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Reference of the PR19 final determinations: Risk and return – response to common issues in companies' 27 May submissions to the CMA

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Reference to the PR19 final determinations: Risk and return – response to companies' submissions on 27 May 2020

Contents

1. Introduction

1.1 In this document we present a targeted reply to the 27 May submissions by Anglian Water, Bristol Water, Northumbrian Water and Yorkshire Water to the Competition and Markets Authority (CMA) (the '27 May submissions'), focused on new materials (evidence and/or arguments), together with short references to the key mischaracterisations that have been made on thematic issues regarding the risk and return policy area. We also submit additional evidence in response to certain points made by the companies. We consider it is important to provide this written reply in order to assist the CMA in its consideration of companies' submissions. In particular, having our perspective on the new materials will enable the CMA to work most effectively.

1.2 In the interests of brevity, we do not seek in this document to set out our answer to the very many points made with which we disagree, we set these issues out in our 4 May response to the companies' statements of case ('our 4 May response'). The CMA is already burdened with an extremely large volume of submissions and materials in these redeterminations. If there are any particular respects in which we have not explained our position in sufficient detail, or where the CMA would be assisted by our response to points we have not addressed, we would be happy to provide further clarification.

Document structure

The rest of this document is structured as follows:

- **Section 2 Balance of risk and return**
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2. Balance of risk and return

Introduction

2.1 In our 4 May response, we set out evidence of historical outperformance against our regulatory cost allowances. We set out the rationale for the adoption of asymmetric cost sharing rates to incentivise companies to deliver stretching business plans. We comment on the key claims put forward by companies on the balance of risk and return for outcome delivery incentives in our response to individual company submissions.

Historical outperformance and evidence of expected outperformance

2.2 In their 27 May submissions, Northumbrian Water (supported by an additional Economic Insight consultancy report)[1] and Yorkshire Water repeat the claim there has not been historical outperformance of price controls. Yorkshire Water raises a new claim that we must measure performance on a return on capital employed basis (RoCE) to be in accordance with our duties.[2] The companies argue return on capital employed is the most relevant metric for assessing historical performance and analysis on this basis suggests there is not systematic outperformance.[3,4]

2.3 As RoCE is a measure that is neither referred to, nor defined, as an appropriate reference point in the Water Industry Act 1991, Yorkshire Water's claim is incorrect. It is similar to earlier attempts by the company to read into the legislation technical concepts that are not there. Analysis we have presented on a return on regulatory equity basis (RoRE) is calculated by reference to equity capital employed (on both a notional and actual basis). It captures out / underperformance on debt financing costs in addition to operational performance. And as it is equity investors that bear the impact of overall out / under performance, it is the most relevant measure of overall company performance.

[1] Northumbrian Water, 'REP067_Appendix3_Economic Insights Appendix'
[2] Yorkshire Water, 'Response to Ofwat Reply', May 2020, p. 186, paragraph 6.5.2
[3] Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, p. 50, paragraph 210
[4] Yorkshire Water, 'Response to Ofwat Reply', May 2020, pp. 172-176

2.4 A shortcoming of RoCE is that it only measures operational performance, it does not measure financing out / under performance which should be considered when determining the overall incentive package.

2.5 Further, Northumbrian Water and Yorkshire Water strongly emphasise the RoCE analysis as not pointing to systematic outperformance, however neither company has engaged with our historical assessment of totex out / under performance which shows a 2.3% median outperformance over 2000-19.[5]

2.6 Anglian Water states it does not dispute the figures on historical totex outperformance we quoted, but says it refutes the inference drawn, claiming its strong performance shows incentive-based regulation is working well.[6] We agree this is one possible conclusion that could be drawn from the analysis, though we note also that Anglian Water has systematically outperformed its cost allowances in each of the last four price control periods (5.7% on average),[7] but claimed a material increase to its totex cost allowances for 2020-25 (a 15.7% increase based on the August 2019 business plan and historical wholesale base costs).[8]

2.7 While it remains early in the 2020-25 period, we note that some companies are predicting scope for outperformance in preliminary results for 2020-21:

> 'South West Water is confident that it will deliver outperformance in each area and is targeting delivery in every year, with financing outperformance … and a focus on delivering substantial cost savings alongside increased targeted ODI rewards.'[9]
>
> Severn Trent Water says 'we are confident we can deliver improved services within our AMP7 totex' … 'we remain confident we can deliver positive net outperformance payments this year, and across the AMP. Due to the nature of some of our customer ODIs, including those that

[5] Ofwat, 'Risk and return – response to common issues in companies' statement of case', May 2020, p. 32, Figure 2.6
[6] Anglian Water, 'REP08 Part G – Reply on cost issues', pp. 4-5
[7] Ofwat, 'Risk and return – response to common issues in companies' statement of case', May 2020, p. 33, Table 2.1
[8] Ofwat, 'Introduction and overall stretch on costs and outcomes -response to cross-cutting issues in companies' statements of case', May 2020, p. 63, table 5.3
[9] Pennon, 'Full year results 2019-20', 4 June 2020, p. 28

> require capital investment, we expect the level of outperformance payments to grow over the AMP.'[10]
>
> United Utilities set out there are 'bigger opportunities to innovate and outperform than AMP6' ODI measures'[11] and it has 'confidence for AMP7'.[12]

2.8 On the basis of the historical outperformance and early evidence that some companies are already predicting outperformance, we consider our approach to cost sharing rates and to the overall balance of risk and return is reasonable.

Cost Sharing

2.9 In their 27 May submissions, Anglian Water, Northumbrian Water, and Bristol Water repeat their challenge on our cost sharing rates.

2.10 Bristol Water[13] and Northumbrian Water[14] claim 50:50 cost sharing rates are more appropriate. Bristol Water claims that its relatively low underperformance cost sharing rate means it has a relatively high exposure to risks such as bad debt risk. Northumbrian Water raises a new claim that asymmetric cost sharing rates do not meet the better regulation principle of proportionality, and Anglian Water argues our approach penalises companies for legitimate disagreements on scope and cost efficiency and disincentives ambitious business plans in future.[15]

2.11 Our view is that customers of companies that are less stretching or cost efficient should receive greater protection than companies that submit stretching and efficient plans. Therefore, companies with the most stretching and efficient plans benefit from cost sharing rates that are more favourable to them and receive more protection from overspend; companies with less stretching and efficient plans benefit from less favourable cost sharing rates and less protection from overspend. We consider this to be entirely consistent with the better regulation principle of proportionality, to which we had due

[10] Severn Trent, 'Preliminary Announcement of Annual Results', 20 May 2020, pp. 5 and 9
[11] United Utilities Group plc, 'Capital markets day', 2 March 2020, p.34
[12] United Utilities Group plc, 'Full year results year ended 31 March 2020', p. 34
[13] Bristol Water, 'Reply to Ofwat response', May 2020, pp. 73-76, paragraphs 357-368
[14] Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, p. 15, paragraphs 49-51
[15] Anglian Water, 'Reply to Ofwat's response: Executive Summary', May 2020, p. 11, paragraph 55

regard, and so our views on these issues remain as stated in our 4 May response.[16]

2.12 We submit that the CMA should not accept company arguments that incentive rates should be symmetrical. As set out in our 4 May response,[17] it is important to recognise any decisions the CMA takes that affect the totex cost sharing rates in our determination could impact on the incentives for submission of efficient business plans in future price reviews.

2.13 We have consulted on and issued our decision on whether we should amend the cost sharing rates for the wholesale bad debt exposure which arises as a result of the liquidity arrangements we have put in place for the retail market in response to Covid-19.[18] Our decision is that the cost sharing rates should reflect the final determination, however we have capped the increased exposure to the average monthly charge for the failed retailer. We have not deemed it appropriate to adjust the cost sharing mechanisms for bad debt risk.

[16] Ofwat, 'Risk and return – response to common issues in companies statements of case', pp. 34-39, paragraphs 2.59-2.72
[17] Ofwat, 'Risk and return –response to common issues in companies statements of case', p. 5, paragraph 1.13
[18] Ofwat, 'Covid-19 and the business retail market: Proposals to address liquidity challenges and increases in bad debt – decision document', April 2020, p. 36

3. Allowed return

Introduction

3.1 In their 27 May submissions, the disputing companies restate many of issues already raised on the allowed return which we already addressed in prior submissions. In this section we focus on areas where new evidence or arguments have been provided. This largely relates to market-to-asset ratio (MARs) analysis, equity beta and cost of debt. Overall, our view remains that market data supports an allowed return at or below our final determination figure of 2.96% (CPIH).

Market to asset ratio analysis

3.2 Our 4 May response set out market to asset ratios (MAR) evidence produced by Europe Economics demonstrating that the allowed cost of equity had not been set too low. Using reasonable assumptions of outperformance based on equity analyst expectations we estimated a residual premium of 1.04x – 1.08x RCV, which indicated a market expectation of outperforming on our allowed return on equity.

3.3 All four disputing companies raise issues with this analysis:

- Northumbrian Water provides new analysis based on decomposing its own MAR calculation using valuations provided by equity analyst reports, finding a range of residual premium of 0.93x to 1.08x, with a central estimate close to 1.0x RCV.[19] Its conclusion is that it is far from clear that there is a MAR premium after outperformance.
- Yorkshire Water argues that our analysis did not adjust headline MARs for non-regulated businesses and should have included United Utilities. The company provides new analysis with which it argues that correcting for these factors and using data from April and May instead of February gives a residual MAR of 0.98 to 1.02 for Severn Trent and 0.95 to 0.97 for United Utilities.[20]
- Northumbrian Water, Bristol Water, and Anglian Water argue that our analysis does not control for other non-cost of equity factors affecting share prices (eg the 2019 election, company outperformance, accrued dividends, and takeover

[19] Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, p. 90, Figures 21 & 22
[20] Yorkshire Water, 'Response to Ofwat Reply', May 2020, p. 213, paragraph 7.6.2

premia) and so cannot be used to draw conclusions about the required cost of equity for the sector.

