs. Thames Water suggested that upper quartile benchmark for the notional company, for both costs and common PCs does not exist for complex businesses.

Our aim is that companies are incentivised to deliver stretching levels of performance. We expect companies to deliver step changes in efficiency and service. A company whose future performance remains at the current average should expect to incur underpeformance penalties on its totex performance – a key expectation of incentive based regulation is that companies should become more cost efficient over time. We expect companies to stretch to deliver improved levels of performance over time.

We set out in section 3.1 that experience from PR14 is that despite an average totex and ODI risk ranges in the PR14 final determinations representing a negative skew (-1.7% to +0.6% on average for ODIs and -2.1% to 1.6% for totex), companies have responded positively with average performance on ODIs of +0.13% and 0.6% for totex. We have revisited our approach to presenting ODI RoRE ranges that we used in the fast track draft determinations, taking account of our interventions. We explain this further in section 3.2.

[12] Anglian Water, Bristol Water, Welsh Water, Wessex Water and United Utilities Water

3.2 Return on regulatory equity

Figure 3.1 sets out the annual average RoRE ranges for the slow track and significant scrutiny companies in our draft determination.

A company's base RoRE is aligned with our allowed real post-tax cost of equity (set out in section 2: cost of capital and retail margins) and is calculated as the return on equity for the equity portion of the RCV based on our notional gearing assumption. We present the RoRE analysis on a real basis to allow comparison with the real cost of equity in our determination. However, investors earn their returns from both the real equity return and inflation of the RCV. Therefore it is possible that a company that experiences a negative RoRE outcome might still achieve an accounting profit and positive return before inflation is taken into account (i.e. in nominal terms).

Base RoRE can vary between companies for the following reasons:

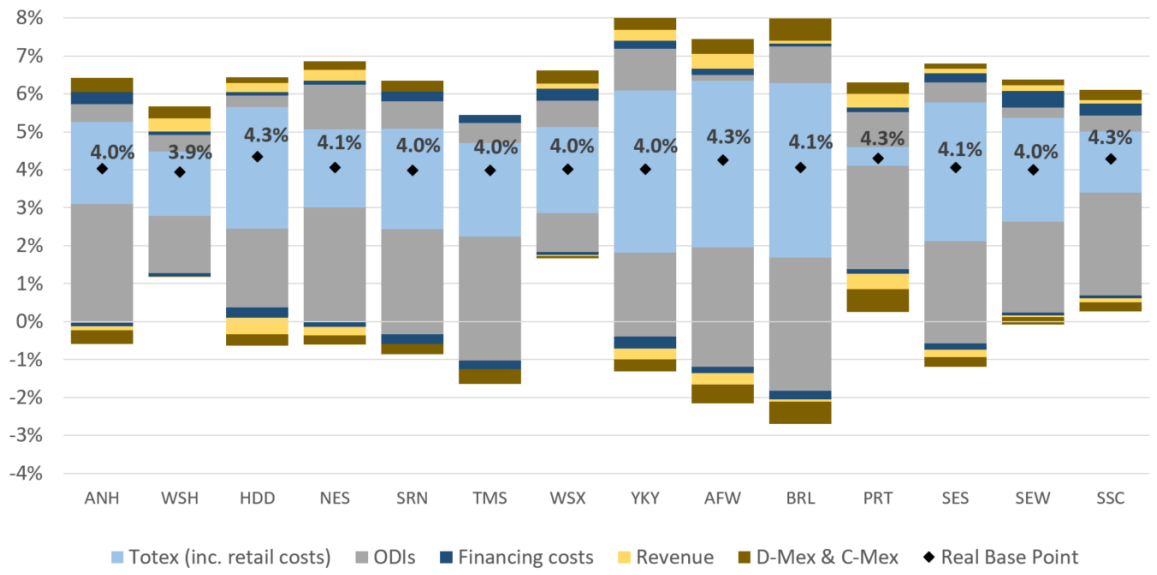
- Base RoRE includes the margin for the retail price control. While the retail margin is 1% on retail and wholesale costs for all companies, it varies between companies when measured against regulatory equity. This amounts to an addition to the base RoRE of between -0.2% and 0.5% for WaSCs, and between -0.2% and 0.9% for WoCs.
- The base RoRE is presented on a real basis, with the real cost of equity blended according to the proportion of the RCV that is indexed to RPI or CPIH. The proportion of regulatory equity that is linked to RPI or CPIH (and so the real equity return) will vary between companies according to factors that include the size of the investment programme, the proportion of totex that is capitalised (i.e which is not remunerated as pay as you go) and RCV run-off rates.

We expect each company can achieve the notional base RoRE based on a P50 estimate of performance, but we expect each company to reflect its expected performance and exposure to a range of risks within P10 and P90 confidence limits For example poorer performing and/or less efficient companies may have greater cost downside, higher ODI downside and financing downside. Conversely high performing companies may expect greater scope for upside.

A number of companies have amended their risk ranges in response to our initial assessment and the outcome evidence we provided. We have taken account of these amendments in our presentation of RoRE and in some cases we have intervened to adjust RoRE ranges in our draft determinations.

We present our RoRE ranges excluding the effect of reconciliation mechanism adjustments[13] that are included in our financial model as post-financeability adjustments and, to enable comparability, excluding the impact of the business retail margin. We explain our interventions in subsequent paragraphs.

Figure 3.1: Draft determination RoRE ranges for the slow track and significant scrutiny companies

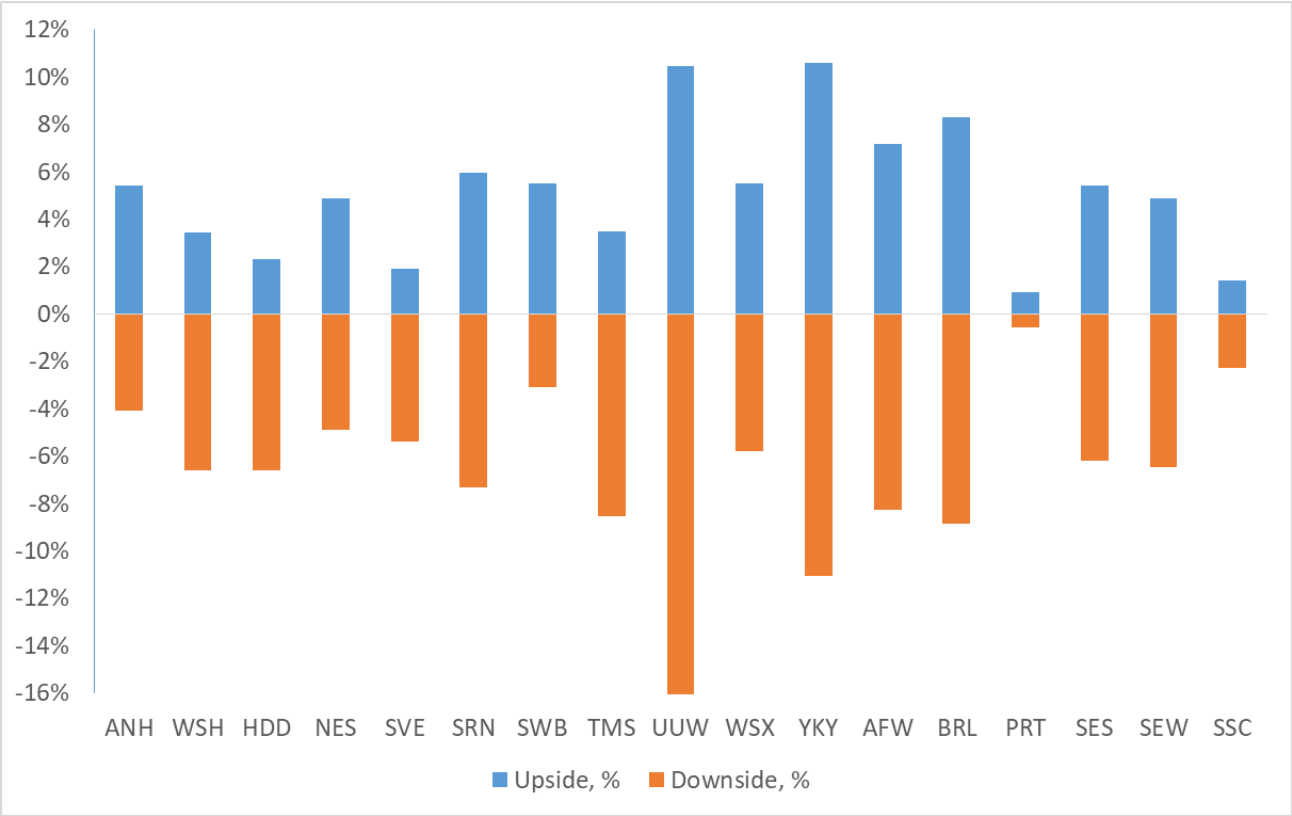


The average **cost performance** range (encompassing both totex and retail costs) is from -1.5% to +1.3%. For the majority of companies, we use the cost risk ranges that are used in business plans in our presentation. We have retained the 50% cost sharing of over/underperformance against our baseline cost allowances assumed by companies in their plans for the water resources and network plus controls. However, we will consider revising our presentation to reflect the final cost sharing rates when we publish our final determinations.

Figure 3.2 shows companies' totex risk range amounts (£m including retail costs) as a percentage of their views of totex requirements (in both cases from their original business plan submissions). This illustrates that a number of companies considered their downside exposure at P10 to be greater than their upside exposure at P90. The average range was from about -7% to 5%. There was, however, significant variance on risk range views amongst the companies.

[13] Reconciliations in our PR19 determination relating to performance and outcomes in 2015-20.

Figure 3.2: Totex P10 risk values as a percentage of Totex in revised business plans[14]



The following slow track and significant scrutiny companies present a downward skew to their RoRE risk range for totex in their updated business plans: Thames Water; SES Water; South East Water; Affinity Water; Southern Water; Hafren Dyfrdwy; and Welsh Water. We are intervening to reduce the downside skew in two cases:

- We are intervening to reduce Hafren Dyfrdwy's downside Totex risk by a total of £5m (on a pre-sharing factor basis). Whilst Hafren Dyfrdwy referred to challenging efficiency assumptions for the wholesale price controls in its plan, the base cost allowance totals we have determined are higher than the company's view.

- We are intervening to reduce downward skew in the level of residential retail costs for Affinity Water. Whilst the company says that its P10 downside value reflects bad debt risks and risks associated with customer data management,

[14] Totex values in this chart include retail business costs.

Values for Portsmouth Water exclude the effect of proposed investment in Havant Thicket winter storage reservoir.

its downside for residential retail cost risk is double that of any other company and there is insufficient evidence that the overall downside cost risk is appropriate. We have adjusted the P10 value to be more consistent with the higher end of downside scenarios proposed by other companies; this is equivalent to a 50% reduction to the retail cost risk proposed by the company.

We have not intervened for any other company to adjust the cost range to reflect our view of risks, as we expect companies will respond to our cost challenge. In PR19 Initial assessment of plans – Technical appendix 3: Aligning risk and return of our initial assessment of business plans we set out the reasons why the expected outperformance range for an efficient company is unlikely to exhibit a negative skew. We set out that companies are strongly incentivised to outperform our efficiency assumptions; we note that cost performance has been positively skewed at a sector level in previous price review periods and, for example, in the period from 2015 to 2018, companies have delivered average cost performance that has produced a 0.6%[15] RoRE upside (within a range -1.5% to 3.3%) despite the average totex range in the PR14 price determination ranging from -2.1% to 1.6% of RoRE[16]. It is possible however, that some companies may be more likely to underperform, for example because of an ongoing trend of underperformance or expected poor performance.

Our PR19 methodology proposes that companies could consider an expected **ODI** range of out/underperformance of +/-1 to 3% of RoRE, with outperformance payments available where companies deliver beyond stretching service levels. In deriving the range of potential performance, the majority of companies proposed ODI risk ranges that were negatively skewed in their business plans and this is a key driver of the overall negative skew in RoRE ranges.

The average ODI RoRE risk range is from –2.6% to +0.6%. We have made adjustments to the majority of slow track and significant scrutiny companies. This includes interventions on individual performance commitments so that companies are targeted with stretching service levels and appropriately calibrated financial outcome delivery incentives. At an overall package level, we have made further interventions to protect customers against the risk of companies focusing on a small number of financially material performance commitments (through the introduction of caps on outcome delivery incentives) and in case their ODI payments turn out to be much higher than expected (through a sharing mechanism above 3% RoRE in any year). For some companies there are some performance commitments that are also material contributors to downside financial risk to the return on regulatory equity. When combined with the rest of the outcomes delivery incentive package, we consider the financial exposure of these companies resulting from the

[15] Ofwat Monitoring financial resilience 2018-19 report
[16] Setting price controls for 2015-20, policy chapter A7 – risk and reward

underperformance rates associated with performance commitments would be disproportionate. Therefore, we are taking financial underperformance exposure into account by adjusting underperformance rates and introducing graduated ODI collars in addition to our other amendments to the outcome delivery incentive. Further details of our approach and interventions are explained in the 'Delivering outcomes for customer's policy appendix'.

We note that the ODI RoRE ranges presented in the PR14 final determinations were negatively skewed with the average being from -1.7% to 0.6%[17]. However, companies have subsequently delivered ODI performance that averages +0.1% in 2015-18, within a range of –0.5% to +1.5%. We consider companies will be strongly incentivised to deliver service improvements to customers through 2020-25; underperformance adjustments protect customers against performance that is lower than the committed level.

The average **revenue** range is from -0.2% to +0.2%. There is notable variance in companies' assessments of revenue risk ranges, with some companies assuming there to be minimal or no revenue risk. We set out in PR19 Initial assessment of plans – Technical appendix 3: Aligning risk and return of our initial assessment the reasons why we consider revenue risk to be minimal in the water sector as a result of the reconciliation mechanisms and regulatory protections in place, and some companies reduced their assessed revenue risk ranges in response to this guidance. Our view remains that revenue risk is low for this sector, except in very exceptional circumstances.

The average **C-MeX / D-MeX** RoRE range is from –0.3% to +0.3%. There has been some variation in the approach adopted by companies to the presentation of the risk ranges for C-MeX and D-MeX. Some companies present very low proportions of return at risk (20 basis points or less), whilst others assume P10/P90 ranges informed by the minimum / maximum of the range. We have clarified that the range of out and underperformance adjustments for C-MeX are equivalent to 12% of annual residential retail revenue for each year from 2020-25. For D-Mex the range of out and underperformance adjustments are equivalent to 2.5% and 5% respectively of annual developer services revenue for each year but we are minded to increase the level of D-Mex financial incentives for out and underperformance to 6% and 12% respectively, as set out in the Outcomes policy appendix.

[17] An aggregate cap and collar of ± 2% of RoRE a year, calculated over a term of five years was applied at PR14.

The C-MeX / D-MeX range is symmetrical for most companies. However, Thames Water assumes a P10/P90 range with underperformance skew, reflecting its view of performance risks.

We are intervening to reduce the C-MeX / D-MeX range for Anglian Water, Southern Water, and Yorkshire Water. We assess that these companies have proposed upside and downside ranges that take account of the minimum and maximum incentive adjustments for C-MeX, and include additional amounts relating to D-MeX. We consider the total ranges to be beyond plausible P10/P90 limits. We expect all companies to reconsider their ranges for C-MeX and D-MeX in their updated App26 submissions in their responses to the draft determinations.

The average **financing performance** range is from -0.2% to +0.2%. The PR19 methodology requires companies to consider the range of financing performance for the cost of new debt only. We recognise that our draft determination RoRE presentation for financing costs does not include risk of variation around cost of embedded debt. The actual cost of embedded debt varies significantly between companies, and we expect that this will drive a range of under and outperformance relative to our allowance over the period 2020-25. This range of performance is driven by the financing arrangements of each company and the timing and tenor of debt issuance. This is consistent with our long-held policy that companies and investors should bear the risk associated with their financing arrangements, not customers.

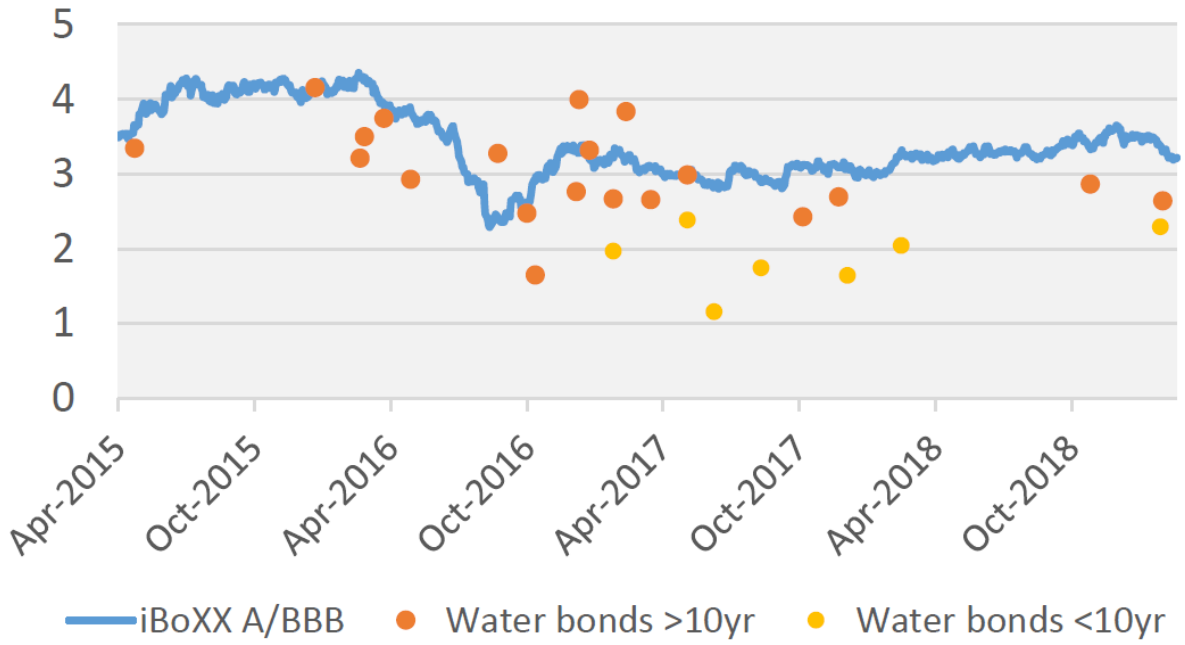
For the final determinations, we propose to update our analysis of the risk range for the cost of debt to include a range for embedded debt. In doing so, we propose to draw on the approach we have adopted for interventions on the cost of new debt we discuss below. Our aim is to present the potential overall cost of debt RoRE range for a company with a notional capital structure, though we acknowledge companies' actual structures contain debt whose costs will be embedded for the duration of the control. We consider this approach will better reflect potential risk around variations on the cost of embedded debt across the sector, while remaining consistent with our expectation that notionally financed companies should be able to achieve the allowed cost of embedded debt. Our aim is to reflect that over time, a company with a notional structure would achieve the cost of debt we allow, but that in any single price control period there may be out and under performance due to variability in timing and structure of debt issuance and tenor and due to inflation. We welcome views on the proposed approach in response to the draft determinations.

For our draft determinations, we are intervening on the financing performance risk range for Wessex Water, SES Water, South Staffs Water, South East Water, and Anglian Water. This is to reflect a RoRE risk range associated with the cost of new

debt that is consistent with the intent of, and approach set out in, the PR19 methodology.

