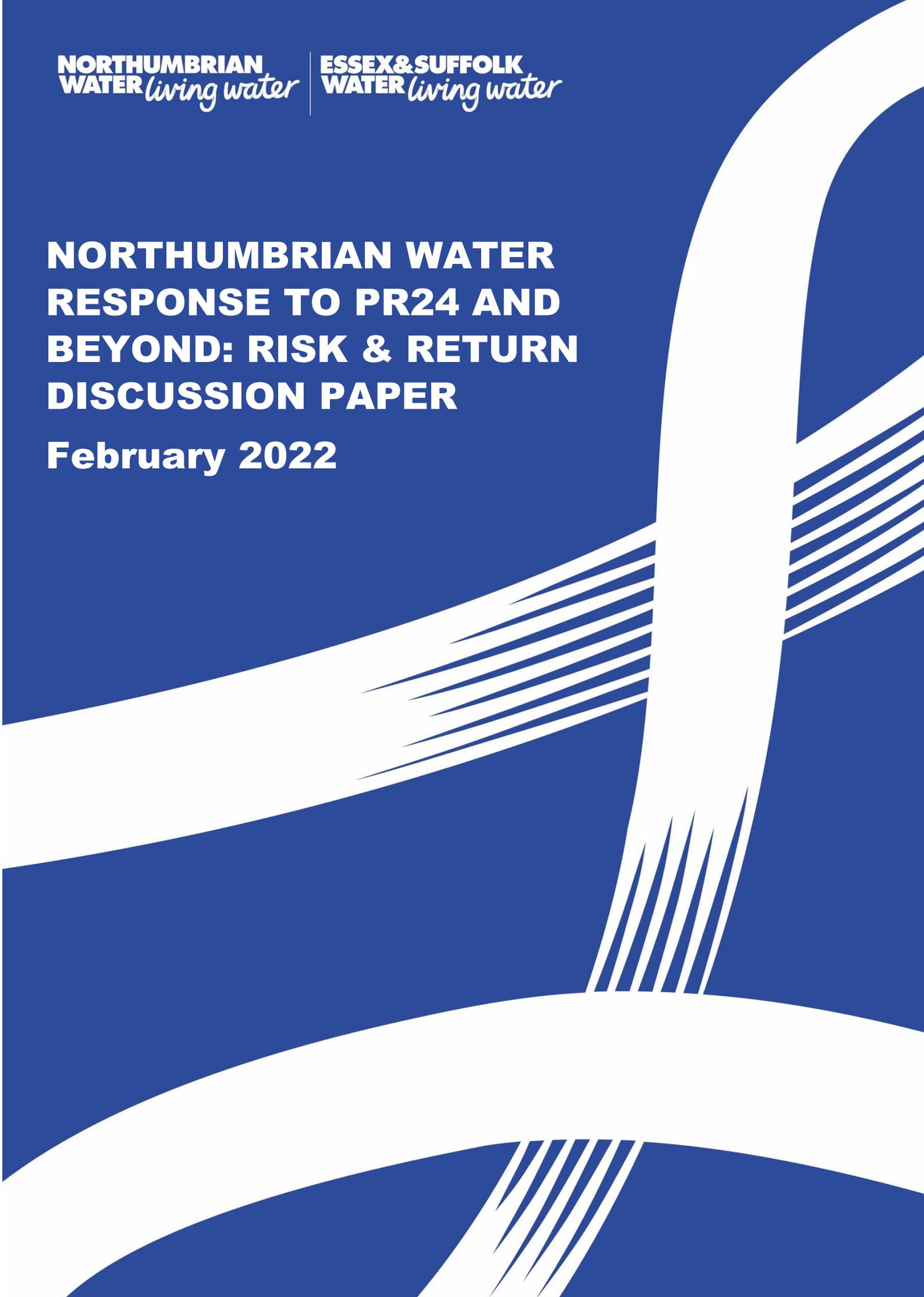


**NORTHUMBRIAN  
WATER** *living water*

**ESSEX & SUFFOLK  
WATER** *living water*

**NORTHUMBRIAN WATER  
RESPONSE TO PR24 AND  
BEYOND: RISK & RETURN  
DISCUSSION PAPER**

**February 2022**



### Northumbrian Water Risk & Return response

This document sets out Northumbrian Water's (NWLs) response to Ofwat's recent consultation on risk and return for the 2024 Price Review (PR24)<sup>1</sup>. We provide some important overall comments on Ofwat's direction of travel before commenting on each element of the framework proposals and finally responding to each of the specific questions raised.

### Executive Summary

**We consider that the proposals set out in the discussion document could have a significant negative impact on customers and the environment. They are not consistent with the supportive investment environment that is needed for PR24.**

Whilst the changes proposed in the document might reduce customer bills in the short term, as we look ahead to the long-term in line with Ofwat's PR24 principles and objectives<sup>2</sup> there is also a clear need for substantial new capital investment. Work by the National Infrastructure Commission (NIC) suggests that £21bn of new investment would be required to address the supply demand imbalance in water resources<sup>3</sup> and Water UK's work achieving Net Zero suggests some £2-4bn of investment would also be required<sup>4</sup>. This will require the sector to attract new capital in a competitive and international market for that investment, with much of that needed in the next five-year period.

Without that investment the detriment to consumers and the environment would be significant<sup>5</sup>. For example the NIC report notes that the impact of not investing could be c.£40bn, and we consider that PR24 needs a greater focus on supporting this investment. Indeed, one of the reflections on last price review has been that there was too strong a focus on short-term bill reductions<sup>6</sup>. However, taken together the changes proposed in the document would:

- require the sector to raise even further additional new equity under the changes proposed to the notional structure;
- offer significantly lower returns to that equity, with perhaps 100-200bps reduction to the cost of equity implied by the changes; and
- weaken the tests on financeability and risk upon which investors rely.

These would occur at a time when, as Ofwat recognises, sector risks are already increasing<sup>7</sup> and more than 80% of the sector are failing to earn their base allowed return<sup>8</sup>, both of which will generally make the sector less attractive to new capital.

Rather than seek yet more reform to every parameter involved in setting the cost of capital, thereby reducing the allowed return, and amending the notional structure to one that does not reflect the efficient capital structure observed in the sector, we would instead urge Ofwat to pursue a more stable

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<sup>1</sup> Ofwat: PR24 and beyond: Discussion paper on risk and return

<sup>2</sup> See: <https://www.ofwat.gov.uk/wp-content/uploads/2021/05/PR24-and-Beyond-Creating-tomorrow-together.pdf> pp.3 in which Ofwat sets out its desire to 'focus on the long term'

<sup>3</sup> See: <https://nic.org.uk/app/uploads/NIC-Preparing-for-a-Drier-Future-26-April-2018.pdf> pp.4

<sup>4</sup> See: <https://www.water.org.uk/routemap2030/wp-content/uploads/2021/03/Water-UK-Net-Zero-2030-Routemap-Summary-updated.pdf> pp.7

<sup>5</sup> This is for example why regulators including Ofwat at PR04, PR09 and PR14 as well as the CMA have tended to 'aim-up' in setting the allowed cost of capital as, given the essential services companies provide, the detriment to consumers and the environment is greater if the return is set too low than if it is set too high, see for example the CMA redeterminations from the PR19 water appeals at: [https://assets.publishing.service.gov.uk/media/60702370e90e076f5589bb8f/Final\\_Report\\_-\\_web\\_version\\_-\\_CMA.pdf](https://assets.publishing.service.gov.uk/media/60702370e90e076f5589bb8f/Final_Report_-_web_version_-_CMA.pdf) pp.1094-6