3.4 We reviewed Northumbrian Water's analysis and found that its conclusion that the residual premium could be below 1.0x[21] is heavily dependent on the input deducted from its MAR estimate to account for 'wholesale outperformance'. We found from checking original equity analyst reports that the figure used to inform the 'low MAR' scenario seemed to include cost of equity outperformance. For instance, Jefferies, source of the 'wholesale outperformance' assumption of 18% (which results in a residual MAR of 0.96 for UUW when deducted) states 'Our view of UU's future outperformance and market discount rate implies 18% RCV premium'.[22] This indicates that deducting this figure from the calculated MAR does not leave a residual MAR just accounting for cost of equity outperformance. We conclude therefore that the company's alternative analysis should not be considered as providing a valid alternative perspective on how the market perceives our final determinations allowed cost of equity.

3.5 We do not agree with Yorkshire Water's decision to revise Europe Economics' calculations using April-May data instead of February. We consider that the company uses data from a period of considerable financial market volatility due to Covid-19 measures, and that calculations cannot therefore be treated as representative of the remaining 2020-25 period.

3.6 We consider that Europe Economics' calculations do account for outperformance, the non-regulated business, fast-track status, and pension provisions. We do not consider that the 2019 election distorted the results of this exercise, as it used data from February 2020 – after the election had concluded. Takeover speculation is an issue that could impact on MARs, though it is not clear if this was a driver of valuation in the assessment period.

3.7 We append to our submission an updated MAR calculation, and set out the residual MAR figures calculated for both United Utilities and Severn Trent in table 3.1. On the basis of any of the approaches set out in the below table, the residual MARs above 1.0 suggest the final determination allowed cost of equity is at or slightly above the market required cost of equity.

[21] Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, p. 90, paragraph 430
[22] R001 - Jefferies, 'United Utilities, Feedback from CMD; Moving up the Confidence Ladder', 4 March 2020 p. 3

Table 3.1: Residual MAR after adjusting for non-cost of equity outperformance:

	Severn Trent	United Utilities
'Europe Economics 2017 approach'	1.07	1.02
'Barclays Approach with EE values'	1.04	1.04
'Barclays approach'	1.05	1.02

Source: Ofwat and Europe Economics Analysis of Refinitiv data

Inflation

3.8 In our 4 May response, we set out our view that long-term CPI and RPI inflation forecasts should be used to deflate between nominal and real allowed return inputs, rather than medium term forecasts. We reasoned that a 15 year investment horizon required a longer-term assumption than available forecasts from the Office for Budget Responsibility and HM Treasury; these forecasts tending to only cover around 5 years. Several companies raised issues with this:

- Anglian Water[23] and Northumbrian Water[24] both suggested that our approach was inconsistent with our approach towards calculating the risk-free rate, as in the latter case we used a short-run forecast rather than a long-run assumption.
- Yorkshire Water claimed that our proposals for RPI were unworkable given proposals to converge the measure to CPIH at some point between 2025 and 2030 which made long-term forecasts of RPI unreliable.[25]

[23] Anglian Water, 'Reply to Ofwat's response, Part F: Review of risk and return arguments', May 2020, p. 13
[24] Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, p. 84
[25] Yorkshire Water, 'Response to Ofwat Reply' (Confidential), May 2020, p. 206, paragraph 7.3.2.

- Yorkshire Water argued there was risk of under-recovery from our proposals as the Office for Budget Responsibility's March 2020 forecast showed lower inflation in earlier years of the control compared to our long-term assumptions.[26]

3.9 We do not consider there is inconsistency in our use of a long-term inflation assumption and risk-free rate. The relevant inflation assumption is that which is likely to apply over the investment horizon – which we assume to be 15 years. This is longer than the medium-term RPI and CPI forecasts published by the Office for Budget Responsibility (6 years)[27] and HM Treasury (5 years);[28] raising doubt over the suitability of those forecasts. We do not on the other hand need to average forecast risk-free rates over a 15 year future period, because we set an allowance to cover reasonable costs of raising finance only over the current control period, spanning 2020-25.

3.10 The reconciliation for the actual RPI-CPIH wedge[29] protects companies from differences in the outturn wedge relative to our forecast applied, and reduces the importance of forecast accuracy where RPI is concerned.

3.11 We acknowledge investors absorb some risk from CPIH being higher or lower than our 2.0% assumption. We note:

- This is not a new risk – investors have been exposed to the risk of RPI being higher or lower than our assumption in previous price controls. Through greater issuance of index-linked bonds, companies are able to partially hedge against this risk.
- The Bank of England's 2.0% target for CPI gives greater confidence in this figure as a long-term assumption.
- The Office for Budget Responsibility's CPI forecast for the 2020-25 period (1.88%) is on average close to our long-term assumption.[30] In addition, the Bank of England's May Monetary Policy report states: 'Overall the MPC judges that the indicators of inflation expectations remain well anchored and consistent with inflation close to the 2.0% target'.[31]

3.12 Using short-term forecasts may risk over-remunerating companies if the forecasts prove to understate inflation. Recently there have been substantial

[26] Yorkshire Water, 'Response to Ofwat Reply', May 2020, pp. 206-207, paragraph 7.3.3–7.3.6
[27] Office for Budgetary Responsibility, 'Economic and fiscal outlook' March 2020, p. 59
[28] HM Treasury, 'Forecasts for the UK economy' May 2020, p. 18
[29] Ofwat, 'Final methodology appendix 12: aligning risk and return', December 2017, p. 99
[30] Office for Budgetary Responsibility, 'Economic and fiscal outlook' March 2020, p. 11
[31] Bank of England, 'Monetary Policy Report', May 2020, p. 43

differences in short-term outlook. For instance, the Centre for Economics and Business Research forecast in March that CPI would hit a peak of 3.2% in Q1 2021,[32] compared to the Office for Budget Responsibility's March 2020 estimate of 2.0% for the same period.[33]

Cost of equity

3.13 The disputing companies provide new evidence in support of their views on beta in particular. We consider that the relevant aspects of the approach the CMA adopted in its provisional findings for the NERL RP3 redetermination on the total market return and risk free rate are aligned with our own approach from PR19 final determinations – which we continue to endorse.

Equity beta

Beta estimation

3.14 Northumbrian Water and Anglian Water submit a new report ("the Gregory paper")[34] providing additional analysis and discussion concerning how beta should be estimated. We asked our advisers Europe Economics to consider this paper; their response is included with our submission. We address the points made in the Gregory paper below:

- **Long-run betas should be used, estimated from the most recent statistical breakpoint –** We agree with Europe Economics that the Gregory paper assumes rather than proves that long-run betas are the appropriate formulation.[35] A sole focus on long-run betas ignores the well-rehearsed trade-off: too short a historic window and the estimate is prone to small-sample statistical issues and risks assigning too much weight to transient events; too long a window and a large portion of the data will reflect market views that are now long out of date and not helpful in informing forecast beta.

  The recommendation to estimate beta from the latest breakpoint is also problematic. Different statistical approaches can identify different breakpoints.

[32] Centre for Economics and Business Research (CEBR), 'CEBR UK Prospects March 2020 – Covid-19 update', March 2020
[33] See: Office for Budgetary Responsibility, OBR - The Economy Forecast - Inflation
[34] AGRF Ltd, 'REP 23 - A Report on the Estimation of Beta for Regulatory Charge Control Purposes', April 2020
[35] R002 - Europe Economics, 'Further comments regarding beta', June 2020

For instance, using a number of different approaches Indepen (2018) cite likely breaks for Severn Trent in years (2002-03, 2004-05, 2008, 2012-13),[36] while the Gregory paper cites likely breaks in 2000, 2003, 2007, 2010 and 2014.[37] There is a risk of data mining to yield the breakpoint which is most convenient to the party carrying out the analysis. Rigidly following the recommendation would also seem to limit regulators to using an unreasonably short span of data if the analysis revealed a breakpoint very close to the date of the estimation exercise.

- **Monthly beta is the most appropriate frequency to use** – the Gregory paper argues that daily betas are biased downwards, based on average monthly betas for FTSE constituent firms being higher than daily betas.[38] We do not consider this evidence to be conclusive - Europe Economics finds that for most of 2010-2020 period, 5 year monthly betas are lower than 5 year daily betas for FTSE 100 network utilities.[39] In addition, Wright et al. (2018), find that long-run betas for Severn Trent and United Utilities decrease as sampling frequency reduces.[40] Europe Economics' application of the standard Dimson test for final determinations to these two companies also revealed no evidence of a downward bias due to high frequency.[41]

  Monthly betas are also highly volatile. This is evident from the large changes in raw beta that result from including additional months of data at the end of the estimation window (for instance, the paper reports raw monthly beta of 0.71 for United Utilities up to January 2020 but this falls to 0.64 including February 2020 – i.e. with just one additional datapoint).[42] Acker and Duck's (2007)[43] paper also finds reference day risk can be a serious issue with monthly betas. Depending on the day in the month chosen the authors show that the beta estimate of one stock could drop as much as 0.93 and rise as much as 3.5. We consider that a reasonable inference is that evidence from monthly betas should be used with caution.

[36] Indepen, 'Ofgem Beta Study – RIIO-2, Main Report', December 2018, p. 7, Table 2.1
[37] AGRF Ltd, 'REP 23 - A Report on the Estimation of Beta for Regulatory Charge Control Purposes', April 2020, p. 12
[38] AGRF Ltd. 'REP 23 - A Report on the Estimation of Beta for Regulatory Charge Control Purposes', April 2020, p. 16, Table 3
[39] R002 - Europe Economics, 'Further comments regarding beta', June 2020, p. 9, Figure 1.3
[40] Wright et al., 'Estimating the cost of capital for implementation of price controls by UK regulators', March 2018, p. G-148, Table 1
[41] Europe Economics, 'The Allowed Return on Capital for the Water Sector at PR19 – Final Advice', December 2019, p. 33
[42] REP23_Gregory et al. 'Estimation of Beta for Regulatory Charge Control Purposes' April 2020, p17, Table 4
[43] R003 - Acker D. & Duck N. 'Reference-day risk and the use of monthly returns data.' Journal of Accounting, Auditing and Finance', 2007

- **A Vasicek adjustment should be used –** the adjustment is only non-trivial when considering monthly data (at a company level, the Vasicek adjustment in the Gregory paper for daily data is only 0.003-0.004). The fact that greater imprecision in the monthly data requires an ex-post adjustment is in our view a clear reason to place less weight on monthly betas. In addition to possible reference day issues, we also agree with Europe Economics that the approach to carrying out the Vasicek adjustment seems flawed. Given the wealth of historic beta data suggesting that water companies have betas well below 1.0 (ie the average company in the market benchmark), it seems inappropriate to use this figure as a prior assumption.

