

1 NORTHUMBRIAN WATER RESPONSE TO THE CMA WORKING PAPER ON THE COST OF CAPITAL

- (1) On the 8th of January 2021 the CMA published three working papers on the approach to setting the Weighted Average Cost of Capital (**WACC Working Paper**). On the 18th of January Northumbrian Water (**NWL**) provided an initial response to that Working Paper ahead of a roundtable hearing on the 20th of January. This document and the accompanying visualisation in relation to the Cost of Debt (**CoD**) represents NWL's final response to the CMA's WACC Working Paper and provides broader commentary in relation to some of the issues discussed in the CMA's roundtable meeting. It is also accompanied by a paper from Professor Alan Gregory and colleagues setting out an alternative, more accurate approach to the CMA's helpful distribution analysis (the **Gregory Paper**).¹

1.1 SUMMARY

- (2) **We have significant concerns with the CMA's process and use of evidence.** The u-turn in the allowed return contains material errors in the Cost of Equity (**CoE**) and the CoD and is unprecedented in comparison to all public CMA and CC precedent. It would, if confirmed, damage the credibility of the CMA as an independent and evidence based regulatory body. The CMA's consultation and the associated roundtable focussed exclusively on the Ofwat concerns and some of the evidence we and the other Disputing Companies have submitted appears to have either not been read or not been understood. In this submission we summarise our views on the underlying WACC parameters, which the CMA has not yet commented upon. We also note that there are wide ranging factual and arithmetic calculation errors in the CMA's working papers and Provisional Findings (**PFs**). We set these out and expect them to be resolved in the CMA's final decision. We consider that this is the minimum one should expect from this process. These issues are considered further in Section 2.
- (3) In our view **the CMA's 'aiming up' of c.50bps in its PFs is the minimum amount that could be considered to constitute sufficient aiming-up based on the uncertainty in the WACC parameters.** The Gregory Paper identifies that aiming up to the 75th percentile as per the PFs would require an uplift of 50bps. Even if the CMA chose to aim up to the 67th percentile, consistent with the New Zealand Commerce Commission (**NZCC**) precedent as suggested by Ofwat, then this would require a 34bp uplift plus a 15bp allowance for the clear asymmetry in the package, or 49bps in total. The alternative proposal in the consultation for a 25bps uplift is not credible.
- (4) Returning to the CMA's PF position would be the most appropriate answer where:
- the proposed **25bp uplift alternative is clearly not supported by the new and superior distribution analysis** presented in the Gregory Paper and would in fact amount to aiming up to the 62nd percentile (if only the standard error in the beta is corrected, hence this percentile remains an overestimate);
 - **the 25bp uplift is in fact only 10bps** given that the CMA has clearly indicated that 15bps of the uplift have been made to account for the clear asymmetry in the package (and where in fact even that is potentially low), meaning that the CMA has largely 'aimed straight'; and
 - the underlying parameter ranges are already likely to be towards the top of the CMA's ranges, for example in relation to the TMR.²
- (5) The issues regarding setting the point estimate are considered in more detail in Section 3.

¹ Annex 1: A simulation of the Cost of Equity for the Water Industry, Alan Gregory, Richard Harris and Rajesh Tharyan, January 2021 (the **Gregory Paper**) as provided to the CMA alongside this submission. This is supported by Annex 2: Beta Simulation.

² See NWL Initial Submission on WACC Working Paper 18.1.21 Figure 3 on TMR estimates and ranges; and commentary on RFR in Section 7.2 of NWL Response to PFs.

- (6) The CMA’s position on beta and the inclusion of the Covid period in its analysis is surprising. In addition to the evidence previously presented by Professor Alan Gregory which clearly shows that beta values are distorted during the Covid period,³ we provide additional evidence on the atypical and rare nature of the pandemic event in Section 4. The CMA has recognised a twenty year investment horizon for water assets. **In setting the beta the CMA should consider whether such a rare and atypical event is appropriately reflected in the weighting of the estimates given.**
- (7) On the current basis the CMA is effectively assuming that pandemics and their impacts occur between 10-50% of the time in calculating the beta. Put another way it assumes that over the 20 year investment horizon a pandemic of this scale, with all the associated government interventions into the core of the economy, will occur in between 2 and 10 of those years. This is not a credible position. Moreover, **the inclusion of this data forces an unfinanceable outcome.**
- (8) This is not a question with which the CMA has had to grapple with previously, which in itself confirms the atypical and rare features of the circumstances experienced in 2020, and continuing into 2021. The CMA’s determination for NATS came during the first six months of the crisis and related to a sector that was particularly affected, with air travel virtually coming to a halt. In that case the CMA rightly ‘passed’ on making the difficult decisions about how to reflect the pandemic in its setting of WACC.⁴ This determination must, however, tackle these questions head on to ensure that the cost of capital set for the next five years, and which will have longer term implications for investability in the future, is set at an appropriate level.
- (9) **The CMA should exclude the Covid period from its beta estimates.** If it considers that it must reflect that period in its analysis then it should take the longest run of data available to minimise the distortion and place the most weight on that long-run data. As can be seen in the Gregory Paper, these estimates still imply that the beta estimate is likely to be toward the top end of the CMA’s range from its PFs.
- (10) We provided a full response to the CoD consultation in our initial submission on 18th of January. During the roundtable it was not obvious, however, that the CMA completely understood some of the key concerns we were making, for example in relation to its ‘matching principle’ and the use of weighted average years to maturity to assess the appropriate time horizon rather than tenor at issue. Comments made by the CMA instead further reinforced our concerns that the CMA has become unduly fixated on 4.52% as a target that would support the financeability of the notional company by reference to credit rating metrics, regardless of whether it could be proved to be theoretically or mathematically sound.⁵ As we have stated, **we reject the 4.52% as theoretically deficient and unsupported from a financeability perspective** based on the PF methodology.
- (11) Given the limitations of time and to assist the CMA in digesting the key elements of our case, we have prepared a short visualisation. This seeks to set out our arguments in a simplified way in relation to the two core principle changes in the working paper to ensure that they can easily be understood in the remaining time available. We have also separately provided the CMA with our underlying calculations and workings in support of our initial submission.

³ Follow up observations on the cost of equity, Alan Gregory, Section 3 (submitted to CMA on 9 December 2020) and *The Evolution of Beta through the Covid Crisis*, AGRF Ltd, Alan Gregory, Richard Harris and Rajesh Tharyan, 18 January 2021.

⁴ CMA (2020) NATS (En Route) Plc/CAA Regulatory Appeal – Final Report (NATS/CAA), paras. 60-61.

⁵ For instance, this question posed by the panel at the round table suggested the CMA was considering different ways of reaching the same number: “In this context, I also note that weighting by RCV, if we do go back 20 years, with a collapsing average would give a result relatively close to the CMA’s working-paper estimate of 4.52 per cent. So whether or not Ofwat or KPMG’s approach is adopted, the range there is 4.41 per cent to 4.55 per cent. So I was wondering if you could back a bit more around this choice between 15- and 20-year and whether, in the alternative, a 20-year might better meet some of Luis’s objectives, in terms of ex-ante incentives. But at the same time the issue to do with the 2000 to 2005 costs on an RCV-collapsing approach might not be as large as some people have suggested, in terms of the differences between the parties.” CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21), p. 16, lines 3-12.