Our interventions are based on our assessment of the bonds issued in the water sector compared with the benchmark index we have used to assess the cost of embedded and new debt in our draft determinations (see Figure 3.3). Based on bonds issued since 2014, we assess the P10/P90 range to reflect the potential for 100 bps upside and 25 bps downside for the cost of new debt. We use this view to calculate the out and underperformance RoRE range where we are intervening. Based on an embedded debt:new debt ratio of 80:20, this results in a RoRE range of -0.1% to 0.3%. For SES Water our range takes account of its request for a 25 bps company specific adjustment to the cost of debt, which we are not allowing, resulting in range of 75bps upside to 50bps downside on new debt costs (while we have not accepted the company specific cost of debt adjustment for Bristol Water, we have not assessed there to be a need for us to intervene in the cost of new debt RoRE range for Bristol Water in our draft determination).

Figure 3.3 Ofwat benchmark index and water bond yield-at-issuance 2015-19 (%)



Source: Ofwat analysis of Refinitiv and IHS Markit data

We expect companies to reconsider and update their assessments in response to our draft determinations and we are asking companies to submit a revised business plan table (App26 – RoRE Scenarios) with their responses.

4 Uncertainty mechanisms

The PR19 methodology sets out that companies in this sector have significant protection from risks. Nevertheless, the PR19 methodology makes limited provision for companies to propose bespoke uncertainty mechanisms. However, as uncertainty mechanisms shift the balance of risk to customers, we set a high evidential bar for bespoke uncertainty mechanisms to be included in our determinations.

There are three types of uncertainty mechanism requested by companies:

- notified items referring to costs not allowed for in our PR19 determination, which potentially allow for determinations to be reset in 2020-25;
- reconciliation mechanisms which can lead to upward or downward reconciliation of costs at PR24; and
- revenue driver mechanisms that change revenue allowances in-period.

In some cases uncertainty mechanisms may be associated with ODIs.

It is also possible for companies to refer the following matters to Ofwat during 2020-25 under the provisions of Condition B in licences for interim determination of price controls where a materiality threshold has been exceeded:

- relevant changes of circumstances and any notified items; and
- circumstances having a substantial adverse or favourable effect on the Appointed Business.

In assessing company claims for uncertainty mechanisms, we consider whether the issue is material to the company, the extent to which management is able to control the risk or the impact of that risk and whether the addition of an uncertainty mechanism adequately protects the interests of customers. We will continue to apply a high bar to any uncertainty mechanisms requested in response to our draft determinations.

We set out that a request for an uncertainty mechanism should be underpinned by RoRE analysis in business plan table App26 and commentary in business plans, taking account of the business plan table reporting guidance.

4.1 Our assessment of proposed uncertainty mechanisms

Several companies propose uncertainty mechanisms in their initial business plan submissions in September 2018 and the updated position on these is as follows:

- Affinity Water proposes a notified item in respect of costs associated with sustainability reductions to water abstraction levels in its Brett catchment area. We have decided that this issue should be considered under WINEP programme arrangements meaning that we do not accept a notified item. Further information is provided in the 'Cost efficiency draft determination appendix' for Affinity Water.
- Welsh Water and SES Water withdrew their proposed uncertainty mechanisms for uncertain business rates costs. SES Water withdrew a proposed uncertainty mechanism for costs associated with lead standards. Affinity Water withdrew a notified item proposal in respect of metaldehyde treatment costs.
- Bristol Water provide an updated proposal for a notified item in respect of possible changes to costs for abstracting water from the Gloucester and Sharpness Canal and this is explained below.

A number of new uncertainty mechanism proposals were made by companies in their revised business plan submissions in April 2019.

Anglian Water propose two new uncertainty mechanisms:

- A reconciliation mechanism to return 90% of cost allowances in case of a slippage in the company's WINEP programme. However, we consider that the normal 100% adjustment should apply because work is not required on Amber WINEP schemes until they have been confirmed and we are not convinced a 90% reconciliation adequately protects the interests of customers.
- A reconciliation mechanism to return a share of savings on proposed growth expenditure. We are not allowing the reconciliation mechanism in relation to growth expenditure. We have used growth forecasts from the Office for National Statistics for our assessment of investment requirements and Anglian Water has not provided evidence to justify divergence from a 100% reconciliation rate.

Thames Water proposes three new uncertainty mechanisms:

- A reconciliation mechanism for a difference of up to £75 million between its business rate costs and its PR19 business rates cost allowances. This relates mainly to changes to the size and valuation of its asset base. 'PR19 Initial

assessment of plans – Technical appendix 2: Securing cost efficiency' of our initial assessment of business plans sets out information on our consideration of rateable value information from companies and from the Valuation Office Agency. Taking account of this, and the cost sharing arrangements for PR19, we consider that Thames Water has not provided sufficient or convincing evidence that the uncertain costs are sufficiently material given the totex cost sharing arrangements in place or sufficiently outside of management control to include a bespoke uncertainty mechanism for Thames Water in our draft determination. On the basis of the evidence presented, we do not consider a bespoke uncertainty mechanism would adequately protect the interests of customers.

- A cost reconciliation adjustment at PR24 in respect of about £100m of costs associated with the Security and Emergency Measures Direction (SEMD).

  We consider that this proposal should not be accepted. Thames Water should have some control over the selection and scheduling of SEMD works. Whilst the costs referred to could be material, insufficient information has been provided for us to determine efficient cost requirements. We do not consider that the proposed mechanism adequately protects the interests of customers because it does not provide a strong incentive to deliver projects efficiently. In particular, Thames Water still has to deliver a significant number of projects scheduled for the 2015-20 period.

- A reconciliation mechanism, to return costs to customers, covering the first phase of a north-east London resilience scheme (£181m) and projects under a national environment programme (£72m).

  We are not allowing the reconciliation mechanism associated with the resilience scheme and projects under a national environment programme because we have decided not to include cost allowances for the projects referred to by Thames Water in our draft determination. Further information is provided in the 'Cost efficiency draft determination appendix' for Thames Water and the cost assessment feeder models.

As we note above, Bristol Water proposes a notified item under Condition B of its licence in respect of possible changes to its costs for abstracting water from the Gloucester and Sharpness Canal which are presently subject to an arbitration process. We have included a notified item in Bristol Water's draft determination because:

- The potential increase in costs are material to Bristol Water and could potentially pass the materiality test set in Condition B.

- The costs are subject to an arbitration process, which Bristol Water is able to engage with; however once the outcome is known, the company is unlikely to be able materially to influence ongoing costs.
- Customers' interests would be protected because, Bristol Water proposes that customers should bear only 75% of the increased costs if the materiality test for an interim determination set out in Condition B of its licence is passed. It also proposes a symmetrical cost saving for customers in the event of a material reduction in costs.

Further information on the uncertainty mechanism is provided in the company summary document for Bristol Water.

We propose to set out an uncertainty mechanism in our final determination for Anglian Water, Dŵr Cymru, Southern Water, Thames Water and United Utilities to address the possibility that, in some circumstances, DPC schemes might need to be brought back in-house. Further information on this is provided in the 'PR19 draft determinations: Delivering customer value in large projects'.

5 Cost recovery now and in the long term for wholesale price controls

Companies can balance the recovery of costs between different generations of customers using financial levers, such as pay-as-you-go (PAYG) and regulatory capital value (RCV) run-off rates.

In the PR19 methodology, we set out that each company's choice of PAYG and RCV run-off rates should reflect its own expenditure and investment plans within each control. We also set out that companies should take into account customers' views on the impact of their PAYG and RCV run-off choices on bills, both in the short and long term. We asked companies to explain how they have set rates and to provide evidence supporting the chosen rates and of customer support for the impact of their choices. We set out that we will intervene, where necessary, if the balance of evidence suggests that a company's overall PAYG or RCV run-off proposals are not appropriate or have been made to solve financeability constraints driven by a company's actual financial structure.

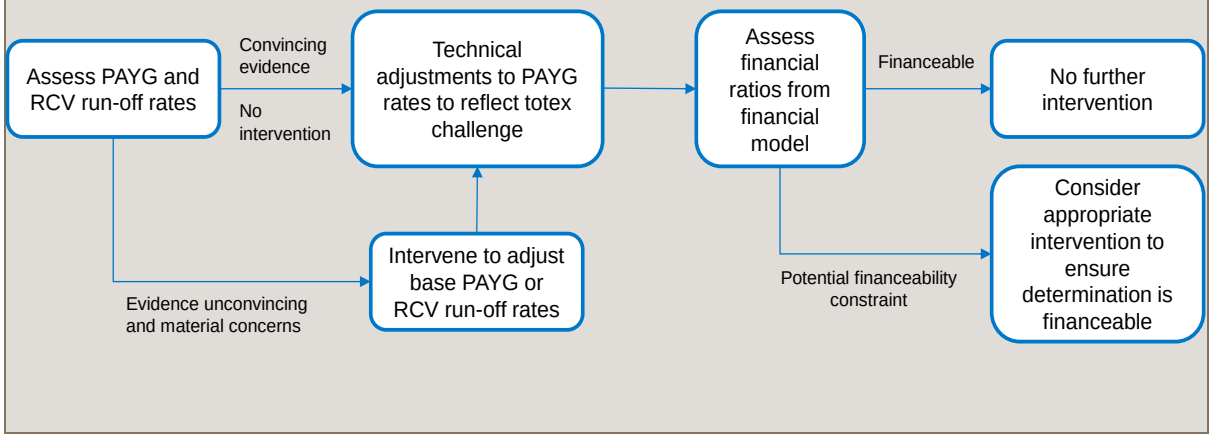
In this section, we set out comparative information on the approaches companies have undertaken in preparing their business plans. We also set out the interventions we are making to PAYG and RCV run-off rates in the draft determinations for companies.

Approach to setting PAYG and RCV run-off rates for draft determinations

The flow chart below sets out our approach to assessing PAYG and RCV run-off rates. The interventions we make can be:

- Interventions where evidence is insufficient or unconvincing in respect of a company's choice of PAYG and/or RCV rates. These interventions are discussed in section 5 of this appendix.
- Technical interventions to PAYG rates to reflect our assessment of efficient totex costs and the appropriate allocation of that totex to opex and capex. This applies to all companies (except the fast track draft determination of Severn Trent Water which takes a longer term view of operating costs as a proportion of totex).
- Interventions to ensure our determinations are financeable on the basis of the notional financial structure. These interventions are discussed in section 6 of this appendix.

Figure 5.1. Flow chart of assessment of company's proposed PAYG and RCV run-off rates:



5.1 Interventions

We set out in the PR19 methodology that we will intervene, where necessary, if the balance of evidence suggests that a company's overall PAYG or RCV run-off proposals do not represent an appropriate balance between current and future customers or have been made to solve financeability constraints driven by a company's actual financial structure. Our assessment of financeability on the basis of the notional company structure may also lead to interventions to PAYG and/or RCV run-off rates.

We set out in table 5.1 our interventions to PAYG and RCV run-off rates for companies' draft determinations along with the value of the interventions.

Table 5.1: Cost recovery - interventions

Water company	Intervention	Rationale	Value of intervention £m (%)
Dŵr Cymru	We intervene to Dwr Cymru PAYG rates in two parts: As part of our technical intervention, we are intervening to align the natural PAYG rates to the company's stated approach as per the original business plan. We are intervening to increase PAYG rates for the water and wastewater network plus controls by 3.4%	i) Dwr Cymru's approach to PAYG rates is to recover an amount equivalent to operating expenses from totex. The company states it is not bringing forward revenue from future periods. However, PAYG rates have not been amended to reflect the changes the company has made to costs in its revised business plan. As part of our technical intervention for Dwr Cymru we are aligning PAYG rates with operating expenses within allowed totex for the draft determinations. ii) Prior to the intervention, our assessment of key financial ratios suggests there is insufficient headroom to a minimum investment grade. We consider the intervention is necessary to ensure financeability on the notional structure following our interventions elsewhere in the draft determination including the lower updated view of the cost of capital.	+£10m (1% of total pay as you go allowance)
Hafren Dyfrdwy	We are intervening to reduce RCV run-off rates for the wastewater network plus control by an average of 1.9%	Hafren Dyfrdwy provides further evidence to support its starting rates for RCV run-off. However, the company makes adjustments to the starting rates to assist affordability for customers and to provide for commitments made at the time of its border variation. Hafren Dyfrdwy has provided insufficient evidence to support the increase in RCV run-off rates for the wastewater network plus control. Therefore we are intervening to move RCV run-off rates for this control back in line with the original business plan.	-£0.1m (0% of total RCV run-off revenue)

Hafren Dyfrdwy	We are intervening to adjust the proposed reduction to PAYG rates for the wastewater network plus control and the increases to PAYG rates for the water resources and water network plus controls.	Hafren Dyfrdwy proposes adjusting PAYG rates to move allowed revenue from wastewater to water controls to assist affordability and balance bills across water and wastewater taking account of commitments made at the time of the border variation. We are applying a technical intervention to amend this adjustment to maintain Hafren's proposed wastewater bill.	N/a
Southern Water	We are intervening to reduce PAYG rates by on average 5.7% for all network plus wholesale controls.	The company has not provided convincing evidence that the proposed PAYG and RCV run-off rates provide an appropriate balance of cost recovery between current and future customers. In conjunction with the RCV run-off rates proposed, we consider a PAYG rate consistent with operating costs and infrastructure renewal expenditure as a proportion of totex is appropriate.	-£182m (13% of total pay as you go allowance)
Thames Water	We are intervening to increase the PAYG rate by 0.7% for the network plus controls.	Prior to the intervention, our assessment of key financial ratios suggests there is insufficient headroom to a minimum investment grade. We consider the intervention is necessary to ensure financeability on the notional structure following our interventions elsewhere in the draft determination including the lower current view of the cost of capital.	+£41m (1% of total pay as you go allowance)
Wessex Water	We are intervening to reduce PAYG rates by on average 0.5% to align rates with operating expenditure and capitalised infrastructure renewals and repairs expenditure net of grants and contributions within operating expenditure.	Wessex Water's approach to PAYG rates is to recover in each year an amount equivalent to operating costs plus infrastructure renewal expenses. The company has adjusted rates to take account of revised costs but has included operating expenses gross of grants and contributions. This will result in a higher proportion of costs recovered from customers within the price review period. Therefore as part of our technical intervention for Wessex Water we are aligning PAYG rates with operating expenses and infrastructure renewal expenditure net of grants and contributions within operating expenses within allowed totex for the draft determinations.	-£11m (1% of total pay as you go allowance)
Affinity Water	We are intervening to reduce Affinity Water's PAYG uplift from on average 7.6% to 1.3% for all wholesale controls.	Affinity Water identifies a financeability constraint on the basis of the notional company. The company has provided insufficient evidence as to the scope of the adjustment required to address the constraint. We consider a smaller increase to PAYG rates is sufficient to enable Affinity Water to be financeable on the basis of the notional company.	-£86m (12% of total pay as you go allowance)

Affinity Water	We are intervening to remove the adjustments proposed by Affinity Water to its RCV run-off rates, reducing average rates by 0.2%.	Affinity Water proposes to reduce RCV run-off rates to protect customers from the company's proposed increase to PAYG rates. We do not consider this adjustment is necessary following our intervention to PAYG rates. Affinity Water further proposes to increase RCV run off rates to balance water bills for customers across the periods 2020-25 and 2025-30. The company does not provide sufficient evidence that the proposed bills are supported by its customers and therefore that this adjustment is appropriate.	-£17m (5% of total RCV run-off on the RCV)
Portsmouth Water	We are intervening to separate costs associated with the Havant Thicket reservoir from the water resources control to a separate price control	We consider the interests of customers are best served by separately regulating the Havant Thicket reservoir within its own price control. We maintain the allocation of all expenditure to RCV as proposed by Portsmouth Water as the reservoir will not be operational during the price review period. We depreciate the RCV on a straight-line basis to an end date 80 years after the assumed start date for the bulk supply agreement of 1 April 2020. We adjust the PAYG and RCV run-off rates for the water resources control to remove the Havant Thicket reservoir costs	N/a
Portsmouth Water	We are intervening to reduce the scope of the proposed increase to PAYG rates to solve a financeability constraint on the basis of the notional company.	Portsmouth Water proposes an increase to PAYG rates for the water resources control of 4.8% to solve a financeability constraint for the notional company. Following the separation of Havant Thicket from the water resources control, we assessed financeability of the notional company including interventions across the plan but excluding the Havant Thicket control. We accept an increase to PAYG rates required to provide sufficient headroom to a minimum investment grade on the basis of the notional company. However, we consider a smaller increase is appropriate. Portsmouth Water does not provide sufficient evidence to support the application of the adjustment to PAYG rates to the water resources control. Consistent with our interventions in relation to other companies, we apply the increase to the water network plus control. Therefore we are intervening to reduce the increase to 4.8% PAYG rates proposed for water resources to an increase of 0.7% for water network plus.	-£3.5m (3% of total pay as you go allowance)

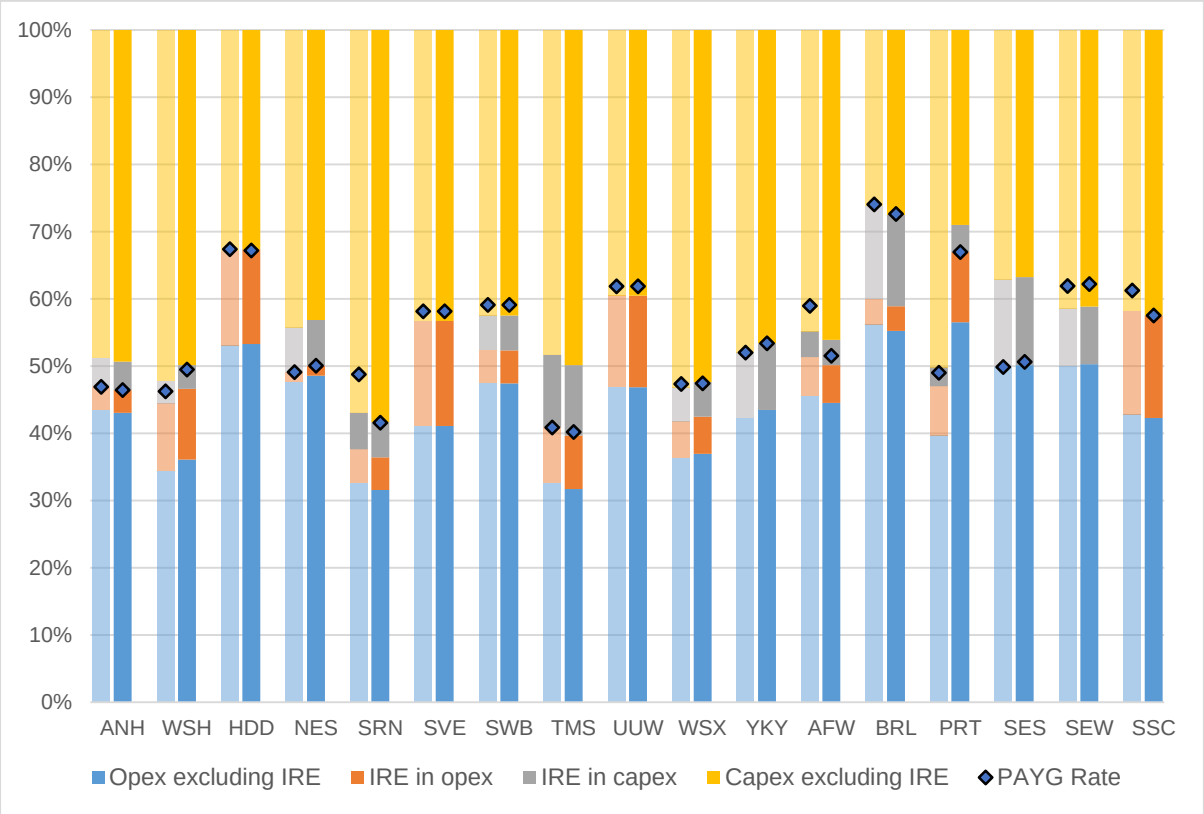
SES Water	We are intervening to increase SES Water's PAYG rates by an average of 0.5%	Prior to the intervention, our assessment of key financial ratios suggests there is insufficient headroom to a minimum investment grade. We consider the intervention is necessary to ensure financeability on the notional structure following our interventions elsewhere in the draft determination including the lower current view of the cost of capital.	+£1m (1% of total pay as you go allowance)
South Staffs Water	We are intervening to remove the proposed increase to PAYG rates of on average 3.0%.	South Staffs Water proposes a 3.0% increase in PAYG rates to address a notional financeability constraint. The company targets a specific level for the adjusted interest cover ratio for each year of the price review which is impacted by the specific bill profile targeted in its business plan. South Staffs Water states that the consequence of the flat nominal bills is a potential step change in bills in the following price review period and sets out that the use of PAYG levers to solve the financeability constraint provides for the management of the transition of bills for 2020-25 to 2025-30. The increase to PAYG rates reduces the increase in bills in the following period under the company's inflation assumption. However, it does not fully mitigate the potential for large reconciliation adjustments at PR24. South Staffs Water further sets out that it will increase nominal bills during 2020-25 if it forecasts the step in bills will be greater than £3 in 2025-26. We do not consider this is consistent with the company's proposal to maintain flat nominal bills. The company has not provided sufficient evidence that the chosen bill profile is in the best interests of customers and we consider the adjustment is not required following our assessment of financeability.	-£15m (5% of total pay as you go allowance)

5.2 Setting pay-as-you-go (PAYG) rates

Our PR19 methodology requires companies to set out their approach to setting the starting point for PAYG rates (before applying any adjustment, for example to smooth bills or address a financeability constraint on the notional capital structure). Most of the slow track and significant scrutiny companies retain their original approach to setting PAYG rates with reference to the costs forecast in the business plan; Affinity Water changes its approach in its revised business plan to be in line with this.