De-levering and re-levering

3.15 Our estimate of notional equity beta was derived by applying the commonly-used regulatory approach of de-levering raw equity beta using the enterprise value gearing of listed comparators and re-levering using our notional gearing of 60%. As identified by the CMA in its provisional decision for its redetermination of NERL RP3, this approach results in a cost of capital which is strictly increasing with gearing, in spite of widely-recognised evidence to the contrary.

3.16 There are a variety of approaches that could be adopted:

- **'Enterprise value approach'** – defined as de-levering using Enterprise Value gearing and re-levering using the notional gearing assumption. This is the approach we adopted.
- **'Book value approach'** – defined as de-levering using book value gearing (the ratio of the book value of net debt to RCV), and re-levering using the notional gearing assumption
- **'Ofgem approach'** – Ofgem has argued that it is potentially inconsistent to de-lever using enterprise value gearing and re-lever using RCV gearing.[44] For its RIIO-2 framework decision it proposed applying a multiplier of 1.1x[45] to enterprise value gearing, to improve consistency.[46]
- **'Listed comparator approach'** – defined as using the listed comparator gearing as the notional gearing. This effectively avoids the de-levering and re-levering steps and associated controversy. We understand that this is the approach used for the CMA's provisional decision for NERL RP3.

[44] Ofgem, 'RIIO-2 Sector Specific Methodology Annex: Finance', December 2018, p. 36.
[45] 1.1x is based on Indepen's argument that a Market-to-asset ratio of 1.1 is defensible for regulated utilities - Indepen, 'Ofgem Beta Study – RIIO-2, Main Report', December 2018, p. 34.
[46] Ofgem, 'RIIO-2 Sector Specific Methodology Decision – Finance', May 2019, p. 57, Table 8.

3.17 In table 3.2, we illustrate the notional equity beta which would result from applying each of the approaches described above. For final determinations we drew on a range of evidence to choose a point estimate for unlevered beta of 0.29. However, for the purpose of illustrating how different approaches result in different notional equity beta from the same raw equity beta, we fix the latter at 0.67.[47] This comparison shows that the approach we used at PR19 gives the highest values of notional equity beta compared to alternatives. Taking the raw beta estimate as given, **a lower notional equity beta than our final determinations point estimate of 0.71 could be supported.**

Table 3.2: Equity beta estimates derived under different definitions of gearing

	Calculation	Enterprise value approach	Book value approach	Ofgem approach	Listed comparator approach
Raw equity beta	A	0.67	0.67	0.67	0.67
March 2020 gearing of UUW / SVE composite	B	56.4%[48]	64.2%[49]	62.0%[50]	56.4%
Unlevered beta	C = A x (1 – B)	0.29	0.24	0.25	0.29
Debt beta	D	0.125	0.125	0.125	0.125
Asset beta	E = C + D x B	0.36	0.32	0.33	0.36
Notional gearing	F	60.0%	60.0%	60.0%	56.4%
Notional equity beta	G = (E – (D x F)) / (1 – F)	0.72	0.61	0.64	0.67

Source: Ofwat and Europe Economics analysis of Refinitiv data

[47] This is approximately the raw beta which, together with an enterprise value gearing of 56.4% would result in an unlevered beta of 0.29.
[48] Europe Economics, 'Further Advice on the Allowed Return on Capital for PR19 – Betas and Gearing', May 2020, p. 5.
[49] Weighted average of March 2020 RCV gearing using regulatory equity of Severn Trent and United Utilities as weights.
[50] Enterprise value gearing multiplied by 1.1.

Total market return

3.18 Taking account of new information, Anglian Water suggest that using the Office for Budget Responsibility's lower long run RPI-CPI 'wedge' estimate of 0.9%, and the latest edition of the Credit Suisse Global Investment Returns Yearbook would increase the RPI-real TMR by 20 basis points.[51] The Office for Budget Responsibility's estimate is a valid data point to consider amongst other evidence. We agree that the latest year of returns data should be considered, but in the context of all other evidence on total market return as a whole (for example taking account of 'ex-ante' and 'forward-looking' approaches to assessment of the total market return), and this may not indicate a strong case for moving from our final determination figure. Our view is that a point estimate of 6.5% in CPIH-deflated terms remains reasonable taking account of evidence in the round.

Risk free rate

3.19 In our 4 May response, we affirmed our view that RPI-linked gilt yields were the best available proxy for the risk-free rate, and that it was reasonable to forecast its average level over 2020-25 using a short trailing average of recent yields uplifted to take account of forward rates. We set out that we did not consider it necessary to assume convergence to an equilibrium rate, or use a long trailing average. We also set out that negative real interest rates were supported by economic theory and that market data implied that they would persist over the next ten years.

3.20 Disputing companies raise the following points in their reply of 27 May:

- Anglian Water argues that we did not address its view that it would be appropriate to include an uplift to our estimate of the risk-free rate to account for the volatility of yields.[52]
- In additional evidence since its statement of case, Yorkshire Water submits that the forward inflation curve implied by nominal and index-linked yields is implausible. This is as it seems to indicate a level of RPI inflation either much higher or lower than the 2.8% which the company considered to be around the level of long-term RPI implied by the Bank's 2.0% CPI target.[53]

[51] Anglian Water, 'Reply to Ofwat's response, Part F: Review of risk and return arguments', May 2020, p. 1, paragraph 1.1
[52] Anglian Water, 'REP 07 - Anglian Water PR19 Part F: Review of Risk and Return arguments', p. 5
[53] Yorkshire Water, 'Annex 10 – YWS – NATS Price Determination Representation', p. 5

3.21 Companies have been exposed to the risk of movements in the risk free rate in all of our previous determinations. We consider that this systematic risk is therefore likely to be reflected in asset betas. Any further compensation for this volatility in the form of a higher risk-free rate, above the level implied by forward rates, would over-remunerate companies and run the risk of a double count.

3.22 We understand that the forward inflation curve is 'breakeven inflation'. Breakeven inflation is only a reliable guide to RPI inflation expectations in the absence of liquidity and inflation risk premia. As both premia have been shown to affect RPI-linked and nominal gilts in a time-varying way,[54] we consider this complicates like-for-like comparisons to any long-term inflation assumption.

Cost of debt

Embedded debt

3.23 Our 4 May response affirmed our view that a 15 year trailing average of the iBoxx A/BBB minus a 25 basis point 'outperformance wedge' provides a sufficient allowance for an efficient company under our notional structure. We noted it is a long-standing principle that companies bear the risks of their financing decisions, that companies made those decisions under the expectation that this principle would continue to apply, and that a move towards allowances set according to company-specific factors would dilute incentives to issue debt efficiently.

3.24 Disputing companies broadly raised issues around two themes – reflecting company-specific factors, and the trailing average period of our index.

Company-specific factors

3.25 Disputing companies raise the following issues with arguments we set out in our 4 May response:

- Anglian Water and Bristol Water suggest that we do not dispute that their debt was efficiently incurred.
- Yorkshire Water and Bristol Water argue that there are reasons unrelated to inefficiency why companies may have a higher cost of embedded debt than

[54] See eg Liu et al., 'The informational content of market-based measures of inflation expectations derived from government bonds and inflation swaps in the United Kingdom', Bank of England Staff Working Paper no. 551. September 2015

our allowance – ie capital/operational financing needs and treasury management decisions over short vs. long-term debt issuance.

- Yorkshire Water provides a new report by Centrus[55] which it uses to argue that its historic issuance was efficient. The water company argues the CMA should recognise its actual cost of embedded debt (4.93% nominal), and forecast proportion of new debt (12%), subject to a 'prudency' test around its historical financing choices.
- Anglian Water and Bristol Water suggest that our final determination approach assigns too much risk of market movements to companies, who cannot control it.

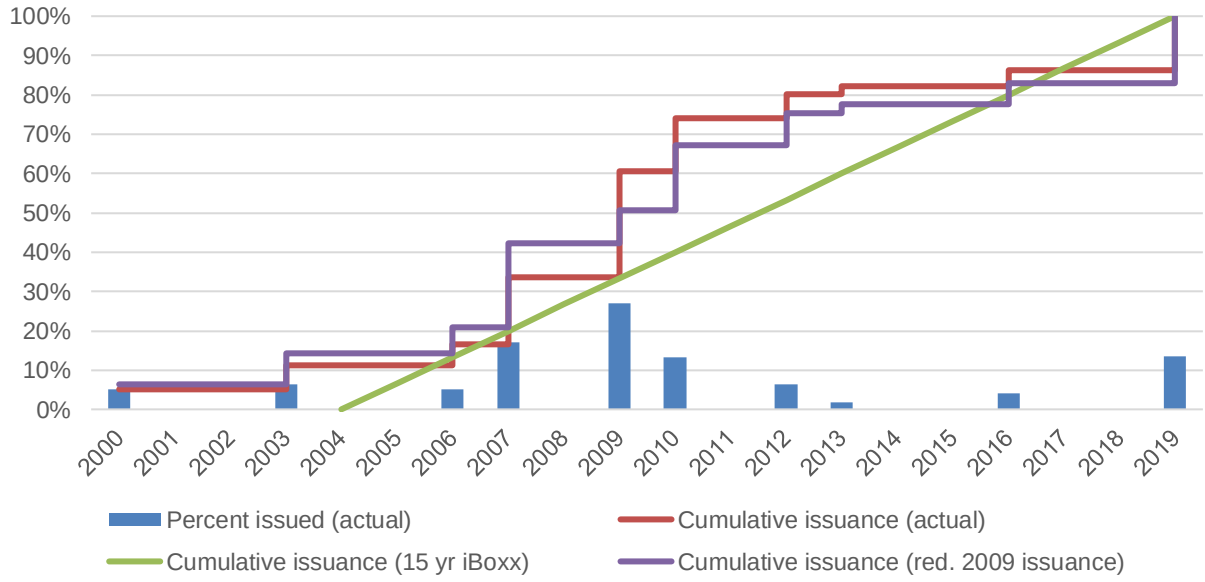
3.26 Our past determinations have estimated allowances for embedded debt through ex-post benchmarking (using within-sector and/or external benchmarks). We have not conducted instrument-level efficiency reviews - meaning companies' statements that their issuance is ex-ante efficient are merely expressions of their own opinion, and we question the reliability that can be placed on their claims. While independently reviewing such company claims would in theory be possible, it would imply a much more intrusive and time-consuming review of companies' financing activities. In addition, we consider that allowances set on such a basis would be damaging to the efficiency incentives implied by our current regulatory approach.