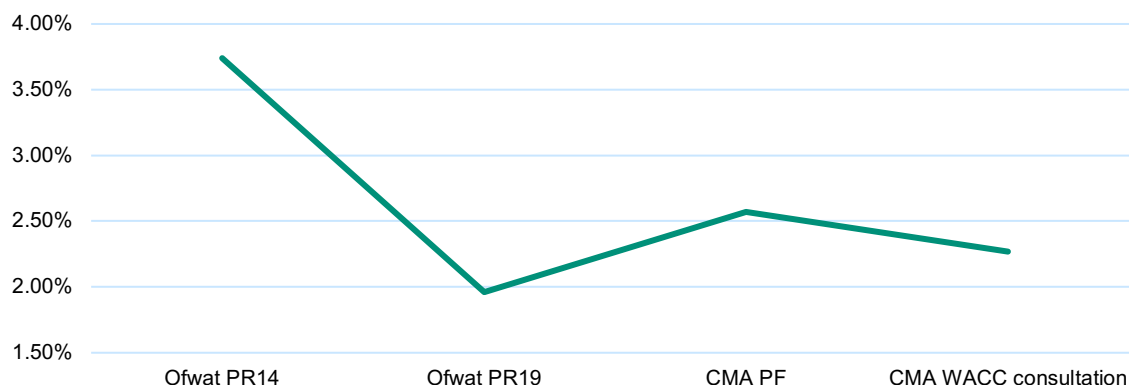
- (12) As such we have not provided any further substantive commentary on CoD in this response but have included a table in Appendix 1 which provides a round-up of methodological inconsistencies in the CMA’s approach to supplement the list of errors provided in Table 2.
- (13) In Appendix 2 we also provide a response to comments made by Ofwat in its Initial Submission on the Working Paper with respect to MARs.

2 PROCESS AND EVIDENCE COMMENTS

2.1 THE CMA’S CHANGE OF VIEW IS BOTH WRONG AND UNPRECEDENTED AND WILL COMPOUND CONCERNS ABOUT THE STABILITY AND PREDICTABILITY OF UK REGULATION

- (14) Ofwat’s 2019 Final Determination (**FD19**) represented a 178bps reduction in the allowed return compared to PR14.⁶ During AMP 7 the allowed return was, therefore, set to fall by a half. As we and others have factually identified, this fall is not a function of market movements and is instead driven by a large number of unprecedented and untested methodological changes.⁷

Figure 1: Evolution of WACC: PR14, PR19, CMA PFs and WACC consultations (RPI)

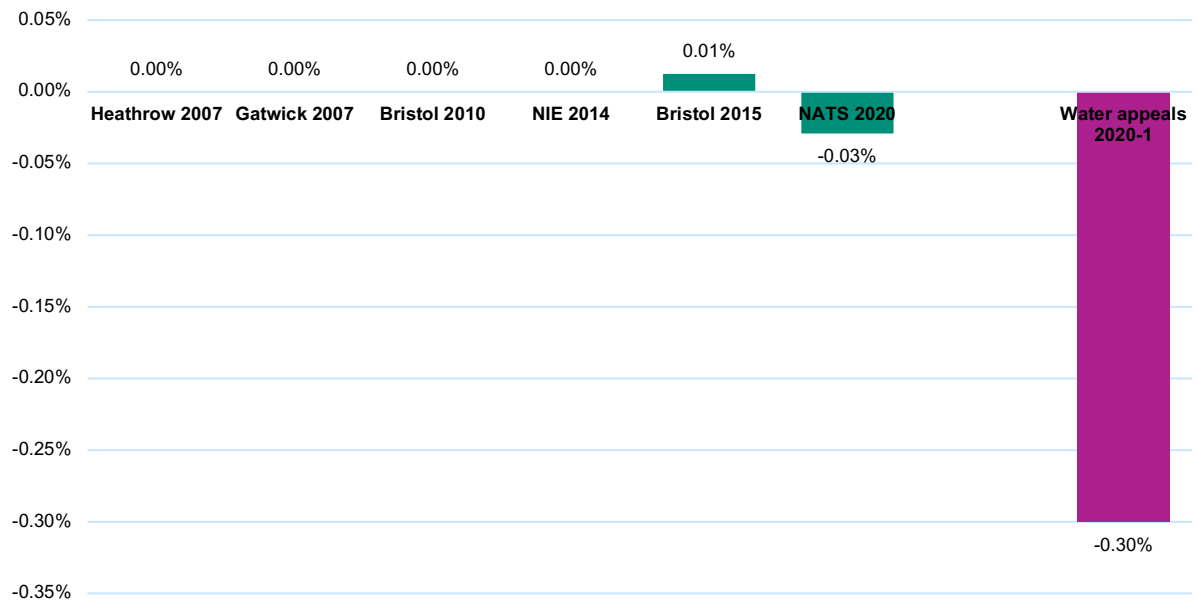


- (15) The movement in the WACC since the PFs is similarly unprecedented. To illustrate this point, Figure 2 below picks up all appeals for which public data is available where the CC/CMA has reviewed the WACC and shows the rate of change between its provisional and final decision. As you can see the volte face in this redetermination is without precedent in previous cases. The suggested movement in this consultation will alarm all companies and investors who look to the CMA to provide consistency, stability and predictability within the UK’s regulated industries.

⁶ Ofwat’s PR14 Appointee WACC was set at 3.74% (RPI) at PR19 Ofwat’s FD Appointee WACC was set at 1.96% (RPI), a fall of 178bps. At 1.96% the PR19 WACC is 52% of the PR14 WACC.

⁷ NWL SOC, Section 8.7 and SOC416 KPMG – Estimating the cost of capital for PR19, March 2020 each provide more detail on the methodological changes in Ofwat’s PR19 approach that have contributed to the significant reduction in WACC from PR14.

Figure 2: Differences in WACC estimates between Provisional and Final decisions, all CMA and CC redeterminations 2007-2021



Source: NWL analysis of CMA publicly available precedent cases

- (16) Looking to the future, the sector will need to make substantial investment to play its part in delivering the Net Zero targets, as well as meeting the resilience challenges that will continue to increase due to a combination of growth pressures, the impact of climate change on drought and flood risk, and restrictions on permitted abstractions. Against this backdrop of significant investment requirements for the sector going forward, the CMA’s proposals in this consultation are not favourable and do not reflect the progress of such a critical parameter in a consistent, stable and predictable regulatory framework. This concern has also been voiced to the CMA by representatives of the global investment community:

“That is why GIIA, as the representative body for the world’s leading international investors in infrastructure, is firmly of the view that the revised approach that the CMA is proposing to the cost of capital and cost of debt significantly increases the risk of new and existing investment being diverted away from the UK in future, directly contradicting the stated intention by the CMA in its PF’s to set the cost of capital at a level that ensures continued investment in the sector.”⁸

2.2 CMA MUST FULLY ENGAGE WITH THE EVIDENCE AND SUBMISSIONS OF THE DISPUTING COMPANIES TO ENSURE PARITY AND FAIRNESS IN THE PROCESS

- (17) In recent letters we have set out our significant concerns in relation to the redetermination process and the apparent bias and improper purpose in the positions reached in these consultations.⁹ The 2019/20 costing data working paper is perhaps the most egregious example of this and is a concerning move away from evidence-based decision making by the CMA. This view of the CMA’s approach has been echoed in the third party comments received on that working paper:

*“In the provisional findings contained in Section 4 of the Working Paper, it is contended that it is common practice “for the CMA to exclude data that it finds to be unreliable or unrepresentative”. This represents a change to the “complete and robust” test outlined in the CMA’s June 2020 approach document, notwithstanding the assertion that it is consistent. One concern arising from this change, which is borne out by the Working Paper’s contents, is that **it risks shifting the weighing process***

⁸ Global Infrastructure Investor Association (GIIA) Cost of Capital and Cost of Debt Consultation Response, 18.1.21, p. 2. In making this statement the GIIA refers to the House of Commons Library FDI Statistics (December 2020) evidence on foreign direct investment which shows that investment into the UK has been falling for the last three years since 2016 whilst increasing on a global basis during the same period “demonstrating the pace at which the UK has fallen behind competitors in the race for global capital investment”.

⁹ NWL Letter to the CMA dated 19 January 2021; NWL Letter to the CMA dated [27 January 2021].