Figure 5.2 below sets out the average PAYG rates as a proportion of totex calculated across the wholesale price controls, comparing revised business plans (left hand side) with our draft determinations (right hand side). Absolute average PAYG rates vary between companies in accordance with the investment programme set out by each company in its business plan. Differences between the revised business plan and our draft determination reflect differences in total totex and the composition of totex in our determination along with our interventions as set out in the previous section. For example, the PAYG rate could increase in our determination if our assessment of totex excludes investment schemes that were added to the RCV in the business plan.

Figure 5.2: Average pay-as-you-go rates for the period 2020-25 across the wholesale controls as a proportion of totex (business plan vs draft determination) (%)



Source: Business plan tables WS1, Wr4, Wn4, WWS1, WWn6, Bio5, Dmmy1, Dmmy 8 for company plans and PAYG models for draft determinations. Infrastructure renewal expenditure (IRE) for our draft determinations is calculated as IRE in company plans divided by opex in company plans times opex in draft determinations. Average PAYG rates are calculated as total pay as you go totex as a proportion of total totex in 2017-18 prices across all wholesale controls. Thames Water excludes Thames Tideway control and Portsmouth Water excludes Havant Thicket control for draft determinations.

In their revised business plans, PAYG for all companies covers operating costs including infrastructure renewal expenditure where this is forecast in operating costs. There are thirteen companies that forecast an element of infrastructure renewal expenditure in capex. Six of these propose recovering these costs in period through PAYG rates. The remaining seven companies propose recovering these costs through the RCV and associated RCV run-off.

In the initial assessment of plans, we set actions for three slow track and significant scrutiny companies to provide further evidence to support the starting point for PAYG rates. We do not set out a definition of natural rates as each company's choice of PAYG and RCV run-off rates should reflect their own expenditure and investment plans within each control. However, we set out in the 'PR19 Initial assessment of plans – Technical appendix 3: Aligning risk and return' that where companies

propose PAYG rates in excess of the proportion of operating expenditure and infrastructure renewal expenditure as a proportion of totex, we apply a higher evidential bar in carrying out our assessment of the PAYG rates proposed.

- Hafren Dyfrdwy and Affinity Water provide sufficient evidence to support the starting position for their PAYG rates in their revised business plans and we accept their approach to setting the starting position for PAYG rates.
- Southern Water's approach of setting PAYG rates to recover costs associated with maintaining the operational capability of the business produces PAYG rates materially higher than the proportion of opex and infrastructure renewal expenditure in totex. This approach, along with RCV run-off rates which are above the average for the sector (as shown in figure 6), results in the company recovering a higher proportion of capital expenditure in the price review period than other companies. Southern Water has not provided sufficient evidence that this approach provides an appropriate balance of cost recovery between current and future customers and we are intervening to align PAYG rates with operating costs and infrastructure renewal expenses consistent with many other companies.
- We set out further details of interventions in company specific summaries and actions and interventions documents.

A number of companies propose adjustments to the starting position for PAYG rates to address financeability constraints, to assist affordability for customers or to balance bills within PR19 or across price review periods. We discuss companies' and our assessment of financeability in section 6.

5.3 Technical interventions to PAYG rates

Where companies have set the starting point for PAYG rates as operating costs as a percentage of totex or operating costs plus capitalised infrastructure renewal costs as a percentage of totex, we accept this approach. Our approach to assessing efficient costs for companies may change the relative proportion of opex and capex in our draft totex allowances. For such companies we apply a technical intervention to determine the starting point for PAYG rates for the draft determination to maintain each company's stated approach. We then consider the appropriateness of any adjustments companies propose to the PAYG rates.

We have published our calculation of the PAYG rates for each company alongside our draft determinations.

Illustration of the technical intervention to PAYG rates

We illustrate below our approach to determining the PAYG rates for our draft determination. We calculate PAYG rates for each year of the price determination based on the profile of allowed totex from our assessment of efficient costs and the profile of opex determined in our assessment of efficient costs. In doing so, we have followed each company's approach to the treatment of infrastructure renewals spend. Our approach to assessing the annual profile of totex and opex within totex is explained in 'Securing cost efficiency technical appendix'.

Figure 5.3: Company X sets PAYG rates based on operating costs as a proportion of totex:

Water resources wholesale control	Company X business plan	Company X draft determination	
Opex	60	57	
Capex	40	35	
Totex	100	92	
Opex/totex = PAYG	60%	62.0%	We maintain PAYG as opex/totex

We allow totex of 92 in our draft determination for company x. Our cost challenge is skewed towards capital enhancement costs and reduces operating costs by 5% (3/60) and capital costs by 12.5% (5/40). Therefore, we increase PAYG rates to 62.0% to ensure company X recovers operating costs through PAYG (92 x 62.0%).

Figure 5.4: Company Y sets PAYG rates based on operating costs plus capitalised infrastructure renewal expenditure (IRE) as a proportion of totex:

Water resources wholesale control	Company Y business plan	Company Y draft determination	
Opex	50	45	
Capex - IRE	10	46	

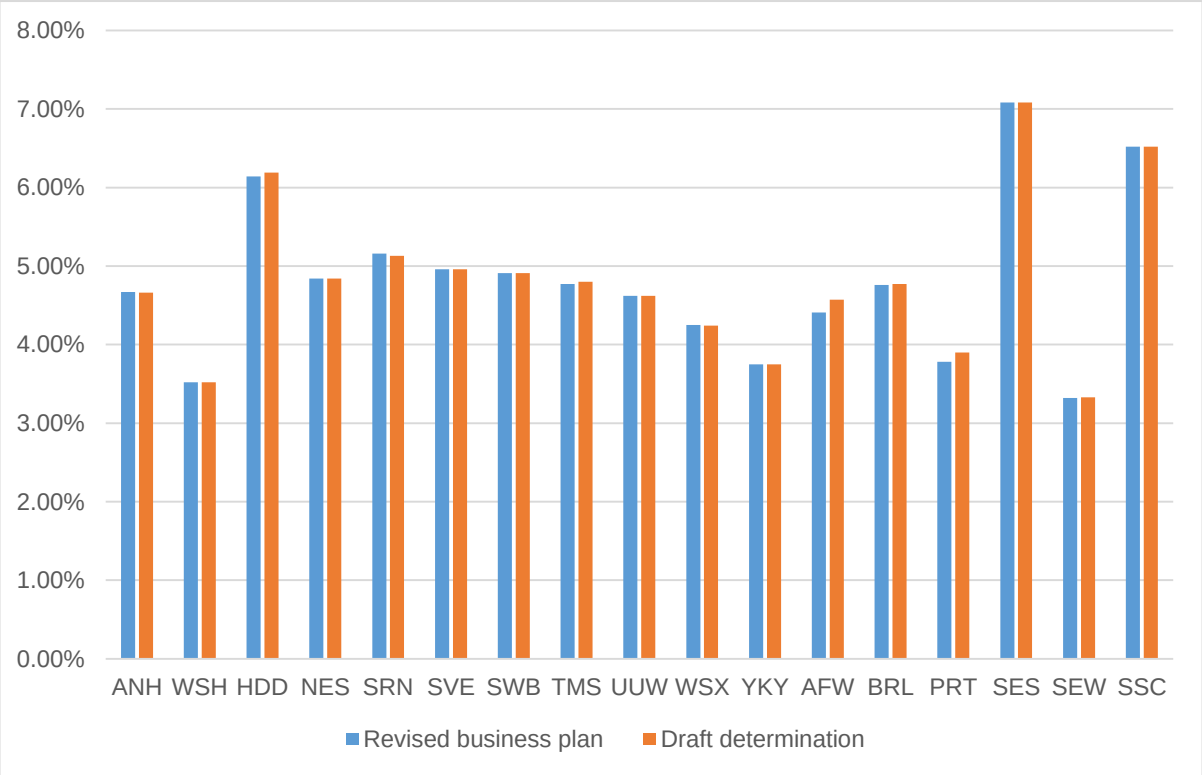
Capex – other	40		
Opex + IRE	60		
Totex	100	91	
Opex/totex	50%	49.5%	
PAYG (opex + IRE/totex)	60%	59.3%	
PAYG/(opex/totex)	120%	120%	We maintain the proportion of PAYG to opex/totex

We allow totex of 91 for company Y. Our cost challenge is skewed towards base costs and reduces operating costs by 10% (5/50) and capital costs by 8% (4/50). Opex now represents 59.3% of totex. We do not separately identify infrastructure renewal expenditure in our totex allowances therefore we apply the percentage uplift to opex/totex as per the company's business plan to arrive at the PAYG rates for the draft determination.

5.4 Setting RCV run-off rates

We asked companies to set out their approach to setting the starting point for RCV run-off rates (before applying any adjustment, for example to smooth bills or address a financeability constraint on the notional capital structure). Most companies set out their approach to setting RCV run-off rates with reference to the current cost depreciation or the average asset lives of the assets underpinning the regulatory capital value of the company. Figure 5.5 sets out the average RCV run-off rates as a proportion of regulatory capital value for each company, comparing average RCV run-off rates from revised business plans (left hand side) with our draft determinations (right hand side).

Figure 5.5 Average RCV run-off rates as a proportion of regulatory capital value (revised business plans versus draft determinations) (%)



Source: Business plan tables WS1, Wr4, Wn4, WWS1, WWn6, Bio5, Dmmy1, Dmmy 8 for company business plans and financial models for draft determinations. Calculated as total run-off as a proportion of total regulatory capital values in 2017-18 prices across all wholesale controls as per business plan table App8. Thames Water excluded the Thames Tideway control.

In the initial assessment of plans, we set actions for six slow track and significant scrutiny companies to provide further evidence to support the starting point for RCV run-off rates.

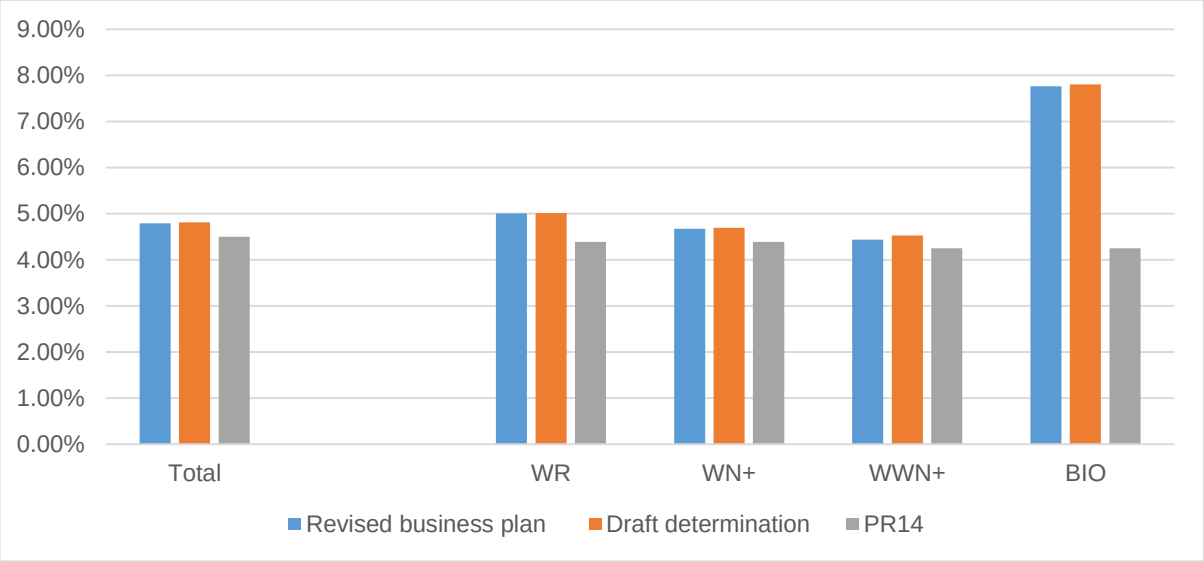
- Dŵr Cymru, Bristol Water, South East Water and South Staffs Water provide sufficient evidence of the approach taken and/or the calculations to support their chosen RCV run-off rates in their revised business plans and we accept their approach to setting the starting position for RCV run-off rates.
- Hafren Dyfrdwy provides evidence in its revised business plan in support of its RCV run-off rates for the water resources and water network plus wholesale controls. The company sets out its approach to setting RCV run-off rates along with the calculations for its starting point. Hafren Dyfrdwy sets out a

number of adjustments to the starting point to address affordability concerns and commitments made in relation to bills at the time of the border variation. However, the revised business plan does not set out a reason for the increase in RCV run-off rates the company proposes for the wastewater network plus control versus the rates proposed in its original business plan. We are intervening to reduce the RCV run-off rates to the level in the original business plan. We accept the company's RCV run-off rates for the other controls.

- Southern Water provides further evidence in its revised business plan and in its response to a query to support its RCV run-off rates. The company's RCV run-off rates are above the average for the sector and combined with Southern Water's approach to setting PAYG rates (as discussed in the section above) results in the company recovering a higher proportion of capital expenditure in the price review period than other companies. However, we accept Southern Water's RCV run-off rates as in the round, taking account of both RCV run-off and PAYG rates following our intervention, we consider this represents an appropriate balance of cost recovery.

Figure 5.6 shows average RCV run-off rates for draft determinations for the sector by wholesale control compared to revised business plans and to average RCV run-off rates at PR14. Generally, RCV run-off rates are slightly higher than at PR14, primarily due to two reasons. Firstly, the use of CPIH to inflate part of the RCV means that a higher run-off rate is required to achieve comparable current cost depreciation values on a nominal basis and, secondly, companies argue that recent capital investment and forecast post-2020 investment tends to be in shorter life assets resulting in a shorter replacement cycle with higher RCV run-off rates. The significant investment in draft determinations increases the proportion of new assets in the RCV and even with higher RCV run-off rates, RCV grows materially for many companies as shown in figure 6.1 in section 6.

Figure 5.6: Average RCV run-off rates for each wholesale control (%)



Source: Simple average of all companies' proposed RCV run-off rates for the combined water and wastewater controls and for each individual wholesale control as per business plan tables Wr4, Wn4, WWn6, Bio5 and Dmmy 8. Water resources and water network plus are compared to the water control at PR14 and the wastewater network plus and the bioresources control are compared the wastewater control at PR14.

Most companies propose different RCV run-off rates for individual wholesale controls reflecting the different average asset lives of the assets associated with each control. Average run-off rates for water resources and the network plus controls are relatively consistent. However, average RCV run-off rates for the bioresources control are significantly higher than other wholesale controls with a number of the companies setting out that, unlike the other controls, bioresources does not have a significant proportion of infrastructure assets and therefore has a significantly shorter average asset life.

Many companies also propose different RCV run-off rates for post-2020 investment, again reflecting the primarily shorter asset lives of current and forecast capital investment.

We do not apply a technical intervention to RCV run-off rates except for Portsmouth Water in relation to separating the costs associated with Havant Thicket reservoir from the water resources control to the separate Havant Thicket control. Differences between company's proposed totex and our draft allowances impact on the amount of totex added to the RCV, and interventions to past performance reconciliation adjustments may impact on opening RCV. For the water resources and the bioresources wholesale controls, companies provide separate RCV run-off rates for post-2020 investment, whilst for the network plus controls the CPIH-inflated RCV run-off rates are applied to post-2020 investment. Overall, we do not consider that

such interventions have a material impact on the RCV run-off rates proposed by companies. Companies may provide representations where they consider interventions require a change in RCV run-off rates in their response to our draft determinations, however, we will apply a high evidential bar to representations that propose further increases to RCV run-off rates given the impact on customer bills. Where companies propose changes to RCV run-off rates for any wholesale in their representations, companies should provide the rates for each element of RCV and for each year of the control along with evidence to support the changes.

5.5 Adjustments to PAYG and RCV run-off rates

5.5.1 Transition to CPIH

The PR19 methodology confirmed we will transition to CPIH as the primary inflation rate from 2020. At 1 April 2020, we will index 50% of RCV to RPI; the rest, including new RCV, will be indexed to CPIH.

The transition to CPIH indexation will result in cash flows being brought forward all other things being equal, which will increase customer bills in 2020-25 and reduce them in future periods compared to RPI indexation. The extent to which a company's total RCV is indexed to CPIH through the price control period, and the impact on customers' bills, will depend on the level of new RCV (capitalised totex) added during the period and the relative run-off of each element of RCV.

We set out in the PR19 methodology that we do not consider that the switch to CPIH necessarily should imply a change in profile of cash flows over price review periods. In original business plans, two slow track and significant scrutiny companies (Thames Water and Bristol Water) made adjustments to RCV run-off rates to remove the impact of the transition to CPIH from customer bills. In revised plans, Thames Water has removed this adjustment for the PR19 period (although it is retained for part of PR24) with bills now reflecting the natural transition to CPIH. Bristol Water continues to apply an adjustment, although this has partly been reversed to assist financeability and balance bills across 2020-25 and 2025-30.

The extent to which customer bills reflect the transition to CPIH is net present value neutral to customers over time, but affects the balance of current and future bills and our methodology allows companies to adopt a faster or slower transition where supported by customer preferences. Both companies provide sufficient evidence to support the changes made to RCV run-off rates and we accept these changes to RCV run-off rates for our draft determinations.

