

18 January 2021

Reference of the PR19 final determinations: Cost of capital – initial response to working papers

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1. Introduction

- 1.1 We welcome the opportunity to provide initial comments on the CMA's current position on setting the cost of capital as set out in the working papers published on 8 January, and we welcome the opportunity to discuss these issues further at the cost of capital round table on 20 January. The issues under consideration are material to the CMA's final determination of the current water references and are likely to be relevant to other regulated sectors.

Cost of debt

- 1.2 We welcome the steps the CMA has taken to revise its approach to the calculation of the cost of embedded debt, which now reflects the importance of benchmarks drawn from actual data. For the most part, we agree with the CMA's approach to the cost of debt, though we remain concerned that the CMA has not engaged adequately with the reasons for considering an outperformance adjustment to the allowed cost of debt, and includes an unnecessary uplift of 5-10 basis points to its actual benchmarks. We discuss these issues further in section 3.

Cost of equity

- 1.3 The CMA proposes to reduce the level of 'aiming up' to the cost of equity that was applied in the provisional findings from 50 basis points to 25 basis points. The cost of equity we infer from the CMA's working paper – at around 4.83% (CPIH)¹ – remains significantly above our determination (4.19%) and Ofgem's recent decision in its RIIO-2 price controls (4.55%).
- 1.4 The working papers refer to range estimates for the cost of equity parameters that were set out in the provisional findings. These have not been adjusted to take account of our representations, with only limited comment that the CMA's view 'on parameter uncertainty is that outside of TMR there may be a mild bias for the assumptions that indicate a higher cost of equity than suggested by the midpoint of our stated range'.
- 1.5 Setting the allowed return inevitably entails a degree of judgement; but it is important that the judgement applied appropriately weighs the evidence, and

¹ The CMA's cost of equity in its provisional findings was 5.08% (CPIH), which the CMA stated included 0.50% for aiming up. With the CMA's now proposed 0.25% for aiming up, the inferred cost of equity is 4.83%, though the CMA confirms its parameter estimates have to be revised for more recent data.

gives effect to the statutory duties in the round. Our view is that the cost of equity components are upwardly biased. As a consequence, if the CMA retains its approach to calculation of the cost of equity midpoint in its final determination, its cost of capital will remain ‘aimed up’ even before its ‘aiming up’ adjustment. We do not know what consideration has been given to our representations on the cost of equity, and so our ability to comment further on any revisions to the CMA’s thinking on the cost of equity is limited.

Aiming up

- 1.6 We welcome the CMA’s clearer explanation of its reasons for ‘aiming up’ the allowed return on equity. This enables us to engage more fully with the CMA’s arguments than in our response to the provisional findings. However, having carefully considered the CMA’s reasoning, we continue to disagree that such aiming up is necessary for water.
- 1.7 As we understand it, the key elements of the CMA’s rationale for ‘aiming up’ appear to be (i) concerns around the risk to setting the cost of capital too low (given the reduction in the allowed return since PR14, and concerns the CMA sets out that this may impact on incentives on companies to invest and investors to remain attracted to the sector), (ii) the need to address perceived asymmetry of the regulatory settlement, and (iii) financeability.

Aiming up – Incentives on investment

- 1.8 We do not agree that ‘aiming up’ of the reasonable allowed return on equity is required in the water sector. The CMA does not place adequate weight on evidence from MAR valuations of listed water companies that the allowed return set in our determinations was not too low, or that we had signalled from very early in the price review process that the allowed return would be lower at PR19, reflecting our reading of market parameters. Our view is that an approach that sets the allowed return taking account of the market data that is relevant for the period of the control without ‘aiming up’ is the one that best takes account of customer interests in the long term.
- 1.9 The CMA agrees that the risk of under-investment and investor exit in 2020–25 is low. But its policy of ‘aiming up’ suggests a higher allowed return is required to incentivise investment in all future regulatory periods, underpinning its rationale to ‘aim up’ the allowed return at PR19. This omits to consider that this risk could

be addressed by Ofwat providing an early signal of the allowed return for PR24 (or future price reviews) if, ex-post, it appeared the PR19 allowed return was too low.

- 1.10 We have already set out that the impact of aiming up on investment incentives is ambiguous; we have submitted evidence that shows a high return does not incentivise investment – instead resulting in higher cost to customers and increased returns to shareholders. Furthermore, it could have the effect of crowding out future investment where the allowed return is used as an input to cost benefit analysis.
- 1.11 The working papers have not taken full account of the increased role of service incentives to incentivise investment. The CMA fails to recognise (i) the significant focus the ODI regime brings on management to appropriately maintain and improve asset health (with increased scope for outperformance at PR19 than PR14), (ii) that the regime has tools built up over 30 years to address risks of underinvestment or (iii) the evidence we have referenced from interim financial statements that well-performing companies are seeking opportunities to invest to earn ODI outperformance rewards.

Aiming up – Asymmetry

- 1.12 The working papers fail to take adequate account of the overall balance of risk and return in the price determination package as a whole. This includes the scope for financial and totex outperformance as well as ODIs, and the greater number of uncertainty and reconciliation mechanisms in the PR19 package that increase the protection companies have from systematic risk relative to PR14.
- 1.13 The CMA also fails to adequately take into account that information asymmetry is weighted to companies. It also discounts our evidence that there is unlikely to be a skew to underperformance ODI payments taking account of how companies are likely to respond to ODI incentives. It appears to accept the arguments that companies respond to incentives and this will increase returns. But apparently dismisses it because this behaviour is in consumers' interests. We agree it is in consumers' interests for companies to respond to incentives but consider that it is nonetheless inconsistent of the CMA to not recognise the impact this has on expected returns.
- 1.14 An inconsistent approach is also proposed to dealing with perceived asymmetry in ODIs, suggesting company specific imbalance is best addressed with adjustments to the ODI package, but any perception that the overall ODI package is

imbalanced is best addressed with a cost of capital premium. Our view is that any such imbalance is best addressed at source to best align the interests of customers and companies through the overall package of risk and return – this was a key objective of the PR19 methodology.

- 1.15 The CMA makes selective use of evidence in proposing the policy of ‘aiming up’. Reference is made to a 2014 decision paper by the New Zealand Commerce Commission. No account is taken of more recent developments, including the Commerce Commission’s October 2020 decision which discussed the issue of aiming up at length. It concluded the case to justify a WACC uplift to meet growth in demand, investment in innovation and investment in reliability and quality was weak,² with a midpoint giving best effect to its duties. The Commerce Commission’s conclusion took account of views in the UKRN academic cost of capital study. It also referenced its expert panel advised that tools to address under-investment concerns, that go to the proximate cause, are preferable to aiming up, which is an expensive way to address concerns for end-users.³ These conclusions are wholly consistent with the operation of an ODI incentive regime.

Aiming up – financeability

- 1.16 In previous submissions we have set out our concerns that setting the allowed return to meet specified financial ratios risks costs to customers being unduly influenced by credit rating agencies, without full consideration of credit rating agency methodologies. We remain concerned that evidence of the position of the credit rating agencies appears to be accepted uncritically, and that it is given too much weight. At the extreme, a potential consequence is that the only relevant parameter for setting the cost of equity, for a given level of gearing, becomes the cost of debt as it requires the determination to satisfy cashflow ratios determined by credit rating agencies.
- 1.17 Such an approach raises fundamental questions about the relationship between the role of the regulator and the role of credit rating agencies (who are not wholly independent from the companies) in setting parameters relevant to the cost of capital. It also results in perverse consequences.
- 1.18 For example, the CMA assesses the cost of debt that should apply to water companies in 2020–25 (2.12% CPIH) to be higher than in Ofgem’s recent decision

² Commerce Commission, ‘[Fibre input methodologies: Main final decisions](#)’, October 2020, p. 484, paragraph 6.728–6.730.

³ Commerce Commission, ‘[Fibre input methodologies: Main final decisions](#)’, October 2020, pp. 510–512, paragraphs 6.835–6.842.

for energy (1.82%). Adopting an approach to resolving financeability constraints would result in an allowed cost of equity that is higher in water than in energy for a given level of gearing. This contrasts with evidence in Ofgem's RIIO-2 determination, beta observations in water are lower than for energy, suggesting a lower cost of equity should apply in water.

Aiming up – calibration

- 1.19 We do not consider that the rationale for the choice of 25bps (or 82nd percentile) as opposed to some other uplift has been adequately set out. It is not clear why the uplift should be greater than that applied by Ofgem for its RIIO-2 determinations (15bps) and the CMA has not set out how its proposal compares to the 67th percentile for the overall WACC (which it references to the 2014 decision by the Commerce Commission in New Zealand). We understand the percentile calculation is an improvement on the provisional findings, though it remains based on parameter estimates (and distributions) that are impacted by upward bias.
- 1.20 We understand the CMA's percentile calculation is an improvement on the provisional findings, though it remains based on parameter estimates that are impacted by upward bias, and it is based on a mixture of uniform and normal distributions without justification. Adopting the CMA's approach suggest an uplift of 13 basis points at the 67th percentile (which could be rounded to 15 basis points) would be more consistent with the regulatory decisions referenced above.
- 1.21 Finally, we remind the CMA that each 10 basis point overstatement of the cost of capital, at a sector level, equates to a cost to customers of c.£160m (before tax⁴) over 2020–25 – for example, if the CMA's midpoint cost of equity were to be overstated by c.40 basis points⁵, with further addition of a 25 basis point 'aiming up' allowance, the cost to customers at PR19 would have been c.£1 billion (before tax) – an insurance cost with highly questionable customer benefit.

⁴ Our modelling excludes the impact of increased revenue to fund additional tax paid by companies, and so is an underestimate.

⁵ Calculated as the difference between the CMA's provisional allowed return (5.08%) and our final determination (4.19%) less the level of aiming up in the provisional findings (0.50%).

Summary of evidence in our representations on the cost of capital that is not considered in the CMA's working papers

- 1.22 In the rest of this paper we respond to the issues set out by the CMA in its working papers. Section 2 discusses issues relevant to the cost of equity, and the CMA's proposed policy of 'aiming up'. Section 3 discusses issues relevant to the cost of debt.
- 1.23 The working papers do not address all of the issues raised in our representations on risk and return or cost of capital. Therefore we summarise in table 1.1 the evidence that has not yet been considered or discussed by the CMA, or on which the CMA has not yet placed adequate weight, that are relevant to the cost of capital in its working papers. The text in this table is a summary provided as part of our initial written response to the CMA's cost of capital working papers ahead of the roundtable on 20 January. It is therefore not necessarily a final list and there may be additional points that it would be helpful for us to add in our final response.
- 1.24 We submit that the CMA should take adequate account of all of our concerns in reaching its final determination.

Table 1.1 – issues raised in our representations that are not considered in the cost of capital working papers

Area	Issue	Reference in our submissions
Risk free rate	<ul style="list-style-type: none"> Conceptual error/error of theory involved in argument for use of AAA corporate bonds. Distortions introduced by the use of AAA bonds to the range of the risk free rate. SONIA swap rate not reflected as an alternative cross check to index-linked gilts. 	Risk and return October submission paragraphs 5.9–5.15–5.26 Europe Economics October paper , section 1.4 Wright & Mason, October paper , section 3 Wright & Mason, November paper , section 1 Risk and return December submission paragraphs 4.1–4.8 This document, section 2.
Total market return	<ul style="list-style-type: none"> Strong upward bias in using historic averages, underweighting more recent evidence on returns, with weight placed on discredited RPI in deflating returns. RPI-deflated figures are not all adjusted for formula effect bias of at least 30bps. Weight placed only on the high end of the PwC uplift to the PwC/MMW ex-post estimate without justification, which results in upward skew in the TMR range. Consistency of using 10 year holding period despite a 20 year horizon used for other parameters (e.g. risk free rate). Ex-ante volatility bias uplift – based on current data we estimate this to be 63bps rather than the 130bps stated by the CMA; which is more consistent with the Competition Commission’s figure in the Northern Ireland Electricity decision. Exclusion of lower bound estimate applied in the CMA’s NERL RP3 decision for in the holding period calculation for the ex-ante approach. 	Risk and return October submission paragraphs 5.9–5.10 Europe Economics October paper , sections 1.2 and 1.3 Wright & Mason, October paper , section 4 Wright & Mason, November paper , section 2 This document, section 2.
Debt beta	<ul style="list-style-type: none"> Asymmetry in the probability of different ends of the range, with the CMA recognising that a zero debt beta is very unlikely but nonetheless including zero within its range. 	Risk and return October submission paragraphs 5.30–5.33 Europe Economics October paper , sections 1.1.1 and 1.5

Unlevered and equity beta	<ul style="list-style-type: none"> Policy on exclusion of outlying data points inconsistent with that used for debt beta. Evidence that observed betas (including raw equity betas going back to 1998) are lower than the point estimate proposed in the provisional findings. Equity beta higher than observed betas. 	Risk and return October submission paragraphs 1.22-1.24, 5.28-5.29 Europe Economics October paper , sections 1.1.1 and 1.5 Wright & Mason, October paper , section 5 This document, section 2.
Cross check – Market to asset valuations	<ul style="list-style-type: none"> The CMA place insufficient weight on evidence from MAR analysis a cross check to the allowed return (taking account of the midpoint allowed return on capital and its proposed ‘aiming up’). 	Risk and return October submission paragraphs 2.11, 3.30, 3.31 and page 104 Europe Economics October submission section 2 Appendix – MAR model. Wright & Mason October submission , paragraphs 7.18 and 7.19. This document, section 2.
Gearing outperformance	<ul style="list-style-type: none"> The CMA should include the gearing outperformance sharing mechanism in its final determination. 	Risk and return October submission , Section 7.
Aiming up the cost of equity – incentivising investment	<ul style="list-style-type: none"> A regulatory approach that is slow to respond to downward movements in the cost of equity is one that favours investors over customers. Aiming up is not required to incentivise companies to promote cost beneficial schemes, is a blunt and ineffective instrument if asset health is a concern. Weight should be placed on the power of ODIs to incentivise investment (which the CMA recognises in its assessment of ODI asymmetry). Reasons for believing the costs to customers from a WACC that is too low are greater than a WACC that is too high have not been set out. 	This document, section 2.
Aiming up the cost of equity – asymmetry	<ul style="list-style-type: none"> The CMA has not adequately engaged with the evidence we set out about the scope for outperformance (across financing, totex and ODIs) The CMA has not adequately engaged with evidence of ODI performance in 2015-20 and the first six months of the current regulatory period. If an aiming up adjustment is to be made, clear evidence underpinning the specific level of uplift should be set out – and if ODI (or other) 	Risk and return October submission , paragraphs 3.46-3.62 and Annex A2 Risk and return December submission paragraphs 2.3 and 2.4. This document, section 2.

	underperformance is a concern, it is better addressed at source	
Aiming up the cost of equity – financeability	<ul style="list-style-type: none"> The CMA has considered company evidence on financeability uncritically and not considered reasonable alternative options to aiming up as a solution to addressing a financeability constraint. 	Risk and return October submission , paragraphs 3.69–3.72 Risk and return May submission 4.122–4.133 This document, section 2.
Embedded debt	<ul style="list-style-type: none"> Historical notional company metrics are consistent with an ‘A’ rating; A3 was targeted at PR09 and targeted credit metrics at previous controls were at least as credit-positive. Unreasonable dismissal of ‘halo effect’ and notional credit rating evidence which jointly suggest a material outperformance wedge. 5–10 basis upwards adjustment to APR-led approaches does not reflect weight of evidence supporting a downwards adjustment. 	This document, section 3. Risk and return December submission, Para 3.21
New debt	<ul style="list-style-type: none"> Unreasonable dismissal of recent traded yields and yield-at-issuance data indicating a discount of at least 25bps to the iBoxx A/BBB once tenor and credit rating is controlled for. Failure to apply ‘matching adjustment’ to new debt allowance, despite arguments deployed for embedded debt applying to new debt as well. 	This document, section 3.
Company specific adjustment	<ul style="list-style-type: none"> The working papers do not address issues raised on the need for a company specific adjustment for Bristol Water 	Risk and return October submission , section 6. Risk and return December submission, section 5.