*away from relying on objective data integrity towards mere selective narrative.*¹⁰ (emphasis added)

- (18) The GIIA also reflects on the knock-on impact of the CMA's provisional decisions on costs on the assessment of WACC:
- "We are concerned that the CMA's position on 19/20 costs and now the partial reversal of its decision on leakage costs will further exacerbate downside risks for investors and, unless this is rectified in the FD's, the WACC should incorporate a greater degree of aiming up not less."*¹¹
- (19) It was apparent from the WACC roundtable that several submissions that we and other Disputing Companies have made to the CMA have either not been read or they have not been understood by the panel members.¹² In contrast it was not obvious that the CMA panel had failed to read any of Ofwat's submissions. The CMA must read and take into account all the documents and evidence provided by all parties in its final decision to ensure that the process can withstand full independent scrutiny and be deemed to have been fair and balanced. Evidence that important submissions have been read and considered in reaching the CMA's decisions is one of the minimum required components of a fair process. Equally, it is essential that any evidence on which the CMA relies in its decision has been shared with all parties to give them adequate opportunity to consider and reflect on it as required.¹³
- (20) In its letter of 25 January 2021 the CMA has responded to some of these concerns by stating:
- "In terms of the focus of the working papers, since Ofwat provided extensive comments and criticisms of certain aspects of the Provisional Findings, it is to be expected that the matters we wish to consult on are to some extent informed by the issues raised in Ofwat's response. Nonetheless, we have taken full account of all of the evidence and analysis received from all the Main Parties and third parties and will continue to do so. Our further consultations are limited to a small proportion of the areas addressed in the Provisional Findings where we consider there might be a case for a fundamental difference in approach from that set out in our Provisional Findings and that it is appropriate to seek further views."*¹⁴
- (21) Rather than assuage our concerns this simply confirms our suspicion that the CMA has focused exclusively on the arguments made by Ofwat, which erroneously asserted that the WACC decision in the PFs was too high and has not given proper consideration to the arguments made by the four Disputing Companies that the allowed WACC is, in fact, too low and barely financeable.
- (22) At the roundtable the panel chose to allocate more than two thirds of the time available to the issues and concerns raised by Ofwat, leaving just one and a half hours to discuss the underlying WACC parameters. As we noted at the time¹⁵ the discussion was too brief and rushed to enable all the points and concerns we have raised in relation to the underlying

¹⁰ Icon Infrastructure response to 2019/20 data for base cost models Working Paper, 19.1.21, p.1.

¹¹ Global Infrastructure Investor Association (GIIA) Cost of Capital and Cost of Debt Consultation Response, 18.1.21, p. 3.

¹² For instance, from the discussion on cross checks to the CoE it became apparent that the CMA had not reviewed or given due attention to the points raised in Oxera, 'The asset risk premium relative to debt risk premium for PR19', 2021. Other papers that do not appear to have been either read in full, or taken due account of in the CMA's deliberations, include The Evolution of Beta through the Covid Crisis, AGRF Ltd, Alan Gregory, Richard Harris and Rajesh Tharyan, 18 January 2021 and the evidence submitted by NWL on the CoD allowance, including in relation to the use of the APR data and the adjustments for floating rate debt: NWL Post PFs Hearing Submission Cost of Debt, December 2020 and NWL Initial Submission on WACC Working Paper 18.1.21 (e.g. Section 3.4.2).

¹³ For instance in the roundtable the panel posed a question on behalf of the CMA staff: "The last question that I know the staff desperately definitely wanted discussed, I think Nick has just brought up, so I will give the question, so you can respond to both Nick and the question. The question they want to discuss was, "What weight do the CMA place on the PwC estimates, that the 0.3 per cent based on auto-aggressive econometric model and 1.2 per cent based on observed (Inaudible) in the historic UK returns over 15 years." (CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21), p. 134 lines 6-13). As the parties noted in response and the CMA confirmed, that underlying analysis has been shared by PwC with the CMA staff team, but has not been shared with the Disputing Companies meaning that it is not possible for the Disputing Companies to respond to the CMA's question in any meaningful way (see CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21), p. 134 line 14 – p.135 line 15).

¹⁴ CMA letter to main parties, 25.1.21.

¹⁵ CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21) p. 126, lines 9-15: "I wanted to raise a broader point, because it feels like that these issues, we are discussing now, are massively important and it feels like we are rushing them. I do not think it is because people are repeating themselves, either from the Ofwat side or from the company side, but I just wanted to raise a concern that it feels like we are not doing justice to some of these issues that really warrant a bit more time than we seem to have allocated."

WACC parameters to be addressed.¹⁶ Rather than repeat all of our arguments and evidence on the parameters we summarise them in Table 1 below with references to the previous submissions which set out the points for the CMA in more detail.

Table 1: NWL views on PF WACC parameters

WACC Parameter	Issue and impact	Reference
Risk-free rate	<ul style="list-style-type: none"> • CMA uses a 6-month period for its RFR reference instruments when a 1 year period would be more appropriate. • CMA does not apply a forward rate adjustment implying that it has better information than the market, which cannot be correct. • The Bank of England (BoE) estimate of the UK's long-run equilibrium interest rate (R^*) offers a useful independent assessment of long-term interest rates as the CMA acknowledges in its PFs. Updated analysis using the BoE methodology supports an RFR slightly above the CMA's range. 	Section 7.2 NWL Response to the PFs
Total Market Return	<ul style="list-style-type: none"> • CMA excludes non-overlapping returns on grounds of small sample sizes. This does not appear to be sufficient justification given that it is not sample size per se that should determine the statistical validity of an estimator, but its efficiency, or level of variation around the true parameter value. Non-overlapping estimators are important because they are assumption free regarding the distribution of returns and serial correlation – these estimators should be included. • CMA in its PFs has indicated that it is not appropriate to include the higher end of the range for ex-post returns based on the CED-RPI series. We set out a range of reasons why the formula effect does not warrant this adjustment being made. 	Section 7.3 NWL Response to the PFs
Beta	<ul style="list-style-type: none"> • We proposed, based on evidence submitted by Gregory, Harris and Tharyan that the CMA should take the periods associated with the structural breaks observed in the data. • We have also separately proposed that the CMA should make use of a Vasicek adjustment to the beta estimates and commented on the sampling frequency of the beta estimates. 	Section 7.4 NWL Response to the PFs Gregory, Harris and Tharyan, 'A response to the CMA's Provisional Findings on Water and the estimation of Beta' (October 2020) PFREP003
Retail Margin Adjustment	<ul style="list-style-type: none"> • CMA excludes measured income accrual balances in its calculation of the retail margin adjustment. When these are added in, the retail margin adjustment should be 3bps or 0. 	Section 7.7 NWL Response to the PFs
Cost of Debt	<ul style="list-style-type: none"> • The cut-off date for embedded debt should align with the start of AMP 7. 	Section 7.5.3 NWL Response to the PFs.

2.3 THE CMA NEEDS TO CORRECT ALL THE ERRORS IN ITS ANALYSIS

(23) There are a number of clear factual and arithmetic errors in the CMAs conclusions that we have identified. As a minimum the CMA needs to correct these mistakes in its final decision. We have listed these in Table 2 below.

¹⁶ There were various comments made by CMA panel members about the time pressures during the discussion on the WACC parameters: CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21) “We have to be very quick here” (p. 112 line 23); “I will have to move on because we are desperately short of time” (p.120, lines 6-7); “I desperately need to move forward here; we have other things that I know the staff want to get through” (p.121 lines 5-7); “perhaps you can have the last word, because I need to get on with my next topic” (p. 126, lines 7-8).