5.5.2 Other adjustments to PAYG and RCV run-off rates

As set out above, a number of companies propose adjustments to PAYG or RCV run-off rates to address a financeability constraint for the notional capital structure or to alter the rate of transition to CPIH. Companies also propose adjustments to PAYG and RCV run-off rates for the following reasons:

- A number of companies amend either PAYG or RCV run-off rates across years for one or more of the wholesale controls to smooth bills within the price review period. Hafren Dyfrdwy and Southern Water adjust PAYG rates to balance the movement in bills between water and waste water customers. Hafren Dyfrdwy has amended the adjustment for the wastewater control in its revised business plan but does not provide sufficient evidence to support the change. Southern Water provides convincing evidence within the revised financial model that there is no transfer of revenue across price review.
- Anglian Water and Bristol Water have also reduced RCV run-off rates to assist affordability for customers. In both cases, this is to restrict the impact on customer bills of underlying increases to run-off rates from PR14. Both companies provide a compelling rationale for the need for the adjustment and we accept the RCV run-off rates for both companies.

Where companies have made adjustments to the starting rates for PAYG or RCV run-off, alongside convincing evidence to demonstrate the appropriateness and level of the adjustment, we look for evidence that the resulting bill profile is aligned to customers' preferences for bills now and in the longer term. We set actions in the initial assessment of business plans for Affinity Water, Hafren Dyfrdwy and South Staffs Water in relation to the quality of customer engagement over the final bill profiles:

- Affinity Water proposed a bill profile that was inconsistent with the bill profiles shown to customers in its customer engagement. The company has amended its bill profile in its revised plan, however we do not consider the profile for bills over 2020-30 is consistent with the bill profiles provided to customers. We set out in the interventions section 5.1 the changes we have made to proposed PAYG rates;
- Following its customer engagement in support of its initial business plan, Hafren Dyfrdwy increased the proposed bills for water only customers and did not carry out further customer engagement. The company undertook further customer research on the water only bill prior to the resubmission of its revised business plan and has provided evidence summarising the level of support for the bill increase for all customers. We consider that overall weighted real bill acceptability (accounting for both regions) at 73% is not

high, although our interventions to Hafren Dyfdwy results in a lower bill, with a 2.4% reduction in draft determination;

- In its September business plan submission South Staffs Water proposes a bill profile that remains flat in nominal terms which results in a potential step change in bills between price review periods due to end of period reconciling adjustments for inflation and outcome delivery incentives. This is not consistent with customer preferences for long-term bills identified by the company in its customer engagement in relation to bills over a ten year period. In its revised business plan, South Staffs Water adapts its approach, bringing forward revenue from the following period to assist the transition of bills between periods, increasing average bills by £3 per annum resulting in customers paying more in 2020-25 to smooth bills across periods. Whilst this reduces the risk of a big step in bills, it does not eliminate it as the company maintains end of period reconciliations for inflation and out/underperformance. We consider it is in the best interests of customers for financial incentives to be aligned closely with the performance which leads to them. South Staffs Water further proposes to increase bills during 2020-25 should its forecasts for inflation or other adjustments suggest a step increase in bills in 2025-26 greater than £3. In the round, we do not accept the company's proposal to defer reconciliation adjustments for outperformance and underperformance payments to the end of the period. However, in setting the bill profile for the draft determination we have given consideration to maintaining movements in bills of less than £3 as per the preference established in the company's customer engagement and we note the average bill in the draft determination provides an initial fall in 2020-21, and then remains flat in nominal terms based on the assumption for inflation.

6 Financeability

We interpret our financing duty as a duty to secure that an efficient company can finance the proper carrying out of its functions, in particular by securing reasonable returns on its capital. In the 'PR19 methodology' we set out that our approach is to assess whether allowed revenues, relative to efficient costs, are sufficient for an efficient company to finance its investment on reasonable terms and to deliver its activities in the long term, while protecting the interests of existing and future customers.

The financeability assessment also acts as a final check that, when all the individual components of the companies' business plans (including totex, cost of capital, PAYG and RCV run-off levers) are taken together, an efficient company can generate cash flows sufficient to meet its financing needs.

In this section we set out the basis of our assessment of financeability for the draft determinations including how we are using the tools set out in the PR19 methodology to address financeability constraints. We set out our view that the draft determinations are financeable for the notional capital structure of each company on the basis of the financial ratios calculated in the financial model[18] on which our draft determination is based.

Our financeability assessment takes account of our assessment of efficient costs, our assessment of PAYG and RCV run-off rates, our updated cost of capital and other interventions. Our financeability assessment is made before any revenue reconciliation adjustments for past performance against regulatory incentive mechanisms to maintain incentives.

We also set out our assessment of how companies have responded to the actions we asked companies to complete in the initial assessment of plans.

6.1 Our assessment of financeability of draft determinations

Our approach to assessing the financeability of our draft determinations follows the approach we set out in the PR19 methodology. We are making interventions in the determinations of a number of companies as set out in section 5. Following these interventions we assess that the draft determinations for all slow track and significant

[18] We have published the financial model for each company alongside our draft determinations; details of our financeability assessment for each company are set out in summary documents for each company.

scrutiny companies are financeable on the basis of our assumptions for the notional company structure.

PR19 methodology - financeability

We set out that we expect each company to submit a business plan that is financeable with Board assurance that it is financeable on both the notional and the actual capital structure. We set out:

- We expect each company to submit a business plan that is financeable.
- We assess financeability at appointee level by reference to the notional structure that underpins the cost of capital.
- We expect companies to explain the credit ratings they are targeting.
- We use a suite of financial metrics, based on, but not exactly replicating, those used in the financial markets and by credit rating agencies. We set out the definitions for the suite of financial metrics.
- We also consider financeability at the control level. If individual controls are not financeable on a standalone basis, we consider how to address this to ensure an appropriate balance between the customers affected by each control.
- Companies have a number of options to address financeability constraints that arise under the notional financial structure. We look for evidence of customer support where companies take steps to address such financeability constraints.
- Companies and their shareholders should bear the risk of their capital structure and financing arrangements, not customers.

Our assessments of notional financial ratios are based on our own financial modelling of company draft determinations, incorporating the updated cost capital, our assessment of efficient costs and generally before making reconciliation adjustments relating to incentive mechanisms from previous control periods. We make an exception to carry out the assessment post reconciliation adjustments where companies provide convincing evidence it is in the best interest of customers to do so, as we discuss below.

For the purpose of our assessment, we assume an opening capital structure that is financed 60% by debt and 40% by equity, consistent with the basis on which we assess the cost of capital. We assume an opening proportion of RPI linked debt of 33 per cent with no new index linked debt issued during the period. This may be considered conservative since index linked debt accounted for 49 per cent of opening debt in companies' revised business plans. We apply a base dividend yield of 3.15 per cent and dividend growth of 1.32 per cent in our assessment of notional financeability. We discuss the level of the base dividends and where it is appropriate

to vary the dividend yield or to apply equity injections for companies that have high RCV growth in section 6.5.2.

Where original business plans submitted include financial ratios below stated target thresholds without clear evidence that this was considered in the assurance process for providing Board statements on financeability, we sought further assurance from companies that their business plans are financeable in our initial assessment of business plans.

Financeability assessment in our draft determinations

Consistent with the approach set out in the PR19 methodology, we carry out our assessment of financeability on the basis of the notional capital structure. In doing so, we consider the range of key financial ratios alongside other evidence presented by each company. The assessment is based on the financial ratios for each company as defined in our PR19 methodology and set out in our published financial models.

We consider the average of each metric over the price control and look at trends over the price control period, rather than focusing on individual metrics in a single year. We have exercised our judgement in looking at the suite of financial metrics as part of our assessment of financeability and look at the entire suite of metrics over the entire control period, rather than focusing on a single metric or a single reporting period.

We do not consider that a poor cashflow metric in a single year necessarily raises financeability issues, however, we would have concerns if there were poor metrics in multiple years or if there was a significant decline in cash flow metrics across the period.

6.2 Interventions

The interventions we make in our financeability assessment can be for a range of reasons. These can include where we assess there is insufficient evidence to support the bringing forward of revenue from future customers (through PAYG or RCV run-off adjustments as set out in section 5) or interventions to make adjustments that have the effect of improving financial metrics where the notional financeability of a company is at risk.

The interventions we are making to company business plans on the basis of our assessment of notional financeability for six companies are as follows:

- we increase PAYG rates to bring forward revenue for three companies (Dŵr Cymru, Thames Water and SES Water);
- we are reducing the scope of the revenue adjustment for Affinity Water and Portsmouth Water that these companies propose on the basis of their assessments of notional financeability;
- we are removing the adjustment for South Staffs Water that it proposes following its assessment of notional financeability;
- we restrict dividends for the notional company structure for Affinity Water providing additional equity to the company; and
- we assume the equity injection to the notional company structure proposed by Portsmouth Water.

We also apply a sensitivity to the dividend yield assumption for the notional company to consider the impact on key financial ratios of lower dividend distributions for three companies (Southern Water, Thames Water and Wessex Water) with high RCV growth.

Some companies include additional pension expenses in their revised business plans to address historic pension deficits to beyond what is allowed for in PAYG revenue. We consider these expenses are a matter for companies and their shareholders and not customers, therefore we exclude these costs in our assessment of financeability for the notional company. We have explained this intervention, where it applies, in the relevant company summary documents.

We explain the basis of our interventions in further detail in the following sections.

6.3 Board assurance

The PR19 methodology also sets out that we expect each company to provide Board assurance that its plan is financeable on both the notional and its actual capital structure.

It is for each company to determine how best to provide such assurance, but we expect the Board statements to set out clearly the steps taken to provide the required assurance. The PR19 methodology sets out our expectation for each company to:

- Set out the credit ratings targeted for both the notional and its actual capital structure, along with the rationale as to why this is appropriate for the company.
- Set out the associated level of financial ratios required to maintain the target credit ratings and explain how these levels have been determined.
- Set out any actions necessary to address any issues of financeability and provide compelling evidence of its financeability at the time it submits its business plan.

The Board assurance provided by all companies is underpinned by the assumptions in their revised business plans, which includes their view of efficient costs and the 'early view' cost of capital as set out in our PR19 methodology.

Our assessment of financeability, takes account of the interventions we are making in reaching our draft determinations. But it is partially informed by each company's own assessment of notional financeability and the Board assurance provided. We take account of the specific financial ratios and the level of those financial ratios that underpin the basis on which Board assurance is provided in making our financeability assessment. For example, where a company takes account of past performance reconciliation adjustments in its assessment of notional financeability, and sets out that this is in the customer interest, we adopt this approach in our determination.

In the initial assessment of business plans, we set actions for 13 companies in relation to their Board assurance statements and the assessment of financeability for the notional or actual structure. Actions relating specifically to Board assurance are summarised below. We discuss the actions relating to financeability of the notional and actual structures in the following sections. The actions we set in the initial assessment of business plans were as follows:

- Affinity Water, Hafren Dyfrdwy, SES Water, South Staffs Water and Wessex Water in relation to the steps taken and the assurance obtained by the Board for the assessment of financeability;
- Bristol Water, Dŵr Cymru, Hafren Dyfrdwy, SES Water, Southern Water and Wessex Water in relation to the assumptions underpinning the business plan in relation to the notional company structure;
- Bristol Water, Dŵr Cymru, Portsmouth Water, Southern Water and South Staffs Water in relation to the evidence to support the target credit ratings for the notional company;
- SES Water in relation to the evidence to support the financeability for the notional company;

- Portsmouth Water, South East Water, South Staffs Water and Yorkshire Water in relation to the evidence to support the target credit ratings for their actual company structures; and
- Anglian Water, Hafren Dyfrdwy, Portsmouth Water and Thames Water in relation to the consistency of the level of certain key financial ratios with the target credit ratings.

In response to our draft determinations, we expect companies to provide further Board assurance that they will remain financeable on a notional and actual basis, and that they can maintain the financial resilience of their actual structure. This should take account of the reasonably foreseeable range of plausible outcomes of their final determination including the evidence of further downward pressure on the cost of capital in very recent market data that is set out in section 2 of this appendix and in further detail in the 'Cost of capital technical appendix'.

Each company is responsible for maintaining its own financial resilience over the long term, taking account of its financing and capital structure. For Southern Water, Affinity Water and Bristol Water, we are setting specific actions to set out the steps they are taking to maintain the financeability and financial resilience of the actual company structure. However, we expect all companies to consider the steps they will take to maintain their long-term resilience in the context of a cost of capital for the final determinations that could be lower than the updated view we have used in our draft determinations. Where companies identify further constraints in relation to financeability for the actual structure, companies should set out the actions they will take to address the constraints.

6.4 Target credit ratings

A credit rating is an evaluation of the credit risk of a company, or the risk of a company being unable to repay debt and/or defaulting. Typically, each company will maintain a credit rating with one or more of Fitch Ratings, Inc. (Fitch), Moody's Investors Service Inc. (Moody's) and S&P Global Ratings (S&P). Credit ratings provide a measure of credit risk of a company, which in turn can influence the cost of new debt for a company and its ability to raise finance.

Our PR19 methodology sets out that companies should set out evidence of the credit rating they target in their plan and the level of each financial ratio considered appropriate to meet that target credit rating. We set out that it was important for companies to demonstrate full ownership of their plans, and in doing so it is important that companies determine for themselves the appropriate target credit rating for both the notional and actual structures. The class of rating selected may

depend on the investment and funding needs of a company, as well as the need to maintain financial resilience in the price control period and the longer term.

Under the conditions of their licences, most companies[19] are required to maintain an investment grade credit rating (i.e. BBB-/Baa3/BBB- (Fitch/Moody's/S&P) or higher). However, we also consider that an appropriate credit rating target should include sufficient headroom (i.e. be higher than BBB-/Baa3/BBB-) to protect against falling to a sub-investment grade credit rating following a deterioration in credit risk or potential cost shocks. We set out, in our initial assessment of business plans[20], that we apply a higher evidential bar in assessing whether a company demonstrates that the target credit rating is sustainable for long-term financeability and financial resilience where a credit rating of Baa2/BBB has been targeted for either the notional and the actual structures, given the lower levels of headroom to cost shocks.

We set out in table 6.1 the credit rating targets for each company for the **notional capital structure**. All companies target a credit rating two notches above the minimum investment grade (BBB+, Baa1 and/or BBB (Fitch, Moody's, S&P)) in their revised business plans.

[19] South West Water's and Hafren Dyfrdwy's licence provisions do not require the companies to maintain a credit rating. However each company is required to certify, in the opinion of the Board, its key financial ratios are consistent with an issuer credit rating which is an investment grade rating.
[20] Initial assessment of business plans, Technical appendix 3: Aligning risk and return

Table 6.1: Credit ratings targeted for the notional capital structure

	Target credit rating for the notional financial structure		
Water company	**Fitch**	**Moody's**	**Standard and Poor's**
Anglian Water	-	Baa1	-
Dŵr Cymru	BBB+	Baa1	BBB+
Hafren Dyfrdwy	-	Baa1	BBB+
Northumbrian Water	-	Baa1	BBB+
Southern Water	-	Baa1	BBB+
Severn Trent Water	-	Baa1	BBB+
South West Water	-	-	Boundary of A/BBB+
Thames Water	-	Baa1	BBB+
Wessex Water	BBB+	Baa1	-
United Utilities	-	Baa1	BBB+
Yorkshire Water	-	Baa1	-
Affinity Water	-	Baa1	-
Bristol Water	-	Baa1	-
Portsmouth Water	-	Baa1	-
SES Water	-	Baa1	-
South East Water	-	Baa1	A-
South Staffs Water	-	Baa1	-

Source: Revised business plan tables (App10)

At the initial assessment stage we set actions for Portsmouth Water who targeted three notches headroom to the minimum investment grade (A3 (S&P)) and four companies that targeted one notch headroom (BBB, Baa2 and/or BBB (Fitch, Moody's, S&P)) in their original business plans. We asked each of the companies to provide further evidence to support its view that this target is reasonable for the notional company in the context of its proposed investment and maintaining long-term resilience.

In revised business plans each of the companies now targets two notches headroom. The companies explain their choice as follows:

- In response to a query, Bristol Water confirm that the target credit rating for the notional company is Baa1 (Moody's). The company states that it considers a notionally geared and financed Bristol Water would be expected to be in line with a strong Baa2 (Moody's) based on current rating agency sentiment, but in the

long run would be expected to be Baa1 (Moody's). Bristol Water considers the current sentiment on the regulatory framework to be a short term perspective. The company has a relatively small funding requirement through 2020-25;

- Dwr Cymru sets out that it believes this to be a suitable target for a notional company which is financially resilient for the longer term but notes that notional structure financeability is very tight;
- Portsmouth Water sets out that the revised target credit rating provides an appropriate balance between financeability and customer bills levels, supported by analysis to consider financial shocks and the company's ability to raise debt in the notional structure;
- Southern Water has increased the target credit rating for the notional company from one to two notches headroom to the minimum investment grade in line with other water companies. It states it has changed its approach to assessing adjusted interest cover ratio which is then consistent with Moody's Baa1 rating. However, Southern Water has not provided evidence of why the revised target credit rating is appropriate for the financeability or long-term financial resilience of the company; and
- South Staffs Water sets out that a rating two notches above the minimum investment grade will maintain its current level of credit quality and provides some headroom to enable the company to remain financially resilient. The company considers this is the target rating that Ofwat uses in assessing the cost of debt component of the weighted average cost of capital.

In addition South East Water clarified that its target credit rating for the notional structure is Baa1 and Wessex Water clarified that the Baa1 credit rating it targets in its revised plan is consistent with the 'strong investment grade credit rating' it targeted in its original business plan.

We set out in table 6.2 the credit rating targets for each company for the **actual capital structure**. Most companies target BBB+/Baa1/BBB+ (Fitch, Moody's, S&P), in many cases being consistent with current or expected credit ratings. Four companies target credit ratings one notch lower, at Baa2 (Moody's) and/or BBB (S&P). This rating provides just one notch of headroom to the minimum investment grade rating of BBB-/Baa3/BBB- (Fitch, Moody's, S&P). These targets are primarily driven by companies' actual financing arrangements. We apply a higher evidence bar in assessing whether the company demonstrates that the credit rating is sustainable for long-term financeability and financial resilience when BBB/Baa2/BBB (Fitch, Moody's, S&P) has been targeted for the actual structure, given the lower level of headroom to protect against cost shocks.