<sup>6</sup> For example the EAC 2021 report on Water quality in rivers raised this concern and this was raised by the disputing companies in the PR19 CMA redeterminations where the CMA did increase both levels of investment and the allowed return

<sup>7</sup> For example, in its discussion document Ofwat recognises that 'The combined effects of a more uncertain future (for example, driven by less predictable weather and the effects of climate change) and revenue at risk from service performance...may indicate a greater role for equity in order to provide a buffer against supply-side or demand-side shocks'. Pp.43

<sup>8</sup> During AMP 6 over half of the companies (9/17) failed to earn their base allowed return on regulated equity. In 2020/21 this figure grew to 14/17 companies (over 80%) with three companies having negative RoRE. See: <https://www.ofwat.gov.uk/regulated-companies/resilience-in-the-round/monitoring-financial-resilience/>

and predictable model of regulation to support investment. Such an approach would clearly be in the long-term interest of customers and the environment.

**Ofwat's proposals do not respect the PR19 CMA redetermination outcome and the associated checks and balances in the regulatory framework: this will further damage investor confidence.**

We are surprised that Ofwat has chosen to reject so many of the CMA's decisions from what was the longest and most considered redetermination ever undertaken. Parliament set out a legal framework for water companies and their investors at privatisation more than thirty years ago that allows companies the opportunity to seek a redetermination, thereby providing an important check and balance within the regulatory framework. Up until PR19 that right of redetermination was rarely triggered, broadly reflecting the significant degree of stability and predictability within the overall framework and its application. The decision of four companies to challenge their PR19 determinations, in the same regulatory window where there has been an increase in similar challenges in other sectors, reflects the significant changes introduced by regulators and the increasing degree of uncertainty faced by regulated companies.

Where redetermination by the CMA has been sought, there is a broad obligation on the sector, including the regulator, to pay close attention to the decisions it takes and its rationale when considering the framework for future price controls. If its findings are not given due consideration, this creates the real risk that the same issues are returned to the CMA on multiple occasions, damaging confidence in the regulatory model<sup>9</sup>. Reading the discussion document Ofwat appears to have selectively accepted only those CMA decisions that would reduce companies' allowed returns, rejecting any that would increase them and cherry-picked elements from the various appeals. In doing so Ofwat is rejecting the evidence and data that the CMA relied upon in reaching those conclusions. As can be seen in Figure 1 below, which summarises the more detailed table in Annex B:

- Ofwat has rejected most of the CMA's decisions, adopting consistent approaches potentially on just three elements - the calculation of Beta, the approach to embedded debt and the customer benefits test;
- in relation to both Beta and embedded debt there remains significant uncertainty about what approaches will be taken. On Beta Ofwat is considering approaches inconsistent with the CMA decision which would materially reduce the allowed return and on embedded debt Ofwat proposes to exclude swaps, for example, which the CMA included; and
- across all other areas, almost all of which led to the CMA increasing the return, Ofwat proposes to reject the CMA's approach in favour of alternatives which were generally considered and explicitly rejected by the CMA and which will reduce the allowed return.

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<sup>9</sup> A good example of this is Ofwat's approach to the small company premium (including the 'customer benefits test', which Bristol Water brought to the CMA and its predecessor body three times (PR09, PR14 and PR19) with the CMA rejecting Ofwat's approach on each occasion. Despite each rejection, Ofwat chose not to reflect the CMA or its predecessor's views in its subsequent price control methodology and is only now accepting it.

## Northumbrian Water Risk & Return discussion paper response

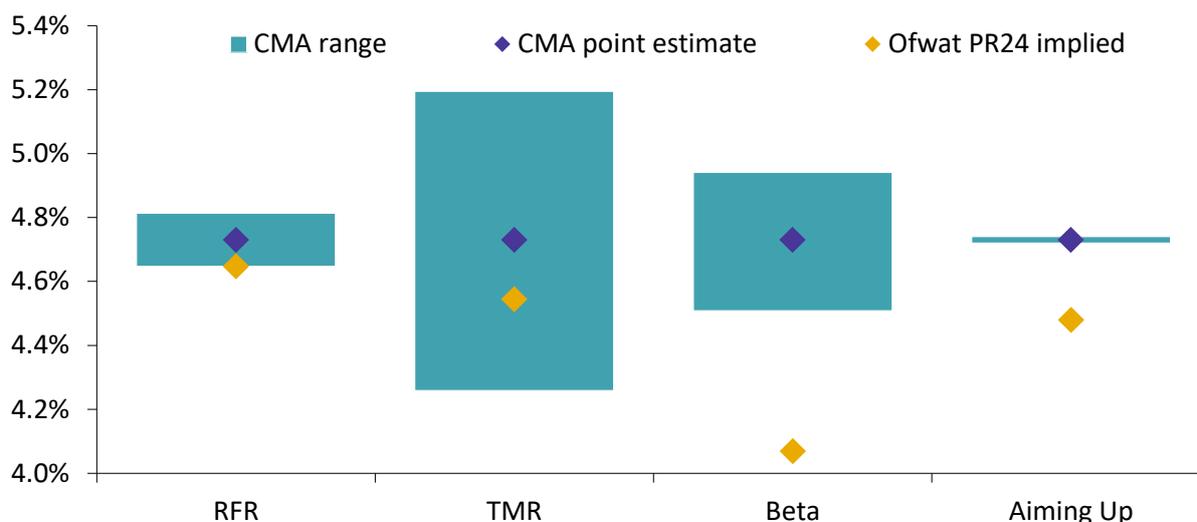
**Figure 1: Comparative assessment of Ofwat’s risk and return consultation with the CMA appeal decisions**

Parameter area	Was it changed by CMA?	Indicative impact of CMA change on allowed return	Is Ofwat’s proposed approach for PR24 consistent with CMA?	Indicative impact of Ofwat change on allowed return
<b>Cost of Equity</b>				
Risk-Free Rate	Yes	Upward	No	Downward
Total Market Return	Yes	Upward	No	Downward
Beta	No	No change	Yes	No change
Treatment of Covid data	Yes	No change	Not clear	Not clear
Beta- de-levering and re-levering	No	No change	Not clear- Ofwat considering approaches that could reduce returns	Not clear but potentially downward
Aiming-up	Yes	Upward	No	Downward
<b>Cost of Debt</b>				
Cost of embedded debt	Yes	Flat	Yes- but methods are unclear	Not clear
Embedded debt-scope	Yes	Flat	No	Downward
Cost of new debt	Yes	Upward	No	Downward
Customer benefits test	Yes	Upward	Yes	No change
<b>Notional gearing</b>	No	N/A	No	N/A
<b>Cross-checks-financeability</b>	Yes	Upward	No	Downward
<b>Cross-checks-Alternative</b>	Yes	Upward	No	Downward

Source: NWL analysis of CMA final decision versus Ofwat risk and return consultation for PR24

This results in an allowed cost of equity, for example, which is well outside the reasonable ranges from the CMA redetermination.