2. Point estimate for the cost of equity

- 2.1 In its final determination, the CMA must arrive at a determination that provides an adequate balance of risk and reward, such that companies are incentivised to operate efficiently and receive reasonable rewards that reflect the service delivered for customers and return on investment.
- 2.2 In deriving the point estimate for the cost of equity, the CMA's proposed approach, suggests that consideration of both (i) the calculation of the central estimate of the cost of equity and (ii) the extent of aiming up, are relevant. We cover both issues in this section. It is only the latter point that is considered in detail in the CMA's working papers; the CMA has not adequately considered our representations on bias in the cost of equity parameter estimates in its working papers.

Cost of equity – midpoint

- 2.3 The CMA's working paper restates the range estimates for component parameters of the cost of equity. It states that the ranges for the parameter estimates were generally proposed where the CMA considered there was a comparable likelihood of the actual value being higher or lower in the range⁶ and, taken together, provide a balance that is close to the mid-point for the cost of equity
- 2.4 However, the CMA has provided no commentary on our representations, nor on those of our advisers (Europe Economics) or Wright & Mason (independent academics). These representations demonstrated that the ranges, and in consequence, the midpoint chosen in the provisional findings were biased upwards even before the application of a policy of 'aiming up'. We submit that in its final determination, the CMA should focus on the level of the allowed return such that the ranges and the point estimate for the cost of equity are set at a level that is reasonable.
- 2.5 We respond below to the points set out by the CMA that are relevant to the CMA's mid-point estimates. We reference the issues the CMA has not addressed from our representations in table 1.1.

⁶ CMA, '[Choosing a point estimate for the Cost of Capital –Working Paper](#)', January 2021, p. 21, paragraph 69.

Total market return

- 2.6 The CMA's working paper references the range proposed in the provisional findings (6.2% to 7.2%, CPIH). It indicates that range was based primarily on historic ex post methodology, with the historic ex ante and forward-looking approaches considered as cross checks. The CMA referenced that the low end of the range was based on CED/CPI-deflated data, with the high end based on CED/RPI-deflated data. The CMA increased weight placed on the CED/RPI approach compared with the provisional findings in the NERL reference, and states this, combined with judgment applied to forward-looking rates, resulted in a 25bps uplift at both ends of the range compared with NERL. The CMA recognises that its approach, which assumes a broadly constant TMR over time may provide an upward-biased estimate in the current low risk free rate environment.
- 2.7 The working paper provides no new justification for the increased weight that the CMA has placed on the CED/RPI-deflated data, suggesting only that it is normal regulatory practice to implement changes gradually over time. As set out in the following sections, a policy of gradual implementation of changes to the interpretation of historical total market data together with a policy of 'aiming up' within the range of point estimates has a double impact.
- 2.8 We are unable to reconcile the statement in the CMA's working paper 'As a result of this move, *and the judgement applied on forward-looking estimates*, the range increased by 25bps at both ends (in RPI terms) in relation to NATS PFs'⁷ (emphasis added) with statements in the provisional findings. The CMA's provisional findings were clear that the range was derived based on historical evidence, weight was not placed on forward looking evidence. The CMA stated in the provisional findings for example:

“While we do not believe that weight should be placed on the forward looking dividend discount/growth models due to their sensitivity to the various assumptions that can be made, we find the survey evidence we have reviewed strongly suggests that even the most optimistic investors are currently expecting returns that are no higher than 5% to 6% (RPI real), and many are expecting returns significantly below this level.”⁸

⁷ CMA, '[Choosing a point estimate for the Cost of Capital –Working Paper](#)', January 2021, p. 21, paragraphs 72(a).

⁸ CMA, '[Provisional Findings](#)', September 2020, p. 557, paragraph 9.220.

- 2.9 Furthermore, the CMA was clear that its range was ‘comfortably at the top end of investors’ current expectations regarding market returns over the next few years.’⁹
- 2.10 We remind the CMA also of Wright & Mason’s conclusion on the range for the total market return included in the provisional findings:
- ‘It seems odd that, despite acknowledging the likely upward bias of historic average returns, in light of forward-looking considerations, the CMA has ended up with an upper limit of its range so obviously at, or beyond, the range even of historic return averages. This choice, in turn, has a disproportionate influence on their final chosen figure, given their choice of the notional 75% percentile.’¹⁰
- 2.11 We conclude that the CMA’s working paper is a restatement of the position on the range of TMR parameter estimates set out in its provisional findings. However, the statements made in the working paper appear to overstate the weight the CMA placed on forward looking evidence in deriving its range of point estimates in provisional findings; which would point to a TMR at the low end of the estimates proposed by the CMA. There is no evidence that it has considered, or sought to respond to the issues we set out on the total market return in our representations summarised in table 1.1, which, in combination, suggest the estimation range remains upwardly biased.

Debt beta

- 2.12 The working paper references the range estimates stated for debt beta in the provisional findings of 0 to 0.15 with the high end of the range based on decompositional analysis which support the stability of the WACC at different levels of gearing and low end based on regression analysis that measure the exposure of systematic risk for bond holders. The CMA expresses a preference for estimates at the low end of the range.
- 2.13 No new commentary has been provided by the CMA in its working paper; we reference our previous submissions on debt beta in table 1.1.

⁹ CMA, ‘[Provisional Findings](#)’, September 2020, p. 557, paragraph 9.221.

¹⁰ Wright & Mason, ‘Comments prepared for Ofwat on the CMA’s Provisional Findings Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Cost of capital considerations’, October 2020, p. 13, paragraph 4.15.

Unlevered beta

- 2.14 The CMA references the range of parameter estimates for unlevered beta as 0.27 to 0.32, with the low end of the range referenced to 2 year spot and 10 year data, the high end referenced to 5 year data. The CMA states it considers the range to be broadly symmetric.
- 2.15 The CMA has set out no new evidence on unlevered beta and no consideration appears to have been given to our representations that it applied an inconsistent approach to the removal of outlier beta estimates, resulting in a range of beta estimates that are upwardly biased.
- 2.16 Furthermore, we draw attention to the evidence considered by Ofgem in its final determination for the RII0-2 controls that beta estimates in the water sector to October 2020 point to a range of 0.24 – 0.32 (based on Severn Trent and United Utilities data which is consistent with the CMA's approach in the provisional findings), with the majority of beta calculations at or below the 0.29 figure used in our final determination.

Table 2.1 – Daily beta estimates stated in Ofgem’s RIIO-2 final determination

Estimation Window	Averaging period	Market value of debt	SSE	NG	PNN	SVT	UUW
2-year	Spot	No	0.63	0.34	0.30	0.26	0.26
2-year	2-year	No	0.47	0.33	0.31	0.26	0.26
2-year	5-year	No	0.55	0.36	0.36	0.31	0.30
2-year	10-year	No	0.47	0.31	0.33	0.28	0.26
2-year	Spot	Yes	0.61	0.32	0.29	0.24	0.24
2-year	2-year	Yes	0.45	0.31	0.30	0.24	0.24
2-year	5-year	Yes	0.53	0.34	0.36	0.28	0.28
2-year	10-year	Yes	0.46	0.30	0.33	0.26	0.26
5-year	Spot	No	0.63	0.35	0.32	0.28	0.27
5-year	2-year	No	0.58	0.36	0.36	0.31	0.30
5-year	5-year	No	0.56	0.35	0.36	0.32	0.30
5-year	10-year	No	0.49	0.32	0.32	0.29	0.28
5-year	Spot	Yes	0.6	0.33	0.32	0.25	0.25
5-year	2-year	Yes	0.56	0.34	0.36	0.28	0.28
5-year	5-year	Yes	0.54	0.33	0.37	0.29	0.29
5-year	10-year	Yes	0.47	0.30	0.33	0.27	0.28
10-year	Spot	No	0.56	0.33	0.32	0.29	0.27
10-year	2-year	No	0.47	0.30	0.32	0.27	0.25
10-year	5-year	No	0.47	0.32	0.31	0.28	0.27
10-year	Spot	Yes	0.54	0.31	0.33	0.26	0.26
10-year	2-year	Yes	0.45	0.29	0.33	0.25	0.25
10-year	5-year	Yes	0.45	0.30	0.32	0.27	0.27

Source: Ofgem¹¹

2.17 We reference our previous representations on this issue in table 1.1.

¹¹ Ofgem, ‘[RIIO-2 Final Determinations – Finance Annex](#)’, December 2020, p. 42, Table 10

Risk free rate

- 2.18 The CMA restates the risk free rate range stated in its provisional findings as – 1.4% to –0.8%, with the low end based on gilt rates and the high end based on rates for AAA-rated corporate bonds. The CMA references that, at the provisional findings stage, it considered the risk free rate (RFR) was closer to AAA corporate bonds than index linked gilts. In addition, the working paper states that ‘Taking a conservative view of a default risk premium for ILGs of 20 bps suggested an RFR of –1.01%, c 10bps higher than the midpoint of the –1.40% to –0.81% range’.
- 2.19 The CMA’s working paper does not consider the issues raised in our representations, particularly on the issue of the relevance of AAA-rated corporate bonds as a measure of the risk free rate or the evidence we have cited on alternative cross checks (using the SONIA swap rate).
- 2.20 Our view remains that placing weight on AAA-rated corporate bonds is inconsistent with the practical application of the CAPM and introduces significant distortions (e.g. inflation, liquidity, and default risk) that outweigh the imperfections in index linked gilts as a proxy for the risk free rate. We reference the evidence we have provided on this in table 1.1, which we submit should be considered by the CMA in its final determination.
- 2.21 We have not identified the reference to the CMA’s proposal to take a ‘conservative view of a default risk premium for ILGs’ in the provisional findings and we cannot follow the logic of either the quantification (since the working paper refers to the ILG premium) or the statement that AAA bonds are a proxy for the risk free rate that is available to all market participants.
- 2.22 The CMA’s stated estimate of a risk free rate of –1.01% (CPIH) referenced in the working paper is materially above the level derived from index linked gilts for the period of the price control and the SONIA swap rate cross check, and we restate in table 2.2 the calculations provided in our December 2020 submission based on data to 24 November 2020.¹² To the extent the CMA is seeking a datapoint to cross check the index-link gilt derived risk free rate we suggest the CMA considers the use of the SONIA swap rate.

¹² Ofwat, ‘Reference of the PR19 final determinations: Risk & Return – Ofwat December response’, December 2020, Table 4.1, p. 40.

Table 2.2 – Risk free rate evidence

	Methodology	Nominal	Real (2% CPIH)	Real (RPI)
Ofwat final determination	15yr RPI-linked gilts: 1 month trailing average with uplift for forward rates (September 2019)	0.58%	-1.39%	-2.35% (3.0% RPI)
CMA – approach adopted to calculate low end of the range	20yr RPI-linked gilts: 6 month trailing average as at 24 November 2020	0.37%	-1.59%	-2.45% (2.9% RPI)
20 year SONIA swap rate	6 month trailing average as at 24 November 2020	0.26%	-1.71%	-2.57% (2.9% RPI)

Source: Europe Economics analysis of Refinitiv data

Rationale for ‘aiming up’

Proposals set out in the CMA’s working paper

2.23 The CMA’s decision to ‘aim up’ the allowed return is said to reflect a number of key concerns: ¹³

- **Incentivising investment – cautious regulatory approach** – The CMA suggests a regulatory regime that supports investment is one that is cautious in responding too quickly to market fluctuations and is consistent over time. The CMA references the midpoint cost of equity in its provisional findings to be 30% lower than AMP6, with much of the reduction due to changes in calculation methodology, and the level of its chosen its range was consistent with market prices and broker forecasts. The working paper recognises that there appears to be significant availability of new capital and suggests risk of an exit of capital in AMP7 is relatively low.

¹³ CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, pp. 31–34, paragraphs 103–114.