Table 6.2: Credit ratings targeted for actual capital structure

	Target credit rating for the actual financial structure		
Water company	**Fitch**	**Moody's**	**Standard and Poor's**
Anglian Water	-	Baa1	-
Dŵr Cymru	BBB+	Baa1	BBB+
Hafren Dyfrdwy*	-	Baa1	BBB+
Northumbrian Water	-	Baa1	BBB+
Severn Trent Water	-	Baa1	BBB+
South West Water*	N/A	N/A	N/A
Southern Water	-	Baa1	A-
Thames Water	-	Baa1	BBB+
Wessex Water	BBB+	Baa1	-
United Utilities	-	A3	BBB+
Yorkshire Water	-	Baa2	-
Affinity Water	-	Baa1	-
Bristol Water	-	Baa2	-
Portsmouth Water	-	Baa2	-
SES Water	-	Baa1	-
South East Water	-	Baa2	BBB
South Staffs Water	-	Baa1	-

* South West Water's and Hafren Dyfrdwy's licence provisions do not require the companies to maintain a credit rating. However each company is required to certify, in the opinion of the Board, its key financial ratios are consistent with an issuer credit rating which is an investment grade rating.
Source: Revised business plan tables (App10)

We asked each of the four companies that target one notch headroom to the minimum investment grade to provide further evidence to support their view that this target is reasonable for the actual company in the context of its proposed investment and maintaining long-term resilience. Each of these companies target a credit rating for the actual structure that is one notch lower than the notional structure, providing less headroom to absorb cost shocks and provide long-term financial resilience suggesting an increased risk to delivery of obligations to customers. All of the four companies retain the same target credit rating for their actual structures and provide further evidence as follows:

- Bristol Water refers to successful refinancing as providing confidence of its financeability at efficient and competitive pricing levels. Bristol Water also refers to the long-dated existing debt and relatively low refinancing

requirement as support that it is targeting an appropriate credit rating. It considers that the company will be in a strong and financeable position to raise the low level of debt required of approximately £9 million in the forthcoming period at a Baa2 rating from Moody's. However, we consider there is limited headroom in the projected financial ratios and we expect Bristol Water to provide further Board assurance of the actions the company will take to maintain its financial resilience;

- Portsmouth Water considers a target credit rating of Baa2/BBB (Moody's, S&P) appropriate for the actual target credit rating due to downward pressure influenced by the lower allowed return, the company's embedded debt and the absence of effective mitigating actions. The company states the Board has accepted that a downgrade to Baa2/BBB (Moody's, S&P) is likely in the actual structure if the company cannot demonstrate higher levels of returns. Portsmouth Water identified a requirement to increase PAYG rates on the basis of its assessment of notional financeability. Following our assessment of notional financeability, we are intervening to reduce the scope of the increase, and as set out in section 5.1 we consider equity investors should contribute to the financing of the significant investment requirement that arises for delivery of the Havant Thicket reservoir and the remainder of Portsmouth Water's activities. We expect Portsmouth Water to consider what action may be required to secure the financeability and long-term financial resilience of the actual structure given our interventions across the draft determination;
- South East Water provides evidence of its recent fund raising through a number of tranches, as well as the protection provided by the covenanted debt structure. The company has also committed to reduce gearing to 75 per cent in 2019-20 through an equity injection. However, we consider that certain financial ratios provide limited headroom against the target credit rating which in turn provides just one notch headroom to a minimum investment grade rating; and
- Yorkshire Water states that the target credit ratings are appropriate to be able to confirm that the company is financeable on an actual basis. We note that the target credit rating for the actual structure at Baa2 (Moody's) is the corporate family rating for Yorkshire Water. The company sets out the specific protection mechanisms for Class A debt, taking account of the covenant and security package for its financing arrangements allow it to issue debt at Baa1 (Moody's), and expects this to be the main source of debt to fund future investment. Yorkshire Water also sets out that the Board has taken the decision to further strengthen the financeability and financial resilience by planning to reduce gearing below 70 per cent by March 2021. We expect the company to set out its plan for how it will achieve this reduction in its response to this draft determination.

We also set actions for Anglian Water and Thames Water to provide further evidence of how the Board has assured itself that the company remains financeable on its actual capital structure given references to failing to meet targets for specific financial ratios. Both companies have provided further evidence to support their financeability assessments, however we consider each company needs to consider what action it may need to take to improve its long-term financial resilience.

6.5 Approach to addressing financeability constraints

Our PR19 methodology sets out a range of options and market mechanisms available to companies to address financeability constraints where they arise from the notional financial structure:

- the use of PAYG and RCV run-off levers to move revenue between control periods on an NPV-neutral basis;
- the restriction of dividends where the company has a large investment programme and the company is seeking to mitigate the effect on credit ratios; and
- the injection of equity where a company has a particularly large investment programme relative to its RCV and needs to maintain notional gearing.

In the 'PR19 Initial assessment of plans – Technical appendix 3: Aligning risk and return', we set out that we also accept the inclusion of the beneficial effect of reconciliation adjustments relating to incentive mechanisms from previous control periods in a company's assessment of notional financeability where it sets out compelling evidence that this is in the best interests of customers. We will not however, assess financeability after the application of incentive mechanisms where the adjustments reflect penalty adjustments to maintain appropriate incentives on companies.

A number of companies have identified financeability constraints in relation to the notional structure. Some companies have also referenced the changes to guidance issued by credit rating agency requirements as a driver of financeability constraints.

We set out in this section further detail on our assessment of financeability in our draft determinations and the basis on which we have made adjustments to ensure our determinations are financeable.

6.5.1 Use of PAYG and RCV run-off

Section 10 of Appendix 12 of the PR19 methodology sets out issues for companies to consider in preparing business plans associated with the mix of real and nominal returns on cash flow metrics.

We noted that as the real cost of capital has fallen in successive price reviews, companies receive a smaller portion of their return through in-period revenues and a larger proportion from indexation of the RCV, meaning lower cash flows and potentially weaker financeability metrics. As financeability constraints are driven by the cash flow effect of a real return on an inflating regulatory capital value it may be reasonable for companies to make some use of PAYG or RCV run-off to address issues around notional financeability.

A number of companies note that this may not necessarily be effective due to certain of the credit rating agencies reversing the effects of advancing revenue in calculating the financial ratios. We maintain that the use of PAYG or RCV run-off remains an appropriate mechanism to maintain financeability where it does not lead to a material depletion of the RCV and where there is sufficient evidence of customer support for the resulting bill profile. We consider the use of PAYG or RCV run-off to address a financeability constraint is preferable to artificially increasing the cost of equity above the level implied by market evidence as, although the use of financial levers increases bills during the period, it is NPV neutral over the long term. We also note that the use of PAYG or RCV run-off financial levers can have the same effect as a faster transition to CPIH. We discuss this further in section 6.7.

Four companies propose to bring forward revenue through increases to PAYG rates in their revised business plans to solve a financeability constraint for the notional company structure. Following our interventions, the draft determinations for six companies use PAYG levers to address a notional financeability constraint:

- Affinity Water proposes an increase to PAYG rates of 7.6 per cent on average. We are intervening to reduce the increase to 1.3 per cent on average.
- We are intervening to increase PAYG rates for the water and wastewater network plus control by 3.4 per cent for Dŵr Cymru.
- Portsmouth Water proposes an increase to PAYG rates for the water resources control of 4.8 per cent on average. We are intervening to reduce the revenue brought forward by removing the increase to PAYG rates for the water resources control and applying an increase of 0.7 per cent to the water network plus control.

- We are intervening to increase PAYG rates for the water controls by 0.5% for SES Water.
- South East Water proposes an increase to PAYG rates for the water controls of 3.4 per cent on average. We maintain the increase for the draft determinations.
- We are intervening to increase PAYG rates for the water and wastewater network plus control by 0.7 per cent for Thames Water.

In addition, South Staffs Water proposes an increase to PAYG rates of 3.0 per cent on average. Following other interventions and our assessment of notional financeability, we are intervening to remove the increase to PAYG rates.

Where we intervene to adjust PAYG rates on the basis of a notional financeability constraint identified for the draft determinations, we target achieving key financial ratios broadly consistent with the ratios set out in the company's revised business plan for which the Board has provided assurance on financeability.

The PR19 methodology does not allow the use of PAYG or RCV run-off to address a financeability constraint for the actual capital structure. Therefore, where we consider a company has accelerated revenue through PAYG or RCV run-off to address a financeability constraint for the actual financial structure, we intervene to reduce rates to protect customers from paying higher bills for a company's decisions on its capital structure.

6.5.2 Base dividends for the notional company

It is reasonable to assume companies should retain a proportion of the economic return given that a proportion of the return is generated from inflationary growth of the RCV and companies must finance investment in the RCV. We set out in the 'PR19 initial assessment of plans – Technical appendix 3: Aligning risk and return' – that in our financeability assessment for the notional company, we limit the dividend yield plus growth assumption to be consistent with the blended cost of equity on a real basis (4.52 per cent on a 50:50 blended CPIH:RPI basis for the early view cost of equity).

Table 6.3 sets out the notional dividend yield applied by companies in revised business plans. A number of companies set a notional dividend yield around 3.15 per cent, being 70 per cent of the blended early view real cost of equity.

In revised plans, only Yorkshire Water set a nominal dividend yield in excess of the blended early view real cost of equity, being in line with the early view real cost of

equity on a CPIH basis. Of the slow track and significant scrutiny companies, Northumbrian Water and Wessex Water are the only other companies to propose to pay out the full real cost of equity.

It appears that all companies based their dividend yields on the appointee cost of equity as no company applied a dividend to the retail control. We apply a similar approach in our assessment of the draft determinations.

Table 6.3: Notional dividend yield and growth in revised company business plans

Water company	Dividend yield	Dividend growth	Total
Anglian Water	3.15%	1.35%	4.50%
Dŵr Cymru	2.60%	2.43%	5.03%
Hafren Dyfrdwy	3.16%	1.36%	4.52%
Northumbrian Water	4.52%	0%	4,52%
Severn Trent Water	3.16%	1.36%	4.52%
South West Water	4.00%	1.03%	5.03%
Southern Water	3.22%	1.30%	4.52%
Thames Water	2.99%	1.28%	4.27%
Wessex Water	4.52%	0%	4.52%
United Utilities	4.52%	0%	4.52%
Yorkshire Water	5.03%	0%	5.03%
Affinity Water	0%	0%	0%
Bristol Water	3.20%	1.30%	4.50%
Portsmouth Water	4.25%[1]		4.25%
SES Water	3.44%[1]		3.44%
South East Water	3.17%[1]		3.17%
South Staffs Water	2.00%	0%	2.00%

[1]Calculated as a simple average of dividends divided by average regulatory equity for each year for companies with a dividend override in the submitted notional financial model that have hard coded the dividend assumptions for the notional structure. Average regulatory equity is calculated as 40% of average RCV.

Source: Company revised business plans and financial models

We have applied the dividend yield of 3.15 per cent with a dividend growth rate of 1.32 per cent for the purposes of our financeability assessment in the draft determinations. The combined dividend yield and growth rate is consistent with the

real cost of equity on a CPIH basis reflecting the transition of price controls to the CPIH measure of inflation. The dividend yield represents a return of 48 per cent of the nominal cost of equity based in our updated view of the cost of equity. It is consistent with an assessment of STOXX Europe 600 payout ratio for 2009-19 which averaged 44 per cent over 2009-19 and 48% over 2017-18. The assessment we have carried out in our financeability assessment suggests that the dividend yield we apply typically allows companies with growth in RCV of less than 10 per cent to maintain gearing around or below the notional gearing level of 60 per cent.

We note that in our fast track draft determinations, published in April 2019, we applied the notional dividend assumptions from the business plans of the fast track companies. For the final determinations we propose to align the base notional dividend for these companies with the approach we adopt for other companies in our final determinations. Of the fast track companies this will have the greatest impact on United Utilities Water, whose dividend yield we would reduce from the figure of 4.52 per cent that was assumed in the company's business plan.

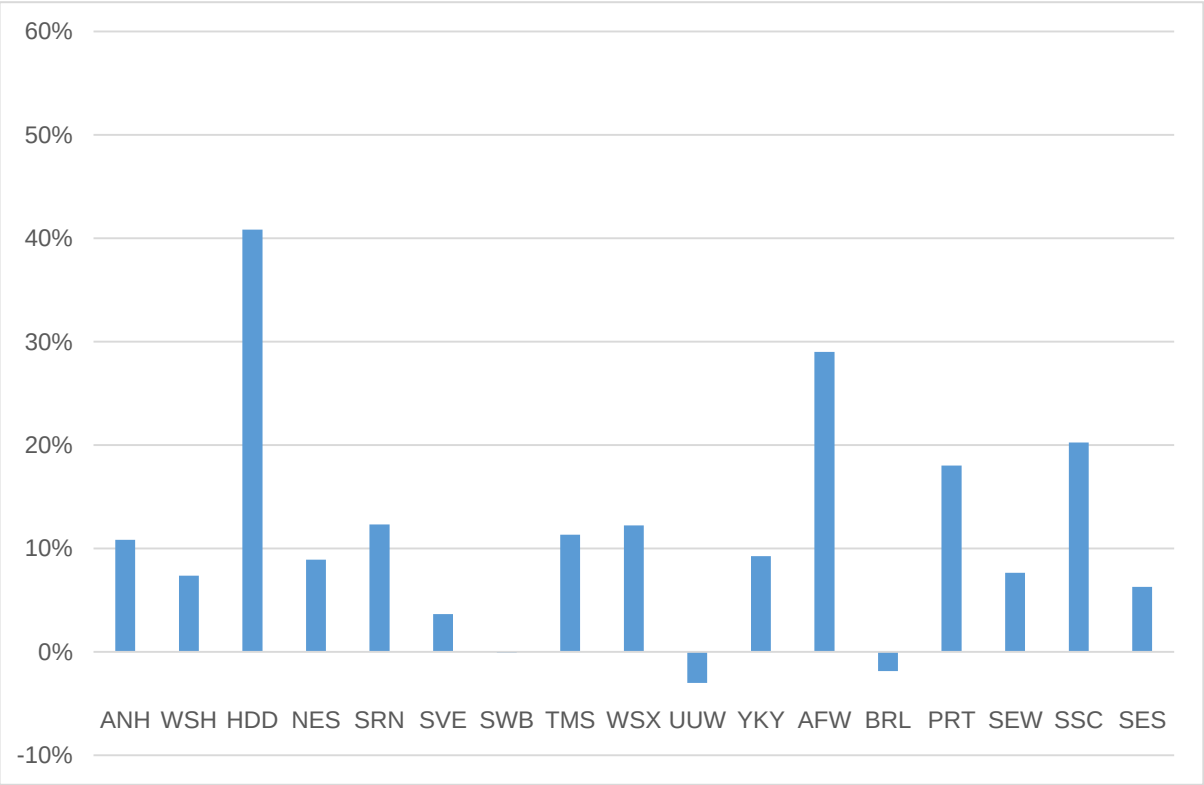
We welcome views on the dividend yield we have applied in responses to our draft determinations. We propose to reconsider and update our assessment of the appropriate dividend yield and growth assumptions should we revise the cost of equity for the final determinations as set out in section 2.

6.5.3 Adjustments to base dividends and equity injections to reflect investment growth

We consider the notional dividend yield and growth rate may be different for each company, reflecting the specific investment and funding requirements in 2020-25. It may be expected that a company with significant RCV growth will retain a higher proportion of earnings to finance the associated investment to maintain gearing consistent with the notional gearing level applied in our determination. For some companies with high RCV growth, we have considered sensitivities with lower dividend yields to assess the financeability of our draft determinations. In instances of particularly high RCV growth it may be appropriate to make assumptions that some RCV growth is financed by equity.

Figure 6.1 compares the cumulative growth of the RCV in the draft determinations. We discuss our assessment of financeability and the interventions we have made where our draft determinations for companies with high levels of RCV growth.

Figure 6.1: Projected cumulative RCV growth in the draft determinations over 2020-25



Source: Draft determinations. RCV growth for Portsmouth Water excludes the investment in the Havant Thicket reservoir, which will be subject to the terms of a bulk supply agreement with Southern Water and will not be funded by Portsmouth Water customers. If Havant Thicket were included in Portsmouth Water's RCV it would be equivalent to increasing Portsmouth Water's RCV growth to 50.8%.

The draft determinations for eight companies have RCV growth in excess of 10 per cent:

- In its business plan, Anglian Water proposes to apply past performance incentives to maintain notional financeability as the company considers this to be in the best interests of customers. We accept this approach as one that is in the customer interest so have not considered a sensitivity for dividends, although we recognise that a reduction in dividend yield would benefit key financial ratios.
- The high RCV growth for Hafren Dyfrdwy is a result of the low starting point for RCV allocated to the company at the time of the border variation. The subsequent RCV growth means that the company benefits from a faster transition to CPIH. We have not needed to consider a dividend sensitivity.
- Southern Water and Wessex Water both show gearing rising over 2020-25 on the basis of the notional company. In our 'in the round' assessment of

notional financeability, alongside the financial ratios set out in section 5.4 of each companies draft determination summary document, we consider the financial ratios based on a reduced dividend yield of 1.8 per cent and 2.2 per cent respectively achieve a gearing level of 60 per cent in 2025.

- In its assessment of notional financeability, Thames Water considered sensitivities for a higher proportion of index linked debt and a reduction in dividend yield to allow the business plan to achieve an adjusted cash interest cover ratio of 1.5x. In our assessment of financeability, we apply a similar sensitivity to reduce dividends to 1.8 per cent which achieves a similar level for this ratio.
- The draft determination for Affinity Water has significant RCV growth. We consider it is appropriate to assume this is partially funded through additional equity. We apply a notional dividend yield of 0.03 per cent for Affinity Water which is equivalent to an injection of equity of £85 million across the period to achieve a gearing level of approximately 60 per cent in 2025. We note that Affinity Water has not included a dividend for the notional company in its revised business model.
- Portsmouth Water has significant RCV growth excluding its investment in Havant Thicket. Portsmouth propose additional equity of £33 million for the notional company in its revised business plan. We apply a similar amount (£34 million) of additional equity in our assessment of notional financeability. We consider £9 million is required to finance investment in Portsmouth Water's activities excluding Havant Thicket and we have applied an equity investment of £25 million to the Havant Thicket control
- We assess South Staffs Water to be financeable for the notional company in the round without applying a sensitivity to the dividend yield, although we recognise that a reduction in dividend yield would benefit key financial ratios.

6.6 Financial ratios

We use a basket of financial metrics as part of our assessment of financeability, comprising debt ratios, equity ratios and other return metrics. These metrics draw on common approaches used in the financial markets and reflect those used by credit rating agencies in their assessment of credit ratings. The metrics and the basis of the calculations are set out in the PR19 methodology.

Credit rating agencies use of financial ratios in the assessment of company credit ratings

Credit rating agencies consider a range of business and financial factors in assessing a company's credit ratings. Financial ratios form only one part of the assessment.

Credit rating agencies also consider a range of financial ratios which differ between credit rating agencies, with some focusing on different ratios and others using similar ratios but applying different adjustments. Furthermore, credit rating agencies apply different weightings to ratios.

- Moody's consider interest cover, gearing, FFO/Net Debt and RCF/Net Debt, with greater weighting applied to the interest cover and FFO/Net Debt ratios.
- Standard & Poor's (S&P's) basket of financial ratios includes FFO/Debt, Debt/EBITDA and a range of supplementary cover ratios and payback ratios. FFO/Debt and Debt/EBITDA are considered to be core ratios for credit rating assessment.

Fitch consider gearing, Debt (gross and net)/FFO, FFO/Debt Service and interest cover. For interest cover, Fitch uses the Post Maintenance Interest Cover Ratio (PMICR) which adjusts for costs associated with long-term investment.

From time to time, credit rating agencies publish targets for financial ratios. We recognise these are a guide and specific thresholds may apply to different companies depending on the credit rating agencies assessment of other factors taken into account in a company's credit rating. We also recognise that metrics below threshold guidance may not necessarily impact credit ratings where they are considered one-off events that do not impact the fundamental strength of the business.

The basis of the ratios used by the credit rating agencies are similar to the ratios set out in the PR19 methodology although each credit rating agency adopts its own definition and the precise definitions will differ between Ofwat ratios and each rating agency ratio. Credit rating agencies may also treat certain cash flows and balances differently between companies depending on specific circumstances. We apply a consistent definition for all companies in our assessment.

We note that companies typically have focussed on the key financial ratios favoured by the credit rating agencies in their approach to assessing financeability. In our assessment we look at the suite of ratios but consistent with the approach adopted

by the companies in their business plans, we apply more weighting to the gearing, adjusted cash interest cover and funds from operations to net debt ratios. We set out these ratios for the draft determinations for each of the companies in table 6.4 and set out further ratios for the revised business plan and the summary document accompanying each company in the company's draft determination (section 5.4 Financeability).