Figure 2: Cost of equity values implied by Ofwat’s proposals versus the ranges proposed by the CMA



Note: NWL analysis, RFR shows indicative impact of using ILGs only, TMR shows impact of dismissing RPI evidence (assumes CPIH=CPI) and using forward looking evidence to select the point estimate. Beta- only includes the impact of relying on raw equity beta directly. Aiming up- excludes CMA’s 25 bps adjustment

**The energy CMA appeals cannot reasonably constitute a basis for rejecting the water appeal decisions.**

We note that Ofwat makes various references to the energy network CMA appeals and the principle that the CMA decided that Ofgem’s approach ‘was not wrong’. The consultation suggests in various places that these decisions are more recent and so should be given more weight over the water decisions<sup>10</sup>. We do not agree with these conclusions. The best and most relevant guide to the choices that must be made for PR24 is, and remains, the CMA’s determinations in relation to PR19.

Firstly, the energy sector is different to the water sector with very different characteristics which will drive a different risk and reward balance<sup>11</sup>. Ofwat has itself recognised this difference in its submissions to the CMA energy appeals and in its proposals to use the listed water company betas. Secondly, and critically, the energy network licence modification appeals regime is materially different to the water redetermination regime<sup>12</sup>. Water is subject to a full ‘de novo’ redetermination whilst in energy appeals companies can challenge specific aspects of the price control decision on a standalone basis and must demonstrate that one or more of the five potential grounds of appeal are met (i.e. such as demonstrating that the decision is based on an error of fact or that it is wrong in law). In seeking a full redetermination the water regime allows the CMA panel full control to review all aspects of the redetermination and set out what they considered to be the best approach in each instance.

The CMA’s final determinations for the four water companies, which was a decision made only some six months before the energy determinations and less than a year ago, not only therefore better reflects the risk and return characteristics of the water sector but also reflects the ‘best’ approaches as considered by the CMA rather than worse approaches which were simply ‘not wrong’. This point is recognised explicitly in the CMA’s energy decision and the discussion it provides on ‘precedents’:

<sup>10</sup> See TMR & RFR sections – p24-26

<sup>11</sup> Ofwat itself recognised this point in its application to intervene in those appeals, see: [https://assets.publishing.service.gov.uk/media/60a249108fa8f56a31c3406f/Ofwat\\_-\\_application\\_for\\_Permission\\_to\\_Intervene\\_---.pdf](https://assets.publishing.service.gov.uk/media/60a249108fa8f56a31c3406f/Ofwat_-_application_for_Permission_to_Intervene_---.pdf) pp.5 “Should the CMA group seek to draw comparisons with the water sector, it is important the CMA recognises the allowed return set for water (both by Ofwat and the CMA in its recent water references decision) includes a return for both retail and wholesale activities.” The point was also noted by, for example, Northern Gas Networks in their CMA submissions, see: [https://assets.publishing.service.gov.uk/media/609153ea8fa8f51b92e94def/NGN\\_PR19\\_Submission\\_.pdf](https://assets.publishing.service.gov.uk/media/609153ea8fa8f51b92e94def/NGN_PR19_Submission_.pdf) para 7

<sup>12</sup> See: [https://assets.publishing.service.gov.uk/media/617fd0608fa8f5297eda6850/ELMA\\_Final\\_Determination\\_Vol\\_1\\_-\\_1.11.21.pdf](https://assets.publishing.service.gov.uk/media/617fd0608fa8f5297eda6850/ELMA_Final_Determination_Vol_1_-_1.11.21.pdf)

## Northumbrian Water Risk & Return discussion paper response

*“While the CMA may have regard to such past decisions in considering the present appeals, it will also take into account the fact that other regulatory appeals may be subject to different statutory regimes and relate to different sectors.*

*For example, the CMA may decline to adopt an approach taken in the recent CMA PR19 Redetermination which was a full redetermination of the PR19 price control by the CMA. By contrast, our role in these appeals is limited to finding whether GEMA was wrong on any of the specific grounds raised by the appellants. As indicated... the appeals do not entitle the CMA to proceed with a re-run of the original investigation or have a de novo re-hearing of all the evidence.”<sup>13</sup>*

In its risk and reward workshop on the 20<sup>th</sup> of January<sup>14</sup> Ofwat expanded upon its view of regulatory precedent by suggesting that different panels at the CMA could make different decisions. We do not dispute this point, but we equally do not consider that it should be assumed that a new panel would simply agree with all the decisions of the energy and water panels that result in a reduction of the allowed return (which is the implication of Ofwat’s proposals).

**Ofwat is separately raising concerns about the financial resilience of the sector<sup>15</sup>, yet we note that the proposals in Ofwat’s risk and return working paper will create further risk to financial resilience. There is an important relationship between the cost of capital and financial resilience that was recognised by the CMA and which should be reflected in future price control methodologies.**

Ofwat has published a separate consultation on the financial resilience of the sector. Whilst we don’t recognise the concerns voiced by Ofwat in that paper, nor do we consider the mooted regulatory interventions are required, we note that the financial resilience of the sector is related to the level of the allowed return. The lower the allowed return the lower the financial headroom companies will have to respond to shocks and stresses. This point was recognised by the CMA who said:

*“Our starting point is that the WACC is the primary factor in the redetermination ensuring that an efficient firm can finance its functions. If the WACC is set at a level which properly reflects the cost of debt and cost of equity for the investors in the sector, both debt and equity investors will earn sufficient returns to cover the costs of financing, and therefore the companies will be financeable.”, CMA, Water redeterminations final report, pp.1116*

Indeed, less than a year ago the CMA adjusted Ofwat’s previous allowed return in part precisely because they considered that Ofwat’s approach harmed the financial resilience of the companies. Ofwat’s proposals for risk and return at PR24 are inconsistent with those views and the proposed changes to the setting of the allowed return can only weaken the financial resilience of the sector.

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<sup>13</sup> Ibid: paras: 3.87-3.88

<sup>14</sup> See: <https://www.ofwat.gov.uk/regulated-companies/price-review/2024-price-review/pr24-working-groups-and-workshops/>

<sup>15</sup> Financial resilience in the water sector: a discussion paper, December 2021

**Main body of the response - Comments on the specific proposals:**

**We support the simplification of the regulatory framework, which has become overly complex, but simplification cannot be used as a justification to merely push more risk onto companies. We broadly support Ofwat's proposed principles for the simplification of reconciliations for PR24 but Ofwat needs to be transparent in its consultation on changes and consider the overall costs and benefits of reform in its methodology consultation later this year.**

We have previously highlighted the significant complexity in the regulatory framework and the need for simplification so we are pleased to see Ofwat considering ways to simplify the regime. However, we are concerned that Ofwat's proposals for simplification appear to be targeted in areas that would either lower the return to companies or increase their risk. Simplification needs to be balanced with considerations of the impact of removing aspects of the regulatory regime.

In our previous response<sup>16</sup> for example, we highlighted a range of simplifications that could be made to the regulatory regime for PR24, such as the deregulation of developer services or the removal of the water resource price control (which adds very little benefit to customers and yet increases complexity materially). We note that Ofwat has not yet signalled any intention to make these simplifications. Ofwat has, however, set out proposals for setting the cost of embedded debt which are materially more complex than the approach taken at PR19 (simply using an independent benchmark index).

Ofwat has suggested some principles that will inform its approach to simplification of the framework but we consider that these should be more aligned to the principles of better regulation in line with its statutory duty. In particular this should include:

- a transparent and comprehensive assessment of the impacts of removing different aspects of the regulatory framework, including on customers and the financeability of companies;
- a full consultation on the proposed changes; and
- a targeted and proportionate focus on elements of the framework where regulation is particularly complex or costly and where there is limited demonstrable value to customers or other stakeholders from it.