- **Incentivising investment – financial incentives** – The allowed return must encourage the ‘right’ level of investment to incentivise companies to identify, develop and implement investment programmes. The CMA is concerned the allowed cost of equity should be set to provide financial incentives for companies to invest, particularly ‘if Ofwat required a step change in investment to meet challenging resilience requirements in the face of climate challenges or other stresses on existing infrastructure’.
- **Asymmetry** – Two points are referenced by the CMA. Firstly, the CMA has concerns that the overall incentive package in the round is skewed to underperformance. Secondly, the CMA also considers there to be asymmetry in the risk of setting the cost of capital too high or too low, and considers that there are risks to the size of the proposed reductions to the risk free rate and total market return that are better addressed at future regulatory periods. The CMA does however acknowledge there is a risk it may have not gone far enough in its reduction to the allowed return.
- **Financeability** – the CMA references financeability as a relevant cross check on the choice of the cost of equity, saying that the use of credit ratios at least provides a check on whether the cost of equity appears to be of a level which is broadly consistent with high-quality credit ratings required by Ofwat and implied by the cost of debt, without the use of cash flow adjustments.

2.24 Taking account of the above factors, the CMA proposes the cost of equity should be set at 25 basis points above the mid-point of its range. It considers this to be necessary despite its assessment ‘that the risk of an exit of capital in AMP7 is relatively low and that this reduces the size of the risks from setting the cost of capital too low’.¹⁴ The CMA explains its modelling suggests a cost of equity around 25bp above the mid-point would in practice be around the 82nd percentile on a probability-weight basis.¹⁵

2.25 We respond to the CMA’s views in the sections that follow.

Our response

Incentivising investment – cautious regulatory approach

2.26 We agree with the CMA’s view that an evolutionary regulatory approach is beneficial to supporting investment in the sector. This is precisely why regulatory

¹⁴ CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, p. 34, paragraphs 116–117.

¹⁵ CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, p. 21, paragraph 69.

approaches evolve over time, with signaling, extensive engagement and consultation. However regulatory consistency is not a reason to aim up the allowed return. In this section we address first the points raised about the evolution of regulatory approaches. We comment further on evidence from the market-to-asset valuation assessments that we consider continue to robustly support our allowed return.

- 2.27 The overall approach to setting our determination at PR19 was itself an evolution of the approach adopted at PR14, drawing on and refining regulatory risk and incentive mechanisms. The lower allowed return set at PR19 was signaled well ahead of the start of the 2020-25 period and was subject to considerable engagement and consultation, starting with the draft methodology in 2017. It has been accompanied by a significant expansion of risk and uncertainty mechanisms that mitigate downside risk, including indexing of the cost of new debt, reconciliation mechanisms for tax, business rates, abstraction charges and labour costs, together with significantly increased scope for ODI outperformance rewards. There has also been significant investment in the water sector since we signaled the allowed return would be lower in 2020-25, with the sector overspending, on average, costs allowed in the last year of the price control for 2015-20.
- 2.28 Secondly, the need to evolve regulatory approaches is not reason, of itself, to knowingly set an allowed return that exceeds that which is reasonable for the period of the price control. There is significant evidence to support the conclusion that the risk free rate has remained structurally lower than the levels that underpinned expectations at PR14, and we have provided the CMA with evidence that the risk free rate is expected to remain low well beyond the period of the price control. This suggests that a risk free rate aligned with our determination is certainly not an approach that is ‘responding too quickly to market fluctuations’.¹⁶ We submit that neither we nor the CMA knows better than the market data. We have learnt from past experience that adopting an overly cautious approach to the risk free rate is one that can only benefit investors, at the expense of customers over time.
- 2.29 Adopting the CMA’s proposed approach of slowly implementing reductions to the allowed cost of equity over successive price reviews results in an asymmetric impact on customers. Reductions would be slow to be passed through when the cost of equity goes down, but, where the cost of equity increases, it seems

¹⁶ As referenced by the CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, p. 31, paragraphs 103(a).

unlikely that a regulator could ‘aim down’ the allowed return – it is more likely that it would be necessary to pass through the increase immediately to meet financeability constraints. Such a policy therefore results in an asymmetry over time that benefits investors at a cost to customers.

- 2.30 Finally, as we set out in previous submissions, parameter estimates for the cost of equity components need to be considered for the relevant period of the price control. Parameter estimates for the cost of equity have been the subject of increased scrutiny as regulators have sought to understand the reasons for companies trading at material premia to RCV. An allowed cost of equity that is calculated based on upwardly biased end-of-range parameter estimates (as proposed in the provisional findings), with a subsequent aiming up within the range (at the 82nd percentile as proposed in the CMA’s working paper), is likely still to result in an allowed return that is biased in investors’ favour at a cost to customers.
- 2.31 We note the working paper suggests the risk of investor exit in AMP7 is low, and the CMA acknowledges there continues to be significant availability of new capital for further investment in infrastructure. It is unclear therefore why it would be reasonable to conclude that customers should bear the costs of an ‘aimed up’ allowed return. Companies and their investors understand that there is a regulatory reset every five years where efficient expenditure to deal with matters such as climate change and other investments will be considered together with the allowed return – where efficient expenditure and the return on that investment will be remunerated in accordance with our duties.
- 2.32 The CMA has not provided guidance on its decision making framework under which the risk of investor exit beyond AMP7 is treated as a concern. However, we offer the following comment – the risk of existing investor ‘exit’ is a matter of supply and demand; existing investors may have a variety of reasons for exiting the sector and the balance of interests heard by the CMA in this dispute process is likely to have been from investors that seek to protect their existing valuations. There is significant global demand for infrastructure investment (among other investments) and this is a factor driving lower expected returns. If the CMA’s concerns relate to expected returns beyond 2020–25, there remains scope for us to provide early signals about the allowed return for 2025–30, as we did at PR19.
- 2.33 The early signaling of future allowed returns would be a much more cost effective way of mitigating the impact of any concern arising from setting cost of capital too low at an earlier review. It is also the case that investment decisions will be

influenced by future expectations of the allowed cost of capital rather than just the historical decision of the regulator in its most recent price review. So a policy of aiming up seems likely to be costly and ineffective as a means of ensuring investor interest in future price review periods.

Market-to-asset valuations

- 2.34 The CMA consider evidence from MARs is not sufficient to counteract the arguments for aiming up. While we agree that MAR valuations cannot themselves be determinative of the reasonable cost of equity, they provide contemporaneous evidence which supports the conclusion that the level of the WACC we set is reasonable, and which directly contradicts the CMA's theoretical argument to 'aim up' the allowed return. MAR valuations in the water sector are particularly valuable as they are calculated for companies close to 'pure play' utilities.
- 2.35 We have reviewed in further detail the evidence Northumbrian Water provided on its MARs analysis submitted in December 2020¹⁷. We conclude that Northumbrian Water has made selective use of data from analyst reports and has made errors in its calculations. Once these issues are corrected, Northumbrian Water's MARs analysis supports our view that the allowed return in our determination was not too low.
- 2.36 Our conclusions are consistent with the view we set out in paragraph 3.4 of our previous submission,¹⁸ which concluded that Northumbrian's view that the MAR premium could be below 1.0x was heavily dependent on the input deducted from its MAR estimate to account for 'wholesale outperformance' and that the figure used to inform 'low MAR' scenarios includes cost of equity outperformance. We identify the following issues:
- Northumbrian Water's latest submission focusses on evidence from two sell-side analysts – Credit Suisse and Morgan Stanley. The Credit Suisse sum-of-the-parts valuation includes an adjustment for 'outperformance on the base WACC allowance', comprising around 40% of the fair value premium, which includes some element of expected equity outperformance. Morgan Stanley do not provide a granular breakdown of expected outperformance. However, taking account of such equity outperformance would have the effect of increasing Northumbrian Water's 'adjusted MAR'. This is a significant flaw in

¹⁷ Northumbrian Water, 'Post PFs Hearing Submission', December 2020, pp. 28-31, paragraphs 137-147.

¹⁸ Ofwat, ['Reference of the PR19 final determinations: Risk and return – response to common issues in companies' statements of case'](#), May 2020, p. 9, paragraph 3.4.

Northumbrian Water's analysis as the objective of the analysis is to arrive at a residual MAR with everything but the expected cost of equity outperformance stripped out. The Credit Suisse report is a direct acknowledgement that the allowed cost of equity in our determination is at least reasonable, if not generous.

- Northumbrian Water include an adjustment for 'non-wholesale regulated business'. This we understand to be an error. We find no reference to such adjustment in the sum-of-the-parts valuations provided as evidence in the analyst reports that underpin Northumbrian Water's calculations. Resetting this assumption to zero has the effect of increasing Northumbrian Water's 'adjusted MAR' by 0.05 in the case of Severn Trent and 0.025 in the case of United Utilities.
- Northumbrian Water's approach has the effect of providing a downward skew on the low end of its MAR range as its low end calculations sum the lowest parameter from each of component estimates, rather than focusing on a range that takes account separately of Credit Suisse's calculations and Morgan Stanley's calculations.

2.37 Correcting for the effect of the issues stated above, results in a MAR range that exceeds 1.0x (at both the low and the high end of Northumbrian's range) supporting our view that the allowed return set in our determination was not too low. We submit that the CMA should apply caution when interpreting disputing company arguments about the evidence on MARs.

Incentivising investment – financial incentives

2.38 In this section we address the CMA's concerns that a cost of capital that is set too low could (i) lead companies not to promote cost beneficial investment schemes in future business plans and (ii) lead to under-investment with associated societal risks that arise from a reduction in asset health.

2.39 On the first point, evidence from past determinations is that costs proposed in business plans are much greater than those allowed in determinations, and evidence since we set our determinations shows that companies continue to be willing to invest. On the second, the CMA has not placed sufficient weight on the power of the ODI incentives to promote investment and has not taken adequate account of the evolution of the regulatory approach – including the lower allowed return expected at PR19 which was signaled well in advance of PR19. We discuss these issues below.

1) Promotion of cost beneficial schemes

- 2.40 The CMA asserts that a cost of capital that is set too low could lead companies not to promote cost beneficial schemes in future business plans. The CMA has not advanced any quantifiable evidence in support of its assertion. Indeed, evidence from previous price determination periods and PR19 is that costs proposed in business plans are much greater than allowed in final determinations – reflecting appetite of companies to grow their regulatory capital value (RCV).
- 2.41 Our regulatory approach and the regulatory regime remains supportive of investment – but as customers fund the cost of investment there is an expectation that investment is efficient and there is a clear and evidenced need for that investment, for example, to meet quality obligations or with well evidenced cost benefit analysis.
- 2.42 We have previously provided evidence of private equity transaction premia in the water sector as part of the reference process.¹⁹ Equity stakes in companies have been sold at significant premiums to the regulatory capital value over most of the period since privatisation. This means that an additional pound invested in the RCV is worth £1.20 to £1.30 when the company is sold. In effect, this provides strong incentive to propose additional investment at each price review – and this is borne out by the excess investment proposed in business plans over a number of price reviews. We are somewhat puzzled that the CMA appears to be unaware of the strong historical and current commercial motivation of companies and investors in the sector to seek RCV growth as an attractive investment opportunity.
- 2.43 The working papers reference Thames Tideway as an example of a scheme that investors might be unwilling to fund if the allowed return were set too low. But the Thames Tideway is being delivered following a competitive market testing exercise that included competition for financing, there is no clear linkage to the determination of the PR19 allowed return or the potential extent of aiming up in a determination. Similarly the direct procurement for customer schemes will be subject to market testing exercises to determine the required return.
- 2.44 As set out in previous submissions, there is strong evidence that the PR19 allowed return is sufficient to encourage companies to invest. Our submission in

¹⁹ Ofwat, [Reference of the PR19 Final Determinations: Risk and Return – response to CMA provisional findings](#), October 2020, p. 31, Figure 3.1.

November 2020²⁰ referenced that in July we, together with Defra and other regulators, invited companies to accelerate AMP 7 investment, bringing forward AMP8 investment or specific new innovative ideas, which would benefit current or future customers. We gave evidence that companies had proposed more than £2 billion of additional expenditure in 2020-25. In particular South Staffs,²¹ South West,²² Severn Trent Water,²³ and United Utilities²⁴ reference the potential for material amounts of funding to be made available to invest in the Green Recovery over the next five years. This is in addition to companies strongly supporting taking forward around £2 billion of contingent amber WINEP proposals included in the AMP7 settlement (which, as at January 2021 has all now been approved by the Environment Agency). We therefore do not consider that an increase on the PR19 allowed return is required to incentivise investment.

2.45 The CMA's working paper introduces 'wider societal benefits' as part of the argument for aiming up, and suggests these external benefits might be foregone without aiming up. The CMA also states 'Nor is it practical to measure the size of externalities. However, these externalities do not have to be large to justify a small difference in the WACC of, say, 0.1%'. However, such assumptions assume investment incentives are not already optimal, whereas, as set out above, there is substantial evidence that companies remain incentivised to invest at the allowed return set in our determinations. Further, there are lower cost options to avoid

²⁰ Ofwat, '[Reference of the PR19 final determinations: Introduction – response to provisional findings responses](#)', November 2020, p. 2, paragraph 1.8.

²¹ South Staffs, '[South Staffordshire Water PLC – Unaudited interim report and accounts](#)', September 2020, p. 6, 'We're also looking beyond the COVID-19 outbreak to explore ways for us to align with the principles of the UK Government's green recovery initiative. This means considering approaches that will help the water sector to achieve its net zero carbon emissions by 2030 and looking for sustainable ways to drive our business forward for the benefit of our customers, society and the environment over the long term'

²² Pennon, '[Half year results 2020-21](#)', November 2020, p. 20, 'We are passionate about the environment and pleased to support the Government's campaign to Build Back Better through their drive to promote a green recovery. We have been working closely with our regulators and water sector peers over the past few months and have identified the areas in which we believe we can bring forward some of our planned investment in order to benefit customers, the environment and the economy'

²³ Severn Trent Water, '[Half yearly financial report](#)', November 2020, p. 3 stated 'These improvements put us in a credible position to begin discussions with Ofwat to access material amounts of funding being made available to invest in the Green Recovery in the next five years. This has the potential to deliver sustainable improvements including reduced carbon water treatment, water abstraction, flooding resilience and river quality for our region. If approved, it would boost employment in the region both directly and indirectly as well as support our environmental ambitions for the long term.'