Table 6.4: Summary financial ratios for draft determinations for notional company structures (2020-25 average)

Water company	Gearing	Adjusted cash interest cover ratio	Funds from operations/net debt
Anglian Water	60.80%	1.44	9.28%
Dŵr Cymru	60.49%	1.50	7.56%
Hafren Dyfrdwy	64.29%	1.74	11.99%
Northumbrian Water	59.60%	1.52	9.96%
Severn Trent Water	60.04%	1.48	10.02%
South West Water	57.88%	2.00	11.93%
Southern Water	61.74%	1.71	10.89%
Thames Water	60.89%	1.46	8.80%
Wessex Water	61.33%	1.67	9.23%
United Utilities	58.89%	1.54	9.81%
Yorkshire Water	61.22%	1.94	9.35%
Affinity Water	60.78%	1.50	9.62%
Bristol Water	59.10%	2.52	13.29%
Portsmouth Water	58.62%	1.48	8.33%
SES Water	62.16%	1.46	13.29%
South East Water	59.74%	2.22	9.64%
South Staffs Water	61.46%	1.66	13.04%

Source: Draft determinations financial models

Gearing is impacted by companies RCV growth and the dividend policy applied to the notional company structure.

Adjusted cash interest cover ratio is impacted by a company's approach to recovering infrastructure renewal expenditure through PAYG or RCV run-off and its accounting policy for treating these costs as operating and/or capital expenditure. For example, Yorkshire Water and Bristol Water capitalise a part of infrastructure

renewal costs in their accounting policies while recovering these costs in period through PAYG rates. Where companies receive allowances for pension deficit recovery costs, the ratio may also be impacted by how companies apply these funds as there may be a difference in how the cash flows are treated in the calculation.

Funds from operations/net debt is impacted by a company's policy for depreciating its RCV. Companies with higher RCV run-off rates as set out in table 5.5 typically exhibit higher funds from operations/net debt.

In our assessment of financial ratios, we give consideration to the thresholds and the levels of the financial ratios set out in a company's revised business plan along with other evidence that companies provide to support their Board assurance statements that their plans are financeable on the basis of the notional company. Most companies set target thresholds for key financial ratios based on current guidance from the credit rating agencies.

Where we assess there is a notional financeability constraint, our intervention aims to achieve financial ratios broadly similar with ratios set out in the revised business plan. We set out the interventions we are making in section 5.1 and in the company's draft determination document.

6.7 Impact of the updated cost of capital on financeability

As set out in the 'Cost of capital technical appendix', we set the cost of capital to provide a reasonable base level of return reflective of the sector's risks, and which is sufficient to cover efficient debt and equity financing costs. The cost of capital we apply directly impacts revenues and can impact on the level of the financial ratios for the notional and actual capital structure.

All companies provide Board assurance that business plans are financeable based on the early view cost of capital. However, a number of companies raise concerns regarding the financeability of the notional company structure if the cost of capital were to reduce versus the early view. In particular, Anglian Water published a report exploring the relationship between the allowed cost of equity and notional financeability[21] which sets out that our early view cost of capital results in notional financial ratios that are tight relative to the requirements for a Baa1 credit rating. The report includes a table demonstrating the relationship between the cost of capital and the adjusted interest cover financial ratio.

[21] 'PR19 – Notional company financeability' - An exploration of the relationship between the allowed cost of equity and notional financeability. Published on Water UK: Marketplace for ideas (March 2019)

We set the cost of capital for draft determinations reflecting evidence of expected market returns for 2020-25. The 'Cost of capital technical appendix' discusses how we use market data to inform our decision.

Consistent with the approach of other regulated sectors, we set the cost of capital, and its components on a real basis. Companies earn a return on their investment partly though a real return and partly through an inflationary increase in the value of RCV. We set out in the 'PR19 methodology' how the real cost of capital has fallen over time, while the long-term view of inflation has increased. The transition to inflate part of the RCV by CPIH mitigates this reduction to some extent, but the real return on a 50:50 blended RPI/CPIH basis remains lower than PR14. The updated real cost of capital has reduced from the early view cost of capital while our long-term view of inflation has remained consistent with the early view, which further reduces the part of the return recovered as a cash.

Whilst providers of equity finance generally accept returns as a dividend yield linked to the real returns and an inflating equity base, most providers of debt require their returns through interest payments based on nominal interest rates. A reduction in the proportion of the real return that is funded through cash can lead to a timing difference between the allowed returns and payments to lenders which causes pressure on cash flow ratios such as the adjusted cash interest cover ratio.

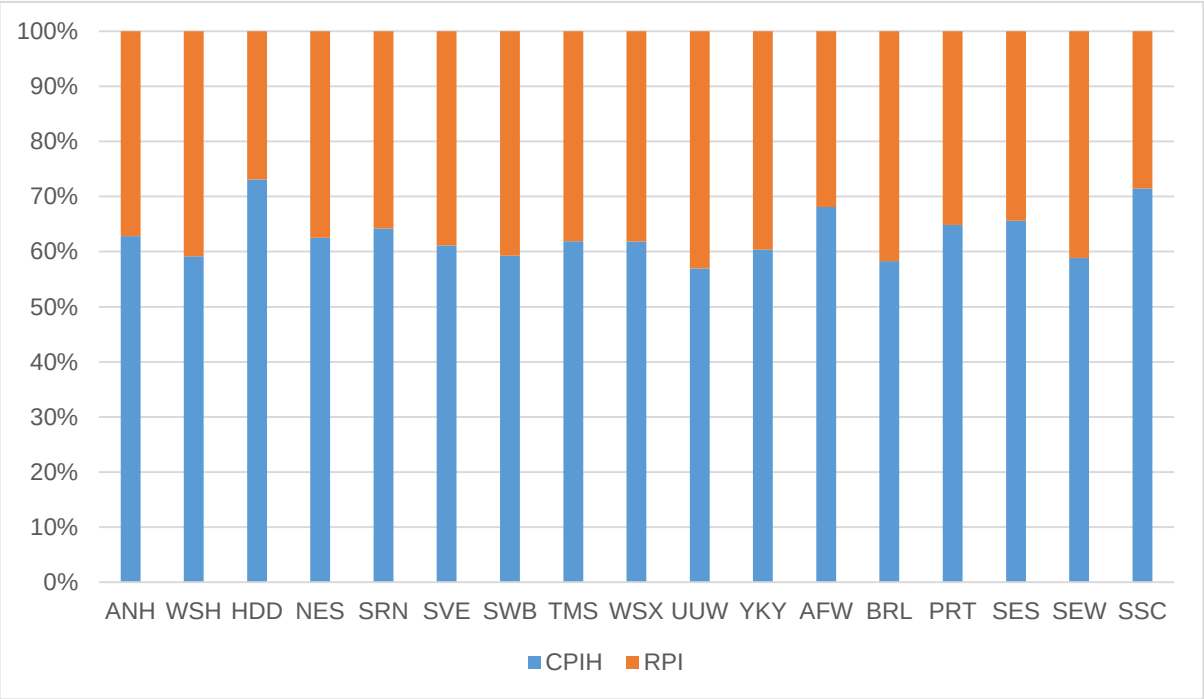
The PR19 methodology allows companies to use PAYG and RCV run-off levers to increase cash flows in the short term where there is compelling evidence of customer support for the resulting bill profiles and provided that RCV is not depleted. We considered in the 'Financing Networks'[22] paper that uplifts to revenue should be value neutral and we maintain our view that the use of financial levers to solve a financeability constraint is in the best interest of customers. An adjustment to the cost of equity to address a cash flow constraint would require customers to pay more and pay twice via the return in indexation of the RCV. In making use of PAYG or RCV run-off levers in our draft determinations we have considered the position of companies in the round. We do not consider there to be evidence that resulting cashflows run down RCV at the expense of maintaining financeability in the long term.

The effect on cashflows of the real cost of capital that is applied in our draft determinations will vary between companies depending on the relative proportions of RCV that are inflated by RPI and CPIH. This is because 50 per cent of RCV as at 1 April 2020 will be inflated by RPI, the remainder, including all post-2020 investment will be inflated by CPIH. Therefore, the proportion of RCV that is inflated by CPIH will depend on the proportion of totex that is capitalised (i.e. which is not remunerated as

[22] Ofwat and Ofgem, 'Financing Networks: A discussion paper' (February 2006)

pay as you go) and the relative RCV run-off rates applied to the different elements. Companies with high investment and/or high RCV run-off rates will transition more quickly to CPIH. We set out the relative speed of transition to CPIH for companies in figure 6.2.

Figure 6.2: Proportion of RCV inflated by RPI and CPIH at 2025



Source: Draft determination financial models. Portsmouth excludes the Havant Thicket control as this is subject to a separate cost of capital.

Our interventions to increase PAYG rates to address notional financeability constraints could be viewed as having an equivalent effect as a faster transition to CPIH. We note, for example, that Moody's has confirmed CPIH cash flows can be seen as credit positive. For example, in response to Ofgem's consultation[23] on its approach to setting prices for gas distribution networks in 2021-26 regulatory period, Moody's set out[24] "Although this (adoption of CPIH indexation) is a pure "speed of money" adjustment that will reduce future cash flow by an equivalent amount, we regard the change as credit positive as long as companies reduce distributions to maintain a stable path of net debt/RAV."

[24] Moody's Investors Service, Credit quality likely to weaken in RIIO-GD2 regulatory period, February 2019

In its report Anglian Water sets out that with RPI being phased out, an efficiently financed notional company is unlikely to raise further RPI linked debt and that if CPI linked debt is raised, the real coupon will be higher and hence ratios weaker. In our assessment of notional financeability we assume an opening proportion of RPI linked debt of 33 per cent and that no new index linked debt is issued during the period. We have previously confirmed that our transition to CPIH does not require companies to issue CPI linked debt, and we see no evidence that coupons are higher on average for CPI linked debt. Between September 2016 and November 2017, we have identified 6 CPI-linked issuances from water companies, with average real coupon 0.28%. Compared to the yield on the day of issue from our benchmark index, we calculate that this sample of bonds was issued at a yield on average around 90 basis points lower.[25]

We also note that our opening assumption for index linked debt for the notional company may be considered conservative with the average for the sector being materially higher than this. Index linked debt accounted for 49 per cent of 2020 opening debt balances in companies' revised business plans. However, companies are responsible for maintaining financial structures that remain resilient in the long term, and while companies can choose to take the short term cash flow benefit of RPI linked debt issuance, this can place pressure on gearing levels in the longer term as a result of the lower inflationary adjustments to the CPIH indexed RCV that companies must manage within their actual structures under a transition to CPIH.

[25] Our comparison uplifts the real yield on CPI-linked bonds by our 2.0% long-term assumption for CPI to compare against the nominal value of the iBoXX A/BBB 10yrs+ non-financials index.

7 Financial resilience

Companies and their investors are responsible for ensuring the long term resilience of their financial structures. We expect companies to demonstrate, in their business plans, that their actual financial structure allows them to maintain financial resilience for 2020-25 and in the long term, taking account of their overall assessment of risks related to their capital structure as well as potential cost shocks. We set out in "Putting the sector in balance: position statement" we expect companies to assess their own downside scenarios and also to assess a minimum suite of scenarios that we prescribed to facilitate our assessment.

We commented on the information companies provided in our initial assessment of business plans and, for a number of companies, challenged them to demonstrate they are taking account of all relevant factors in their assessment of financial resilience. We sought further evidence and assurances from companies, where necessary, in relation to their management of financial risks and also risks that could arise as a result of their group financial structures, their ability to access new finance, the potential for equity support, and major development projects.

Impact of increased revenue at risk with an actual financial structure

Reflecting the expectation of a lower cost of capital, we have, for some time[26], signalled a need for highly geared companies to ensure their actual financial structure will remain resilient and, where necessary, to amend their financing structures to ensure long-term resilience.

Companies with high gearing have a lower equity base to absorb financial shocks. Companies with high cost debt or that are subject to penalties for poor performance may have low levels of headroom in financial ratios to withstand cost shocks. Often these issues can lead to a lower credit rating assessment from the credit rating agencies.

We apply a higher bar in challenging companies to demonstrate they will remain financially resilience in the long term where companies exhibit lower levels of financial headroom.

Some companies have already taken steps to restructure their debt financing arrangements and/or reduce gearing levels in the context of a cost of capital that is

[26] See for example, Cathryn Ross's speech at Moody's conference in 2017.

low by historical standards for 2020-25; others are proposing dividend restrictions and equity injections to improve resilience in 2020-25. Gearing levels for actual company structures reported as at 31 March 2018 in annual performance reports, and projected for 31 March 2021 and 31 March 2025 in the revised business plans (and the business plans for the fast track companies) are set out in Table 7.1.

Table 7.1: Companies' reported (2017-18) and forecast (2020-21 & 2024-25) gearing for their actual company structures (%)

Company Name	2017-18 (%)	2020-21 (%)	2024-25 (%)
Anglian Water	78.54	77.88	76.23
Dŵr Cymru	57.05	59.86	58.53
Hafren Dyfrdwy	67.16*	61.38	63.13
Northumbrian Water	66.02	68.85	69.66
Severn Trent Water	61.50	62.88	65.07
South West Water	60.36	63.74	62.06
Southern Water	79.22	69.96	69.08
Thames Water	82.93	81.78	78.69
United Utilities	64.69	62.14	59.95
Wessex Water	63.85	68.85	69.08
Yorkshire Water	74.32	70.35	69.89
Affinity Water	79.67	79.86	79.40
Bristol Water	63.96	67.00	67.19
Portsmouth Water	63.58	55.33	62.21
South East Water	77.74	75.32	75.04
South Staffs Water	71.51	67.55	69.55
SES Water	77.07	69.05	69.82
Sector Average	**69.95**	**68.34**	**68.51**

* Dee Valley Water (pre 2018 acquisition by Severn Trent Water and border variation (NAV))

Source: 2017-18 – annual performance reports; 2020-21 and 2024-25 – revised business plan tables (App10)

The updated cost of capital in the draft determinations is lower than the early view cost of capital adopted by companies in their revised business plans. Very recent market evidence points to a cost of capital that is even lower than our updated view. Therefore, we seek further Board assurance from all companies that they will remain financeable on a notional and actual basis in response to our draft determinations. We expect companies to provide further Board assurance to confirm that they can maintain long term financial resilience, taking account of the interventions we have made to their plans and the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the cost of capital in very recent market data.

Most companies with high levels of gearing propose steps to reduce gearing through 2020-25. In most instances, this is proposed to be achieved by constraining dividends. In the cases of Southern Water, Thames Water, and Yorkshire Water, debt raised above the level of the ring fence is being used (or is proposed to be used) to reduce gearing of the appointed business; we expect companies to be transparent about such arrangements. It is important these companies consider carefully how they will ensure such arrangements allow them to meet their obligations and commitments to customers both now and in the long term, and the impacts these arrangements could have on their long-term financial resilience.

The evidence presented in business plans and the assessment we have carried out in our draft determinations suggests some companies with high levels of gearing and/or high cost debt do need to take steps to maintain their financial resilience.

For Anglian Water, South East Water, South Staffs Water, Southern Water, Affinity Water, Thames Water, and Bristol Water, we expect the revised Board assurance to set out further detail of the steps each company is taking to demonstrate that each company will maintain financial resilience in the long term. For each of these companies we have set specific actions to demonstrate the steps they are taking to maintain long-term resilience.

For Southern Water and Affinity Water, we request this to be accompanied by evidence of support from equity investors and accompanied by independent assurance about the long-term viability, including their ability to maintain sufficient headroom with respect to target credit ratings. The action for Southern Water is in the context of an enforcement penalty in light of our findings in an investigation. The action for Affinity Water relates to its proposals to reduce its currently high levels of gearing. We will engage with companies and challenge them where we have concerns about the effectiveness of the actions they are taking to ensure their long-term resilience.

Actions for Yorkshire Water, Bristol Water, Portsmouth Water and South East Water are set within the context of limited headroom within the credit rating targeted for the actual financial structure which is lower than the credit rating stated for the notional financial structure, which places greater risk on customers. The action for South Staffs Water is in the context of limited headroom in the financial ratios in its business plan under the actual structure.

There are also a number of other companies that currently have, or expect to maintain, high levels of gearing. We have set an action for Yorkshire Water to provide further details about its proposal to reduce gearing levels by 31 March 2021. Thames Water and Anglian Water both propose reductions in gearing, but propose

to continue to maintain high levels of gearing through 2020-25. Both companies will be subject to the gearing outperformance mechanism as discussed in section 9, so share gearing outperformance benefits with customers.

All companies have committed to meet our expectation that their assessment of financial resilience in their Long Term Viability Statements in their Annual Performance Reports should extend into the long term, that is, beyond the period of the price control. We expect companies to assess a set of suitably robust downside scenarios in their long term viability statements (for example as set out in 'IN 18/04: Expectations for companies in issuing long term viability statements'). We will monitor the assessments companies provide in their Long Term Viability Statements through 2020-25. We will also monitor progress against de-gearing proposals companies make in their business plans as represented in table 7.1. We will continue to challenge companies, where appropriate, to demonstrate that the financing choices they make, take account of the interests of customers.

8 Tax

We set out our approach to tax in the PR19 methodology. Our approach is largely consistent with the approach that we have used in previous price reviews. However, our PR19 methodology introduces changes in some areas, including:

- that companies should pay full tax value for any group losses that they utilise (or receive full tax value for any losses surrendered to other group companies). Where companies do not do this, we will reclaim any tax allowances that were not needed through our price determinations; and
- a true up mechanism to adjust the tax allowances for changes in corporation tax or capital allowance rates that were enacted after the final determination was made.

We calculate a tax allowance reflecting the corporation tax that each company expects to pay in 2020-25. We calculate the tax allowance using our financial model based on the projected taxable profits of the appointed business and the current UK corporation tax rates and associated reliefs and allowances. The information has been updated to take account of the recent changes to the capital allowances regime announced in the 2018 budget.

8.1 Representations to draft determination assessment for tax

The interventions we make in our determinations may impact on forecast levels of capital expenditure and in the area of new connections our assumed recovery rates may differ from what companies assumed in business plans. The resulting impact on allowances used for the calculation of taxation has not been reflected in our draft determinations. Where these changes result in significantly different inputs for capital allowances or tax deductions, we expect companies to identify this as part of their representations on the draft determination.

We expect companies to set out the assurance process they adopt alongside the provision of any new tax data that is provided as part of companies' representations on our draft determinations, this is consistent with our expectations on tax data contained in business plans.

SES Water and South Staffs Water provide insufficient evidence of the assurance work undertaken on their tax forecasts in their business plan, in comparison to the level of assurance provided by other companies. Both companies have an action to provide further evidence to explain the assurance process they have taken to

develop their tax forecasts. Should either company not provide sufficient evidence in advance of the Final Determination, we will consider whether it is appropriate to make an adjustment to the tax allowance in the Final Determination to reflect this.

8.2 Tax reconciliation mechanism

Our PR19 methodology introduces a tax reconciliation mechanism, which will take account of any changes to corporation tax or capital allowance rates after we make our final determinations. These adjustments will be subject to reconciliation at PR24.

Our reconciliation will recalculate the tax allowance for each year, to reflect changes to either the headline corporation tax rate or to the writing down allowances available on capital expenditure.