We recognise that RPI is a discredited inflation index and the ONS has indicated that it will be moved over to CPI by 2030. The full transition from RPI to CPIH will remove the need for a reconciliation mechanism between RPI and CPIH and has been signalled over two price controls. We note that this will still leave companies, like NWL, with a significant basis point risk between RPI-linked debt and CPIH. If Ofwat does move to full CPIH then this basis risk needs to be priced in which may be expensive where the entire sector needs to hedge this risk and CPI markets remain nascent. Ofwat also needs to consider the long-term implications as cashflows in the long term will be lower.

We note that no company has raised an interim determination since 2013 but we do not agree with Ofwat that this is as a result of the growth in the number of reconciliation mechanisms reducing risk to companies. Changes since 2013 have generally transferred more risk to companies and investors and away from customers. The allowed return has fallen materially also reducing headroom to address risks and shocks. For instance, Ofwat highlights that:

*"For instance, PR19 featured uncertainty mechanisms for abstraction charges, business rates and an ex-post true-up for labour costs, companies receive significant protection from general inflation, and bear only a fraction of totex cost overruns. These mechanisms reduce the risk of under-recovery of revenues because of unexpected developments, and so can be expected to reduce the scope for interim determinations following downside risk events."*<sup>17</sup>

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<sup>16</sup> PR24 AND BEYOND: CREATING TOMORROW TOGETHER: NWL Consultation Response, paras 17, 274

<sup>17</sup> p12 of the paper

This statement is not credible:

- whilst it is true that PR19 featured uncertainty mechanisms for abstraction charges and business rates these have always existed in previous price controls which also included far more uncertainty mechanisms<sup>18</sup>. For example, companies are now almost fully exposed to extreme weather risk, which is outside of management control, rising as a result of climate change and the service impacts from this are more material given the stronger service incentives applied. Companies could previously exclude impacts from extreme weather events. Companies bear the full risk of totex cost overruns for retail and bioresources and Ofwat adjusted cost sharing factors materially away from symmetrical values at PR19 pushing further risk on companies; and
- whilst it is also true that the sector receives protection from general inflation, this is now based on CPIH rather than RPI (which previous price controls have been pegged to historically). RPI is typically around 100 basis points higher than CPIH so the new price control provides far less protection from input cost pressure. In fact, it was this reduction in input cost pressure protection that has required the introduction of a reconciliation for labour costs<sup>19</sup>. This was because there was clear evidence at PR19 that labour costs, which are a significant input cost for companies representing around 39% of costs, were expected to rise above CPIH in the general economy. We note that in the current operating environment companies are fully exposed to power, chemicals and construction material prices where those rise above CPIH, which they are all doing.

**With the benefit of hindsight, we agree with Ofwat that risk analysis as performed at PR19 (and PR14) could have been further improved and that there is scope to do so for PR24. Any approach to risk analysis needs to recognise that information on cost and service performance risk will be very company specific and can cannot be centralised or standardised like notional financeability analysis has been historically.**

In our previous response to Ofwat's earlier consultation, we illustrated this in Table 1 where we queried Ofwat's benchmark company approach.<sup>20</sup> This table illustrates how inappropriate a single centralised approach to risk assessment would be because company issues and risks are locally specific, especially with regard to cost and service, and the benchmark is inappropriate<sup>21</sup>.

We consider that as part of that risk analysis, RoRE provides an important cross check on the final settlement package of the price review including inter alia:

- assessing whether the overall package constitutes a 'fair bet';
- as a cross check to the cost of capital (we note, for example, that one of the CMA's reasons for aiming up by 25bps on the cost of equity was a recognition that there was likely to be downside risk in the incentive package, as there has proved to be thus far in AMP 7); and
- as a check on the overall incentive package.

We and (apparently) the CMA<sup>22</sup> therefore disagree with Ofwat that RoRE analysis cannot be used as a basis for adjusting the WACC. Even if it is only indicative and subject to inconsistency, where analysis shows that there is widespread predicted downside risk across the sector this is a relevant consideration in the final package as well as the allowed return.

Nevertheless, we recognise that there were weaknesses and inconsistencies in RoRE ranges at PR19 (and PR14) to be addressed. The key weaknesses stemmed from the assessment of P10 and P90 ranges

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<sup>18</sup> E.g. the logging up and down mechanism widely used up to 2015 and see for example table A7.3 in Ofwat's PR14 FD Risk and Reward Annex: [https://www.ofwat.gov.uk/wp-content/uploads/2015/10/det\\_pr20141212riskreward.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2015/10/det_pr20141212riskreward.pdf)

<sup>19</sup> See: <https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Securing-cost-efficiency-technical-appendix.pdf> section 5

<sup>20</sup> PR24 AND BEYOND: CREATING TOMORROW TOGETHER: NWL Consultation Response, Table 1

<sup>21</sup> See: <https://www.ofwat.gov.uk/wp-content/uploads/2021/08/NWL-response-PR24-Consultation.pdf> table 1.

<sup>22</sup> Downside risk asymmetry was one of the reasons provided by the CMA in its decision to 'aim up' by 25 basis points on the cost of equity.

for service incentives (PCs and ODIs) and the relationship with the allowed costs (which is sometimes referred to as the 'cost service disconnect') as well as the common calculation of P10 and P90 ranges. To address this gap we have encouraged Ofwat to require companies to report their expenditure on meeting particular PCs over time<sup>23</sup> alongside existing reporting on service performance. This will provide more robust information against a time series for a wide range of companies on the costs of improving different services levels.

We consider that Ofwat should require the consistent collection of this information with a historical back-cast across the sector alongside more guidance on the calculation of P10 and P90 ranges. Without this the problems with risk analysis will persist into PR24 and in the absence of this requirement we are likely to seek to undertake this work alongside other companies. This information could also be helpful for Ofwat in setting incentive rates through centralised customer research by ensuring that the marginal costs of service improvement are not higher than customers valuation of those service improvements (marginal benefits).

Ofwat's suggestion that risk analysis is undertaken both centrally under a 'notional' basis and individually by companies does not seem practical and sensible. This extends the scope and purpose of the notional company into cost and service risk. Ofwat has not undertaken this analysis in the past and is not well placed to carry out such an assessment, particularly given the company and locationally specific nature of this and the gaps in the data highlighted above. These challenges are increased by the backward-looking nature of Ofwat's evidence here. At a minimum these gaps would need to be addressed before any central assessment could be undertaken.

Notional risk analysis needs to reflect the characteristics of each company, such that the analysis would be able, for instance, to reflect a notional company that has the characteristics of Northumbrian Water. Company specific factors are not 'actual' risks to be ignored. During a January workshop on the discussion document Ofwat signalled, for instance, that it may choose to exclude embedded debt from the notional RoRE ranges. Any risk analysis needs to reflect the real pressures faced by the company including embedded debt.