²⁴ United Utilities, '[Half year results](#)', November 2020, p. 21, 'We have accelerated our capital investment plans, with plans to spend more over the early years of AMP7 than our original business plan in order to secure improvements earlier in the period for customers and the environment, along with accompanying ODI rewards and contributing to the 'Green recovery' in a region heavily affected by the pandemic.'

perceived risk about impact on investment in future price review periods such as early signals of allowed return.

2.46 As set out in our response to the provisional findings, the impact of aiming up on investment is ambiguous, it is a very weak instrument for fine tuning investment levels compared to other planning and incentive mechanisms. And an overstated allowed return could have the effect of crowding out future investment, as the allowed return is used as an input to cost benefit analysis.

2.47 Finally, we understand that the CMA's concerns relate to investment over multiple future reviews. However, there are multiple ways in which a problem of this sort might be identified from our monitoring of company performance. There are also several ways in which this may be addressed. For example, as we did for PR19, it remains possible for us to provide an early signal of the expected allowed return for PR24. Such an approach is beneficial compared to aiming up the allowed return in 2020-25 – an approach that introduces irreversible cost to customers.

2) Risks to asset health

2.48 We do not understand the CMA's contention that 'aiming up' the allowed return at PR19 would encourage companies to invest more to address asset health. The CMA's logic²⁵ is that where the cost of capital is low, there will be a preference to withdraw capital rather than increase the level of invested capital over time, through a high dividend pay-out policy.

2.49 However, there is nothing to link higher returns and spending on maintenance of assets. The CMA's logic fails to recognise (i) a higher allowed return would allow companies to finance higher dividends rather than invest and this perpetuates an expectation that companies will continue to pay high dividends, (ii) that asset health metrics and ODIs provide early warning signals and incentives for companies to invest, companies are subject to ODI underperformance adjustments and totex reconciliations that include out and under performance adjustments to reflect actual performance and (iii) that if the CMA's logic holds true, investors would need to have comfort that the uplift to the allowed return would persist in all future regulatory periods; an issue that is outside the scope of the current determination. We submit that if the CMA is concerned about asset maintenance, then this should be funded directly through its cost allowances.

²⁵ As expressed in CMA, '[Choosing a point estimate for the Cost of Capital –Working Paper](#)', January 2021, p. 16, paragraph 48.

- 2.50 Furthermore risk to asset health on investment returns is a diversifiable risk. Therefore the application of an aiming up adjustment to the allowed cost of equity for perceived investment risk is inconsistent with the standard application of CAPM.
- 2.51 In the rest of this section, we provide evidence on the use of ODIs and other measures to promote, monitor and assess asset health. We submit that if the CMA has a concern about investment in asset health it should address this risk by a more direct method. Evidence submitted by PwC as part of the dispute process shows that higher returns has not lead to more money being invested in companies, rather it is more likely to lead to increased dividend payments.²⁶
- 2.52 Companies have duties to maintain, improve and extend their assets. Since privatisation the sector has had key metrics to help understand how the assets of companies perform. PCs in the 2020–25 period essentially include metrics with the same coverage as those in place at 2015. We have expanded and refined these metrics over time and in collaboration with companies and stakeholders, such as the Environment Agency, to help identify problems with asset health. We set out more details on the evolution of these metrics in Annex A.
- 2.53 PCs sit within a wider set of reporting in annual reports and directly to other regulators. For instance, the Drinking Water Inspectorate publishes a wealth of information on a quarterly and annual basis including the enforcement action that it takes. The outcomes framework also sits in the broader context of the company's statutory and licence requirements for service delivery. Independently of the outcomes framework, each company also has to ensure that it complies with its legal obligations. We have a range of tools if we identify issues, including enforcement action.
- 2.54 Companies have to manage risks across their businesses and have clear incentives to maintain their assets through the ODI framework. If a company allows assets to deteriorate it increases the risk of receiving underperformance payments. If the deterioration continues at some point we, or another regulator, can take, and have taken, action where companies have not complied with their statutory obligations to maintain, and where appropriate to improve, assets. Therefore the company does not avoid investment indefinitely and it has to make up this investment in order to maintain asset performance and associated

²⁶ PwC, '[Review of the relationship between financing allowances and water company performance](#)', 2020.

incentive payments. Because we use industry cost benchmarks to set allowances, any catch-up investment is not paid by customers.

- 2.55 For instance, Thames Water's poor leakage performance, largely due to how Thames Water designed and implemented its contractual arrangements for reducing leakage, resulted in enforcement action that led to the provision of legally binding commitments by Thames Water and a financial penalty in 2018. We also imposed a financial penalty in 2019 on Southern Water for failings related to the management, operation and performance of its wastewater treatment works. For the 2010–15 period we removed £179.4m from the RCV of companies due to companies failing to properly manage and maintain their asset systems.²⁷
- 2.56 In summary, should a company actively choose to reduce maintenance spend to allow a withdrawal of capital, the underspend would be reflected in the totex reconciliation (which is subject to cost sharing with customers), and will lead to revenue and RCV adjustments that are applied at PR24. To the extent reduced maintenance spend also impacts asset health, this may impact on performance against its performance commitments, potentially leading to underperformance adjustments. It could potentially also lead to enforcement action. We submit that the CMA has failed to adequately weigh the incentives brought about by these mechanisms against its view that an aimed up allowed return is necessary to incentivise investment.

3) The CMA has placed no weight on the power of ODI incentives to promote investment

- 2.57 The introduction of ODI incentives at PR14 and the subsequent expansion of these incentives at PR19, to provide increased scope for outperformance rewards, is a material change in regulatory approach. The PR19 approach provides well managed companies with increased discretion to target investment on issues that matter to the long term interests of customers. As referenced above, ODIs that are linked to metrics that measure the underlying health of the asset base provide incentives on companies to adequately maintain and improve their asset base.
- 2.58 The working paper has not taken account of the evidence we referenced from interim financial statements (reporting the financial performance of companies in the first six months of the PR19 price control) that well performing companies are

²⁷ Ofwat, '[Updated 2010–2015 reconciliation](#)', December 2017, p. 21.

seeking opportunities to increase totex investment to seek ODI outperformance.²⁸ Such comments demonstrate the power of ODI incentives to focus companies on performance levels and seek outperformance rewards. The CMA appears to recognise this power in its analysis of asymmetry of ODI rates (see paragraph 2.70).

- 2.59 Asymmetry of information means the regulator may not be able to perfectly calibrate the ODI package, for example to incentivise appropriate maintenance spend, but companies have a significant role in proposing the calibration of ODI incentive rates. Furthermore, companies, including the disputing companies, are able to seek opportunities to invest to earn ODI outperformance rewards. Asymmetry of information means disputing companies are unlikely to have fully disclosed the extent of the opportunities to outperform as part of the dispute process, and the companies will in any case seek further outperformance opportunities through the remainder of the control period. Such asymmetry is reason to apply caution in any ‘aiming up’ decision.
- 2.60 Finally, the CMA places weight on a 2014 decision paper from the New Zealand Commerce Commission, a regulatory body that in the past had adopted an explicit policy of ‘aiming up’ to incentivise investment. However in its most recent decision in October 2020, the Commerce Commission concluded that the case to justify a WACC uplift to meet growth in demand, investment in innovation and investment in reliability and quality was weak,²⁹ and that choosing a midpoint gave best effect to its duties. The Commerce Commission’s expert panel advised that other tools to address under-investment concerns, that go to the proximate cause, are preferable to an adjustment to the allowed return which is an expensive way to address concerns for end-users.³⁰ These conclusions are wholly consistent with the operation of an incentive based regime underpinned by the more recent adoption of ODIs as exists in the water sector.

4) The CMA has set out no reason for believing that the costs to customers from a WACC that is too low are greater than the costs to consumers from a WACC that is too high

²⁸ Ofwat, ‘Reference of the PR19 final determinations: Risk and return – Ofwat December response’, December 2020, p. 11, paragraph 2.4.

²⁹ Commerce Commission, ‘[Fibre input methodologies: Main final decisions](#)’, p. 484, paragraphs 6.728–6.730.

³⁰ Commerce Commission, ‘[Fibre input methodologies: Main final decisions](#)’, pp. 510–512, paragraphs 6.835–6.842.

- 2.61 To defend a policy of ‘aiming up’, it is not enough simply to argue that underestimating the WACC might create costs for customers. Over-estimating the WACC definitely creates costs for customers: the prices they pay are higher. To defend aiming up, a minimum requirement is to demonstrate that the costs from under-estimating the WACC by a given amount exceed those of over-estimating the WACC by that same amount.
- 2.62 The CMA’s working paper does not do this. It sets out reasons why, in its view, under-estimating the WACC creates potential costs. But it does not set out any systematic reason for believing those costs associated with under-estimating the WACC to be greater than the costs of over-estimation.

Asymmetry

- 2.63 In its working paper, the CMA discusses that the allowed return on capital should be set in the round, which includes a view on the overall balance of the settlement. The CMA’s concerns are largely that (i) it considers there remains structural asymmetry in the incentive package, including for ODIs, that should be reflected in the choice of point estimate of the cost of capital and (ii) there is potential asymmetry in the definition of the range for the cost of capital, in which particular concerns are referenced about the size of the reduction to the estimates of the risk free rate and total market return in its provisional findings.
- 2.64 The CMA has not taken account of our representations on asymmetry in ODIs in or on the overall package in its working paper. We consider the CMA’s concerns about the overall adjustment to the allowed return, compared to PR14, are overplayed – both from the perspective of customers and the reasonable expectation the marginal investor.

Asymmetry – ODIs

- 2.65 The CMA retains the view put forward in its provisional findings that it is appropriate to aim up on the cost of capital to reflect asymmetry of risk in the determination. We are concerned that the CMA has not set out its position clearly on this issue or fully engaged with the arguments we put to it. Specifically:
- It says its concerns go beyond ODIs but it does not engage with any of the discussion on the potential for such wider asymmetry.
 - It says that it expects there to be negative ODI payments reflecting the asymmetry in ODI rates. But at the same time, it accepts that in practice the

companies can take action to mitigate downside penalties (and, as our submission pointed out, are funded to do so).

- It does not properly consider the empirical evidence from the PR19 and PR14 period pointing to net positive ODI payments.
- It still does not properly explain its approach to estimating ODI risk or attempt to produce more accurate calculations.
- It does not pay sufficient consideration to the alternative response to any concerns about asymmetry in ODI rates of simply adjusting ODI rates directly.

2.66 We consider these points in turn below.

a) The CMA does not clearly outline its concerns

2.67 The CMA says “In the PFs, we said that the ODI package was asymmetric, as it included significant asymmetric (largely penalty-only) incentives. We assumed that the rest of the package was broadly symmetric, although in practice this is a balanced judgement, since there are other aspects of asymmetry, such as the cost sharing incentives”.³¹ It later clarifies that it does now have wider concerns, saying “We recommend that the overall degree of structural asymmetry in the ODIs, and otherwise in the determination, should be reflected in the choice of point estimate of the cost of capital.”³²

2.68 But there is no consideration of other areas of structural asymmetry in the document. In particular, the CMA has not engaged in the working paper with evidence we have shared through the dispute process that takes account of financing and operational (including cost and service) out and underperformance over time. This evidence shows a tendency for companies to outperform cost allowances on average and that financial outperformance tends to be greater than operational outperformance on average.³³ Therefore it is not clear what basis it has concluded there is wider structural asymmetry.

2.69 It is also simply not true to say that our incentives were largely penalty-only. Of the common PCs, only the two compliance PCs were penalty-only for all companies. Water supply interruptions, internal sewer flooding, pollution incidents, leakage, PCC and C-Mex and D-Mex all included rewards for

³¹ CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, p. 24, paragraph 78.

³² CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, p. 25, paragraph 82.

³³ For example, Ofwat, ‘[Reference of the PR19 Final Determinations: Risk and Return – response to CMA provisional findings](#)’, October 2020, pp. 37–38, paragraphs 3.44–3.52.

outperformance. Asset health PCs, including mains repairs and sewer collapses, had outperformance for some companies as well. This is shown by the CMA itself in Table 7-1 of its provisional findings.

b) The CMA is contradictory in its expectation of outturn ODI performance

- 2.70 In our response to the CMA’s provisional findings, we explained how companies can mitigate the skew in ODI rates by incurring additional costs (which they are funded for) when these are lower than the penalty rates or by reprioritising resource from areas of outperformance. We also explained that, since many companies aim to outperform in practice, this should diminish the prospect of incurring penalties.³⁴
- 2.71 The CMA has not engaged with these points in detail, and oversimplifies them, but seems to agree with the thrust of them. Specifically, it says “Ofwat said that in practice, supported by past performance, Disputing Companies would overachieve, and in particular that they would focus effort on areas where they could achieve rewards and that this would offset the penalties associated with underperformance. Incentives are part of normal regulation and operational outperformance is a desirable outcome. If companies are able to outperform, this delivers benefits to customers both from the actual improvements and from Ofwat being able to use the evidence in its comparisons in future periods.”³⁵
- 2.72 On the other hand, however, the CMA says “we conclude that expected returns on ODIs should reflect the balance of rewards and penalties. Accordingly, we would expect negative ODI-related returns on average.”³⁶ The CMA thus seems to dismiss the arguments about how management actions can improve ODI performance, on the basis that such behaviour is desirable.
- 2.73 This seems inconsistent. We agree with the CMA that it is a good thing for companies to respond to incentives. But by not taking account of this, the CMA is overstating the risk faced by companies, i.e. customers are paying for risk that does not exist. Indeed, since companies are funded to respond to negative events, by aiming up on the WACC to account for this, customers will pay twice. The

³⁴ Ofwat, [Reference of the PR19 Final Determinations: Risk and Return – response to CMA provisional findings](#), October 2020, A2.19 – A2.30

³⁵ CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, p. 24, paragraph 79.