3.27 A common theme of company responses is that our approach unfairly penalises companies for reasonable company-specific variation in investment profiles which lead to issuance in periods with a relatively higher market cost of debt. Companies argue that higher costs due to timing should not be considered to be inefficiency. In practice, we find that projected underperformance relative to our PR19 allowance can mostly be attributed to particular non-operational financing decisions (usually related to upstreaming of dividends and/or funds in the form of intercompany loans).

3.28 **Yorkshire Water** issued an atypically high amount of debt in 2009 which was primarily used to carry out its financial restructuring and set up its whole business securitisation structure, increasing company gearing in the process. Figure 3.1 shows that its decision shifted its issuance profile away from that which would have resulted through issuing at a constant rate over the last 15 years.

[55] Yorkshire Water, 'Annex 07- Centrus - Yorkshire Water Debt Portfolio Review', May 2020

Figure 3.1. Yorkshire Water: profile of currently outstanding GBP-denominated listed bonds and counterfactual profiles



Note: Actual issuance not adjusted for accretion in index-linked bonds.

Source: Ofwat analysis of Refinitiv data

3.29 Had a more notional water company financial structure been maintained or a more gradual issuance profile adopted (as the company has done in other years), the company would have been less exposed to differences between our allowed notional cost of debt and its own actual debt financing costs.

3.30 To illustrate, Centrus set out that in 2009, the company issued 30% of its outstanding debt.[56] In contrast, our 15 year trailing average with equal weight assigned to each year would imply a 6.7% share of debt from this year instead. The effect of this increased weight on 2009 in our 15 year trailing average of the iBoxx A/BBB would in itself increase our trailing average by 0.38%.[57] This accounts for most of the 40-50 basis points which Yorkshire Water seeks[58] above our allowance of 4.47% to correct alleged 'errors' in our approach.

3.31 **Anglian Water's** issuance profile is distorted by concentrated issuance in the year 2002 associated with its financial restructuring. We estimate that £1,256m

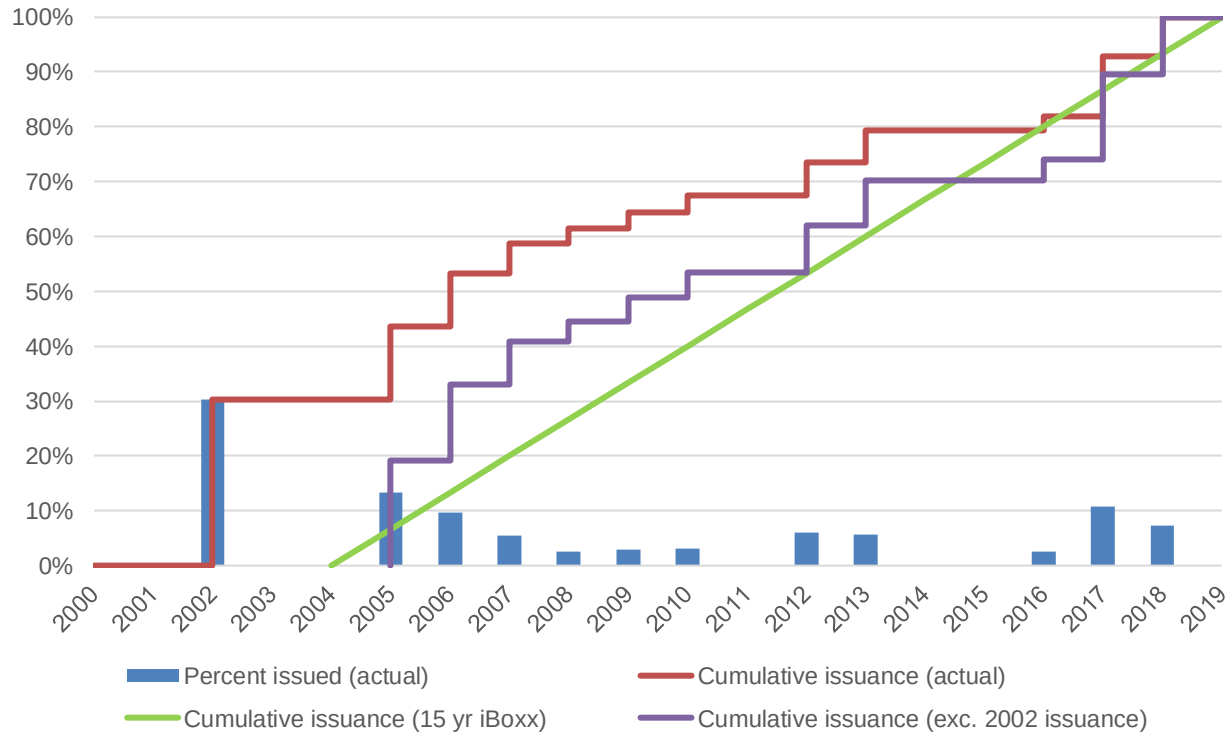
[56] Yorkshire Water, 'Annex 07- Centrus - Yorkshire Water Debt Portfolio Review', May 2020, p. 5

[57] We calculate this by comparing our 15 year trailing average value for the iBoxx with a counterfactual scenario of 27% weight on the 2009/10 financial year and equally weighted issuance in other years. This gives a trailing average of 5.05%, compared to the constant profile 4.72%. 5.05% - 4.72% = 0.33%.

[58] Yorkshire Water, 'Response to Ofwat Reply' (Confidential), May 2020, p. 213, paragraph 7.5.12

was issued in 2002, making up approximately 23% of the company's current borrowings. As set out in Anglian Water's 2002-03 accounts, all of this borrowing was on-lent to a holding company, and so was not an operational use of funds.[59] If this 2002 borrowing had not been incurred, we estimate the company's issuance profile would be much closer to that implied by our notional 15 year trailing average of the iBoxx A/BBB (Figure 3.2). We estimate that omitting the bonds issued in 2002 would result in an overall weighted average nominal interest cost of 4.6% (assuming 3.0% long-term RPI).[60] This figure is comparable to our final determinations allowance of 4.47% nominal.[61]

Figure 3.2 Anglian Water: profile of currently outstanding GBP-denominated listed bonds and counterfactual profiles



Note: Actual issuance not adjusted for accretion in index-linked bonds.

Source: Ofwat analysis of Refinitiv data

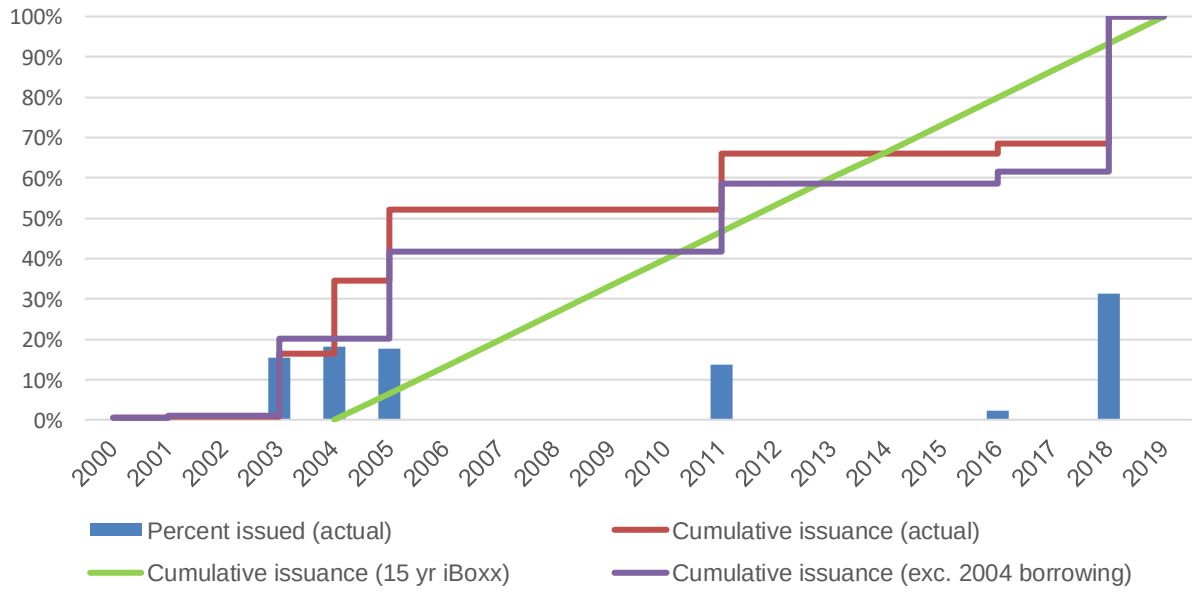
3.32 **Bristol Water** has a profile of issuance that is also heavily weighted towards issuance in the period 2000-05. We estimate that approximately 57% of the company's outstanding debt was issued in 2003-05 via Artesian loans.