**Ofwat's approach to setting the cost of equity explicitly ignores the CMA position in most elements and will not support the investment environment we need for PR24 leading to a detriment for customers and the environment.**

Ofwat proposed to retain a fixed *risk-free rate* as well as other elements of the cost of equity where the PwC report suggests that indexation would not be appropriate<sup>24</sup>. We are comfortable with this approach which is in line with our view that we should have stability and predictability in the regulatory framework and that PR24 should be as consistent as possible with the CMA's water redeterminations less than a year ago. We note that adopting this approach is likely to place risk on companies in AMP 8 given the potential for a rising interest rate environment through the PR24 price setting process<sup>25</sup> and, without either a forward rate adjustment, indexation or 'aiming up' on the Cost of Equity, it increases the likelihood that an adjustment is needed to reflect this asymmetric interest rate risk. We consider that it is important to be consistent with the CMA decision rather than continuing to drive change and uncertainty in how the return is set.

However, in setting the risk-free rate Ofwat takes a different approach to the CMA and proposes not to use AAA corporate bonds, instead focussing only on gilts. Ofwat also argues that there is 'little (if any) evidence' of any premia in gilts. The latter point is not only inconsistent with the CMA's PR19 water redetermination but also its approach in the energy appeals where the CMA recognised the

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<sup>23</sup> See: <https://www.ofwat.gov.uk/wp-content/uploads/2021/08/NWL-response-PR24-Consultation.pdf> para 18

<sup>24</sup> We note that we found PwC's assessment of the indexation of the Risk-Free Rate somewhat unbalanced and short-term where it suggests a mixed impact on risk to companies but a negative impact on customers. In AMP 8 it seems clear to us that indexation of the RFR would likely reduce risk on companies (which is not what the PwC report states) but would increase volatility of bills for customers. In the long term the issue is about whether in the long-term this approach would have benefits in terms of ensuring that customers' bills remain as stable and affordable as possible and that the sector is financeable.

<sup>25</sup> See for example: <https://tradingeconomics.com/united-kingdom/interest-rate> 'forecast' tab

existence of a convenience premium<sup>26</sup>. Across both decisions the CMA clearly recognised that gilts alone were not the best approach to setting the risk-free rate.

Ofwat either needs to make use of the AAA bonds as the CMA did or suggest an alternative approach for reflecting the premia in gilts. In this context we are not persuaded by Ofwat's approach to reject the use of AAA corporate bonds because of a lack of datapoints. The point the CMA recognised (in both sets of appeals) was that gilts alone are not the appropriate mechanism for setting the risk-free rate and that some adjustment is required to reflect the premia. The CMA used AAA bonds combined with gilts as the best available evidence base to reflect this premia: gilts provided a floor to the RFR, whilst the AAA bonds provide a ceiling. By using these benchmarks in combination the CMA was able to recognise the issues with both datasets and set an appropriate RFR. We welcome Ofwat's proposal to undertake more analysis of the convenience yield, which could constitute a genuine improvement, but we remain of the view that the CMA's approach in the PR19 redetermination was sensible and robust.

In setting the **Total Market Return** (TMR) Ofwat proposes to retain both historical and forward-looking approaches but to use more recent data to inform the point estimate within the range. It is not entirely clear what this means specifically but the discussion document is not obviously inconsistent with the CMA decisions in the water redeterminations. If Ofwat's proposal is seeking to make use of Dividend Discount Models or Dividend Growth Models, then these models are widely recognised to be the least robust estimation approaches available. This is principally because these approaches are heavily assumption driven.

The document goes on to propose that it will use the ONS's forthcoming CPIH back-series to deflate historical returns subject to a quality check. Clearly wherever there is a demonstrable improvement in data this should be reflected in the calculation of the cost of equity (or any other parameter) but we are sceptical that this series will address the underlying issues that exist in the previous RPI or CPIH series. This is because the new dataset cannot go back in time and address gaps in the historical data pre-WWII, which was a key reason for the problems that the CMA found in the CPI series. It will simply be a reconstruction using the same data that both the RPI and CPI existing series are based upon. Assuming this is the case, the best approach will continue to be to place equal weight on the existing CPI and RPI series as the CMA did, or perhaps to replace the CPI series with the new CPIH series. This is because both CPI or CPIH and RPI have merits and demerits.

In setting the **beta** Ofwat proposes to focus on listed water company data: we agree that this data is most relevant. Ofwat queries how the impact of the Covid period should be reflected. A pandemic is a very atypical event with the last one occurring around 100 years ago. If Ofwat is using data between two and ten years old then it will end up placing too much weight on the covid pandemic period within that dataset without an adjustment. The CMA made such an adjustment by removing 'outliers' from its analysis. We argued that the period should be excluded from the analysis entirely and continue to believe that for the 2020-21 period which was particularly volatile. However, at a minimum, Ofwat should adopt the same approach as the CMA for this period.

Ofwat references the Wright and Mason report in considering the approach to de-levering and re-levering the beta. This approach is inconsistent with the Modigliani-Miller theorem. As we highlighted to the CMA (and as the CMA reflected in its final PR19 determinations) the approach taken in the NATS decision is flawed and fails to properly adjust the parameters under the CAPM. We set out in further detail why this approach is wrong and should not be undertaken.<sup>27</sup> There is a common approach to undertaking these adjustments which has been followed across many regulatory determinations and this approach should continue to be adopted for PR24. This would also be a more consistent approach.

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<sup>26</sup> CMA (2021), FD Volume 2A: Joined Grounds: Cost of equity', October, para. 5.68. We note that the CMA has also recognised the existence of a convenience yield as far back as 2008 (where it was valued at 30bps), CC, 2008, Stanstead Airport Ltd Q5 Price control review, Appendix L

<sup>27</sup> See p20

Ofwat proposes that it will not **aim-up** in setting the cost of equity. We do not agree with this decision. There is clearly uncertainty in the setting of cost of equity parameters with wide ranges acknowledged by Ofwat. It is also logically the case that the detriment to customers is much higher should the sector fail to attract necessary investment for the essential services delivered than if the cost of equity is set marginally too high. This is particularly the case in AMP 8 where a wide range of new investments are anticipated. Both of these points are recognised in historical regulatory precedent, including in the water sector, and particularly in the CMA's PR19 redeterminations. We therefore continue to consider that there is a de-facto case for aiming up in setting the cost of equity allowance.

During the water redeterminations the CMA chose to aim-up by 25 basis points. This was driven by a range of factors including: a concern about downside skew in the overall package; concerns about the financeability of the settlement; concerns about uncertainty in the parameters; and the need to aim up to avoid the risk of underinvestment. This highlights that other factors could also drive a need to increase the overall reward in the package to reflect risk. We agree with Ofwat's statement that it is better to address any perceived risk at source in the underlying parameters (i.e. by adjusting allowed costs or service performance targets or incentive rates) but we note that Ofwat tried to take the same approach at PR19 and the CMA ended up making an adjustment to the WACC. This illustrates that whilst the principle is sound there may be reasons to adjust the allowed return nonetheless.

Ofwat proposes that it will use Market-to-Asset Ratio (MAR) analysis as a **cross-check** to setting the allowed cost of equity. In relation to the use of MARs we note that the CMA considered that:

*"In the round, we do not consider any of the parties' MAR analysis to represent sufficient evidence to determine whether the CMA or Ofwat's cost of capital is more appropriate for the entire water sector, nor to arbitrate between an allowance that is at the midpoint or one that is 0.1% higher in WACC terms. As a result, we have therefore not given the MAR analysis significant weight in coming to a final view on the point estimate".<sup>28</sup>*

We agree with the CMA's conclusions that MARs analysis can be influenced by a wide range of factors and controlling for those factors to identify any real premia or difference can be extremely challenging. We also note that the previous UKRN work, including by Ofwat's own academic advisors, also recognised some of these issues<sup>29</sup>. We therefore do not consider that MARs should be used as a cross check. There are a wide range of other better cross checks that could be proposed.