Table 2: List of CMA errors

WACC Parameter	Issue and impact	Reference
Calculation of the distribution for the CoE range	<ul style="list-style-type: none"> Based on analysis from Ofgem and Europe Economics (for Ofwat) the CMA assumes a normal distribution for the CoE which is incorrect. The Gregory Paper updates this analysis using a range of underlying estimates for beta (a material parameter driving the CoE distribution and one for which calculation can be undertaken with a higher degree of confidence). This updated analysis shows that a 50bp uplift would be required to achieve a 75th percentile position as per the PFs. 	See Gregory Paper.
CMA rationale for selection of 15Y trailing average (embedded debt)	<ul style="list-style-type: none"> The CMA's decision to move to 15Y relies on wrong data as it uses 'years to maturity' instead of using tenor at issue (which governs pricing), and hence cannot be relied upon for calibration of the trailing average. 13-14 years to maturity across the industry implies 26Y trailing average period not the 15Y adopted by CMA and supports need for 20Y trailing average. A shorter trailing average misses critical data points which makes a material difference to implied cost of embedded debt. 	NWL Initial Submission on WACC Working Paper, Section 3.2
Collapsing average applied to 15Y trailing average period (embedded debt)	<ul style="list-style-type: none"> CMA is wrong to have applied a collapsing average to its 15Y trailing average as the CMA's approach is not internally consistent. Assuming water companies raised debt at the iBoxx benchmark (20Y tenor) there would be no refinancing of debt within AMP7. This is corroborated by Ofwat analysis which shows that projected debt costs for the industry are flat from 2019/20 across AMP7. 	NWL Initial Submission on WACC Working Paper, Section 3.1
Calculation of balance of new and embedded debt	<ul style="list-style-type: none"> The CMA misapplies industry average years to maturity in its analysis of the new to embedded debt ratio (as it assumes all sector debt will mature in 13.8Y i.e. 2034 when in practice only 50% of debt will have matured by this date). Correcting this gives new debt % of 11% based on actual company data. Notional company analysis implies 12.5% - 16.5% new debt across AMP7 (including RCV growth would increase this by 2%, adjusting for the assumed reduction in notional gearing from 62.5% in AMP6 to 60% in AMP7 would reduce this by 2.5%). 	NWL Initial Submission on WACC Working Paper, Section 3.3 and Appendix 1 Section A.1.5
Calculation of matching adjustments for EIB and floating (embedded debt)	<ul style="list-style-type: none"> The proportion of EIB debt assumed by the CMA is wrong: (CMA estimates £7bn but only £5.3bn on company balance sheets). The cost of EIB debt assumed by the CMA is wrong: Benchmarking of water company EIB debt (60-70bps) indicates that 100bp is likely to overstate the impact of EIB issuance compared to the benchmark selected by CMA. The proportion of floating debt assumed is wrong: the CMA is wrong to have relied on the simple average % floating debt to inform its assessment as this attaches weight to outliers. The median (6%) is consistent with the low end of the CMA's range (15bp). Collectively matching adjustments for EIB and floating are 5 and 15bp respectively (lower than 40bp assumed by CMA). 	NWL Initial Submission on WACC Working Paper, Section 3.4 and Appendix 1 Sections A.1.2 and A.1.4
Calculation of cost of carry	<ul style="list-style-type: none"> CMA has not carried out analysis of cost of carry for water companies, but this is needed if CMA is carrying out detailed analysis of actual financing. An analysis of cash on company balance sheets and RCFs indicates cost of carry of 9-14bp, materially higher than the 	Databook for NWL Initial Submission on WACC Working Paper

	4bp allowance provided by Ofwat and broadly equivalent to the adjustment considered by CMA for floating rate debt.	
Retail Margin Adjustment	<ul style="list-style-type: none"> CMA excludes measured income accrual balances in its calculation of the retail margin adjustment. When these lines from the financial model are included, the retail margin adjustment to the wholesale WACC is reduced to 3bps or zero. 	Section 7.7 NWL Response to PFS
Debt Beta	<ul style="list-style-type: none"> The CMA uses 0.04 as a debt beta in arriving at the asset beta's but in inputting these values into the CoE they have assumed a uniform distribution of 0 to 0.15. Given the mid-point of 0.075 this will downward bias the observed CoE. 	

3 SETTING A POINT ESTIMATE

- (24) A significant part of the CMA's PF WACC uplift related to its desire to 'aim-up' within its parameter range estimates. We have been clear in our submissions¹⁷ and in the roundtable why we support this approach, which should be seen as uncontroversial given the precedent and clear justification.
- (25) The decision to 'aim-up' to the 75th percentile of the parameter ranges has clearly had a material impact on the CMA's proposed WACC estimate. It represents around 20 out of the 54bps uplift that the CMA has allowed relative to Ofwat's FD19 WACC decision. The amount of aiming up can therefore be seen as one of the most material parts of the CMA's WACC choice in comparison to Ofwat's FD19 view.
- (26) Where there is uncertainty in the decision around 'how far' to aim up, it is helpful to have carried out complete distribution analysis of the underlying parameters. Doing so represents a clear enhancement to the decision-making process. It can help to provide an indication of the appropriate amount to aim up in order to balance the risk of underinvestment and the consumer detriment that could arise in an essential service like water and wastewater against the risk of additional shareholder returns. Without this analysis the amount of aiming up is simply a judgment.
- (27) In our initial submission on the CMA's working paper we demonstrated that the distribution analysis the CMA has relied upon in reaching its view in the consultation contains significant errors.¹⁸ In particular:
- the CMA's **probability distribution for the CoE is wrong because it fails to take account of the underlying variance in the estimators** used to derive the CMA's range;
 - further, the CMA's aiming-up analysis **overlooks the asymmetry in the package**. Adopting the CMA's 15bp mid-point RORE downside, the CMA has aimed up by just 10bp, which effectively amounts to taking the mid-point CoE;
 - evidence from the NZCC and BlackRock strongly supports the conclusion that **the CMA has underestimated the scale of the uncertainty in the CoE**. For example, the CMA effectively assumes a standard deviation for the TMR of 0.29%, whereas the NZCC assumed 1.5% in a 2010 decision; and
 - notwithstanding the above, **empirical evidence continues to show that there is a higher probability that the 'true' CoE lies above the CMA's mid-point**. Indeed, the mean of the CMA's historical TMR estimates is either 6.1% or 5.9% (depending on whether an adjustment is made for the 2010 change in the RPI formula effect), which is materially above the CMA's mid-point (and assumed mean in its probability distribution analysis) of 5.7%.

¹⁷ NWL Response to PFs Section 2.5 and Section 8; NWL Reply to PFs Responses Section 3; and NWL Post PFs Hearing Submission, Section 4.1.

¹⁸ NWL Initial Submission on WACC Working Paper, 18.1.21, Section 2.1.