³⁶ CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, p. 25, paragraph 82.

c) The CMA has not properly engaged with the empirical evidence

- 2.74 We put forward evidence from interim financial statements for 2020–21. Despite being only part way through the first year of the current price control period, this shows a number of companies have signalled they are on track to deliver against the final determinations, and in some cases are seeking opportunities to invest to achieve ODI outperformance³⁷ The CMA has not considered or discussed this evidence.
- 2.75 We also put forward evidence on the positive skew in operational performance from the PR14 period (2015–20). The CMA dismiss this saying that “The approach to PCs in PR19 is very different to previous periods, and includes extensive analysis from customers, overlaid by comparisons across the companies. The analysis of the PCs suggests that they have been deliberately set at stretching levels to produce benefits for consumers. We are not persuaded it is consistent for Ofwat to both set new and increasingly stretching targets for PCs in PR19 and also to assume that companies will outperform against those targets.”³⁸
- 2.76 To be clear, our PCLs are set at the P50 level –i.e. if all companies efficiently spend their totex allowance, the median performance is expected to be the PCL. However, there is a positive skew in operational performance, i.e. the extent of outperformance above this median level is greater than the extent of underperformance. This means the expected (or mean) ODI payments are positive. In addition, companies may invest additional totex to further outperform, as shown by the evidence from the 2020–21 interim financial statements.³⁹
- 2.77 The PR14 data clearly showed this positive skew in performance. We agree that PR19 is more stretching than PR14, particularly in relation to the three “upper quartile” PCs and leakage. But this does not affect the shape of the distribution of operational performance i.e. regardless of where the PCL is set, the mean of the distribution is still above the median. Moreover, this positive skew is likely to be re-enforced at PR19 given the greater upside incentives, including from the customer satisfaction metric, C-Mex, which is now symmetric.

³⁷ Ofwat, ‘Reference of the PR19 final determinations: Risk & Return – Ofwat December response’, December 2020, pp. 11–12, paragraphs 2.3–2.4.

³⁸ CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, p. 24, paragraph 81 b.

³⁹ Ofwat, ‘Reference of the PR19 final determinations: Risk & Return – Ofwat December response’, December 2020, pp. 11–12, paragraph 2.4.

2.78 We also used the PR14 data to estimate the impact of the positive skew in operational performance on expected ODI payments and showed that it more than outweighed the negative skew in rates. This finding was also true when we adjusted the data to account for the fact that we were not challenging enough on some PCs in PR14.

d) The CMA does not properly try to estimate risk

2.79 In the provisional findings, the CMA estimated the asymmetry resulting from ODIs was 0.1%-0.2% RORE. In response, we explained that we found the CMA's analysis to be unclear, based on incorrect assumptions, erroneous calculations and flawed data.⁴⁰

2.80 The CMA has clarified that its analysis was based on an indicative assumption, where it gave a 10% weighting to a 10% downside scenario for all asymmetric incentives. We are still concerned that this approach is erroneous as it does not correspond to expected ODI performance on a probabilistic basis, and overstates the downside.

2.81 The CMA acknowledges some of the weaknesses we pointed out, such as the potential for an asymmetric distribution of outperformance and underperformance on particular PCs and a more critical scrutiny of the calculation of P10. It does not clarify, or correct for, its treatment of collars and deadbands. But it says its estimate was “a broad estimate of scale of the structural asymmetry resulting from ODIs, to be included in an ‘in-the-round’ assessment of the cost of capital”.⁴¹ It says it “has no basis on which to form a view of more accurate probability distributions which could be used to perform a more granular assessment. Our view is that a more detailed analysis will not in practice better inform the overall assessment.”⁴²

2.82 We disagree. It is possible to construct a more accurate view, using, as we have done, actual evidence from the PR14 period, correcting for our different approach to setting PCs in PR19. Moreover, this is important to the overall assessment, as the CMA's estimation is manifestly inconsistent with the evidence.

⁴⁰ Ofwat, [Reference of the PR19 Final Determinations: Risk and Return – response to CMA provisional findings](#), October 2020, A2.4 – A2.18

⁴¹ CMA, [‘Choosing a point estimate for the Cost of Capital –Working Paper’](#), January 2021, p. 26, paragraph 84.

⁴² CMA, [‘Choosing a point estimate for the Cost of Capital –Working Paper’](#), January 2021, p. 26, paragraph 84.

e) The CMA does not give sufficient consideration to the alternative of adjusting ODIs

- 2.83 We submitted that if the CMA continues to believe it cannot reliably estimate expected ODI payments, it would be better to directly adjust the ODIs to remove the skew. Making adjustments to ODIs has the benefit of directly aligning company and customer interests (i.e. the increased customer cost is directly linked to service performance), rather than uplifting allowed returns with no link to service incentives.⁴³
- 2.84 However, the CMA says that having consulted on retaining our ODIs, a change to the structure of ODIs would be very difficult to implement effectively.
- 2.85 We do not agree with this. We do not see why this is difficult to consult on or implement a relatively small adjustments to a small number of ODIs. Given the issues the CMA has with estimating expected ODIs which are outlined above, it certainly seems easier to implement effectively than adjusting the WACC. It also seems inconsistent with the CMA's view that a company-specific imbalance would be better addressed in the ODI package than a company-specific cost of capital adjustment.

Asymmetry – allowed return

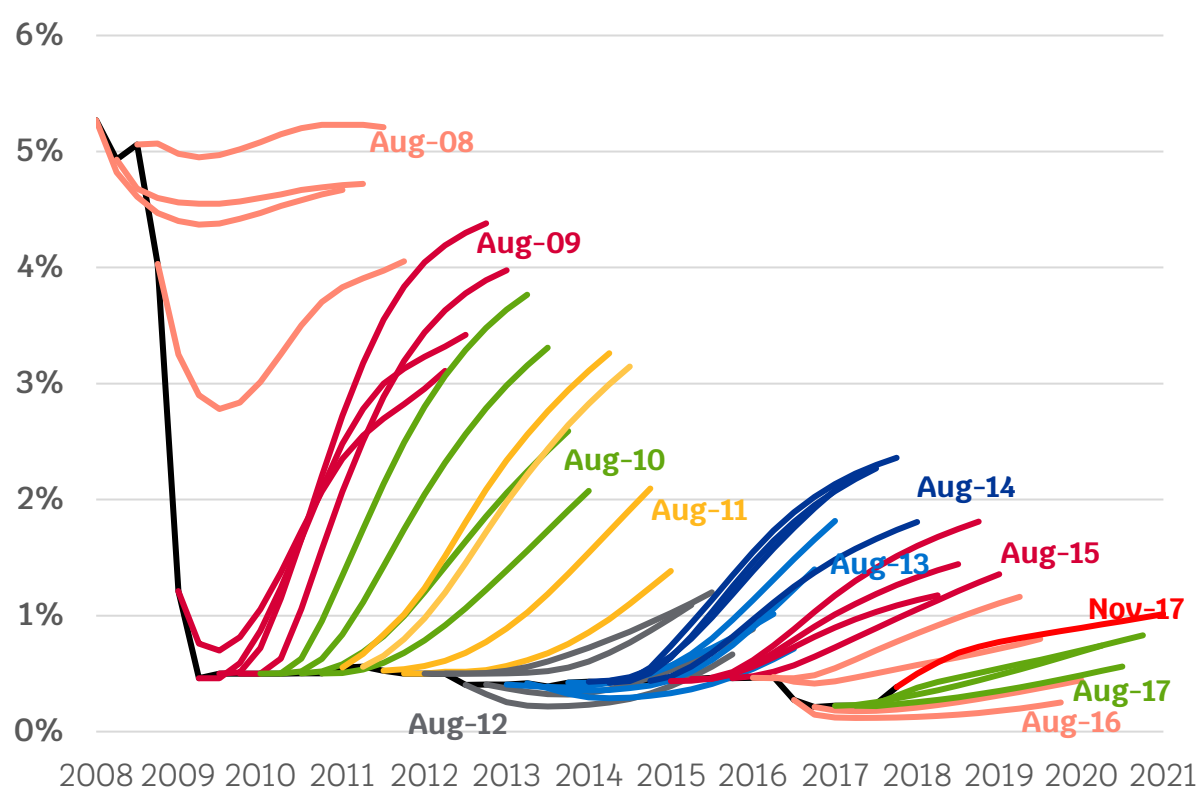
- 2.86 The working paper suggests the CMA has 'some concern about the risks associated with the size of reduction in the estimates of the risk free rate and total market return since AMP6'.⁴⁴ These concerns were not set out as reasons for 'aiming up' the allowed return in the provisional findings, and we consider the CMA's parameter ranges for the cost of capital were already upwardly biased.
- 2.87 Regarding the risk free rate, first, it is relevant to consider the role of equity in financing a sector. Unlike debt, equity returns are not fixed, they may vary over time. To the extent that the risk free rate is low, and is expected to remain low for the period of the PR19 price control and by so doing impact on expected equity returns, this should flow through to the allowed equity return that is funded by customers.

⁴³ Ofwat, [Reference of the PR19 Final Determinations: Risk and Return – response to CMA provisional findings](#), October 2020, paragraphs 3.61– 3.62

⁴⁴ CMA, '[Choosing a point estimate for the Cost of Capital –Working Paper](#)', January 2021, p. 33, paragraph 112.

2.88 Second, expectations around the level and path of interest rates have changed significantly between the PR14 and PR19 price review periods. Figure 2.1. set out that market expectations of a rapid rebound in rates after 2009 was initially persistent, but the expected path of rates flattened considerably after 2014. The long span of both low rates and flattening rate rise expectations in the run up to final determinations has increased the confidence in using a point estimate close to spot figures, contrary to the approach used at PR14.

Figure 2.1: Market-implied expectations of the Bank of England base rate



Source: Bank of England, Conditioning Path for Market Interest Rates

2.89 Third, the CMA's working paper has failed to take account of evidence submitted by Ofgem and Ofwat that the use of the SONIA swap rate is a relevant cross check to the risk-free rate calculated using RPI-linked gilts.

2.90 Fourth, the proposal to set the risk free rate to reflect that observed by market data was signalled early and well trailed from prior to development of the PR19 methodology. An important learning from PR09 and PR14 was that we are not better placed than the market to make predictions about the future path of the risk free rate. The CMA is correct to note the NAO did not raise concerns directly

about the level of the risk free rate set at PR09. However, it would be an error for the CMA to claim its provisional findings on the risk free rate would not provide companies with significant opportunities to earn windfall gains. Ofgem has, for example, introduced indexation of the risk free rate in RIIO-2.

- 2.91 On total market return, evidence from the UKRN cost of capital academic study clearly sets out a view that regulators have set the total market return too high for too long and perpetuating such an approach is not beneficial to the regulatory regime over the long term.

Financeability

- 2.92 We agree with the CMA that the financeability assessment is a valuable cross check⁴⁵ – to test whether an efficient company, with the notional capital structure, will be able to access the finance it needs. We agree also that, given the need for asset intensive businesses to raise finance, the determination should allow notional companies to maintain a credit rating within the investment grade.
- 2.93 As a cross check for the allowed return in the final determinations for the non-disputing companies, we note that Moody's has recently returned the outlook for UK regulated water utilities to stable, reflecting certainty around allowed returns and costs allowances for 2020-25.⁴⁶ Moody's states the average rating for the UK water sector remains at Baa1, along with the weighted average rating of rated debt by operating companies.⁴⁷
- 2.94 In previous submissions we have set out our concerns that setting the allowed return to meet specified financial ratios risks costs to customers being unduly influenced by credit rating agencies, without full consideration of credit rating agency methodologies.⁴⁸ We remain concerned that evidence of the position of the credit rating agencies appears to be accepted uncritically, and that it is given too much weight. Taken to its logical extreme, the application of this policy would appear to require the regulator to set an increased allowed return, especially where there are high levels of RCV growth, if other parameters relevant to the financeability assessment are unchanged. Such an approach risks over-

⁴⁵ CMA, '[Choosing a point estimate for the Cost of Capital –Working Paper](#)', January 2021, p. 30, paragraph 97.

⁴⁶ Moody's Investors Service, 'Regulated Water Utilities – UK, 2021 outlook returns to stable as companies settle into a tough regulatory period', January 2021.

⁴⁷ Moody's Investors Service, 'Regulated Water Utilities – UK, 2021 outlook returns to stable as companies settle into a tough regulatory period', January 2021, p 22, Exhibit 28.

⁴⁸ Ofwat, '[Reference of the PR19 final determinations: Risk and return – response to common issues in companies' statements of case](#)', May 2020, pp.110-113, paragraphs 4.55-4.64.

remunerating companies, resulting in an overstated allowed return and the potential for inflated dividends.

- 2.95 The CMA approach leaves customers exposed to the views expressed by credit rating agencies; adopting such an approach introduces tensions and policy questions that are difficult to justify. For example, Moody's provides 'guidance' for certain financial ratios for UK regulated industries. The guidance provided for adjusted interest cover for water for Baa1 is 1.5x,⁴⁹ whereas for energy this is 1.4x.⁵⁰ But, as referenced by Ofgem in its recent RIIO-2 decision, observed unlevered equity betas are lower for water than energy – Table 2.1 reproduces analysis prepared by Ofgem for its RIIO-2 Final determinations.⁵¹
- 2.96 As the CMA's allowed return on debt is higher than that determined by Ofgem in RIIO-2, if the binding constraint on the allowed equity return were financial ratios for the financeability assessment to meet Moody's 'guidance', the allowed equity return in water would need to be higher than energy. However, as market wide parameters such as TMR and the risk free rate should be assumed to be broadly consistent across regulatory decisions, the binding constraint directly conflicts with the evidence from beta observations.
- 2.97 This tension suggests that the CMA's approach should lead to a need to revisit the notional structure in the CMA's determination (as there is no reason for other cost of equity parameters to be materially different between sectors), to reduce or remove the scope for any 'aiming up' (or to address financeability constraints by some other means); this may well include the need to reduce the level of notional gearing. We have previously set out how changes to the notional capital structure could increase financial headroom and reduce the magnitude of the financeability challenge.⁵²
- 2.98 In various places, the CMA's working paper does not fairly represent the merits of a cashflow profiling approach to financeability (and in places provides a misleading application of a policy that makes use of PAYG revenue advancement).
- 2.99 The CMA suggests for example, that aiming up the allowed return for financeability reasons "should result in lower bills in AMP7 than Ofwat's approach

⁴⁹ Moody's Investors Service, 'Regulated Water Utilities – UK, Regulator's proposals undermine the stability and predictability of the regime', May 2018, p. 5, Exhibit 5.