[59] Anglian Water Services Limited, 'Annual Report and Accounts 2003', p. 2
[60] Source: Ofwat analysis of table 1E from Anglian Water's 2019 Annual Performance Report.
[61] Ofwat calculation; assumes RPI of 3.0%.

3.33 The company states that its financing needs are dictated by its capex and operational requirements, and that it has little choice as to when to issue debt and in what quantum.[62] We note however, its 2004 accounts state: 'In February 2004 we raised further funds through Artesian vehicles amounting to £26.0m of index-linked debt and £27.5m of fixed rate debt. The company then advanced £47m of the new funds in the form of a long term interest bearing loan to the ultimate parent company. Together with other cash balances the ultimate parent used this to finance a £51m return of capital to shareholders.'[63]

3.34 The 2004 accounts thus make clear that the 2004 Artesian issuance essentially funded a discretionary return to shareholders, suggesting it was not incurred for operational reasons. By removing this 2004 borrowing from Bristol Water's total borrowings, we estimate Bristol Water's interest cost would be approximately 4.8% in nominal terms (assuming long term RPI of 3.0%).[64] Furthermore, taking account of the downward adjustment the CMA made in its 2015 determination to account for issuance proceeds being higher than the face value of Artesian loans (-0.17%),[65] Bristol Water's interest rate would be 4.6% - comparable to our 4.47% final determinations allowance for embedded debt.

Figure 3.3 Bristol Water: profile of outstanding embedded debt and counterfactual profiles



Note: Actual issuance not adjusted for accretion in index-linked bonds.
Source: Ofwat analysis of Bristol Water business plan submissions

[62] Bristol Water, 'Reply to Ofwat response', May 2020, p.19, paragraphs 83-84
[63] Bristol Water, Annual report and accounts 2004, p. 5
[64] Source: Ofwat analysis of table 1E from Bristol Water's 2019 Annual Performance Report.
[65] CMA, 'Bristol Water Plc, A reference under section 12(3)(a) of the WIA 1991', p. 316, Table 10.2

3.35 We have shown above that the cost challenge faced by Anglian Water, Bristol Water and Yorkshire Water on embedded debt is predominantly a function of non-operational financing decisions. These decisions have created an issuance profile different to that of the notional company, increasing these companies' costs above our allowance.

3.36 As we have outlined previously, financing decisions made by companies and their investors, including on capital structure and timing of debt issuance, are a matter for companies and their investors to manage. No expectation has been set that companies would receive protection from under-recovery of debt costs. Customers of these companies should not be expected to make up any shortfall through proposed adjustments to the notional approach. We respond further on each company's comments on its actual structure in section 5.

Trailing average period for embedded debt

3.37 Three companies raised issues with the length of our trailing average period used for calculating the embedded cost of debt:

- Anglian Water suggests we previously supported long-term debt, and have opportunistically changed our position due to how markets have moved.
- Anglian Water and Bristol Water argue that our 15 year trailing average effectively implies no debt should be issued at tenors exceeding 15 years, incentivising shorter tenor bonds, and thus increasing refinancing risk.
- Yorkshire Water argues that the tenor of industry debt is longer than our trailing 15 year average, meaning that there will be greater divergence at PR24 between actual sector embedded costs and Ofwat's allowance.

3.38 We reject the characterisation that the use of a 15 year trailing average is opportunistic and a break with previous practice. In fact it represents a significant extension in the 10 year trailing average used at PR14.

3.39 We observe that our approach to remunerating the cost of debt means that a total of 20 years of iBoxx yields will be encompassed by our overall allowance by the end of the 2020-25 regulatory period, and that in 2025, iBoxx yields from 2005 will still be reflected in our overall allowance. It is therefore more accurate to describe our allowance as remunerating historic debt of up to 20 years tenor at issuance. We consider the 20 years spanned by our final determination approach to be fairly matched with the roughly 20 year average asset life in the

sector as implied by RCV run-off rates,[66] and also the weighted average years-to-maturity of the iBoxx A/BBB (21 years).[67]

Cost of new debt

3.40 Disputing companies raise several new issues concerning the 'outperformance wedge' in their 27 May submissions:

- Anglian Water, Northumbrian Water and Yorkshire Water criticise the sample of bonds we used in our 4 May response, arguing that more recent issuances presented a more mixed picture of outperformance.
- Northumbrian Water[68] and Yorkshire Water[69] argue that our use of a 'wedge' would dilute incentives to reduce refinancing risk by issuing longer-dated debt.

3.41 Water companies have issued a number of bonds since our final determination. We analyse the nominal fixed-rate bond instruments (with tenor at issuance greater than 10 years) issued in the period between our final determinations and 3 June 2020 in Table 3.3.[70] The simple average spread to iBoxx A/BBB of all such instruments is 22 basis points. As we set an allowance based on the notional structure, we however consider that the 'outperformance wedge' should place more weight on instruments from companies with gearing aligned with our notional assumption of 60% and with a credit rating close to our notional target of Baa1 (ie Dŵr Cymru, United Utilities and Severn Trent). The average spread of instruments from these companies is 53bps. This suggests that **a higher outperformance wedge on new debt than 15 basis points could be supported by recent evidence**.

[66] RCV run-off from business plans and final determinations is around 5%. This implies asset life of 1/5% =20 years. Source: 'PR19 Final determinations: Risk & Return technical Appendix'. Figure 5.7
[67] Ofwat, 'PR19 final determinations: Allowed return on capital technical appendix', December 2019, p. 75
[68] Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, p. 98, paragraph 456
[69] Yorkshire Water, 'Annex 01 - YWS – Supplementary technical annex', May 2020, p. 6
[70] We also addressed the issue of estimating the outperformance wedge in Ofwat, 'Reference of the PR19 final determinations: Risk and return – response to common issues', May 2020, pp. 82-6, paragraphs 3.109 to 3.115.

Table 3.3: Water sector bond spreads to iBoxx A/BBB, December 2019 to June 2020[71]

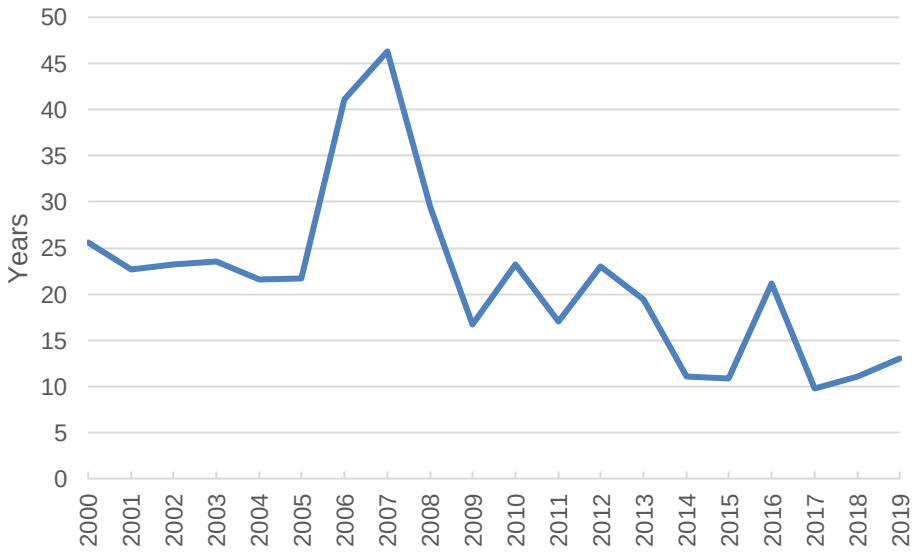
Company	March 2019 Gearing	Issue amount	Issue date	Tenor at issuance (years)	Coupon (%)	iBoxx A/BBB on day of issue (%)	Spread to iBoxx (basis points)
United Utilities (A3)	64.8%	250	10/02	18.0	1.75	2.25	-50
Dwr Cymru (A3)	56.0%	300	24/02	13.1	1.38	2.21	-84
Thames Water (Baa2)	81.9%	350	22/04	20.0	2.38	2.46	-8
Thames Water (Baa2)	81.9%	40	12/05	30.0	2.44	2.45	-1
Southern Water (Baa3)	68.8%	450	28/05	17.0	3.00	2.35	65
Severn Trent Water (Baa1)	63.7%	300	02/06	20.0	2.00	2.32	-32
United Utilities (A3)	64.8%	300	03/06	22.0	1.88	2.32	-45
					Average (all companies):		**-22**
					Average (Severn Trent, Dŵr Cymru, United Utilities):		**-53**

Source: Ofwat analysis of annual performance reports, Moody's credit ratings and Refinitiv data

[71] Table contains only bonds which are nominal, fixed-rate and which had tenor at issuance of at least 10 years, consistent with our final determinations criteria for bonds used to estimate the 'wedge'.

3.42 We dispute company claims that applying an outperformance wedge will increase refinancing risk. It is not clear from Table 3.3 that there is a clear tendency to issue at tenors much lower than the iBoxx A/BBB average years-to-maturity of approximately 21 years (the average tenor of the 7 featured bonds is 20 years). Reducing tenor is also a trend which has been evident for a number of years and predates our policy of applying an outperformance wedge to new debt (Figure 3.4). We therefore consider that there is no clear evidence that our outperformance wedge is an important driver of company choices around tenor.

Figure 3.4 – Weighted average tenor at issuance for UK water bonds, 2000-2020



Source: Ofwat analysis of Refinitiv data

3.43 We have also set out in this submission that a 15 basis point wedge represents a cautious interpretation of the market evidence, and that some companies with characteristics similar to our notional company outperform by a markedly wider margin. Together with a methodology for calculating the wedge that excludes instruments of tenor lower than 10 years at issuance, we consider there is no reasonable inference that the notional company must issue at short tenor to recover its new debt costs.