- (28) The Gregory Paper proposes an alternative distribution analysis that is superior to the one presented by Ofgem and Europe Economics on behalf of Ofwat. That analysis:
- uses assumptions in relation to the distributions for RFR and TMR that are consistent with those adopted by the CMA and Ofgem where it is more difficult to calculate the underlying distribution of the ranges and their impact on the overall CoE distribution; and
 - uses a range of methods for calculating the beta (eight in total) using a variety of daily and weekly betas and over different time periods; and
 - using that analysis, takes monte-carlo simulation of 50,000 random draws to illustrate the distribution of beta and its impact on the CoE distributions.
- (29) In doing so the analysis much more accurately reflects the impact of the beta on the CoE distribution estimates, with beta being both a material driver of the CoE distribution. Beta is also the parameter for which the distribution can be estimated with reasonable certainty (i.e. directly from the regression results) in comparison to TMR and RFR, which require some judgement on which estimator is to be used. The analysis is therefore clearly an enhancement to the previous CoE distribution analysis which we have shown to be wrong.
- (30) This analysis indicates that:
- as we would expect, given the interactions between the parameters, the simulated CoE is not normally distributed - the median lies about 3 bps below the mean; and
 - given this non-normal distribution, **the Ofgem and CMA models are in error as they fail to adequately model the relationships involved** - the relevant benchmark for aiming-up is the median, not the mean (which is in principle consistent with the CMA mid-point) and one has to calculate percentile points from the empirically generated distribution, not the mean.
- (31) The conclusion from this analysis is that **an uplift of 34bps is required to hit the 67th percentile and 50bps is required to hit the 75th percentile. The 25bps proposed by the CMA is clearly inadequate as it would amount to ‘aiming-up’ to the 62nd percentile** – only taking into account the uncertainty in beta and only when allowances for asymmetry are excluded. Whilst this analysis understates the amount of aiming-up required because it still uses the same assumptions on the RFR and TMR, it clearly illustrates by way of superior analysis that the CMA’s proposed aiming-up of 25bps is simply unsound.
- (32) In our view the CMA’s ‘aiming up’ of c.50bps in the PF decision is really a minimum amount that could be considered. The Gregory Paper identifies that aiming up to the 75th percentile as per the PFs would require an uplift of 50bps. Even if the CMA chose to aim up to the 67th percentile, consistent with the NZCC precedent as suggested by Ofwat, then this would require a 34bp uplift plus a 15bp allowance for the clear asymmetry in the package, or 49bps. Returning to the CMA’s PF position would be the most appropriate answer where:
- the proposed 25bp uplift alternative is clearly not supported by the distribution analysis and would in fact amount to aiming up to the 62nd percentile (using a distribution, which reflects the uncertainty in beta only);
 - the 25bp uplift is in fact only 10bps given that the CMA has clearly indicated that 15bps of the uplift have been made to account for the clear asymmetry in the package (and where in fact even that is potentially low), meaning that the CMA has largely ‘aimed straight’; and
 - the underlying parameter ranges are already likely to be towards the top of the CMA’s ranges, for example in relation to the TMR.¹⁹

¹⁹ See Figure 3 on TMR estimates and ranges in NWL Initial Submission on WACC Working Paper 18.1.21; and commentary on RFR in Section 7.2 of NWL Response to PFs.

- (33) **Ofwat’s alternative proposal**, voiced in the roundtable²⁰ and in its initial reply,²¹ to aim-up just 15bps to remain close to precedent (of the c.67th percentile based on NZCC) is therefore even more inappropriate. This **relies on the same erroneous distribution analysis and would provide nothing for the clear asymmetry in the package**. Indeed, even relying on the erroneous distribution analysis Ofwat’s approach would require doubling to 30bps when the asymmetry impacts are accounted for.
- (34) Returning to the 50bp uplift on the CoE from the PFs is the minimum supported by the evidence. Retaining the proposed 25bp uplift for aiming-up would rely on distribution analysis that is clearly wrong and results in a package that is in all reality not ‘aimed up’.
- (35) We note that in supporting the need for aiming up the CMA appears to have recognised that there is clear evidence of the need for further investment in the water sector in the future and that there will be clear downsides for customers if that investment does not occur. Such an outcome would clearly not be in the long-term customer interest. This is illustrated by the quote below from the National Infrastructure Commission’s 2018 report on preparing for a drier future:
- “Those [costs] for maintaining current levels of resilience and relying on emergency measures for more severe droughts are between £25 billion and £40 billion. In simple terms, this is what it is worth spending upfront to avoid the risk of drought, although uncertainty around individual figures is high. There would also be further environmental and public health impacts associated with emergency response. In comparison, the cost of proactive long-term resilience improvements to the same standards ranges between £18 billion and £21 billion”²²*
- (36) In fact, this example understates the benefits from aiming up for customers. This is because the CMA’s decision may have wider implications for UK infrastructure and investments will typically deliver wider social and environmental benefits.

4 CALCULATING THE BETA

- (37) In its PFs the CMA has clearly used an investment horizon of 20 years, including for its calculation of RFR using Gilts and in its estimate of TMR:
- “In addition, we note the very long-life assets and long-horizon investment decisions that are likely to be based on our cost of capital estimates. As a result, we suggest that a 20-year investment horizon would closely match the reality of decision-making within the sector and so use gilt and other market data at or close to 20-year maturities. We note this horizon is longer than the 15 years used by Ofwat.”²³*
- (38) The CMA has calculated beta using a series of 2, 5 and 10 year estimates. Since the CMA has chosen to extend its administrative timetable it may choose to use the most up to date data in its calculations for its final decision. Indeed, the CMA signals this possibility in its PFs. This raises the important question, therefore, of the right approach to the use of 2020 data given the occurrence of the Covid-19 pandemic.
- (39) In our initial response to the WACC consultation, we submitted a paper prepared by Professor Alan Gregory on the impact of the Covid 19 pandemic on water company equity betas.²⁴ In particular that analysis found the following:
- “In our October report, we showed that the structural break associated with the early months of Covid appeared to be temporary, so that an alternative approach was to regard these months as outlier events.*

²⁰ CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21), p. 76 lines 10-18.

²¹ Ofwat: Cost of Capital – initial response to the working papers (18.1.21), paras. 2.105-2.108.

²² National Infrastructure Commission, *Preparing for a drier future*, 2018, p.8 <https://nic.org.uk/app/uploads/NIC-Preparing-for-a-Drier-Future-26-April-2018.pdf>

²³ PFs, para. 9.128

²⁴ *The Evolution of Beta through the Covid Crisis*, AGRF Ltd, Alan Gregory, Richard Harris and Rajesh Tharyan, 18 January 2021

Unfortunately, since that analysis, the pattern of Covid infections has moved in a direction that Government, its scientific advisers, and indeed markets, clearly did not anticipate, resulting in a further series of lockdowns and tier restrictions.

In our view, **such restrictions distort normal cyclical patterns because of mandated shutdowns of entire industries. This type of Government intervention is unprecedented**, except perhaps in the context of wartime. Mandated shutdowns amplify the betas of those industries that are directly affected, and industries that supply these industries.

Since the value weighted average of all betas must be equal to unity, the corollary is that if the betas in these industries are amplified, those in unaffected industries are attenuated.

This hypothesis is directly testable, and in this paper we show that the effect of mandated lockdowns on beta is dramatic and significant. **Our conclusion is that it is simply unsafe to use Covid period data to estimate a beta for PR19, unless the CMA is of the explicit view that Covid is here to stay over the long run.**

Nonetheless, as in our October paper, we take into account the CMA's position that a longer run estimate of beta may be informative. As we argued then, if, as the CMA seem to imply, structural breaks are to be ignored altogether, then that estimate should be based on a very long run estimate of beta, using all of the available data.

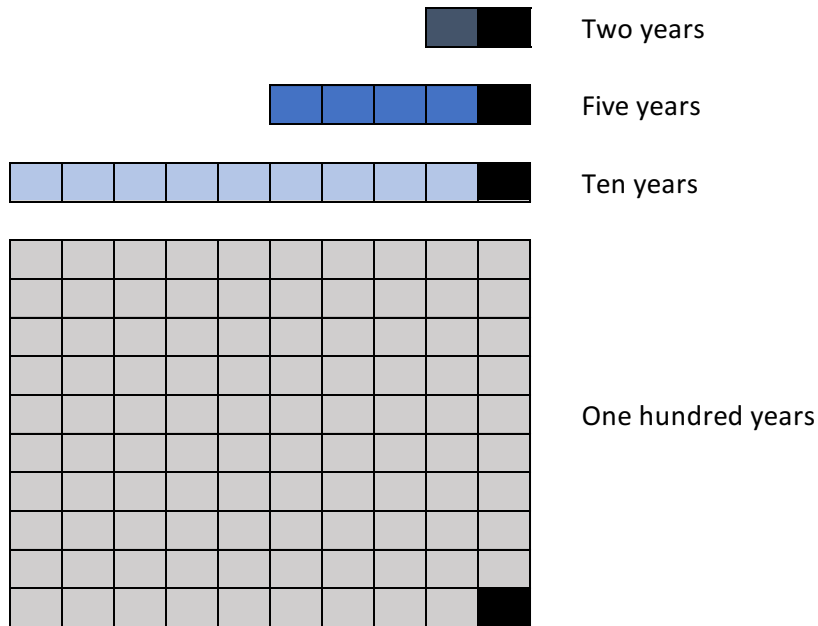
We show that such an analysis still supports a beta towards the top end of the CMA's range. Specifically, we find that **the data supports an asset beta in the range 0.348 to 0.360.**²⁵ (emphasis added)