⁵⁰ Moody's Investors Service, 'UK energy networks webinar', September 2020, slide 16.

⁵¹ Ofgem, '[Decision – RIIO-2 Final determinations – Finance annex](#)', December 2020, p 42, paragraph 3.70.

⁵² Ofwat, '[Reference of the PR19 final determinations: Risk and return – responses to common issues in companies' statements of case](#)', May 2020, pp 134–135, paragraph 4.125–4.128.

for those companies which had large PAYG adjustments, whilst maintaining ratios which are consistent ... with the investment-grade ratings”. While the CMA’s statement is true for AMP7 in isolation, the statement is incorrect over the long term, as it fails to recognise that, unlike cashflow profiling, its proposed approach is not NPV neutral to customers over the long term as future generations of customers will incur higher charges (as the cashflows that are not advanced will be logged to RCV). Assessed over the lifetime of the proposal (consistent with the advice of the Green Book),⁵³ the counterfactual that advances PAYG revenue is the option that leads to lowest cost to customers.

2.100 We have previously set out that the unique conditions of PR19 exacerbate a financeability constraint. With (i) the percentage of historic expensive embedded debt reducing as it is replaced by cheaper debt alongside new investment also funded at cheaper rates, and (ii) further transition to CPIH (or the alignment of RPI with CPIH), the financeability constraint is expected to ease in future price controls.

2.101 We note the CMA’s comment that PAYG adjustments could be fully reversed in future periods, but that this cannot be assumed with confidence.⁵⁴ While we understand the CMA’s concern, and potentially could consider such issues in development of future price review methodology, the CMA can have confidence that aiming up the allowed return does increase cost to customers, with no mechanism for costs to be reversed in future.

2.102 There is no evidence that the CMA has considered the full range of options we have cited to address financeability either in the provisional findings or the working paper. In previous submissions we have set out matters that are relevant to the financeability assessment which include: the assumed level of gearing, the proportion of index linked debt, and the dividend assumption. This is because the capital structure of the notional company, including the level of gearing and the proportion of index linked debt, and the inflationary index used to translate nominal into real returns, all influence the level of cashflows – and so cashflow headroom in financial ratios. If the CMA retains its position that the financeability assessment is relevant to the derivation of the allowed return in its final determination, we submit that the CMA should consider these issues first before calibrating any aiming up of the allowed return for financeability purposes.

⁵³ HM Treasury, ‘[The Green Book](#)’, p. 9, paragraph 2.18.

⁵⁴ CMA, ‘[Choosing a point estimate for the Cost of Capital –Working Paper](#)’, January 2021, pp. 10–11, paragraph 28.

2.103 Finally, as the CMA has not set out the full range of assumptions made for the purposes of the CMA's financeability assessment in its working paper, we are not able to comment on the assertions made that the CMA's determination will be financeable. In particular, we are unable to comment on the CMA's assertion that (for a given set of cost allowances and levels of financial ratios) an aimed up allowed return results in lower cost to customers in AMP7 than an approach that advances cashflows from future customers.⁵⁵ We request the CMA to illustrate why its assertion holds.

Statutory duties

2.104 The CMA refers to three aspects of the statutory duties as considerations when setting a point estimate for the WACC – financing, resilience and the consumer objective. We appreciate that this is in summary and is not intended as an exhaustive articulation of the application of the statutory duties. However, as the CMA knows from our previous submissions, and the CMA appeared to have agreed in its provisional findings, we consider that the duties must all be satisfied in the round and that there is no trade-off between them. Ofwat therefore does not agree with all of the ways in which the CMA has referred to and expressed the effect of the duties in the working papers. However, we do not repeat submissions we have already made on these matters.

Calculation of the proposed uplift for 'aiming up'

2.105 In its provisional findings, the CMA's claimed 'aiming up' uplift was calculated at 50bps, based on the 75th percentile of its range of cost of capital estimates. In its working paper, the CMA proposes to halve the proposed uplift to 25bps. It states this to equate to the 82nd percentile on a probability-weighted basis.

2.106 We do not consider that the rationale for the choice of 25bps (or 82nd percentile), as opposed to some other level of uplift, has been adequately set out so that we are able to understand it and respond to it as fully as we would wish.

2.107 It is not clear why the uplift should be greater than that applied by Ofgem for its RIIO-2 determinations (15bps) and the CMA has not set out how its proposal compares to the 67th percentile for the overall WACC (which it references to the 2014 decision by the Commerce Commission in New Zealand).

⁵⁵ CMA, '[Choosing a point estimate for the Cost of Capital –Working Paper](#)', January 2021, pp. 33–34, paragraph 114.

2.108 We understand the CMA's percentile calculation is an improvement on the provisional findings, though it remains based on parameter estimates (and distributions) that are impacted by upward bias, and it is based on a mixture of uniform and normal distributions for different cost of equity parameters without justification. Our calculations based on the CMA's ranges and approach would suggest an uplift of 13 basis points at the 67th percentile (which could be rounded to 15 basis points).

Overall level of aiming up

2.109 The CMA disagrees with our calculation of the cost of 'aiming up' the WACC. At a sector level, the CMA calculate this as c.£1.2 billion rather than the £1.9 billion stated in our representations.

2.110 Our calculation took account all elements of aiming up – including aiming up across all cost of capital parameter estimates (both midpoint for the cost of equity and the proposed cost of debt), which equates to c.50bps on the WACC on our PR19 final determinations (the CMA's allowed return of 3.50% compared to our final determination 2.96%, CPIH).

2.111 This modelling suggested that return on CPIH linked RCV would increase by 17% and return on RPI linked RCV would increase by 26%. Taken together the modelling indicates that return on RCV would increase by £1.9bn in real terms for the sector during the 2020-2025 period. The increase in a nominal price base is £2.1bn. Our modelling excluded the impact of increased revenue to fund additional tax paid by companies, and so is an underestimate.

2.112 The level of aiming up implied by the working paper remains significant. The difference implied by our allowed cost of equity and the CMA's approach (before updates to its parameter estimates for more recent data) is c.65bps and c.£1 billion (before tax) as referenced in section 1; before taking account of the CMA's proposed higher cost of embedded debt.

3. Approach to cost of debt

- 3.1 We recognise and appreciate the substantial analysis which the CMA has carried out to consider the representations made by ourselves and disputing companies on the appropriate allowance for the cost of debt.
- 3.2 The approach used by the CMA in its final determinations to justify its allowance sets a reference point that may also be relevant to future determinations. It is therefore appropriate that the CMA has applied a perspective considering all sector companies, and that it has broadened the scope of evidence under consideration in its working paper.
- 3.3 We welcome the use of actual cost benchmarks to set the cost of embedded debt – this supports regulatory consistency, represents regulatory good practice in properly taking into account all relevant data, and also restores a core principle of incentive regulation that customers should receive some benefit over time from the incentives faced by companies to issue debt efficiently. While we recognise that disputing companies have raised various measurement concerns around using actual data, these are either insignificant or easily dealt with through making adjustments.
- 3.4 The working paper's proposals are an undisputable movement towards a reasonable allowance for the cost of debt. We nonetheless submit that the CMA should go further to properly address the implications of the evidence in our submissions.
- 3.5 Firstly, having carefully considered the CMA's arguments, we continue to consider that the evidence supports a downwards adjustment to benchmarks using the iBoxx A/BBB indices. While acknowledging the working paper's disagreement with applying an 'outperformance wedge', we note that it harnesses the concept of a 'matching adjustment' to the iBoxx A/BBB to capture the broader range of debt issued by water companies, which is used in part to justify the move to a 15 year collapsing trailing average to inform its point estimate for embedded debt. If the CMA is minded to discount the substantial body of evidence showing that recent bond instruments are issued at a material discount to the iBoxx A/BBB when controlling for tenor and credit rating, we submit that it should at least apply a similar 'matching adjustment' to the allowed cost of new debt.

- 3.6 We also consider that the working paper has in places assigned unreasonable weight to disputing company representations that seek to undermine the analysis we have supplied. This is evident in the working paper’s rejection of our notional debt-weighted index, and also in a proposed 5-10 basis point upwards adjustments to APR-led benchmarks to reflect ‘data issues’ raised by companies. We have previously highlighted to the CMA the flaws in companies’ alternative calculations, including: mismatch of data sources, internally incoherent assumptions and selective use of data. We submit that the CMA should thoroughly weigh the quality of the evidence supplied by all parties in making its final determinations.
- 3.7 Finally, we consider that the working paper’s cross-check range for embedded debt benchmarks using actual data of 4.45% to 4.82% represents an unduly cautious assessment of its own analysis. Firstly, the lower-bound does not reflect the CMA’s own calculations using a WaSC range of 4.31-4.41% based on the average and median of the ‘floating-adjusted’ APR data. Secondly, the upper-bound based on an all-company benchmark seems inconsistent with the proposal in the CMA’s provisional findings to allow a small company premium on embedded debt, and applies an unnecessary uplift of 10bps. Our previously-submitted analysis suggests a plausible range of around 3.4% to 4.5%. Thus, while we welcome the CMA’s point estimate of 4.52% as a clear movement towards a more reasonable allowance, we also consider that materially lower figures are supported by the available evidence.

Proposals set out in the CMA’s working paper

- 3.8 The CMA’s working paper on the cost of debt contains the following key features, which we discuss in the following sections:⁵⁶

- 1. Endorsement of an equally-weighted iBoxx A/BBB index**
- 2. A 15 year collapsing trailing average**
- 3. No ‘outperformance wedge’**
- 4. Acknowledgment of a role for cross-checks using actual data**
- 5. A revised assumption for share for new debt**

1) Endorsement of an equally-weighted iBoxx A/BBB index

- 3.9 The working paper continues to support the use of an average of the A and BBB-rated iBoxx GBP non-financials 10+ indices. It rejects the use of the higher-rated

⁵⁶ CMA, ‘[Cost of debt – Working paper](#)’, January 2021, pp. 31-34, paragraphs 103-114.

‘A’ index as it found that, while previous determinations may have targeted credit metrics consistent with a higher credit rating, this higher rating was not an explicit target. It also rejects the use of a notional debt-weighted trailing average, citing disagreement between the disputing companies and Ofwat around how to calculate the trailing average.

Our response: Credit rating

3.10 We consider that the evidence supporting a higher historic credit rating for the notional company over the period 2000 to 2015 remains strong. For instance, at PR09 (2010–15) we stated: ‘We have targeted financial ratios that are consistent with an A-/A3 credit rating.’⁵⁷ This rating corresponds to the ‘A’-rated iBoxx. Our previously-featured Table 3.1 shows that historically targeted credit metrics prior to PR09 are at least as supportive of this rating, if not more so.

Table 3.1: Notional company (water and sewerage companies) credit metrics and Moody’s (pre-2018)⁵⁸ guidance for an A3 rating

	PR99 (2000–05)	PR04 (2005–10)	PR09 (2010–15)	Moody’s guidance
Interest Cover Ratio	>3x	Around 3x	Around 3x	n/a
Adjusted Interest Cover Ratio	n/a	Around 1.6x	Around 1.6x	≥1.6x
Gearing	Min 40%	Below 65%	Below 65%	<65%

Source: Ofwat analysis of Moodys guidance and previous final determinations

3.11 This finding is further corroborated by the fact that 57 out of 68 bonds (84%) in the sample we used to update our estimate of the outperformance wedge are rated A3 or higher. This rises to 245 out 285 bonds (86%) with a rating at issue from the wider KPMG ‘outperformance wedge’ dataset.⁵⁹ This demonstrates that customers have paid for higher credit quality through their bills in previous reviews, and why it is right to reflect this in the assumption for the notional company.

Our response: Notional debt-weighted trailing average

⁵⁷ Ofwat, ‘[Future water and sewerage charges 2010–15: Final determinations](#)’, 2009, p. 8.

⁵⁸ Moody’s, ‘Regulator’s proposals undermine the stability and predictability of the regime’, May 2018, p. 5, Exhibit 5.

⁵⁹ This is tab ‘(KPMG original) water_bonds_cln’ in the R&R appendix databook annex 2 submitted with our response to the CMA’s provisional findings.

3.12 The working paper states that ‘the merits of this approach are called into question by the significant disagreement about how to perform this calculation’. While we recognise that KPMG arrive at a figure (4.95%) that is higher than we calculated for our response to the provisional findings (4.62%), this estimate does not undermine our analysis. As set out in our December response, this is because the assumptions driving KPMG’s higher figure are either conceptually incorrect or imply a path of notional debt different to that used historically to set prices:

- **Notional refinancing:** KPMG’s assumption that 1/20 of all debt is refinanced each year is inconsistent with the CMA’s Provisional Findings assumption of debt issued at 20 year tenors over 2000–2020. Specifically, this does not make sense for the period up to 2010 because the sector was privatised in 1989 with no pre-existing debt. This means that no 20 year tenor notional debt would have fallen due in the 1989–2010 period.
- **Reflecting index-linked accretion:** this alteration double counts inflation compensation, as it applies the nominal iBoxx rate to the post-accretion index-linked principal.
- **Smoothing notional debt profiles:** KPMG propose a smoothed profile of notional gearing from 2000 onwards. This results in average gearing in each control period being higher than the notional gearing assumption actually used to set prices historically, and so should be rejected.

3.13 We submit that the CMA should feel confident in placing weight on our analysis as a reference point for its decision. Our notional debt-weighted trailing average is based on the profile of the sector’s notional debt used historically to set prices, and so represents an appropriate and internally coherent basis for providing weights to a trailing average of the iBoxx A/BBB. The figure the CMA calculate using this approach with a collapsing trailing average (4.41%) could therefore easily support a lower point estimate than its preferred 4.52%, especially noting that the former figure does not include the impact of floating-rate debt.