4. Financeability

Introduction

4.1 In their 27 May submissions, the disputing companies repeat many of the views they expressed in their statements of case on the issue of financeability. Comments made, including in relation to the discharging of our financing duty, are primarily disagreements as to the merits of our decisions. We stand by our approach to assessing financeability set out in previous submissions, which is consistent with our approach in previous determinations. Our view remains that the final determinations for all companies were financeable on the basis of the notional capital structure.

4.2 In this section we comment and provide further information only where we consider it is necessary to clarify to the CMA our position in certain areas.

Credit ratings

4.3 In our 4 May response, we noted that in a number of credit opinions, published since our final determination, Moody's has applied a one notch upgrade to two sub-factors that are taken into account in its credit rating assessment. The upgrades have a positive impact on the overall credit score which provides an indicative rating for a company which is then adjusted to take account of other factors not within the scorecard to form the final credit rating. Anglian Water states that we have not provided details of our assessment of the changes.[72]

4.4 We do not consider this to be a change in Moody's rating methodology as suggested by Anglian Water, rather a change in the assessment within the methodology. The two sub-factors that have been upgraded in the credit assessments are (i) Revenue risk and (ii) Scale and complexity of capital programme and asset condition risk, which form part of the business profile assessment. The factors are initially weighted at 5% and 10% respectively in Moody's scorecard.[73] Table 4.1 sets out the movement in these sub-factors.

[72] Anglian Water, 'Reply to Ofwat's response, Part F: Review of Risk and Return arguments' (Confidential), May 2020, p. 15, paragraph 1.1
[73] R018 - Moody's Investors Service, 'Rating methodology, Regulated water utilities', June 2018, p. 4, exhibit 1

Table 4.1: Movement in 'Revenue risk' and 'Scale and complexity of capital programme and asset condition risk' in recent Moody's credit opinion

Company	Date of opinion	Revenue risk		Scale and complexity of capital programme and asset condition risk	
		Current	Forward view	Current	Forward view
Anglian Water	Feb 2020	A	Aa	A	A
Dŵr Cymru	Feb 2020	A	A	A	Aa
Northumbrian Water	Mar 2020	A	Aa	A	Aa
Severn Trent Water	Feb 2020	A	A	A	Aa
Southern Water	Mar 2020	A	Aa	Baa	A
Thames Water	Mar 2020	A	Aa	Baa	A
United Utilities	Mar 2020	A	Aa	Baa	Baa
Wessex Water	Mar 2020	A	Aa	Baa	A
Yorkshire Water	Mar 2020	A	Aa	A	Aa
Affinity Water	Mar 2020	A	Aa	Ba	Baa
Bristol Water	Mar 2020	Baa	Aa	Baa	Aa
Portsmouth Water	Mar 2020	A	Aa	Baa	Ba
SES Water	Feb 2020	A	Aa	Baa	Baa
South East Water	Mar 2020	A	Aa	Baa	Aa
South Staffs Water	Feb 2020	A	A	Ba	A

Source: Moody's Investor Services – Company credit opinion reports, rating methodology scorecards. The current position relates to full year 31 March 2019; the forward view is Moody's 12-18 month forward view as of March 2020.

4.5 Moody's has not set out in rating credit rating updates or opinions what is driving the change to these sub-factors. However we note:

- In assessing revenue risk Moody's considers how a regulatory regime provides mechanisms that reduce companies' exposure around volume risk and the timeliness of true-up adjustments.[74]
- In assessing scale and complexity of capital programme and asset condition risk, Moody's take into account the underlying asset condition and the related

[74] R018 - Moody's Investors Service, 'Rating methodology, Regulated water utilities', June 2018, pp. 9-10, Revenue risk

risk of potential asset failure. Moody's also consider capex:RCV; where this has reduced, this could increase the rating of the sub-factor for individual companies.[75]

4.6 We estimate that, on average, the improvements in credit score for these two sub-factors outweigh the negative impact of the reduction in their view of the stability and predictability of the regulatory environment sub-factor. Whilst Moody's has not made further changes to its financial ratio guidance at this time, it is further evidence of why we should not be tied to rating agency guidance for specific financial ratios at a specific point in time.

The financeability constraint

4.7 In our 4 May response, we set out that a financeability constraint arises from the balance of real and inflationary returns within the market-driven allowed return on capital.[76] We demonstrated that the constraint is driven by the profile of cash returns in the short term compared with the nominal return received over the long term.

4.8 The disputing companies claim the need to address a financeability constraint for a number of companies means that the allowed return is set too low and should be increased to provide additional headroom in financial ratios. Anglian Water claims that we have mischaracterised its argument and states that its:

> 'position is not that the allowed return on capital should be increased above the market-based cost of capital to hit ratios, but that the financeability test indicates a problem with the calibration of the allowed return on capital against the market-based cost of capital.'[77]

4.9 There are a range of alternative plausible explanations for credit ratings being below target levels other than an indication that the allowed return is too low, as claimed by the disputing companies. We have set out the specific circumstances of the balance of the real and inflationary return at PR19 in previous submissions.

[75] R018 - Moody's Investors Service, 'Rating methodology, Regulated water utilities', June 2018, pp. 10-11, Scale and complexity of the capital programme and asset condition risk
[76] Ofwat, 'Risk and return – response to common issues in companies' statements of case', May 2020, pp. 114-118, paragraphs 4.68-4.73
[77] Anglian Water, 'Reply to Ofwat's response, Part I: Reply to Ofwat's Response on Risk and Return' (Confidential), May 2020, p. 23, paragraph 72.

4.10 An alternative way of looking at Anglian Water's argument is that other assumptions underpinning our financeability assessment need to be revisited. If the allowed return is reasonable based on market evidence, it might reasonably be assumed that (i) the target financial ratios are not right or (ii) the notional structure needs to be recalibrated. On the former, Moody's and Fitch increased the target threshold for adjusted interest cover from 1.4x to 1.5x in the PR19 process, in part to reflect the prospect of increased variability in returns. But PR19 has also been accompanied by an increase in the regulatory protections and greater scope than before to achieve outperformance rewards; even if the increase in risk is of the level the credit rating agencies describe, one response would be to assume a higher equity buffer in the form of a lower notional gearing level.[78] On the latter, this is the reason why we set out the alternative approaches to resolve a financeability constraint that could be considered in the CMA's redetermination (which we clarify further below).

4.11 The PwC report submitted with our 4 May response provides empirical support to our view that the use of PAYG and RCV run-off adjustments at PR19 does not adversely impact the long-term financial viability of the sector.[79,80] PwC observed that based on current expectations, we could potentially unwind the effect of advanced revenue at PR19 in the 2025-30 period.

4.12 The disputing companies repeat points previously made on the use of PAYG and RCV run-off adjustments. But in response to the analysis undertaken by PwC, Anglian Water, Northumbrian Water and Yorkshire Water claim that the use of financial levers is not a sustainable option as the constraint is not temporary. The companies argue there is uncertainty over the evolution of the cost of debt and equity into future price review periods, and the PwC analysis does not take account of companies' actual cost of debt.[81]

4.13 We do not consider the issues raised by the disputing companies should lead to any alteration of PwC's conclusions:

[78] Alongside the change in adjusted interest cover, Moody's also reduced guidance for gearing by 3% for each credit rating, implying they expect a higher equity buffer.
[79] Ofwat, 'Risk and return – response to common issues in companies' statements of case', May 2020, pp. 126-128, paragraphs 4.102-4.106
[80] R030 - PwC, 'Long-term financeability in the water sector', May 2020
[81] Anglian Water, 'Reply to Ofwat's response, Part I: Reply to Ofwat's Response on Risk and Return' (Confidential), May 2020, p. 19, paragraphs 61-62; Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, pp. 104-105, paragraphs 489-492; Yorkshire Water, 'Annex 01, Supplementary technical annex for TWS's response regarding cost of capital, capital structure and financeability', May 2020, p. 16, Diagnosis of financeability issues

- While the future path of interest rates is unknown, market-implied rates remain the most robust way of projecting forward interest rates. We observe that PwC's interest rate projections over PR19 are aligned to those in the Bank of England's May 2020 inflation report, which observes that 'monetary policy rates have been reduced and are expected to stay low'.[82]
- PwC also uses market-implied rates to project forward the risk-free rate whilst holding constant other components of the CAPM model in the estimation of the cost of equity in the 2025-30 period so this calculation is aligned to the forward-looking cost of debt calculation.
- Were interest rates to move very differently in future, we are able to use the PR24 price review to reset allowed returns and reconsider use of financeability levers for the period 2025 to 2030 as required, which means we are able to conclude on the likely impacts on long-term financeability using current market aligned projections.
- We do not consider our approach to addressing a financeability constraint should be driven by companies that adopt financial structures that depart materially from the notional structure. For this reason, PwC's analysis focussed on the notional capital structure, not actual structures as requested by the disputing companies.

Options to address the financeability constraint

4.14 Our 4 May response set out alternative approaches that could be adopted to recalibrate the notional structure and in so doing, mitigate the financeability constraint. The disputing companies have responded to the points we made on the alternative mechanisms, but in some cases have mischaracterised our position. We therefore provide clarification on these mechanisms below.

Changes to the notional capital structure

4.15 The notional gearing level for the final determinations is 60%, consistent with the level stated in the PR19 final methodology. We set out that lowering the notional gearing or reducing the notional dividend yield could increase financial headroom; and referenced gearing based on the enterprise value gearing of the companies used for our beta observations.[83]

[82] Bank of England, 'Monetary Policy Report', May 2020
[83] Ofwat, 'Risk and return – response to common issues in companies' statements of case', May 2020, pp. 134-135, paragraphs 4.126-4.128

4.16 The disputing companies claim using the enterprise value is not appropriate as regulatory gearing for these companies is above our notional level. Companies also claim that it is not appropriate to assume that such a reduction can be achieved over a short period of time.[84] Northumbrian Water claims it is not reasonable to make sudden changes to the notional structure as a company's actual structure is an outcome of the notional structure and companies need time to transition to it.[85]

4.17 Disputing companies also claim that a lower level of notional gearing would result in a higher proportion of embedded to new debt, which would increase the average cost of debt, and changing the gearing would overall have a small impact on the average cost of capital. However, a lower gearing level would reduce the overall debt level and the debt interest cost.