- (40) Given the clear evidence presented we are surprised and rightly concerned that during the roundtable the panel seemed to suggest that the inclusion of the Covid period in its analysis may be appropriate.²⁶
- (41) Pandemic events are clearly very rare and atypical things. The experience during 2020 has been even more so given the level of government intervention required to address the health impacts of the pandemic through lockdown, and the measures it has implemented to mitigate the associated economic consequences. None of the individuals participating in these redeterminations will have even experienced anything like the arrangements we currently find ourselves in. Indeed, the last comparable pandemic (if any such thing exists) was the Spanish flu epidemic of 1918, just over 100 years ago. In contrast to this period, the CMA assesses the beta estimates using a series of 2, 5 and 10 year datasets with a range of sampling frequencies. This difference in these time periods is illustrated below.

²⁵ The Evolution of Beta through the Covid Crisis, AGRF Ltd, Alan Gregory, Richard Harris and Rajesh Tharyan, 18 January 2021, p.1.

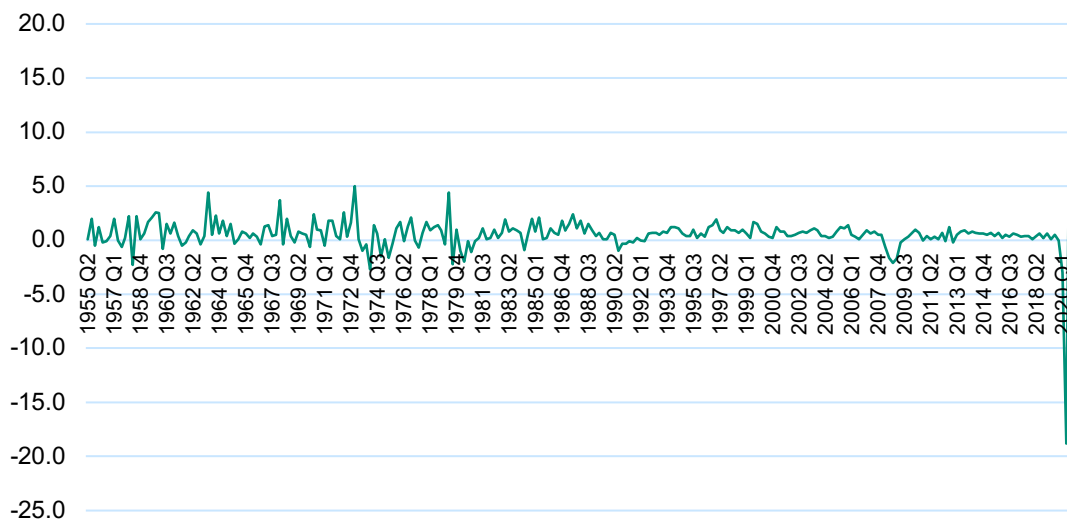
²⁶ The question posed by the panel was "why is it appropriate to exclude Covid impacted data from our data estimation and how much should we remove, if we should remove it at all": CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21), p. 114, lines 1-3. The panel also noted that "Your repeatability criteria are interesting, but it is not entirely obvious to me why it is relevant. Crises tend to be unexpected and different; that is the nature of crises. So, it is not that obvious to me that just because something big happens and it is really different like an Icelandic volcano erupting, we should therefore exclude it.": CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21), p. 118, lines 1-5.

Figure 3: Illustration of time periods between pandemics and the periods assessed by the CMA in calculating the beta (with 1 year shaded)



- (42) In considering how to take account of the Covid period, the CMA must reasonably consider how repeatable this experience is within its 20 year investment horizon. At the moment between roughly 10-50% of the data will be affected by this event, based on the time periods used for analysis. This is transparently inappropriate given the rarity of the experience.
- (43) The pandemic has similarly had very atypical impacts on the economy and the unusual nature of these impacts can be observed throughout the data. For example, examining changes in GDP over the longest run of data held by the Office for National Statistics (back to 1955) we can see that the change in GDP growth in 2020 is particularly pronounced and much more than can be observed from the normal economic cycle. It is clearly observable as an outlier event.

Figure 4: UK Gross Domestic Product: Quarter on Quarter growth: 1955-2020 CVM SA %

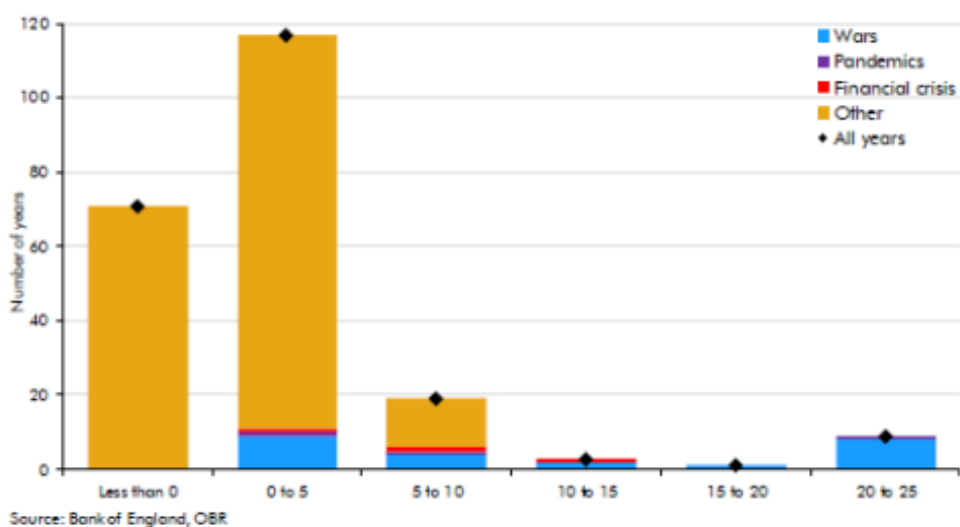


Source: ONS, GDP quarterly national accounts time series (QNA), released 22.12.2020

- (44) The pandemic has driven significant government intervention and the level of government spending is clearly well in excess of what could reasonably be observed in response to events linked to the normal economic cycle. A recent OBR publication examined the historical change in government spending as a proportion of GDP going back to 1800 and the sources of different years. In that analysis, they observed that the level of Government spending was comparable only to war and pandemic events in history (i.e. the Government response is well beyond anything that can be observed from the normal economic cycle). Over this 220 year period similar levels of Government spending were observed in less than 5% of cases and less than 1% of cases when driven by pandemics, with most of this 5% driven by spending in wartime. This means that 2020 is unique in over 220 years of historical data.