2) A 15 year collapsing trailing average:

3.14 The working paper proposes a 15 year collapsing trailing average of the iBoxx A/BBB as the preferred benchmark. This move from the 20 year trailing average used at provisional findings reflects the recognition of a broader financing approach by companies than that implied by the provisional findings benchmark.

Our response: Collapsing trailing average

3.15 We support this proposed change in the working paper and note company support exists in the form of Anglian Water’s response to the provisional findings.⁶⁰

Our response: 15 year trailing average

3.16 The working paper proposes to shorten the trailing average of the iBoxx A/BBB index from 20 years in the provisional findings to 15 years, citing in support for this approach.⁶¹

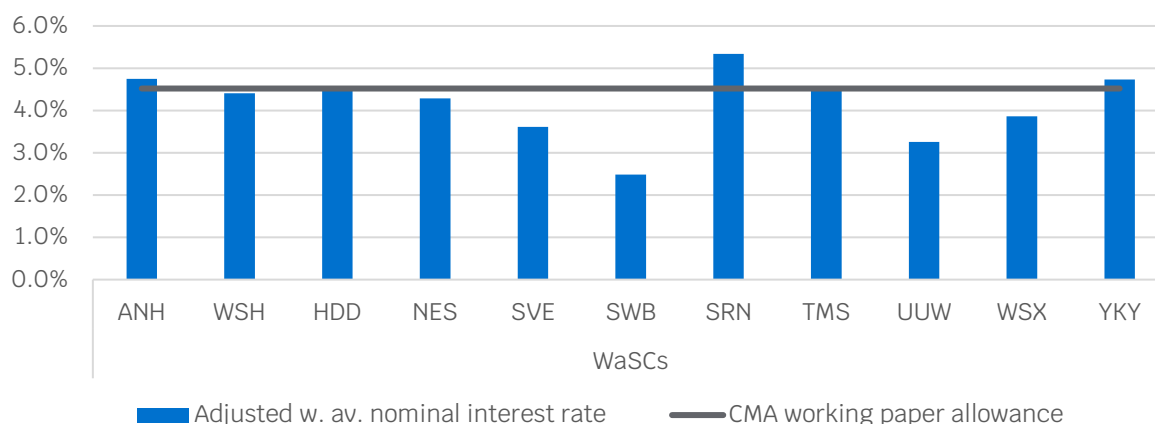
- a) The 15 year average is a better proxy for the range of instruments used by the sector (e.g. taking account of floating rate debt).
- b) The range of current maturities is around 13-17 years.
- c) The reduced need for judgment or manipulation of data.

3.17 We support the working paper proposal to move from a 20 year to a 15 year collapsing trailing average, agreeing both that the sector’s issuance is broader than the type of debt used in the iBoxx A/BBB and that this confers a cost advantage. It is no surprise that this results in an allowance that is more reasonable when considered against the costs actually achieved by the sector. Our (December 2020) updated analysis of weighted average nominal cost of debt as at March 2020 suggests that most WaSCs would continue to outperform the allowance proposed in the working paper, but by significantly less than the proposal in the Provisional Findings.

⁶⁰ Anglian Water, ‘[Response to provisional findings](#)’, October 2020, p. 86, paragraph 426.

⁶¹ CMA, ‘[Cost of debt – Working paper](#)’, January 2021, paragraph 78.

Figure 3.1: Estimated weighted-average cost of embedded debt, March 31 2020⁶²



Source: Ofwat analysis of 2019 and 2020 Annual Performance Reports, CMA Cost of debt working paper

3.18 As set out in our 27 May submission, the relatively minor underperformance for disputing companies Anglian Water and Yorkshire Water should not be seen as a concern. A significant factor underpinning the relatively higher cost of debt is the legacy decisions of these companies to issue large amounts of non-operational debt due to financial restructurings in a single year (for Anglian Water in 2002, for Yorkshire Water in 2009).⁶³ The risks of such decisions should properly be held by shareholders.

3.19 The working paper could be read as suggesting that actual data on maturities of debt in the sector must determine the length of trailing average used. We do not consider regulators should be bound by any such constraint. As with the notional gearing assumption (which is not a mechanistic function of actual sector gearing), neither should the assumed notional tenor-at-issuance or trailing average be mechanistically derived using actual sector data. The concept of ‘notional tenor-at-issuance’ is not a feature of past controls, and these controls have not drawn a link between this concept and the length of trailing average period. More important, in our view, is a trailing average which adheres to regulatory consistency and achieves a reasonable allowance: as we have previously stated, the jump from the 10 year trailing average used at PR14 to 20 years for PR19 would be a radical change, reducing the predictability of the

⁶² Note: Analysis reflects the March 2019 quantum of floating-rate debt, as set out in Ofwat, ‘Reference of the PR19 final determinations: Risk & Return – Ofwat December response’, December 2020, pp. 27-28.

⁶³ Ofwat, ‘[Risk and return – response to common issues in companies’ 27 May submissions to the CMA](#)’, June 2020, pp. 18-20.

regulatory regime. It would also sit oddly in the context of Ofgem’s decision to adopt a 10-14 year extending trailing average for RIIO-2,⁶⁴ given the similarities between the water and energy sectors.

3) No outperformance wedge:

3.20 The working paper maintains the position from provisional findings that there is insufficient evidence to support an outperformance wedge. This is for three reasons:

- **Insufficient historical evidence of a ‘halo effect’:** the working paper references KPMG and Ofwat analysis that finds an average discount of 1-6bps to the relevant iBoxx index once timing and tenor is controlled for. The CMA did not consider this sufficiently strong evidence for a ‘halo effect’ given small sample sizes and the skew towards an ‘A’ rating in the sample used by Ofwat.
- **Comparison to iBoxx Utilities index:** The working paper draws on Ofgem evidence comparing a time series of yields for the Utilities 10+ index and the iBoxx A/BBB 10+ indices which showed little difference between the two series in recent years.
- **Concerns over transferring risk to customers:** The working paper suggests that the outperformance wedge can be seen as ‘simply a version of averaging costs’ because it pushes costs towards the average. It suggests that this might not be in customers’ interests if rates move up after a long period where they have been falling.

Our response: Insufficient historical evidence of a ‘halo effect’:

3.21 The working paper continues to not recognise the evidence of sustained and structural outperformance which we have provided in prior submissions:

- Our evidence suggesting that the notional company was funded to achieve credit metrics of at least A3 over the period 2000-2015, thus driving credit rating-related outperformance in addition to any identified ‘halo effect’. This is further corroborated by the 245 out of 285 bonds (86%) with a rating of A3 or above from the wider KPMG dataset.⁶⁵ S&P analysis suggests that a movement from BBB+ to A- is associated with a reduction in credit spread of around 25 basis points.⁶⁶

⁶⁴ Ofgem, ‘[RIIO-2 Final determinations – finance annex](#)’, paragraph 2.57, pp. 22

⁶⁵ This is tab ‘(KPMG original) water_bonds_cln’ in the R&R appendix databook annex 2 submitted with our response to the CMA’s provisional findings.

⁶⁶ S&P, ‘Credit trends: The cost of a notch’, 26 March 2019.

- Evidence from traded yields of the WaSC disputing companies on 29/04/2020, suggesting that the secondary market yield of their non-subordinated fixed rate instruments lies below our final determinations benchmark of the iBoxx A/BBB minus 15 basis points even at years-to-maturity close to the ~20 years of the iBoxx A/BBB, and in spite of the Baa2 rating of Yorkshire and Anglian Water.⁶⁷
- Our updated estimate of the ‘halo effect’ of 7bps using KPMG’s calculated iBoxx A and BBB yield curves to control more effectively for tenor.⁶⁸
- Evidence from scatterplots of discount to iBoxx vs. tenor difference for the iBoxx of the same rating. Relevant to the Baa1 rating targeted by the CMA, there is evidence that bonds issued at this rating had yield-at-issuance significantly lower than the iBoxx BBB benchmark even at tenors of around 15 years longer than the iBoxx BBB weighted-average years to maturity.⁶⁹
- Evidence from traded yields on bonds with a years-to-maturity close to 20 years and issuer credit rating of Baa1 (a match with the iBoxx A/BBB). This shows an average discount of 35 basis points over the period 29/05/2020 to 13/10/2020.⁷⁰
- Evidence from a variety of bonds issued since final determinations, suggesting a persistent yield-at-issuance discount to the iBoxx A/BBB when tenor and credit rating is controlled for (See Table 3.2 below).⁷¹

3.22 The CMA’s working paper focuses on the issue of whether a ‘halo effect’ exists in water or not, thus appearing to conflate the differing concepts of a halo effect and an outperformance wedge. We submit that the two concepts are distinct:

- **Halo effect:** The structural discount-at-issuance of water bonds relative to the iBoxx benchmark once credit rating and tenor are controlled for.
- **Outperformance wedge:** The required adjustment to the level of the iBoxx A/BBB yield to account for the different characteristics (i.e. credit rating, tenor) of debt issued by the notional company relative to the index.

3.23 We note that the CMA’s conclusion places significant weight on average spread to issuance of a sample of 21 bonds with tenor at issuance +/- 5 years from the relevant iBoxx (ignoring outperformance at sample level), and requires a novel

⁶⁷ Ofwat, ‘[Risk and return – response to common issues in companies’ statements of case](#)’, May 2020, Figure 3.4, p. 86.

⁶⁸ Ofwat, ‘Risk and return – Ofwat December response’, December 2020, pp. 21–22, paragraph 3.11.

⁶⁹ Ofwat, ‘[Risk and Return – response to CMA provisional findings](#)’, p. 65, Figure 4.5.

⁷⁰ Ofwat, ‘[Risk and Return – response to CMA provisional findings](#)’, October 2020, p.69, paragraph 4.40 and Figure 4.6.

⁷¹ Ofwat, ‘Risk and return – Ofwat December response’, December 2020, Annex A1.

and somewhat artificial constraint on the notional company that all historic debt is assumed to be issued in this bracket. This constraint is thus highly influential to the CMA's conclusion – and not borne out by either actual sector debt issuance which is at a range of tenors, similar to the constituents of the iBoxx A/BBB.

- 3.24 The following commentary in the working paper: 'Ofwat's own analysis, which was biased towards higher-rated issues, found only a 6bps discount to the benchmark when measuring bonds issued at 5 years either side of the average maturity of the index',⁷² does not fairly reflect our analysis. The high credit rating of bonds in our analysis is not a quirk of the sample chosen – as previously set out, the share of bonds rated higher than A3 is 84% in our sample vs. 86% in the broader dataset of bonds with a rating at issuance. In any case it is far from clear that the distribution of ratings is relevant to our 6bps estimate, given that the spreads being averaged are that of the instrument yield against the relevant iBoxx (i.e. A-rated bonds compared with A iBoxx etc). The weighted average spread comparing to the iBoxx A/BBB for the +5/-5 maturity bucket (i.e. not controlling for credit rating) is -33bps.
- 3.25 It is particularly disappointing that the working paper's discussion skirts over the multiple pieces of evidence from traded yields and new debt issues by referring to its solitary piece of historical evidence focusing on the +5/-5 year maturity bracket. Table 3.2 sets out analysis which seeks to compare yield at issuance for fixed-rate >10yr bonds issued by issuers within 1 notch of BBB+/Baa1. As tenor at issuance and credit rating this will not always match the iBoxx A/BBB characteristics, we have made adjustments based on same-day nominal gilt curves (to adjust for term premium) and S&P analysis (to adjust for credit rating).⁷³ This analysis suggests that water sector bonds issued following final determinations have achieved a discount of around 25bps to the iBoxx A/BBB, controlling for tenor and credit rating.

⁷² CMA, '[Cost of debt working paper](#)', January 2021, paragraph 120.

⁷³ S&P, 'Credit trends: The cost of a notch', 26 March 2019.

Table 3.2: Adjusted spread to iBoxx A/BBB for nominal fixed-rate bonds issued after final determinations.

	A	B	C	D	E	F	G= (C+D+E)-F
Fixed-rate bond	Date of issue	Tenor at issuance	Yield at issuance	Adjustment for issuer rating ⁷⁴	Adjustment for term premium ⁷⁵	iBoxx A/BBB level	Adjusted spread
£250m United Utilities (A3) XS2114778140	10/02/2020	18.0	1.78%	0.25%	0.09%	2.25%	-0.13%
£300m Dwr Cymru (A3) XS2115092442	24/02/2020	13.1	1.46%	0.25%	0.31%	2.21%	-0.19%
£350m Thames Water (Baa2) XS2161831776	22/04/2020	20.0	2.42%	-0.30%	0.01%	2.46%	-0.33%
£40m Thames Water (Baa2) XS2168290000	12/05/2020	30.0	2.44%	-0.30%	0.05%	2.45%	-0.25%
£300m Severn Trent Water (Baa1) XS2182065149	02/06/2020	20.0	2.06%	0.00%	0.01%	2.32%	-0.26%
£300m United Utilities (A3) XS2182444914	03/06/2020	22.0	1.95%	0.25%	-0.02%	2.35%	-0.17%
£50m Anglian Water (Baa1 (neg)) XS2257836838	13/11/2020	15.0	1.76%	0.00%	0.21%	2.11%	-0.14%
£300m Wessex Water (Baa1) XS2279783760	12/01/2021	15.0	1.35%	0.00%	0.21%	1.96%	-0.40%
Source: Ofwat analysis of Refinitiv and IHS Markit data						Simple average:	-0.23%
						Weighted average:	-0.25%

⁷⁴ S&P, 'The cost of a notch', 26 March 2019, gives the yield differential of A- to BBB+ as around 25 basis points, while the differential from BBB+ to BBB is 30bps

⁷⁵ Adjustment applies the difference between nominal gilts at the bond's tenor and the iBoxx A/BBB's tenor on the day of issue.