We consider that there are a range of cross-checks that are appropriate in setting the cost of capital:

- as per previous points, risk analysis should play an important role in providing a cross-check on the overall package including the cost of capital;
- financeability analysis also represents an important cross check in setting the cost of equity as recognised by the CMA;
- other cross-checks should also be used including the ARP/DRP cross-check or alternative hedge ratios and the use of multi-factor models.

**Ofwat must set out substantially more detail on its approach to setting the embedded cost of debt. For new debt Ofwat continues to suggest that an outperformance premium exists – we do not agree with the evidence Ofwat submits which was dismissed by the CMA.**

Ofwat proposes an approach to setting the embedded debt based on greater use of company specific information. This is somewhat consistent with the CMA decisions but Ofwat needs to set out in much more detail how it will do this. For instance:

- What averaging approach will it use?

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<sup>28</sup> CMA Final Determination para 9.1362, see also paras 9.3160-1

<sup>29</sup> Estimating the cost of capital for implementation of price controls by UK Regulators, An update on Mason, Miles and Wright (2003) , <https://www.ukrn.org.uk/wp-content/uploads/2018/11/2018-CoE-Study.pdf>, page 66-68

- Which companies will it include in the dataset?
- How will it treat each of the various financial instruments in this assessment and on what basis?

These elements need to be set out in detail and consulted upon. Without clarity the variability in the data would allow Ofwat to reach a very wide range of conclusions.

As part of the calculation of setting the allowed cost of debt Ofwat proposes to exclude derivatives. We do not agree with this approach in general, albeit there may be very specific examples that could reasonably be excluded (for example, swaps that have been used purely to reprofile cashflows over time). In raising finance companies already do so competitively and where derivatives are raised it is generally because that is the cheapest way to raise the finance in line with the company's risk hedging strategy. For example, under current market conditions the cheapest way to raise a 15 year fixed-rate bond would be to raise a 15 year nominal bond with a derivative swap. The vast majority of swaps in the sector are designed to achieve economic hedges and should be included in the calculation. Taking the approach Ofwat is proposing would encourage companies not to raise efficient finance as they would know that in this circumstance the swap would not be included in the calculation. We note that these derivatives are generally included in the approach taken by the independent rating agencies in assessing companies' debt costs.

The use of an independent index as a benchmark cross-check appears sensible, but again more detail is needed to understand how this check would be carried out. We assume, for example, that Ofwat would not apply an adjustment for 'outperformance'. Such an approach was rejected by the CMA because once tenor and rating were controlled for no outperformance relative to the benchmark was found.

Ofwat's proposed approach to **new debt** is generally uncontroversial except that it proposes to make an adjustment for perceived outperformance. Substantial investigation was undertaken as part of the CMA appeal process into whether there exists any real difference between the cost of water company debt raised and the iBoxx benchmark index. Within this analysis all bond issuances were examined and adjusted to correct for the common tenor and rating that the index implies. Once this was undertaken the 'wedge' disappeared and the CMA did not include one for new debt<sup>30</sup>. It is disappointing that Ofwat makes no reference to this work. At a minimum, if Ofwat seeks to apply such an adjustment then it will need to show that such a 'wedge' exists with analysis that is supported by a similar level of rigour to that carried out for the CMA process. Ofwat will also need to demonstrate how such a wedge has materialised since the CMA's review and determination.

**The economic rationale for adopting a notional structure does not support Ofwat's proposals to adjust notional gearing – the level proposed would not represent an efficient water company.** Regulators have for many years used a notional company structure when setting price controls. The use of the notional company has two long-standing objectives recognised by Ofwat in the consultation:

- it allows an approximation of an efficient capital structure - so where companies adopt inefficient capital structures the regulator does not have to embed those structures into the determination for customers; and
- it enables regulators to be agnostic to the structures adopted by companies - any risks implied by those structures will sit with shareholders.<sup>31</sup>

This implies that any adjustment to the notional structure must be driven by some evidence that the predominant structure in the sector is inefficient – i.e. there must be a clear problem which the new regulation is designed to remedy. At 60% the current notional structure is below the actual structure for all but one company in the sector. It is also at the bottom end of other comparable regulated and

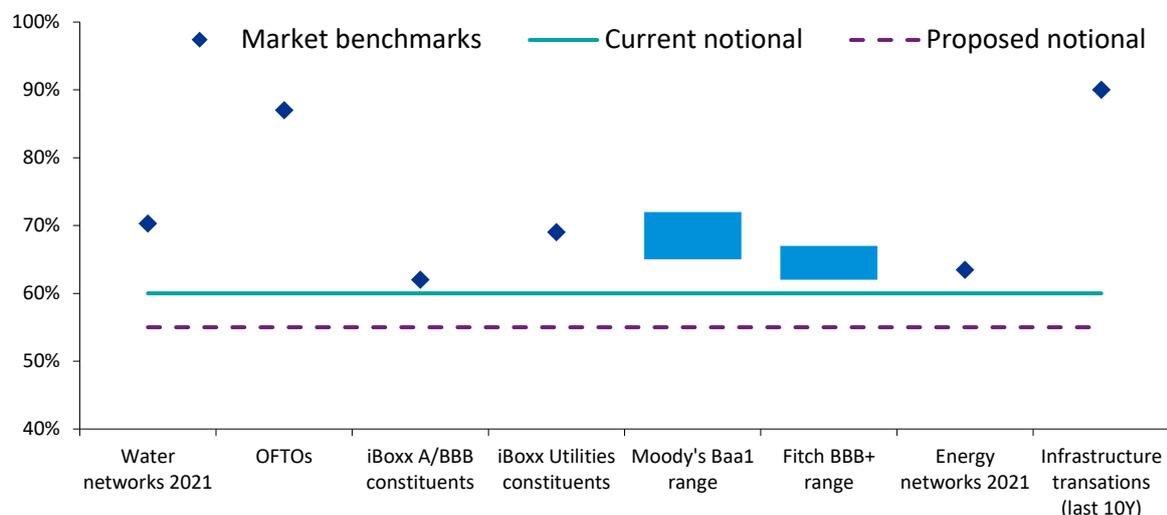
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<sup>30</sup> CMA FD paras 9.752, 9.788, 9.823

<sup>31</sup> Section 5.1 of the paper

competitive infrastructure sectors as demonstrated in Figure 3. A notional gearing level below 60% is therefore unlikely to be efficient, implying higher costs for customers.

**Figure 3: Comparative analysis of gearing across regulated and competitive infrastructure sectors and 55-57.5% notional**



Sources in order: Monitoring financial resilience report, Infranews & IJ Global & Ofgem, Refinitiv Eikon, Moody's (2018), Regulated electric and gas networks – UK, Risks are rising, but regulatory fundamentals still intact, Fitch (2021), Fitch Affirms United Utilities at 'BBB+'; Stable Outlook, Network 2021 RFPs, InfraNews

Ofwat suggests that the notional structure 'is a matter of regulatory judgement' and that the structure has varied over time. Whilst it is true the structure has varied, this has generally followed the changes to the sector structure – as a reflection that if the whole sector's gearing is increasing then this is likely to be a more efficient structure for customers. In making this statement Ofwat appears to imply that it can suggest whatever notional structure it chooses, which is not credible. Ofwat must provide robust and conclusive evidence as to why it considers that this new notional structure is efficient or in customers' interests.