“The budget deficit in 2020-21, which we forecast in our most recent November Economic and fiscal outlook (EFO) to reach 19 per cent of GDP (in the central forecast), is expected to reach levels only previously experienced in times of war, or earlier pandemics. Our most recent forecast of real GDP growth for 2020 is for a fall of 11 per cent – the largest drop in annual output since the Great Frost of 1709.”²⁷

Figure 5: Historical distribution of public sector net borrowing as share of GDP since 1800 (Copied from chart 1.1 of OBR Forecast Evaluation Report, January 2021)



- (45) The same volatility is similarly visible in the FTSE all-share when the 2020 Covid period is observed relative to the last five years, as demonstrated in Figure 6. This point was also noted by the CMA in its PFs.²⁸

Figure 6: FTSE all-share, last five years



Source: London Stock Exchange, accessed 25.01.21, <https://www.londonstockexchange.com/indices/ftse-all-share?lang=en>

²⁷ OBR, Forecast Evaluation Report, January 2021, para 1.7. <https://obr.uk/fer/forecast-evaluation-report-january-2021/>

²⁸ CMA PFs, para 9.270 ‘We can observe that events in March 2020 did lead to a sharp move in the prices of the water company shares and the overall market index’

- (46) Finally, we note that the CMA has rightly placed strong emphasis on the financeability of the overall package. It makes strong reference to the overall return and the impact that has on the cashflow metrics of the independent credit rating agencies, which all companies must meet by in accordance with the express licence condition to that effect, as introduced as a standard requirement in 2019.²⁹
- (47) We have shown that the CMA's proposed changes to the WACC in its consultation contain material errors which make the conclusions reached there on financeability incorrect (see Table 2 above). Once these are corrected for we will be unfinanceable under the proposed changes in the consultation. Even absent the clear errors, if the CMA made the changes highlighted in its WACC consultation, including reducing the CoD allowance to 4.52% and the amount of 'aiming up' to 25 bps, then the package becomes barely financeable under the base case: AICR metrics for the notional company are at 1.5x almost exactly. We assume that the CMA's apparent fixation on the 4.52% CoD is indeed because it has effectively back-solved to this answer to meet these ratios. There is already no downside buffer for reasonable shocks at this level and little if any explicit recognition of the clear asymmetry in the package. If the CMA were to include the Covid period in its analysis of beta and rely on two, five and ten year estimates then the package would not be financeable, even when the clear errors in the CMA's calculations are addressed.
- (48) The CMA has recognised a twenty year investment horizon for water assets. In setting the beta it should consider whether such a rare and atypical event is appropriately reflected in the weighting of the estimates given. On the current basis the CMA is effectively assuming that pandemics and their impacts occur between 10-50% of the time in calculating the beta, or put another way that over the 20 year investment horizon assumed a pandemic will occur in between 2 and 10 of those years. This is not a credible position and understandably the CMA has failed to provide any credible evidence that would allow such a position to be independently supported. To appropriately reflect the long run risk profile of water assets it would clearly not be appropriate to include the Covid period in its analysis. This approach would:
- ignore clear evidence that the beta estimates are distorted;
 - place substantial weight on a very atypical event (50% of the data for 2-year estimates, 20% of the data for five year estimates and 10% of the data for 10 year estimates would be affected) which occurs perhaps once every 100 years; and
 - drive an unfinanceable outcome.
- (49) The CMA has no credible option other than to exclude the Covid period from its beta estimates. If it wrongfully elects to reflect that period in its analysis, then taking the longest run of data available will help to minimise the distortion. As can be seen in the Gregory Paper, these long-run estimates still imply that the beta estimate is likely to be toward the top end of the CMA's range from its PFs.

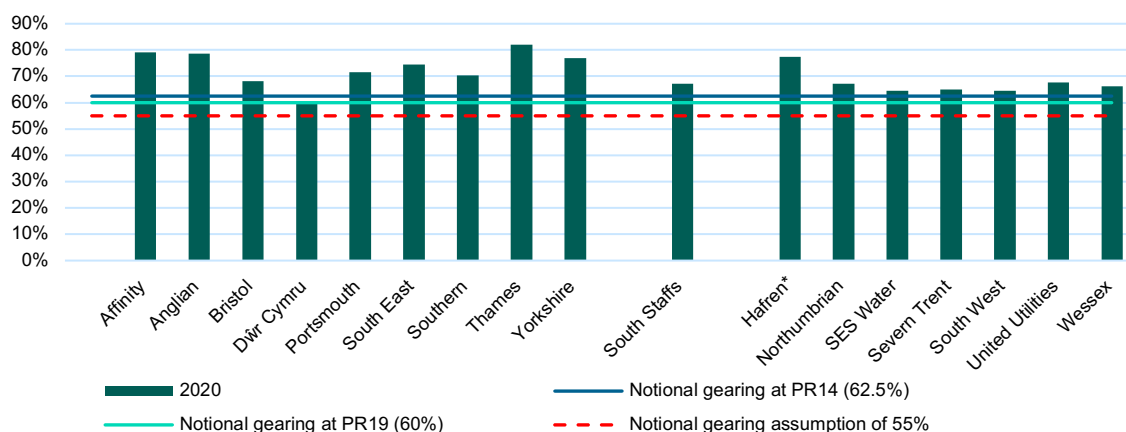
5 FINANCEABILITY

- (50) We strongly support the position taken by the CMA that financeability is a critical cross check on the overall package, with specific reference to the credit metrics used by the independent credit rating agencies. As previously stated maintaining our credit rating is a condition of our licence. Moreover, as an efficient and high performing company with gearing levels below the sector average, we have not required a financeability adjustment since PR04. We have always maintained, consistent with the CMA's PFs and working paper position, that the sector wide PAYG adjustments adopted by Ofwat at PR19 were not in customer's best interests.

²⁹ In confirming its decision to implement this condition as a "must ensure" requirement for all companies, Ofwat noted that the credit ratings are "helpful for monitoring Appointees because they provide a widely recognised and independent, forward-looking view of an Appointee's financial strength and resilience.": Ofwat Conclusions on strengthening the regulatory ring-fencing framework, 9 July 2019, Section 1. <https://www.ofwat.gov.uk/wp-content/uploads/2019/07/Decision-document-on-strengthening-the-regulatory-ring-fencing-framework....pdf>

- (51) Given the CMA’s consistently strong position on this issue throughout the redetermination, we were surprised and alarmed at the suggestion in the roundtable that the CMA may consider reducing the notional gearing to 55%.³⁰ This is a material change, which would effectively result in the notional gearing being reduced by 7.5% since PR14. This does not feel like an appropriately evolutionary change that would reflect stable and predictable regulation. Absent any discussion of this in the CMA’s recent consultations we do not consider that it would be reasonable to adopt this approach in the CMA’s final decision. Moreover, a notional gearing set at this level would be extremely difficult to justify – not a single company in the sector demonstrated this level of gearing in 2020 according to Ofwat’s recent monitoring financial resilience report.³¹

Figure 7: Actual water company gearing 19/20 versus notional assumptions PR14 (62.5%), PR19 (60%) and 55%, chart splits securitised (left) and non-securitised (right)



Source: Ofwat, 2020, Monitoring financial resilience report

- (52) Finally, as we have set out in previous submissions, this change to notional gearing would have little impact on financeability in any event because it would require consequential changes to the balance of new and embedded debt.³²

³⁰ CMA All Party Cost of Capital Round Table Hearing – Transcript (20.1.21), pp. 126-129

³¹ Ofwat, Monitoring Financial Resilience Report, December 2020: <https://www.ofwat.gov.uk/wp-content/uploads/2020/12/Monitoring-financial-resilience-report-2019-20.pdf>

³² NWL Reply to PFs Responses, Section 3.1.4.

APPENDIX 1: COST OF DEBT – METHODOLOGICAL INCONSISTENCIES

In addition to the errors of fact set out in Table 2 above we highlight below (building on our submission of 18th January) the key methodological inconsistencies in the CMA’s approach in (1) shortening the trailing average period adopted in its PFs; and (2) applying the novel ‘matching principle’ to derive notional embedded debt costs.