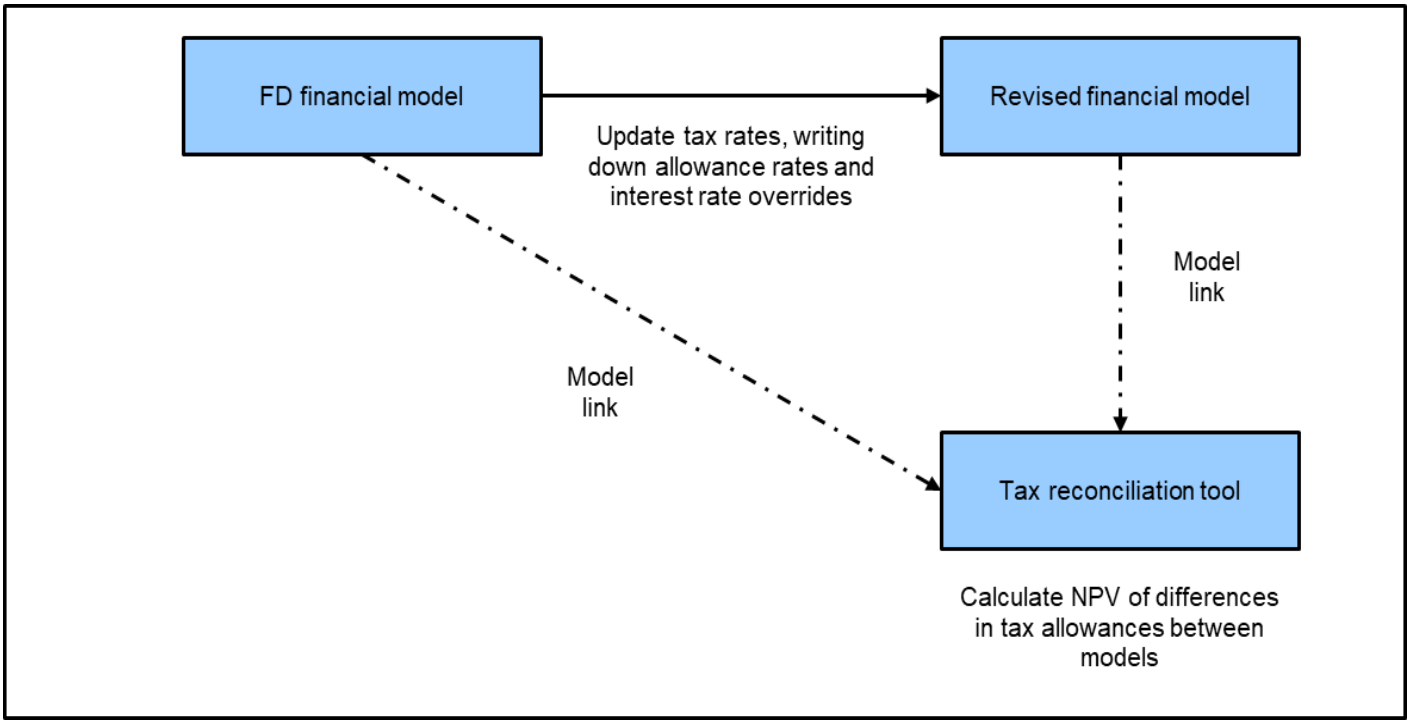
Our PR19 methodology also introduces a cost of debt mechanism and the PR19 methodology confirmed that when calculating the reconciliation adjustments for corporation tax, we will take into account the impact on the tax charge arising from changes to the cost of debt, derived from the cost of new debt index mechanism.

For our reconciliation model, we will require a version of the published PR19 financial model which contains the totex allowances, PAYG and RCV run-off rates (as set out in the final determination) updated for any changes to the statutory corporation tax rate, capital allowance writing down allowances and the updated cost of debt calculated in the cost of debt mechanism over the 2020-25 period.

We have published a tax reconciliation tool, which will draw from the published version of the PR19 financial model and the updated version. It then calculates the adjustment required at PR24 based on the difference in the tax allowance if the revised inputs had been used at PR19. Alongside the tax reconciliation tool we have also made revisions and republished our cost of new debt reconciliation spreadsheet.

Our PR19 methodology sets out that where companies have not paid full tax value for any group losses utilised in 2020-25 (or where they have not charged full tax value for any losses surrendered to other group companies), we will reclaim any tax allowances that were not needed through at PR24. The reconciliation model contains input lines to enable companies to capture any adjustments necessary for such adjustments to be made. We welcome views on the tax reconciliation tool that has been published alongside the draft determinations.

Figure 8.1 Tax reconciliation tool



9 Putting the sector in balance

In July 2018 we published our 'Putting the sector in balance: position statement', which made targeted amendments to the PR19 methodology that aimed to encourage companies to take greater account of customers' interests. The document set out our aim to improve trust and confidence of the sector including encouraging companies:

- to act in a manner consistent with their responsibilities as providers of essential public services;
- to be transparent and accountable to customers and wider society; and
- to have appropriate alignment of the interests of company management and investors to the interests of current and future customers.

The expectations we set out in our position statement aim to align the interest of company management and investors to the interests of current and future customers. We set out our expectations as follows:

- Companies should set out clearly in their business plans details underpinning their proposed approach to **dividends** and factors that would influence dividends for 2020-25. This should include the dividend yield that underpins their assessment of long term financial resilience and how this relates to their proposed approach to dividends in 2020-25. We set out that companies should explain how their approach would take account of delivery for customers over the period of the price control, taking account of factors that include out/underperformance and benefit sharing, employee interests, pension obligations, capital structure, the need to finance investment and financial resilience. We sought commitment from companies that dividend policies, and how dividends declared or paid, should be set out clearly in Annual Performance Reports.
- Companies should set out clearly in their business plans details to show how their policies for **performance related executive pay** demonstrate a substantial link to stretching performance delivery for customers, we reference 'stretching' to mean stretching performance by reference to the business plan. We set out that companies should demonstrate how their approach aligns with customer interests including, for example, the extent to which the short and long-term performance related pay policies link to outcome delivery incentives, totex, or other measures of operational performance.
- Companies with high gearing levels should propose **gearing outperformance mechanisms** that allow customers to share in the returns equity investors achieve from high gearing. We set out an illustrative gearing outperformance

sharing mechanism. We set out that we would accept alternative mechanisms if they deliver equivalent benefits to customers in the round, which may include both financial and wider impacts such as risks borne by customers.
- We set out an expectation that companies should consider **voluntarily sharing** the benefits of outperformance with customers.

We assessed and commented on the evidence companies provided on these issues in our initial assessment of business plans. We set actions for all companies on dividend and performance related executive pay to take into account in their revised business plans. In this section, we comment on company proposals in revised business plans and we provide examples of the best practice we have seen.

9.1 Dividend policy

Our approach is to regulate prices charged to customers and to set allowed returns for investors, as part of setting price controls. We do not regulate the level of dividends. We recognise that the decisions companies make as to the declaration and payment of dividends are best determined by companies and their boards, within the wider framework of price controls, licence obligations and company law.

However, we consider that companies should explain how their dividend polices and dividends declared or paid reflect delivery to customers and their wider obligations as essential service providers. Companies should also be mindful of their licence obligation which requires them to ensure that dividends paid or declared are in line with their dividend policy which means they should not impair the ability of the appointee to finance the appointed business and should reward efficiency and the management of economic risk.

Our ‘Putting the sector in balance’ position statement set out our expectations for dividend policy over 2020-25. We asked companies to set out in their business plans:

- details underpinning their proposed approach to dividends and factors that would influence dividends for 2020-25 transparently in their business plans;
- the dividend yield that underpins their assessment of long term financial resilience and how this relates to their approach to dividends (both base dividends and any relating to outperformance) in 2020-25;
- how their approach will take account of delivery for customers over the period of the price control;

- a commitment that dividend policies will be clearly set out in Annual Performance Reports in 2020-25, including how dividends declared or paid relate to that policy; and,
- a commitment to clearly signal any changes to dividend policies in the Annual Performance Reports.

We set out that factors companies should take into account when designing dividend policies, including:

- whether companies are meeting their obligations,
- the commitments they have made to customers,
- adjustments for out/underperformance against regulatory metrics and benefit sharing,
- employee interests,
- pension obligations,
- actual capital structure, including whether, for a company with high gearing, it has considered maintaining the same dividend yield as under our notional structure,
- the need to finance future investment (RCV growth) and
- financial resilience.

Following publication of our 'Putting the sector in balance' position statement we published our revised Board leadership, transparency and governance principles in January 2019. In that document we set out our expectation for each company's approach to transparency and governance to engender trust and to ensure accountability for their actions. Companies should explain in a manner that is effective, accessible and clear how they are meeting that objective.

A guiding provision of the revised Board, leadership, transparency and governance Principles is that companies should publish an explanation of dividend policies and dividends paid, and how these take account of delivery for customers and other obligations (including to employees). This information should be published in a form and level of detail that is accessible and clear for customers and stakeholders.

In the initial assessment of business plans, we set actions for all companies, which companies have taken into account in their revised business plan submissions. All companies demonstrate that they are moving towards meeting our expectations and we have set out our assessment for each company in the company summary documents that accompany our draft determinations.

All companies have made firm commitments around transparency and said that their dividend policy will take account of obligations and commitments to customers. However, the majority of companies have not provided sufficient explanation or evidence to explain precisely how they will demonstrate they will meet our

expectations. We consider that for a company to demonstrate best practice in meeting our expectations in this area it will have set out:

- that it will take account of performance across a range of factors that matter to customers and wider stakeholders, including delivery for customers and the environment;
- the specific obligations and commitments to customers and other stakeholders that will be considered when determining dividends under the policy;
- the performance levels or expectations that the obligations and commitments will be considered against, including reference to the final determination of price limits where appropriate; and
- how the above factors will impact on dividends.

We expect all companies to continue to take steps to meet our expectations. For most companies we have identified further actions that are needed to demonstrate alignment with customer interest. While most companies have indicated their dividend policies will take account of regulatory targets, we expect companies to demonstrate transparently that their dividend policy for 2020-25 takes account of obligations and commitments to customers and other stakeholders, including performance in delivery against the final determination.

We expect companies to respond to these issues in response to their draft determinations, where relevant, taking account of our comments on current best practice we have identified in our assessment of business plans regarding the application of dividend policies for 2020-25 which we set out below. We do not comment on the application of dividend policies in the current regulatory period as our assessment is forward looking for the period 2020-25.

It will only be once companies apply their policies in the 2020-25 period that we will be able to assess whether companies are fully meeting our expectations and so we intend to monitor the application of policies by the companies as reported in their Annual Performance Reports in the 2020-25 period.

9.1.1 Dividend policies - best practice in business plans

Some companies state that their assessment of performance will be made by reference to their business plan. However, reference levels of performance for 2020-25 could change as a result of interventions for our draft and final determinations.

We consider Yorkshire Water's demonstrates an element of best practice by referencing performance levels that will be measured against its determination. The majority of companies referenced regulatory targets but we consider there needs to

be clarity around the specific performance levels considered for companies to be accountable to their customers and wider stakeholders.

Example of an element of best practice – performance levels or expectations

Yorkshire Water confirms that it will adjust its base dividend to reflect and recognise company performance and delivery to customers, in particular performance above or below that assumed in the determination of price limits.

We expect companies to be transparent about the approach they take to arriving at decisions on dividends by reference to company performance. SES Water's business plan explains the decision making process that the board will follow, demonstrating an element of current best practice.

Example of an element of best practice – description of dividend process

SES Water's business plan sets out in detail the process the board proposes to take when setting dividends and the judgements it will make around the balance of performance against the commitments made to customers. It confirms this will reflect a mixture of financial and non-financial incentives, with account taken of known and forecast performance and relative importance to customers and stakeholders. It also demonstrates best practice with the level of description and explanation that is proposed to be published around dividend decisions, involving a descriptive approach and quantitative analysis.

Very few companies attempt to explain what the impact on dividends would be as a result of actual performance. United Utilities Water quantified the outperformance dividend based on a calculation of RoRE and committed to a threshold over which outperformance will be shared with customers. We consider the level of detail provided demonstrates an element of current best practice from the business plan submissions. But definitions or examples of material breach or materially failing to meet performance targets would improve transparency.

Example of an element of best practice - meeting obligations and commitments to customers – impact on dividends

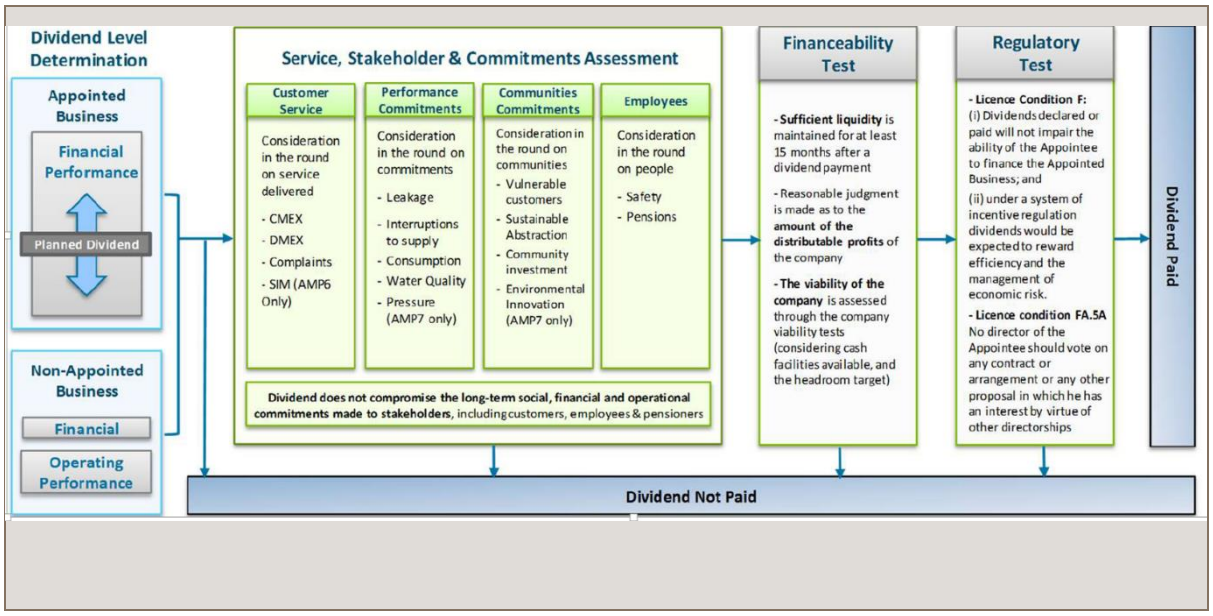
United Utilities Water uses a tabular approach to list the factors that need to be met in order to pay dividends above the stated level of the base dividend. Taking account of:

- Before declaring any dividend (including the base dividend) the company will consider whether payments would cause significant harm to the company's financial resilience and the potential impact any distributions may have on customers or employees.
- Any payment of outperformance dividends in excess of the equivalent of 2% of RoRE would not be made where the company was materially failing to meet its performance targets unless the dividend was accompanied by investment aimed at improving that position. There is a commitment to 1:1 matching of this payment with contributions to CommUnity Share for customer benefit.

While all companies have now made firm commitments that dividend policies will take account of obligations and commitments to customers, most companies have not set out which specific obligations and commitments will be considered. Affinity Water publish a diagram which sets out what will be considered when determining dividends. The company includes supporting narrative that clearly sets out what obligations and commitments would be considered and we consider it demonstrates an element of best practice. We also consider the reference to a wide scope when assessing performance in the round for delivery to customers is also best practice.

Example of an element of best practice – detail on specific obligations and commitments

Affinity Water included a diagram in its business plan that summarised its dividend policy. The supporting narrative clearly sets out what 'Service and Commitments to stakeholders' will be considered (under the headings, customer service, operational, community and employees) will be assessed against Business Plan targets. The narrative confirms that the Board's assessment also confirms the financeability considerations that will be taken into account, the requirements of Affinity Water's licence and the legal requirements that the Board must comply with.



9.2 Performance related executive pay

Given the public service nature of the water sector, it is important that water companies are transparent about executive pay and how it aligns to delivery of services to customers. Performance related pay can align the interests of executives with those of customers and investors. Transparency of the relationship between pay and performance can help customers see how performance related executive pay is aligned to the provision of an essential service.

The ‘Putting the sector in balance’ position statement set out our expectations for performance related executive pay policy for 2020-25. We asked companies to set out in their business plans:

- details of the policy for 2020-25;
- clear demonstration of how the incentives are aligned to the substantial delivery of service to customers;
- evidence to show that targets will be stretching;
- evidence to show how policies will be monitored and rigorously applied; and
- a commitment to full transparent reporting, including further updates to the policy for 2020-25.

We set out that we expect:

- companies to be transparent about how executives are remunerated and specifically how any performance related element of executive pay is linked to the underlying performance of the company;

- policies for short- and long-term performance related pay to demonstrate a substantial link to stretching performance delivery for customers, for example aligned to outcome delivery incentives, cost performance and other regulatory mechanisms; and
- a commitment to clearly signal any changes to executive pay policies in the Annual Performance Reports.

A guiding provision of the revised Board, leadership, transparency and governance principles is that companies should publish an explanation of their executive pay policy and how the criteria for awarding short- and long-term performance related elements are substantially linked to stretching delivery for customers and are rigorously applied. Where directors' responsibilities are substantially focused on the regulated company and they receive remuneration for these responsibilities from elsewhere in the group, policies relating to this pay should be fully disclosed at the regulated company level. This information should be published in a form and level that is accessible and clear for customers and stakeholders.

Following the initial assessment of business plans, we set actions for all companies, which companies have taken into account in their revised submissions. Slow track and significant scrutiny companies responded to these actions in their revised business plans, however we assessed companies still had more to fully meet our expectations, some more so than others. Therefore we issued a further query to all slow track and significant scrutiny companies to request further evidence of how proposed policies demonstrated alignment to our expectations. The assessment we have set out in the draft determination summary document for each company takes account of this additional information.

We have set out our assessment for each company in the company summary documents that accompany our draft determinations. We expect all companies to continue to take steps to meet our expectations. For most companies we identify further actions that are needed to demonstrate alignment with customer interest.

While most companies have taken steps to demonstrate their performance related pay policies will link to performance that matters for customers, we expect each company and its remuneration committee to ensure its performance related executive pay policy demonstrates a substantial link to performance delivery for customers through 2020-25 and is underpinned by targets that are stretching. Trust and confidence can best be maintained where stretching performance is set by reference to the final determination and taking account of stretching regulatory benchmarks (for example delivery of upper quartile performance) and should include a commitment that the company will continually assess performance targets to ensure targets will continue to be stretching throughout 2020-25.

We also identify that best practice approaches include ‘gateway’ or ‘underpin’ arrangements which set a minimum level of service that must be achieved for performance related payments to be made and arrangements where remuneration committees retain discretion to remove or constrain payments if certain circumstances arise.

We expect companies to respond to these issues in response to their draft determinations, where relevant, taking account of our comments on current best practice we have identified in our assessment of business plans regarding the application of performance related executive pay policies for 2020-25 which we set out below. We do not comment on the application of performance related executive pay policies in the current regulatory period as our assessment is forward looking for the period 2020-25.

It will only be once companies apply their policies in the 2020-25 period that we will be able to assess whether companies are fully meeting our expectations and so we intend to monitor the application of policies by the companies as reported in their Annual Performance Reports in the 2020-25 period.

Where a policy applies at a group level, we expect the policy to take account of the position of each company within the group. Also that the customers of each company within the group only contribute to any bonus payments if the performance targets for its company are met, thereby demonstrating that the policy aligns with the service delivered to the customers of each company within the group.

9.2.1 Performance related executive pay – best practice

We have not set a minimum threshold that is required to satisfy substantial delivery for customers. However, following our assessment we have seen evidence of best practice amongst the companies that we regulate where companies have indicated a minimum of 60% incentives being directly aligned to the delivery of service to customers, with some significantly higher.

We consider substantial delivery for customers can be best demonstrated where measures are linked directly to customer service measures and where a range of measures are used to provide an assessment of the overall performance of the company. Such measures might include regulatory metrics such as C-MeX, common outcome delivery incentives, measures of water quality and environmental performance.