- 3.26 Even if the CMA is not persuaded to apply an outperformance adjustment for the cost of embedded debt because of its position that its 15 year collapsing average is aligned with its cross check, we consider that an outperformance adjustment remains relevant for the cost of new debt for two key reasons (i) as recognised by the CMA, the index does not capture currently lower-cost types of financial instrument in use in the water sector and (ii) there is sufficient and sustained evidence that companies can issue at a discount of around 25bps to the iBoxx A/BBB after controlling for tenor and credit rating.

Our response: comparison to iBoxx Utilities index

- 3.27 We do not consider evidence on the small average difference in yields between the Utilities 10+ and iBoxx A/BBB indices is helpful in resolving the question of whether an outperformance wedge is appropriate. The Utilities 10+ index does not have a credit rating criterion, thus it is difficult to assess whether it is a good proxy in credit rating terms for the notional company. In addition, the significant share of bonds in the Utilities 10+ index is from issuers which are not pure play regulated network utilities.⁷⁶ This raises the prospect of yield premia which would not apply to the notional water company.

Our response: Concerns over transferring risk to customers:

- 3.28 We do not agree that applying an outperformance wedge is simply a way of converging on an average actual sector rate. The wedge is estimated using average spread to the iBoxx A/BBB using bonds selected for similarity with iBoxx criteria. This is consistent with an adjustment to the benchmark which moves away from the average actual sector rate, as well as towards it.⁷⁷
- 3.29 We conceive of the outperformance wedge as being due to a combination of structural features (e.g. inherently lower risk of network utilities) as well as a degree of mismatch between the notional company and index characteristics (e.g. tenor and credit rating).
- 3.30 The CMA's argument seems to hinge on the outperformance wedge being a temporary factor which may be reversed in future. If this is indeed the case, it seems fair for customers to enjoy some benefit now, as we (like Wright and Mason) are doubtful that a regulator could in practice resist pressure to reflect a

⁷⁶ For instance, EDF bonds contribute around 18% of the iBoxx Utilities 10+ by weight. Moodys state that they rate EDF using its methodology for Unregulated Utilities and Unregulated Power Companies
Source: Moodys '[Credit Opinion: Electricite de France](#)', 3 July 2019

⁷⁷ eg. if the average spread is positive and the actual average is lower than the benchmark.

positive wedge above the index due to the financing functions duty. If the CMA is wrong and the discount is persistent, this seems straightforwardly to be a case of allocative inefficiency, as customers end up permanently overpaying.

- 3.31 Expressed differently, the use of a wedge does not transfer risk to customers, but redresses the balance of risk. Customers are already exposed to the downside risk of paying more than the index if water bonds start to be issued at a premium. Using a wedge when bonds issue at a discount makes this exposure more symmetrical.

4) Acknowledgement of a role for cross-checks using actual data

- 3.32 The working paper recognises the need for carefully considered cross checks in calibrating the CMA's benchmark-led approach. It proposes a cross-check range based on actual cost data of 4.45% – 4.82%. It concludes however, that a 15-year collapsing average of the iBoxx A/BBB (4.52%) provides a simple, effective and independent approximation for efficiently incurred costs at the industry level without the need for further adjustments to its selected benchmark.
- 3.33 The use of actual cross-checks stated in the working papers involves the following considerations:
- **The acknowledgement of a potential 'matching adjustment' to reflect sector borrowing practice:** The CMA acknowledges that the sector's use of floating rate and EIB debt is a reason why notional debt costs could structurally (or at this point in time) be lower than the 20-year iBoxx trailing average. The CMA suggests that reflecting these factors could justify a downwards 'matching adjustment' of around 40bps to the level of the 20-year iBoxx A/BBB trailing average, albeit noting considerations (e.g. unluckily-timed issuance) which could in theory result in companies having higher costs than the index.
 - **A 'normalised' cross-check using APR data:** The CMA notes evidence that companies have temporarily increased drawdown of liquidity facilities in response to the Covid-19 crisis and proposes to 'normalise' APR data to attempt to remove this effect. To do so, the CMA uses the March 2019 shares of fixed, floating, and index-linked borrowings to re-estimate a weighted-average interest cost, adjusting upwards the index-linked cost of debt by 30 basis points to reflect the higher long-term assumption used by the CMA (2.9%) relative to the March 2020 reporting assumption of 2.6%. For WaSCs this results in a lower bound of 4.45% (a floating-adjusted average of 4.31%

and a median of 4.41%, plus 5-10bps for other adjustments), and an upper bound of 4.82% (The whole-sector median of 4.72% uplifted by 10bps to capture issues with using APR data).

- **Difficulties in achieving an agreed definition of ‘actual’ cost:** The working paper notes disagreements between Ofwat and the disputing companies over how to interpret the 2020 APR data and how it should be converted into an allowance for the cost of embedded debt.
- **Potential risks to customers from using actual data:** The working paper argued that assigning weight to actual costs when they are lower than an index-led approach after a period of falling rates might transfer risks to customers should rates rise again, after shareholders had benefited.
- **Reconciling index-led and actual approaches:** Noting the in-principle case for a ‘matching adjustment’ to the 20-year average and its otherwise poor fit with its cross-checks using actual benchmarks, the CMA notes that the 15-year collapsing average of the iBoxx A/BBB (4.52%) lies within the overall cross-check range of 4.45%-4.82%, and meets the CMA’s objectives for a benchmark approach (objectivity, strong incentive properties and avoiding company-specific cost pass-through). As an additional cross-check the paper also proposes a ‘notional-actual hybrid’ cross-check using the notional company shares of fixed-rate (67%) and index-linked (33%) debt together with company-specific interest costs for these categories of instrument. The paper calculates a lower bound of 4.54% (WaSC median) and an upper-bound of 4.60% (whole sector average), using this approach.

Our response: Acknowledgment of a ‘matching factor’ to reflect sector borrowing practice

- 3.34 We endorse the principle of a ‘matching factor’ and welcome the CMA’s recognition of the fact that different types of debt issuance (e.g. floating rate and EIB debt) which are not captured within the iBoxx A/BBB index have led to sector debt costs which are lower than an unadjusted 20 year trailing average of that index.
- 3.35 While noting the CMA’s listing of ‘in-principle’ reasons why actual costs could be higher than the benchmark (a desire to match the life of long-lived assets, inopportune timing, no market for index-linked debt), we note firstly that the CMA’s actual cost benchmarks referenced in the working paper all lie significantly below the 20 year collapsing trailing average of the iBoxx A/BBB (4.93%). In addition, the evidence submitted so far by disputing companies does not convincingly support these issues being the type of persistent, sector-wide and

structural factors which would warrant making an explicit adjustment to benchmarks drawn from actual data.

Our response: A ‘normalised’ cross-check using APR data

- 3.36 The CMA has adopted a broadly similar approach to our own in normalising for changes in floating-rate debt due to liquidity facilities being utilised on a temporary basis due to Covid-19. The CMA’s use of the March 2019 breakdown of debt avoids reflecting such increases.
- 3.37 We dispute however that the issues raised by companies justify a 5-10 basis point adjustment to the benchmarks used in this approach to reflect data issues. The evidence presented in the CMA’s working paper falls short of justifying why customers should incur this cost once company arguments about the need to adjust reported APR data are taken into account. For instance, our analysis found that using a yield-at-issuance approach reduced average nominal interest costs relative to coupon rates, suggesting that the adjustment should be applied in the other direction (given that the APR data expresses interest costs based on coupon rates).
- 3.38 Finally, we note the sizeable impact of around 30bps from using the sector median as a benchmark rather than the WaSC average. Given the CMA’s provisional findings proposal to award an uplift to Bristol Water due to its size-related historic debt issuance costs, this suggests that a WaSC-based benchmark is more appropriate.

Our response: Difficulties in achieving an agreed definition of ‘actual’ cost

- 3.39 We recognise that companies and their advisers have put forward alternative views on benchmarks based on actual data. We have highlighted to the CMA the flaws in companies’ alternative calculations, including: mismatch of data sources, internally incoherent assumptions and selective use of data. We submit that the CMA should thoroughly weigh the quality of the evidence supplied by all parties in making its final determinations. It should also be cautious in accepting late revisions to data where that data has been submitted to us as an externally audited and company quality-assured submission for the APRs.

Our response: Risks to customers from using actual data

- 3.40 We wish to remind the CMA that the use of benchmarks based on actual debt cost data is not new but has rather been a feature of price reviews going back to PR94. Customers have always been exposed to a degree of interest rate risk in the form of regulatory resets at each price review.
- 3.41 We consider that benchmarking using some contribution from actual cost data is an integral part of incentive regulation. The incentives faced by companies to outperform the index-led benchmark would be for nothing if customers did not over time share in the benefits. In addition, cross checks to an index-led approach are necessary to give confidence that the benchmark is well-calibrated to provide a reasonable allowance for the notionally-structured company.
- 3.42 The use of sector benchmarks drawn from actual data also maintains strong incentives for individual companies to issue efficiently and to manage risk. This is as crystallised risks (i.e. higher costs) faced by individual companies due to their financing decisions have very weak pass-through to the sector benchmark. This means that companies are aware of the long-run cost/risk tradeoffs of their financing decisions and of the need to consider them carefully. This should provide confidence that the sector level risks to customers of using benchmarks drawn from actual data are also low.

Our response: Reconciling index-led and actual approaches

- 3.43 We note that a robust actual data-led approach also achieves the CMA's objectives for a benchmark (objectivity, good incentives and preventing cost pass-through). While the CMA's choice of point estimate represents a welcome move towards a more reasonable allowance, we consider that the plausible range is lower than the 4.45% to 4.82% suggested by the CMA. The CMA's lower bound appears to place no weight on the CMA's own calculations suggesting a WaSC range of 4.31-4.41% based on the average and median of the 'floating-adjusted' APR data. We consider the upper-bound to be overstated based on the addition of 10 basis points for 'APR data issues' which lack evidential basis, while the use of an all-company benchmark does not seem consistent with the CMA's provisional findings decision to allow a small company premium on embedded debt.
- 3.44 We recognise the CMA's 'notional-actual hybrid' approach as a useful cross-check informing the CMA's determinations, while noting that the absence of floating-rate debt in the calculations will serve to place upwards pressure on the calculated benchmarks relative to those based on actually-incurred costs.

5) A revised assumption for share of new debt:

3.45 The CMA's working paper estimates an updated assumption of 20% new debt for the notional company, up from the provisional findings point estimate of 17%. The working paper bases this figure on:

- **A bottom-up assessment:** Using the 15-year collapsing average, the CMA infers an average of 12.5 years of embedded debt and 2.5 years of new debt, on average. This in turn suggests that new debt should be $2.5/15 = 16.6\%$ of the total. The CMA then recognise the contribution of 3.9 percentage points to end-of-period new debt share due to RCV growth. This results in the calculation $16.6\% + (0.5 \times 3.9\%) = 18.5\%$ as one estimate of the required share of new debt.
- **Using the approach from Ofwat FDs and the CMA's provisional findings:** The paper proposes to use the equation $N = T/M$ for the end-of-period proportion of new debt, where N is the proportion of new debt at the end of the control period, T is the number of years in the control period and M is the weighted average maturity of debt. Using the notional inputs the calculation is $5/12.5 = 40\%$, while using APR inputs it is $5/13.8 = 36\%$, which increases to 39.9% with the addition of 3.9% new debt from RCV growth. Divided by 2 to give the average for the control period, both approaches therefore give a result close to 20%.

3.46 We support the CMA's approach as reasonable and agree that a 20% average share of new debt for the 2020–25 period is supported by the evidence.

Annex A – Evolution of the water sector metrics to assess Asset Health

The following tables show the asset health metrics that were in place between 1990 and 2015 and if there are metrics in the 2020–25 period that will highlight deteriorations in asset health in similar ways. This is shown by the relevant cells being coloured green. Information before 2015 is taken from an UKWIR report.⁷⁸

Table A1.1 Water infrastructure

Metric	1990–2000	2000–2005	2005–2010	2010–2015	2020–2025	Comment
Number of burst mains						Note revised name of mains repairs – same metric.
DG3 unplanned interruption to supply exceeding 12 hours						Covered by average water supply interruptions PC.
DG2 Properties at risk of receiving low pressure						A bespoke PC for some, although the numbers of properties at risk are small.
Iron non-compliance (as 100–Mean Zonal Compliance) (%)						These are covered by CRI. The DWI also reports on a wide range of metrics on a quarterly and annual basis, as well as its enforcements.
Distribution index TIM						
Customer contacts per 1,000 pop – discolouration (orange/brown/black)						Covered by all companies in bespoke PCs.

⁷⁸ UKWIR, 'Serviceability methodologies Report Ref. No. 12/RG/01/4', 2011, p. 85

Table A1.2 Water non-infrastructure

Metric	1990–2000	2000–2005	2005–2010	2010–2015	2020–2025	Comment
Water treatment works coliform non-compliance						These are covered by CRI. The DWI also reports on a wide range of metrics on a quarterly and annual basis, as well as its enforcements.
Service reservoir coliform non-compliance						
Number of WTW where turbidity 95%ile greater than or equal to 0.5NTU						
Enforcement actions						
Unplanned non-infrastructure maintenance						Unplanned outage builds on the previous metric, accounting for impact of failure.

Table A1.3 Wastewater infrastructure

Metric	1990–2000	2000–2005	2005–2010	2010–2015	2020–2025	Comment
Sewer collapses						Sewer collapses – common
Pollution Incidents						Pollution incidents – common
Flooding other causes						All flooding is reported together as internal flooding incidents.
Flooding overloaded sewers						
Flooding due to collapses						
Sewer Blockages						These are strongly correlated with sewer flooding as these are the underlying cause of the majority of incidents.
Equipment failures						

Table A1.4 Wastewater non-infrastructure

Metric	1990-2000	2000-2005	2005-2010	2010-2015	2020-2025	Comment
% of sewage treatment works discharges failing numeric consents						These are covered by treatment works compliance PC.
% of total p.e. served by sewage treatment works in breach of consents						
Unplanned non-infrastructure maintenance						
BOD sub-threshold indicator						These provide further information, but the underlying issue is picked up by the common PC.
Suspended solids sub-threshold indicator						
Ammonia sub-threshold indicator						

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