4.18 We use the enterprise gearing level as an illustration of a different notional gearing level that the CMA may choose to adopt; we note notional gearing for price review periods from PR04 has been in the range of 55% to 62.5%; which suggests changes to gearing levels within this range are reasonable.

4.19 We find Northumbrian Water's assertion that the actual structure is an outcome of the notional structure not to be credible. While it is not our role to determine dividend policy, we note the dividends paid by Northumbrian Water far exceed the dividends assumed in our financeability assessment, and the average proportion of index linked debt for the sector is above the level of the notional company at PR14 and PR19.

4.20 In summary, we conclude it may not be unreasonable for the CMA to adopt a gearing level that is lower than the value used in our determination.

Faster transition to CPIH

4.21 Our 4 May response set out that the CMA could adopt a faster transition to CPIH as a net present value neutral method to increase headroom and improve

[84] Anglian Water, 'Reply to Ofwat's response, Part I: Reply to Ofwat's Response on Risk and Return' (Confidential), May 2020, p. 22, paragraph 70(i); Bristol Water, 'Reply to Ofwat response' (Confidential), May 2020, pp. 94-96, paragraph 444-454; Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, p. 119, paragraphs 561-565; Yorkshire Water, 'Response to Ofwat Reply', May 2020, p. 231, paragraph 9.2.7 (b)
[85] Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, p. 120, paragraph 569

financeability.[86] In their 27 May submissions, the disputing companies claim it is not appropriate to consider faster transition to CPIH. Companies claim a faster transition to CPIH would be a significant change which would increase bills in the short term and argue that Moody's will reverse the effect of the transition in the calculation of financial ratios.[87] Yorkshire Water set out that it would like to understand more clearly our alternative approach regarding the speed of transition to CPIH.[88]

4.22 The argument companies' make that Moody's will reverse the benefit of a faster transition to CPIH is incorrect to the extent it applies to the opening allocation of RCV to RPI and CPIH indexation. We understand that Moody's accept the transition to CPIH is a permanent change and so would not reverse out the revenues – it is only where the effect of the transition is achieved through the use of financial levers that Moody's reverse the revenue advanced.[89] Therefore, a faster transition could be achieved by indexing a higher proportion of the opening RCV to CPIH than used in the final determinations. This has the benefit of maintaining companies' RCV run-off rates whilst noting the approach is consistent with the acknowledgement made by Moody's of the cash flow benefits of a CPIH transition.

Headroom in financial ratios

4.23 The disputing companies repeat their claims that we have failed to carry out adequate tests that there is sufficient headroom under the final determinations.[90] The disputing companies claim the headroom check was not resilient to the downside scenarios we prescribed for testing of actual company structures. Bristol Water makes a new claim that we made no financeability assessment in the round, and asserts this is compelling evidence that we failed

[86] Ofwat, 'Risk and return – response to common issues in companies' statements of case', May 2020, pp. 135-136, paragraphs 4.129-4.133
[87] Anglian Water, 'Reply to Ofwat's response, Part I: Reply to Ofwat's Response on Risk and Return' (Confidential), May 2020, pp. 20-22, paragraphs 66-69; Bristol Water, 'Reply to Ofwat response' (Confidential), May 2020, pp. 96-97, paragraph 455-458; Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, pp. 9, 120-121, paragraphs 572-576
[88] Yorkshire Water, 'Response to Ofwat Reply', May 2020, p. 232, paragraph 9.2.7 (c)
[89] R004 - Moody's Investors Service, 'Ofwat tightens the screws further', July 2019, p. 5
[90] Anglian Water, 'Reply to Ofwat's response, Part I: Reply to Ofwat's Response on Risk and Return' (Confidential), May 2020, pp. 12-13, paragraph 43; Bristol Water, 'Reply to Ofwat response' (Confidential), May 2020, pp. 88-89, paragraph 412-417; Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, pp. 115-117, paragraphs 544-551

to meet the financing duty.[91] Anglian Water and Northumbrian Water provide new information, setting out their analysis of downside sensitivity analysis.

4.24 Our 'in the round' consideration of financeability starts with providing an adequate equity buffer in the notional capital structure and our expectation that companies target a credit rating with sufficient headroom to the minimum investment grade. We clarify that we set out expectations for scenarios used for stress testing in our 'Putting the sector in balance position statement'.[92] We set out a suite of common scenarios we expected companies to assess based on their actual financial structure. The purpose of the common scenarios was to draw out comparisons and common themes across companies, along with mitigations and planned management actions should the scenarios require them. We did not necessarily expect the company to maintain financial ratios consistent with an investment grade credit rating in all scenarios absent mitigations and management action. The headroom calculations in our determination did not for example take account of such mitigations. We understand that credit rating agencies will tend to look beyond one-off events and are unlikely to downgrade a credit rating below investment grade on the basis of the impact on short-term financial ratios of such an event.

4.25 Our analysis of actual totex compared to final determinations identified one incidence of totex underperformance by more than 10% of our baseline out of 82 observations.[93] We set out our final determination risk ranges for totex performance in our return on regulatory equity assessment. These were 5.7% underperformance to 7.4% outperformance based on an analysis of totex performance at PR14.[94] We consider this confirms our assessment that there is sufficient headroom in the final determinations.

4.26 In response to Bristol Water's claim that we failed to meet our financing duty, we note that the approach taken to the assessment of financial ratios in our financeability assessment is consistent with that set out in the PR19 methodology and with previous price reviews. Bristol Water's downside sensitivity is impacted by £7 million of reconciliation adjustments for past performance. We maintain that financeability issues arising due to past performance are matters for the company and its investors to bear, not customers. Bristol Water's determination was financeable on the notional

[91] Bristol Water, 'Reply to Ofwat response' (Confidential), May 2020, p. 6, paragraph 29
[92] Ofwat, 'Putting the sector in balance: position statement on PR19 business plans', May 2018, pp. 61-67 , Financial resilience
[93] Ofwat, 'Reference of the PR19 final determinations: Risk and return - response to common issues in companies' statement of case', May 2020, p. 37, paragraph 2.67 and p. 33, table 2.1
[94] Ofwat, 'PR19 final determinations: Aligning risk and return technical appendix', December 2019, pp. 20-25, (p. 24, paragraph 3)

capital structure before the application of past performance reconciliation adjustments.

4.27 The commentary provided by Anglian Water and Northumbrian Water on their downside stress tests was provided in confidential versions of their 27 May submissions. We provide our assessment of these issues in a separate annex to this submission.

5. Gearing outperformance sharing mechanism and actual company structures

Introduction

5.1 Many of the issues raised by the disputing companies repeat those set out in the statements of case on the gearing outperformance sharing mechanism, however Yorkshire Water raises a new claim that it considers our stance has changed in the CMA process. We also respond to new information submitted by companies on their actual capital structures in their 27 May submissions.

Gearing outperformance sharing mechanism

5.2 The disputing companies repeat many of the issues raised in their statements of cases, which we addressed in our 4 May response.[95] However, Anglian Water[96] and Yorkshire Water[97] have stated that our view has changed and we have taken on contradictory stances on this subject.

5.3 Yorkshire Water claims we have changed our approach 'between the Reference and the Reply' (which we understand to mean between our day one submission and our 4 May submission). There is no inconsistency – the additional detail we included in our 4 May submission aimed to provide further explanation of our position and was entirely consistent with the position we set out in our 'Putting the sector in balance' position statement, published after consultation in 2018.

5.4 The disputing companies are correct to point out that our 'Putting the sector in balance' consultation,[98] led to a change of approach. We have had long held concerns about the potential impacts of high gearing on financial resilience and the policy we have applied on tax[99] has been in place since PR09 to remove one incentive on companies to adopt highly geared structures.

5.5 However, our more recent concern has been about investors receiving all of the benefits of highly geared structures; in the absence of benefit sharing, the

[95] Ofwat, 'Risk and return – response to common issues in companies' statements of case', May 2020, pp. 139-48
[96] Bristol Water, 'Reply to Ofwat response', May 2020, p. 27, paragraphs 83-87
[97] Yorkshire Water, 'Response to Ofwat Reply', May 2020, p. 216
[98] Ofwat, 'Putting the sector in balance: position statement on PR19 business plans', July 2018
[99] To claw back allowed tax where a company adopts a step increase in gearing.

regulatory arrangements could distort company incentives on choosing financing structures without full consideration of the potential impacts on customers and wider stakeholders.

5.6 Our positional change arose from a realisation that the customer protection may not be as strong as we had previously considered and features of the regulatory framework distort incentives which may allow companies and their investors to transfer some risk to taxpayers and/or customers.

5.7 Increasing gearing to levels materially above the notional level also transfers risk from equity investors to debt investors. This risk transfer is mitigated in part by the introduction of highly covenanted structures. The covenants have been put in place to protect the interests of debt investors, allowing higher levels of gearing to be achieved while maintaining a target credit rating. The covenants reduce the flexibility for businesses to restructure or respond to changes in regulation. As the covenants are designed to mitigate risks that flow from increased levels of gearing, it is difficult to see that this could be presented as a net benefit to customers.

5.8 The adequacy of the covenants of the securitised companies have not been tested in a distress scenario. Should a distress scenario occur that is at least partly attributed a company's decision to adopt a covenanted structure, and results in a loss to debt investors of a water company, this could impact on investor sentiment. Should this result in a future increase in debt costs for the sector, this is a cost that is borne by all future customers.