In some cases, companies propose to use RoRE as a comparative performance measure for performance related executive pay. As RoRE takes account of cost and

outcome performance as well as financial performance, it can be considered as providing some alignment to customer interests. However, companies demonstrating an element of best practice place greatest weight on measures that directly measure customer performance.

Examples of elements of best practice – evidence of substantial delivery for customers

Anglian Water and Welsh Water both propose that 100% of their incentives for performance related executive pay are directly linked to delivery for customers.

- Anglian Water proposes three sets of measures (i) direct customer measures (including C-Mex and vulnerability), (ii) customer delivery measures (a small number of outcome delivery incentives determined by customers), and (iii) customer centric measure of efficiency.
- Welsh Water's incentives include drinking water quality, environmental compliance, customer satisfaction and complaints, reliability of customer service and three year average customer service performance.

A number of other companies proposals (Affinity Water, Hafren Dyfrdwy, South Staffordshire Water and Portsmouth Water), indicate incentives in excess of 60% that are aligned to the delivery of service to customers, including outcome delivery incentives, totex performance, customer service delivery and RoRE performance.

For several companies we have set out that we expect further clarity to be provided to demonstrate how they will ensure performance targets will be stretching. We have identified best practice approaches as being those that commit to set stretching targets by reference to sector upper quartile performance or by reference to the stretch targets contained in the final determination. Companies demonstrating best practice in this also demonstrate an on-going commitment to review and refine performance targets where appropriate to ensure the targets remain stretching.

Examples of elements of best practice – stretching targets

Affinity Water and Southern Water demonstrate that targets will be stretching by proposing to align the target metrics that are contained within their performance related pay policies to those in the final determination.

Yorkshire Water states that targets will be based on those in the final determination, with additional stretch provided by reviewing performance against

previous year outcomes and forecasted in year performance and applying a stretch target onto the required target performance.

Welsh Water states that incentives are calibrated across the prior year's performance and against the performance of other companies as assessed by Ofwat and other regulators, in order to incentivise sector-leading performance

Some companies have made use of 'gateway' or 'underpin' arrangements (a set of conditions that must also be met in order to qualify for the award). Such arrangements can be useful to ensure alignment of customer interest because they can set a minimum service level thresholds that must be achieved before incentive payments are made.

Examples of elements of best practice – 'gateway' and 'underpin' arrangements

South West Water proposed an 'underpin' arrangement whereby for the annual bonus the element aligned to specific customer delivery targets will only be awarded if at least 90% of the basket of customer outcome delivery incentives are achieved.

South East Water proposed 'underpin' arrangements whereby for the annual bonus, no bonus would be payable if three or more of the six objectives are not met, irrespective of the company's financial performance, and for the long-term bonus, no bonus would be payable if the overall performance of the company against its outcome delivery incentive results in a penalty for poor performance.

Wessex Water states that only if the remuneration committee judges that three quarters or more of the customer and environmental targets have been achieved, will executive directors be eligible for the award of a bonus.

In addition, some companies have referenced circumstances where remuneration committees have discretionary powers to reduce all or part of performance related pay payments resulting from significant failures, for example against customer, health and safety, asset health or regulatory targets.

Examples of elements of best practice – remuneration committee discretionary powers

A number of companies (Bristol Water, Hafren Dyfrdwy, Portsmouth Water, SES Water, Thames Water and United Utilities Water) state that their remuneration committees have discretionary powers to reduce in full or in part any bonus payment for exceptional circumstances, for example a significantly detrimental customer event, or failure to meet health and safety requirements.

9.3 Gearing benefits sharing

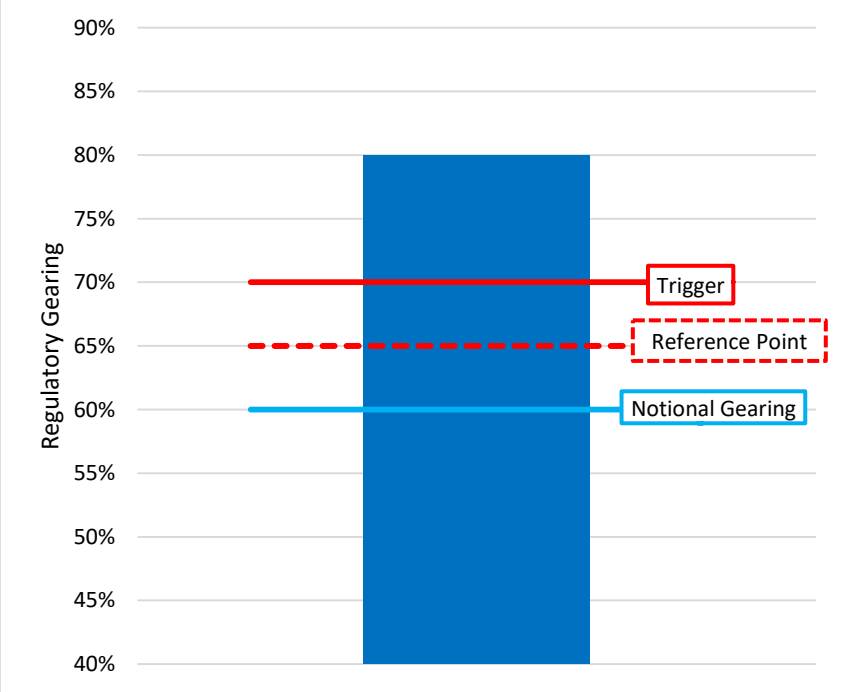
Companies and their investors are responsible for the decisions they make about their actual financial structure. However, where companies adopt high levels of gearing, they may reduce financial resilience and transfer some risk to customers and / or potentially taxpayers in the event that a company fails. Therefore, in our 'Putting the sector in balance: position statement', we set out that companies with high levels of gearing should share benefits with customers.

In our position statement we proposed an illustrative gearing outperformance sharing mechanism. We said we would accept alternative mechanisms if the alternative were to deliver equivalent benefits for customers in the round, which may include both financial and wider impacts such as risks borne by customers. We also said alternative outperformance mechanisms may include a transition period where there is compelling evidence this is in customers' interest. However, it would be important that the overall proposals deliver benefits that are equivalent to the default mechanism.

9.3.1 Default sharing mechanism

Our default mechanism is detailed below.

Benefit sharing for high gearing – default mechanism



The gearing outperformance sharing mechanism payment amount will be calculated at PR24 based on the sum of sharing payment amount for each year in 2020-25 when gearing exceeds the trigger point of 70%.

Annual sharing payment amount
= (Gearing[27] - Reference Point) × Sharing Rate × (Notional Nominal Cost of Equity- Actual Cost of Debt[28]) × Closing RCV Nominal

Where:
Gearing = Debt / RCV as reported in the Annual Performance Report with the reference, table 1E, line 7
Reference Point = 65%
Sharing Rate = 50%
Notional Nominal Cost of Equity = as referenced in the final determination
Actual Cost of Debt = reported in the Annual Performance Report with the reference, table 1E, line 11
Closing RCV Nominal = reported from the yearly published RCV figures (https://www.ofwat.gov.uk/publications/)

Which simplifies the formula to the below:

Sharing payment amount
= (Gearing – 65%) x 50% x (Notional Nominal Cost of Equity - Actual Cost of Debt) x Closing RCV Nominal

Values are then discounted to 2025 in present values terms. The sum of the 2025 values is the total value of the reconciliation to be shared with customers.

The above calculation is illustrated in the reconciliation model Gearing Sharing Mechanism 2020-25. Instructions on how to use the model is contained within the model, in the tab 'Front Page'.

9.3.2 Company representations in business plans

We received revised business plans from the slow-track and significant scrutiny rated companies on 1 April 2019.

[27] Where gearing is regulatory gearing from the company Annual Performance Report
[28] Where actual cost of debt is indicative weighted average nominal interest rate from the company Annual Performance Report

All companies, except Thames Water, South Staffs Water and Bristol Water, have confirmed they will apply our default sharing mechanism. Thames Water proposes an amendment to the sharing mechanism. South Staffs Water and Bristol Water propose amendments to the calculation of gearing that is used for the mechanism.

Affinity Water, Anglian Water, South East Water, Southern Water and Thames Water state objections to the mechanism on grounds that the mechanism is not consistent with financial theory and that companies with gearing in excess of 70% are able to maintain financial resilience.

Thames Water proposes:

i) A tiered sharing system where different rates apply to each tier band (with 25% customer share between 70 and 75% gearing, 50% share between 75 and 80% and 75% share above 80%), which Thames Water consider to provide a stronger incentive to de-gear than the default mechanism
ii) Increasing the reference point from 65% to 70%

Thames Water also states that mechanism penalises efficient issuers of debt. The company further comments that using the actual cost of debt penalises it for having a more efficient (lower) actual cost of debt. The company has not included any amendment to the proposed mechanism on this point but encourages us to consider changing the calculation.

South Staffs Water proposes its gearing value should be based on its covenanted gearing rather than regulatory gearing as this is the value which investors, credit rating agencies and lenders use. South Staffs Water states that regulatory gearing includes accounting adjustments that do not represent actual liabilities. The company comments that the use of regulatory gearing will lead to a higher reported gearing, which could impact its credit rating. The company further says it may ultimately lead to an increased cost of debt, which would not be in the interest of customers.

Bristol Water proposes its gearing calculation should exclude £12.5 million of preference shares, as it considers these specific historical financing arrangements can be considered an element of equity, rather than debt in some circumstances.

9.3.3 Our assessment of the proposals

We addressed the objections that the gearing outperformance mechanism is inconsistent with financial theory and financial resilience of companies with gearing

in excess of 70% in our 'Putting the Sector in Balance: position statement'. In summary:

- We commented on the application of financial theory in the context of our gearing outperformance mechanism. We set out that where companies adopt high levels of gearing, they may increase risk to equity investors and reduce financial resilience. They may also transfer some risk to customers and or potentially taxpayers, in the event that a company fails.
- High gearing may also reduce the ability of companies to adapt to changes to regulatory arrangements that are required in customer interests. Equity investors benefit from higher equity returns that are associated with their increased risk, but there is no substantive benefit passed to customers.

We do not consider that the tiered mechanism proposed by Thames Water provides equivalent benefits for customers. While customers receive a greater benefit above gearing of 80% in terms of the sharing rate, headroom in financial ratios is eroded at such high levels of gearing and Thames Water forecasts gearing to remain below 80% in 2020-25. The sharing rate within the gearing band 70%-75% is 25%, which is half of the default mechanism sharing rate of 50%.

Further to this, the reference point being increased from 65% to 70% means that the company is sharing 0% within this band, while the default mechanism is sharing 50% with customers.

From our analysis, using the company's forecasted gearing from business plan tables, assumptions in cost of debt / equity and RCV, we conclude that the default mechanism benefits customers more than the company mechanism proposed on financial impact. We forecast if Thames Water were to use the default mechanism, it would share an estimated £90 million over 2020-25. While if the company were to use its own proposed mechanism, the company will be sharing £50 million with customers.

For wider impacts such as reduced risks for customers, the company argues a tiered mechanism could incentivise it to reduce gearing and customers benefit from the intermediate stepping points. The company proposes to reduce gearing by about 5%, but remain above 76% gearing at the end of 2025. But it does not state it would further reduce gearing if it were to use its mechanism. The company does not provide convincing evidence that customers benefit from wider impacts.

The company comments that any major new regulation with significant financial impact should include a reasonable transition period. Our position statement does set out that we would consider a transition period if it is in the customer interest, and

the overall proposals deliver benefits that are equivalent to the default mechanism. However, the company has not provided any evidence as to the period over which a transition should be adopted. Furthermore, we note that most other companies have confirmed the application of the default mechanism.

Regarding Thames Water's view that the calculation should be made on the basis of the notional, rather than actual cost of debt, we retain the view that, it is appropriate that the calculation is based on the actual cost of debt as this is the cost companies consider when making gearing decisions. As set out in our position statement, the use of the actual cost of debt will better reflect the individual company circumstances and take account of any link between the cost of debt and the higher geared structure such as any increase in the cost of debt associated with higher gearing or benefits from securitisation arrangements. The company's actual cost of debt would also capture both the impact of the higher level of debt and any out/underperformance against the notional cost of debt. We favour the use of the actual cost of debt reported by companies as there is likely to be a link between gearing level and the cost of debt and it is more consistent with the principle of benefit sharing, where benefit from financing arrangements is split between investors and customers.

In the 'Putting the sector in balance: position statement', we set out and proposed a consistent definition of gearing for all companies to use for the mechanism, which is based on the regulatory gearing number which it reports in the company Annual Performance Report. South Staffs Water proposes to use its adjusted gearing (which it currently reports in its Annual Performance Report as 'Adjusted gearing'), which is used for specific financing arrangements for the company; Bristol Water proposes to treat its preference shares as equity for the purposes of the gearing outperformance mechanism. We consider these to be a matter for each company and their investors rather than issues for adjustment in out gearing outperformance mechanism.

Further, both South Staffs Water and Bristol Water project limited headroom in the financial ratios under their actual structures. While gearing reductions in 2020-25, could reduce risks to customers in the long term, we seek further assurance from both companies about the levels of financial resilience they will achieve as a consequence of the interventions in our draft determinations. We do not consider that applying the definition of gearing to reflect specific covenant definitions (South Staffs Water) is in the best interest of customers in the context of the limited levels of headroom. In the context of Bristol Water we do not accept that treating preference shares as equity for the purposes of the calculation is in the customer interest as it is unlikely interest payments on preference shares could be reduced to reflect, for example, circumstances related to poor performance or to maintain financial

resilience which would be consistent with the expectations we set out in our ‘Putting the sector in balance: position statement’.

Regarding South Staffs Water’s concern that the mechanism could increase the cost of debt, we note increased debt costs arise where companies have lower levels of financial resilience as indicated by lower credit ratings. Choice of capital structure is a matter for each company and its investors. South Staffs Water has chosen to adopt a capital structure that contains higher levels of debt than our assumptions for the notional structure, which, itself, can lead to higher debt costs than we assume for the notional structure. Therefore we are not convinced that adopting an alternative definition of gearing to reflect South Staffs Water’s circumstances would be in customers’ best interests.

South Staffs Water has regulatory gearing at 71.5% and is forecasted to gear at around 69% over the control period. South Staffs Water’s covenant gearing is c.5% lower than its regulatory gearing. So, if the company uses its covenant gearing, it is not forecasted to trigger the mechanism in the control period unless regulatory gearing is 75%+.

From our analysis, using the company’s forecast covenanted gearing from company business plan tables and including the difference between regulatory and covenant gearing (c.5%), assumptions in cost of debt / equity and RCV, we concluded that the default mechanism benefits customers more than the company mechanism proposed on financial impact. We forecast if South Staffs Water were using the default mechanism, it would share an estimated amount of £1 million. While if the company were to use its own proposed mechanism, the company will not share any benefits with customers.

We do not consider that adopting the mechanisms proposed by Thames Water and South Staffs Water provide equivalent customer benefits compared with our default mechanism in the round. Therefore, we have decided to reject Thames Water and South Staffs Water sharing mechanism proposals.

We expect Thames Water, South Staffs Water and Bristol Water to apply our default mechanism. If the companies do not apply the default mechanism we set out in the ‘Putting the sector back in balance: position statement’, we intend to make an adjustment at PR24 to ensure benefits are adequately shared with customers.

We expect to set out how such an adjustment would apply in the PR19 reconciliation rulebook.

9.4 Voluntary sharing arrangements

Following our 'Putting the sector back in balance: position statement', we continue to encourage that companies with a low cost of embedded debt should consider proposing voluntary sharing mechanisms.

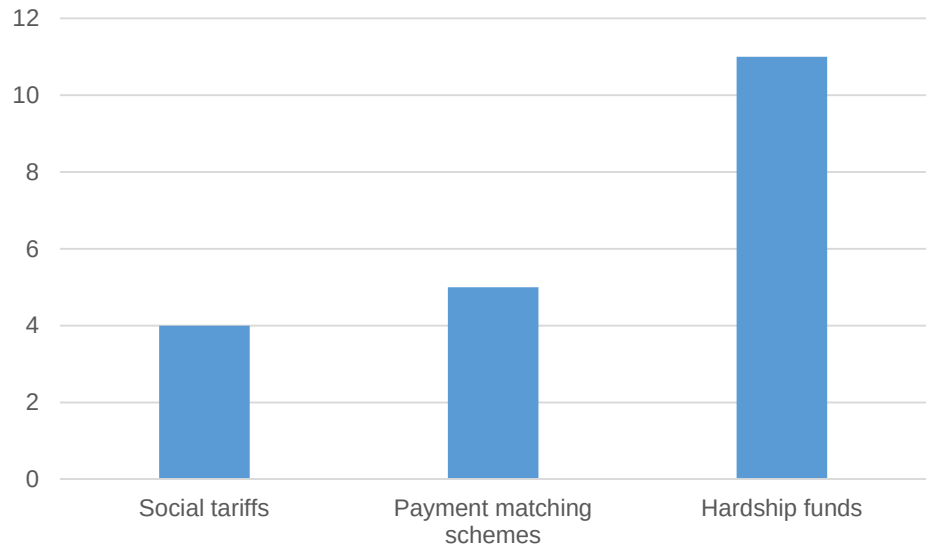
In general, adoption of sharing proposals relating to debt is low in revised business plans from slow-track and significant companies, with a single scheme proposing to share outperformance benefits from embedded debt. We assess that customers will not in practice see benefits from this scheme as the company's embedded debt costs are materially higher than our notional assumption for draft determinations.

For our Initial Assessment of Plans, we assigned actions to companies to include a sharing mechanism for Outcome Delivery Incentives which will share 50% of any outperformance above 3.0% of regulatory equity. Two revised business plans from Dŵr Cymru[29] and Wessex Water include sharing proposals which go beyond this; for instance, sharing a proportion of all net outperformance benefits from Outcome Delivery Incentives.

Across the sector, some companies also committed to making company contributions to affordability support schemes over 2020-25. Hardship funds are the most widely proposed recipients, with 11 companies committing to provide funding to such schemes. Payment matching schemes and social tariffs are less popular, with 5 and 4 companies proposing contributions to these schemes, respectively. The total value of company contributions to affordability support schemes has reduced compared to business plans submitted in 2018. This in part reflects greater standardisation in how companies report spending proposals, and the removal of ineligible spending (e.g. admin costs) from their figures.

[29] For Dŵr Cymru, this may reflect its unique position as a company limited by guarantee with no shareholders.

Figure 9.1: Number of companies contributing to affordability support schemes (including fast track companies)



Source: Ofwat analysis of PR19 business plans

Examples of best practice – ambitious sharing proposals

Dŵr Cymru propose to make £76m of company contributions to its social tariff (in 2017/18 prices) over 2020-25. This sharing corresponds to the assumption the company makes for its equity dividend the company would have paid if it had shareholders.

United Utilities commits to spend £71 million of its own money on financial assistance schemes over 2020-25. It has committed that dividend distributions to shareholders which exceed the base dividend plus 2% of RoRE will be matched by contributions to its CommUnity Share scheme which provides matching financial benefits for customers and communities in the North West. Allocations from the CommUnity Share scheme will be made in consultation with customers and shareholders, overseen by the CCG.

Wessex Water proposes a sharing mechanism which will reinvest 20% of net Outcome Delivery Incentive payments in community projects and which will cap any within-period ODI payment to 2% of regulated equity.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales. Our vision is to be a trusted and respected regulator, working at the leading edge, challenging ourselves and others to build trust and confidence in water.

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