Finally, whilst we are pleased that Ofwat recognises that there is a cost to issuing new equity, the notional structure is one of the most important longstanding elements of the framework, It should not change without a clear basis in market evidence on a consistent basis across all relevant components of the notional capital structure.

### Annex A: Our responses to Ofwat's specific questions

#### Q2.1. Do you agree with our principles for reviewing old and new reconciliation mechanisms and do you have suggestions for further reconciliation mechanisms which could be retired for PR24?

We broadly agree with the criteria proposed by Ofwat but consider that financeability implications warrant inclusion in the list as well.

We agree that the large suite of 20 reconciliation models should be reviewed as part of the PR24 process. Many of the reconciliation mechanisms were created by Ofwat to adjust for variances in external factors compared to those assumed at the time the price control was set. Adjustments for in-period variations in the cost of new debt and taxation rates were justified at the time in relation to passing on to customers the benefits of falling costs in-period.

Two areas of simplification would be to remove the forecasting incentive penalties for the RFI and Bioresources revenue reconciliation model. Companies always make revenue forecasts as accurate as they can, supported by the knowledge that, through these models, any excess revenue collected must be returned to customers in future years. We do not believe that the forecasting penalties incentivise companies to make better forecasts and become merely a penalty for failing to anticipate an unforeseen revenue event (e.g. covid 19) in advance.

As currently defined, we do not believe that the DSRA should be removed. The DSRA as defined by the CMA included non-contestable services such as sewer flooding and STW growth<sup>32</sup>, which would be unaffected by the growth in the contestable developer market.

We do support the removal of the contestable part of new development (costs and income) from the price control, but this alone will not be sufficient to make the DSRA redundant.

It is important to recall that the DSRA was introduced to correct the current disincentive for water companies to support housing development. The current regulatory approach captures 100% of developer contributions within the fixed revenue cap, but does not provide an uplift for the costs of supplying them (beyond the fixed totex allowance built into the base costs assessment). Thus, on a marginal basis, companies would not be incentivised to support developers were it not for the DSRA adjustment.

We agree that, once the switch is made to full CPIH indexation – crucially with appropriate allowance for the management of basis risk between RPI, CPI and CPIH in the absence of an RCV 'pot' linked to RPU in line with the sector's liabilities – the RPI-CPIH wedge reconciliation mechanism will be unnecessary.

The Gearing Outperformance Sharing Mechanism should be withdrawn at PR24, following the CMA rejection of it in PR19<sup>33</sup>.

We also suggest that the Bilateral entry adjustment (BEA) model should be withdrawn given the lack of Government support and the development of preferred alternatives (DPC, NAVs, Bid Assessment Frameworks).

We have made separate arguments for Ofwat not to add to the number of reconciliation models by incorporating the RMEX and BMEX reconciliation models into the price control but for MOSL to incorporate it, suitably calibrated, into the Market Performance Framework. This would align to the materiality principle set out in the consultation.

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<sup>32</sup> CMA FD para 4.848

<sup>33</sup> CMA FD para 9.1222

As we have previously noted, many of the models have the same inputs (eg inflation data). Rather than require companies to input this same data up to 20 times, we suggest that some aggregation of the models (with the same calculations) would reduce duplication.

**Q2.2. Do you have any comments on our proposed approach to producing risk ranges, including but not limited to:**

**a. Notional risk ranges for the efficient notional company prepared by Ofwat; and**

**b. Company-specific risk ranges produced by companies.**

It is important to clarify what the purpose of risk analysis is. It is to serve as a cross check to price control calibration (e.g. setting of pcls) as well as a cross check to returns and, in particular, the internal consistency of risk allocation and returns. As such, it should recognise the risks that a company faces (which will often be specific to them) based on its business characteristics

Ofwat's use of notionalisation to date has been to adjust gearing levels within the financial model to a single value across all companies, to allow for comparability and to set a single cost of capital. This proposal takes that approach much further, by effectively designing a theoretical company with gearing, performance and risk profiles all unconnected to the evidence provided in each company business plan that is specific to its size and characteristics. An alternative approach which does not factor in company specific risks could result in a mismatch between risk exposure implied by regulatory determinations and the cost of capital.

We do not believe that Ofwat should produce notionalised company risk ranges. Assuming the notional company achieves the price control benchmarks on service and efficiency calculations undermines any genuine attempt by Ofwat to discover the risks in the incentive regime as proposed. It effectively 'back solves' Ofwat's proposals by suggesting that there is no risk in them, whatever they are set at. This creates a fundamental disconnect between a key driver of systematic risk – how a regulator sets each determination – and estimation of returns.

Ofwat is not in a position to assess the forward-looking risks in company business plans. Indeed, the approach seems to be to use only historical data, which does not align with Ofwat's suggestion in the paper that companies face a more uncertain future (p2).

Instead, requiring companies to set out their own views of risk ranges for actual and notional gearing levels based on their business plan projections should be retained as a tried and tested approach for PR24. This approach is well understood by all parties, provides Ofwat with company evidence it would not otherwise see, and was not challenged by any party in the PR19 CMA redetermination.

**Section 3: Should we index the allowed return on equity, and if so, how ought this to be implemented?**

We agree with Ofwat's proposal not to index the cost of equity on the grounds of increased complexity, bill volatility and added uncertainty for investors.

In addition to these points, our response to the May 2021 consultation<sup>34</sup> stated:

*Ofwat (and CEPA) present the benefits of CoE indexation as principally around the removal of volatility in the setting of the Risk-Free Rate. In response we would observe that:*

- *Ofwat effectively took a spot rate for the RFR based on gilts, it was the taking of the spot rate that really increased the volatility in the process rather than volatility in gilts. Had Ofwat taken a longer period average or a weighted average of AAA bonds and gilts (as the CMA did) the volatility would have been much lower;*

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<sup>34</sup> Northumbrian Water consultation response: PR24 AND BEYOND: CREATING TOMORROW TOGETHER

## Northumbrian Water Risk & Return discussion paper response

- *In any event the volatility was still lower than the volatility observed on other parameters such as the beta estimates over the period, which Ofwat and CEPA are not proposing to index; and*
- *Whilst we agree that there is a financeability benefit to the matching of debt and equity, it is likely to be small in line with the impact of the RfR on the Cost of Equity and it could also have a negative impact on financeability or imply different levels of financial headroom on an ex-ante basis given the long term fixed embedded debt costs across the sector.*

We note that in the expected rising interest rate environment, absent either a forward rate adjustment or any 'aiming up' on the cost of equity, this will likely create an asymmetric in the package that would need to be addressed in some other way.

### Q3.1. How should we reflect the period affected by Covid-19 in our approach to estimating beta?

In setting the beta Ofwat proposes to focus on data from Severn Trent and United Utilities – we agree that this data is most relevant at this stage as Pennon has been a pure play water company for a limited period of time.