Actual structures

5.9 We provided information on the financial structure of the disputing companies in our 4 May response. Companies raise concerns with our comments and provide additional new information in support of their view:

- Anglian Water claims we knowingly misdescribed the true position of its actual financial structure and failed to distinguish its dividend payments between dividends paid to finance interest on intercompany loans and dividends paid to investors outside of the group.[100]

[100] Anglian Water, 'Reply to Ofwat's response, Part I: Reply to Ofwat's Response on Risk and Return' (Confidential), May 2020, p. 40, paragraph 137

- Bristol Water states the special dividend paid at the time of its Artesian debt issuance was 'small', lower than cumulative dividends retained since 2014.[101]
- Northumbrian Water seeks to defend its high dividend payments since its acquisition by CKI.[102]
- Yorkshire Water claims we have seriously mischaracterised its actual financial structure, which it states is plainly not relevant to the redetermination.[103] It claims we have not correctly portrayed its dividend payments,[104] and made inaccurate statements in relation to its swap portfolio.[105]

5.10 It is not surprising the disputing companies further defend their actual financing choices; it is in their interests to claim the choices they made were efficient and to use the redetermination process to seek to encourage the CMA to pass their financing costs to customers.

5.11 In the following sections, we (i) address company comments on dividend payments, (ii) respond to companies' arguments that covenanted structures deliver benefits, and (iii) comment on the enduring impact of restructuring arrangements carried out by the disputing companies.

Dividends

5.12 Anglian Water and Yorkshire Water claim we have mischaracterised their true dividend positions. We set out the gross dividends paid as reported by the companies in their annual performance reports. Where appropriate, we were clear that dividends paid were used to finance intercompany loans.[106]

5.13 We encourage companies to be transparent about their financing arrangements and we report the dividends paid – both gross and net – in our 2019 Financial Monitoring Resilience report.[107] Representations made by Anglian Water and Yorkshire Water do not change the outcome that the financial restructuring

[101] Bristol Water, 'Reply to Ofwat response', May 2020, p. 19, paragraph 85
[102] Northumbrian Water, 'PR19 CMA Redetermination reply', May 2020, paragraphs 651-654 and Northumbrian Water, 'REP071_CONFIDENTIAL_Appendix 7_Dividends Appendix'
[103] Yorkshire Water, 'Response to Ofwat Reply', May 2020, p. 47, paragraph 2.18.2 and 2.18.3
[104] Yorkshire Water, 'Response to Ofwat Reply', May 2020, pp. 24-26, paragraphs 2.4.1 and 2.4.11
[105] Yorkshire Water, 'Response to Ofwat Reply', May 2020, pp. 50-51, paragraphs 2.18.16 and 2.18.33
[106] Ofwat, 'Risk and return – response to common issues in companies' statements of case', pp. 16-18 and 21-24, paragraphs 2.19-2.23 and 2.29-2.37
[107] Ofwat, 'Monitoring financial resilience report 2018-19', p. 12

arrangements led to step increases in gearing to levels well above the notional level.[108]

5.14 The commentary provided by Northumbrian Water on its historical dividend payments was set out in a confidential appendix to its 27 May submission. We comment on its response in a separate annex to this submission.

5.15 Bristol Water considers the special dividend of £10 million in 2002-03 was small in size.[109] We calculate the special dividend to be equivalent to an increase in gearing in 2002-03 of 5.5 percentage points.[110] However, it is not just the special dividend that is relevant; as referenced in section 3, Bristol Water used the proceeds of its Artesian debt issuance to finance an intercompany loan that allowed it 'to finance a £51m return of capital to shareholders'.[111] The intercompany loan amounted to £68.5 million as at 31 March 2019.

Claimed benefits of covenanted structures

5.16 Anglian Water provides lengthy explanations of the benefits it considers come from its securitised structure;[112,113] it argues we have not responded to all of the points it has made.

5.17 The securitised structures companies such as Anglian Water have put in place are matters for each company to manage. We do not comment on the detailed terms of the covenanted financing arrangements, which are designed to transfer risk and allow companies to raise higher levels of debt for a given credit rating than would otherwise be the case. Such covenants can only provide limited assurance that all necessary protections are in place in the event of distress.

5.18 Anglian Water references the structural uplift to credit ratings that is assigned by Moody's to the credit ratings of companies with securitised structures. This is a correct interpretation of the rating methodology; includes a policy that

[108] Anglian Water's gearing increased from 52% at March 2002 to 82% at March 2003 and Yorkshire Water's gearing increased from 42% at March 2006 to 73% at March 2011.
[109] Bristol Water, 'Reply to Ofwat response', May 2020, pp. 19, paragraph 85
[110] 2002-03 Special dividend £10 million / 2002-03 RCV £181 million = 5.5%
[111] Bristol Water, Annual report and accounts 2004, p. 5
[112] Anglian Water, 'Reply to Ofwat's response, Part I: Reply to Ofwat's Response on Risk and Return' (Confidential), May 2020, p. 27, paragraphs 83-87
[113] Anglian Water, 'Statement of case', April 2020, pp. 29-30, paragraph 151

assigns a 'notch uplift' to Anglian Water[114] and Yorkshire Water[115] to take account of their security and covenant packages. However, the value of such uplifts should be considered in the context of all relevant facts:

- All companies receive a 'notch uplift' on account of the regulatory ring-fence. The value of this is 0.5. The 'notch uplift' is greater for companies with highly covenanted structures, with an uplift of either 1.0 or 1.5. Anglian Water has an uplift of 1.5. However, Moody's has recently reduced the uplift for Yorkshire Water[116] (and Southern Water)[117] from 1.5 to 1.0.
- In its methodology, Moody's assigns a 10% weighting to it financial policy factor.[118] Moody's assess historical track record and stated objectives with respect to leverage and financing decisions, and investment return. Yorkshire Water (along with Southern Water and Thames Water) has the lowest score in the sector for this factor at 'B'; Anglian Water, Bristol Water and Northumbrian Water score 'Ba', lower than companies such as United Utilities and Severn Trent which score 'Baa'.

5.19 In summary, a comparative assessment of the Moody's ratings for the water companies shows companies with high levels of leverage are marked down in the 'financial policy' factor, but receive some benefit in the form of a 'rating uplift' where covenanted structures are in place. However, the 'rating uplift' has recently deteriorated for two companies, suggesting Moody's is placing less weight on the credit enhancing features of Yorkshire Water and Southern Water.

5.20 In our view, it is far preferable that companies adopt resilient structures that benefit from adequate equity buffers. And, while the gearing outperformance sharing mechanism does not prevent companies from maintaining high levels of gearing should they choose to do so, it encourages companies to ensure their decisions that affect capital structure are balanced against the interests of current and future customers.

[114] R002 - Moody's Investors Service, 'Anglian Water Services Ltd - Update following CMA appeal and negative outlook'. 27 February 2020, Exhibit 12, p. 10
[115] R022 - Moody's Investors Service, Credit opinion: 'Yorkshire Water Services Limited, Update following CMA appeal and downgrade of Class A bonds to Baa2', March 2020, Exhibit 11, p. 9
[116] R022 - Moody's Investors Service, Credit opinion: 'Yorkshire Water Services Limited, Update following CMA appeal and downgrade of Class A bonds to Baa2', March 2020.
[117] R028 - Moody's Investors Service, 'Southern Water Services (Finance) Limited, Update following affirmation at Baa3, stable', March 2020, p. 9
[118] R018 - Moody's Investors Service, 'Rating methodology, Regulated water utilities', June 2018, Exhibit 1, p. 4

Impact of past financing choices made by the disputing companies

5.21 As illustrated in section 3, Anglian Water, Bristol Water and Yorkshire Water have all raised a significant proportion of debt in a short period of time that has been accompanied by step increases in gearing and/or a financial restructuring. At the time these decisions were made, it was clear to each company that its actual financing costs would not be passed through to customers.

5.22 Yorkshire Water claims we mischaracterised elements of its actual structure[119] and made inaccurate statements on its swap portfolio.[120] We disagree; we note:

- Yorkshire Water's argument that other companies have similar swap arrangements in place is not a reason, in itself, to believe Yorkshire Water's decision is efficient. The decision by Yorkshire Water's management to raise index linked swaps in 2008 increased the company's exposure to changes in financial markets (and as set out in the company's Annex 07 by Centrus,[121] the substantial amount of debt subsequently raised in 2009 further increased Yorkshire Water's exposure). The swaps Yorkshire Water raised were material – with a nominal value of £1.3 billion in 2008, equivalent to c.30% of its RCV and over 45% of its debt, with maturity dates ranging from 2026 to 2063.[122] Moody's cite these swaps have a negative mark-to-market value of over £2.6 billion as of January 2020.[123]
- There are two other water companies which Moody's cite whose fair value gearing exceeds 100% - Southern Water[124] and Thames Water.[125] Like Yorkshire Water, both companies adopted highly leveraged, covenanted, structures. We do not endorse such financing structures, as the structures adopted reduce headroom to withstand cost shocks compared with the notional structure.

5.23 We are continuing to engage with and monitor closely the ability of companies to maintain their long term financial resilience where there is evidence of limited headroom.

[119] Yorkshire Water, 'Response to Ofwat Reply', May 2020, p. 47, paragraph 2.18.2
[120] Yorkshire Water, 'Response to Ofwat Reply', May 2020, p. 50-51, paragraphs 2.18.16 and 2.18.33
[121] Centrus, 'Annex 07 - Yorkshire Water Debt Portfolio Review', 27 May 2020, p. 5
[122] Yorkshire Water Services Limited, Annual Report and Financial Statements for the year ended 31 March 2010, Note 15. p. 43
[123] R022 - Moody's Investors Service, 'Yorkshire Water - Update following CMA appeal and downgrade of Class A bonds to Baa2', 13 March 2020, p. 1
[124] R028 - Moody's Investors Service, 'Southern Water Services (Finance) Limited - Update following affirmation at Baa3, stable', 30 March 2020, p. 8
[125] R026 - Moody's Investors Service, 'Credit Opinion – Thames Water Utilities Ltd - Update following PR19 final determinations and downgrade to Baa2', 26 March 2020, p. 7

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