Table 3: Methodological inconsistencies in the CMA's estimation of the CoD

Issue	Commentary
Inconsistency between 20Y iBoxx benchmark selected and 15Y trailing average period implies wrong incentives	<ul style="list-style-type: none"> The CMA’s trailing average period is not matched to the tenor at issuance implied by the iBoxx benchmark, which is around 20Y (consistent with the investment horizon for the sector). As a result a company issuing 20Y debt on a continuous basis cannot expect to recover costs equal to the yield at issuance across the maturity period of each instrument. The CMA’s policy incentivises companies to raise debt at shorter tenor than the benchmark as companies cannot expect to recover costs over 20Y and exposes companies which issued in line with the benchmark to losses.
Matching principle transfers risk from the notional company to customers but CMA consider risk should ‘sit with companies’	<ul style="list-style-type: none"> CMA does not appear to have attached weight to the implications of its ‘matching principle’ for short term and floating debt on risk for customers. In a rising interest rate environment companies with short term or floating debt will incur costs above the benchmark which (if reg policy is consistently applied over time) would be passed onto customers, which creates an inter-generational reallocation of risk / transfer of equity.
Matching principle implies wrong incentives for companies to issue short term debt in a ‘race to the bottom’	<ul style="list-style-type: none"> The CMA’s approach includes adjustments to shorten implied maturity, and will lead to more companies more often taking on the risk of adopting shorter term approach with more exposure to interest rate risk. This will require further shortening of maturities in the regulatory policy in the future, ultimately leading to unravelling of incentives for long-term financing while leaving companies adopting a longer term approach out of the money in the meantime.
Matching principle creates uncertainty around future remuneration of debt costs and implies companies should be exposed to a combination of (1) market movements; (2) regulatory discretion	<ul style="list-style-type: none"> Future allowances cannot be predicted ex ante (as this would require forecasting the debt strategy of each firm in the ‘pool’ and then matching the weighted average strategy), so it is not possible for a prudent firm to hedge the regime on an ex ante basis. CMA policy implies water companies should try to ‘beat the market’ on an ex ante basis but this creates material financing risk (BUT water companies are not hedge funds).
Matching principle is inconsistent with Ofwat policy and sector-wide consultation on the cost of debt ³³ (as well as past policy)	<ul style="list-style-type: none"> Ofwat considered in its 2016 consultation whether to share risks with companies based on observed financial performance vs allowance and concluded that this could transfer risk to customers. The CMA’s matching principle directly contravenes this policy: <ul style="list-style-type: none"> “The allocation of risk between companies, investors and customers and how we set allowed returns are central to determining customer bills and delivering good outcomes for customers.”³⁴ “This approach means that companies, their investors and management are responsible for their own financing and capital structure and bear the risks associated with their choices. Placing this risk with companies incentivises companies to minimise their debt costs and ensures that customers are not responsible for funding inefficient financing structures.”³⁵

³³ Ofwat Water 2020: consultation on the approach to the cost of debt for PR19 (September 2016) (Ofwat CoD Consultation 2016) https://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap_con20160906costofdebtv2-1.pdf

³⁴ Ofwat CoD Consultation 2016, p. 4.

³⁵ Ofwat CoD Consultation 2016, p. 4.

	<ul style="list-style-type: none"> ○ “We recognise that the legitimacy of the regulatory framework is stretched where there is a very one-sided benefit to companies without the ability for customers to share in those benefits. This is particularly the case where these benefits arise from unanticipated movements in the market ...”³⁶ ○ “Risk sharing mechanisms may weaken company incentives to manage financing risks and could expose customers to risks associated with companies’ actual financing structures. As companies determine their own financing arrangements, this means risk sharing might result in customers bearing the risk of inefficient financing decisions by companies. There is also the potential for customers to bear downside risks from financing arrangements”³⁷
<p>Matching principle is inconsistent with its past approach to water sector cost of debt focussed on long term finance</p>	<ul style="list-style-type: none"> • The CMA’s decision in the PR14 Bristol Water redetermination was based exclusively on long term finance and did not include short term or floating rate debt: <ul style="list-style-type: none"> ○ “a stable approach to the cost of capital over regulatory periods is consistent with investors making long-term financing decisions.”³⁸ ○ “We note that this approach did not include separate values for cash holding costs. To include an additional amount for such costs could be inconsistent with the notional financing cost analysis, which is itself based on a notional financing structure assuming long-term bonds only.”³⁹ ○ “We did not support Bristol Water’s views that the analysis of embedded debt costs should include an element of short term debt, since our analysis was based on a review of WaSC bonds and the iBoxx index, neither of which included short term debt.”⁴⁰

³⁶ Ofwat CoD Consultation 2016, p. 35.

³⁷ Ofwat CoD Consultation 2016, p. 36.

³⁸ CMA Bristol Water Redetermination 2015, para. 10.61.

³⁹ CMA Bristol Water Redetermination 2015, para. 10.83.

⁴⁰ CMA Bristol Water Redetermination 2015, para. 10.85.

APPENDIX 2: RESPONSE TO OFWAT MARS COMMENTS

In its Initial Submission on the WACC Working Paper CMA Ofwat challenges our MARs analysis.⁴¹ We do not consider Ofwat’s arguments to be compelling and retain our view that a reasonable and robust analysis of the MAR range does not imply a clear premium. Across a range of market views the MAR could be slightly below or slightly above 1x.

Ofwat point	Our response
<p><i>“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....However, taking account of such equity outperformance would have the effect of increasing Northumbrian Water’s ‘adjusted MAR’.”⁴²</i></p>	<p>In the SOTP valuation, Credit Suisse states “<i>Outperformance on WACC</i>”. Ofwat has suggested that this “<i>includes some element of expected equity outperformance</i>”. However, it has not provided a reference to where in the analyst reports, CoE outperformance is mentioned. On the first page of the analyst report, under the heading ‘Outperforming the regulatory settlement’, Credit Suisse states “<i>We forecast SVT earning c300bps of efficiencies, cost of debt outperformance and incentives owing to its fast-tracked nature and history of earning ODI incentives.</i>”⁴³ [Emphasis added]. This suggests that the financing outperformance is attributed to CoD outperformance. There is no explicit mention of CoE outperformance. Further, it is also worth noting that UU and SVT have significant outperformance on cost of debt.</p>
<p><i>“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.”⁴⁴</i></p>	<p>Ofwat has not explained why it considers this to be an error. Non-wholesale regulated activities are not included in the RCV, but any projected value from such activities will be reflected in the market value of the company. An adjustment for this is therefore required to ensure that the numerator (Market Value) is consistent with the denominator (RCV). We included a similar adjustment in our MARs analysis in June, to which Ofwat did not make any arguments against. Even if this adjustment is excluded, the overall MAR range is 0.95 – 1.08x.</p>
<p><i>“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.”⁴⁵</i></p>	<p>Our approach, which is consistent with earlier analysis that Ofwat did not challenge at the time, is to consider as wide a range of analyst reports as possible and to look at the various drivers of value seeking to isolate the equity return element and compare this to Ofwat’s FD. This was a key weakness with Ofwat’s own previous analysis, prepared by EE, which was largely based on a single analyst view. We note that Ofwat has not sought to update the analysis. Looking at each element of value individually (e.g. non-regulated businesses, pension deficit/surplus, wholesale outperformance, etc) is a sensible approach because it considers a wide range of analyst views and because each element is separate and independent of others. It therefore makes sense to take into account a broad range of views for each element (from various analyst reports). Taking each analyst report on its own in aggregate would limit the range of views on each underlying source of value. The approach taken rightly emphasises the full range of views from the lowest valuations of all parameters to the highest: it does not have ‘the effect of providing downward skew’. The approach equally means, for example, that the upper end of the range would have an ‘upward skew’ by the same logic.</p>

⁴¹ Ofwat: Cost of Capital – initial response to the working papers (18.1.21),, paras. 2.34 – 2.37.

⁴² Ofwat: Cost of Capital – initial response to the working papers (18.1.21),, para. 2.36, bullet 1.

⁴³ Credit Suisse, ‘Severn Trent Trading at fair value’, 23 July 2020, p.1. SVT CS 23072020 – provided to CMA by NWL in support of Post PFs Hearing Submission.

⁴⁴ Ofwat: Cost of Capital – initial response to the working papers (18.1.21),, para. 2.36, bullet 2.

⁴⁵ Ofwat: Cost of Capital – initial response to the working papers (18.1.21),, para. 2.36, bullet 3.