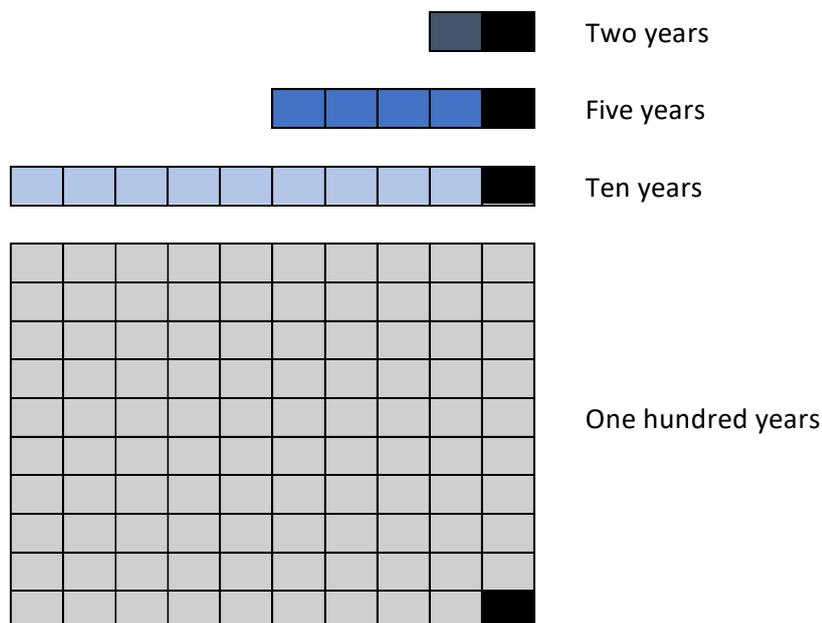
Ofwat has queried how the impact of the Covid period should be reflected in beta estimates. A pandemic is a very atypical event with the last one occurring around 100 years ago. The treatment of Covid should be such that it does not place undue weight on this period in the estimates, which are intended to reflect expected returns over long-run holding periods (10 – 20 years), consistent with the remaining parameters in the CAPM framework. Given that Ofwat is using beta estimating using averaging periods and estimation windows between 2 and 10 years, there is a risk that too much weight will be placed on the Covid pandemic period within that dataset without an adjustment.

At PR19 the CMA placed weight on both Covid-affected and unaffected data, although Covid-affected data was relatively limited. The CMA set out to place equal weight on both Covid-affected and unaffected estimates but further reduced the weight placed on the former by removing 'outliers' – which were all Covid-affected estimates – from its analysis.

*9.493 The inclusion of the 10 months from March 2020 to December 2020, covering the period of the COVID-19 pandemic, reduces the spot, 1-year and 2-year rolling average beta estimates materially in comparison with the various estimates to February 2020. Similarly, we observe that, for the period to December 2020, the spot, 1- and 2-year rolling average beta estimates were materially lower than the 5-year average. **While we consider that the pandemic represents a systematic event which should not be excluded from our estimates, we also recognise that this type of economic crisis is relatively rare and that it is likely to be over-weighted in our range of beta estimates, which cover the last 2-, 5- and 10-year periods. Therefore, we have placed less weight on the lower estimates from the dataset to December 2020.***

In our PR19 submissions to the CMA, we argued that the period should be excluded from the analysis entirely and continue to believe that for the 2020-21 period which was particularly volatile. We note that pandemic events are clearly very rare and atypical things. The last comparable pandemic (if any such thing exists) was the Spanish flu epidemic of 1918, over 100 years ago. In contrast to this period, if the beta is estimated 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.

Figure 4: Illustration of time periods between pandemics and the periods assessed in calculating the beta (with 1 year shaded)



Specifically we stated:

*In addition to the evidence previously presented by Professor Alan Gregory<sup>35</sup> which clearly shows that beta values are distorted during the Covid period, 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.***

*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...*

***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.*

Specifically, the report submitted by Professor Alan Gregory stated:

***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.***

<sup>35</sup> The Evolution of Beta through the Covid Crisis, AGRF Ltd, Alan Gregory, Richard Harris and Rajesh Tharyan, 18 January 2021

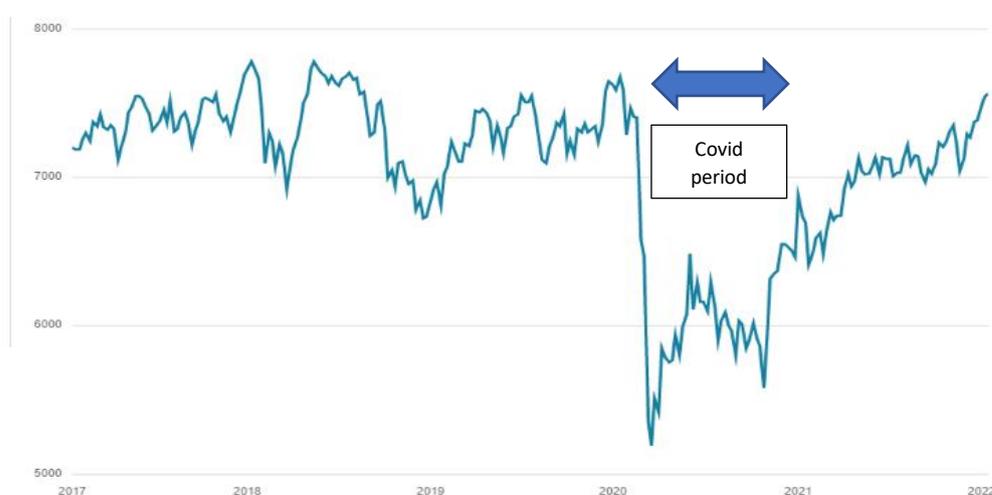
Nonetheless, as in our October paper, we take into account the CMA's position that a longer run estimate of beta may be informative. As we argued then, if, as the CMA seem to imply, structural breaks are to be ignored altogether, then that estimate should be based on a very long run estimate of beta, using all of the available data.<sup>36</sup>

At a minimum Ofwat should adopt the same approach as the CMA for this period.

We note that Ofwat will have listed company data from 2021 onwards that can be used to ensure that the most recent evidence is incorporated and so the exclusion of 2020-21 does not impair Ofwat's ability to use recent data.

We can see that the FTSE 100 Index 2017-2022 shows the extreme temporary volatility due to Covid over the 20/21 period.

**Figure 5: FTSE 100 share price index 2017-22**



Source: Morningstar

### **Q3.2. Noting the impact of gearing on betas discussed in the report by Professors Mason and Wright, how should we adapt our approach to specifying beta for a company at the notional gearing?**

Ofwat references the Mason and Wright (MW) report in considering the approach to de-levering and re-levering the beta. This approach is inconsistent with the Modigliani-Miller (MM) theorem. As we highlighted to the CMA (and the CMA reflected in its PR19 determinations) the approach taken in the NATS decision is flawed. We set out in further detail below why this approach is wrong and should not be undertaken. There is a common approach to undertaking these adjustments which has been followed across many regulatory determinations and this approach should continue to be adopted for PR24. This would also be a more consistent approach.

The dynamic observed by MW – that Ofwat's PR19 WACC increases by 15bps due to the difference in listed comparator and notional gearings – is not robust. It is materially driven by: (1) an incorrect application of the MM framework given the dynamics of the regulatory framework for pricing embedded debt costs; and (2) a failure to account for differences between CAPM-implied cost of debt and market-based cost of debt used in allowance setting. These factors have to be explicitly adjusted for to allow for an accurate assessment of how WACC behaves under different gearing assumptions

<sup>36</sup>The Evolution of Beta through the Covid Crisis, AGRF Ltd, Alan Gregory, Richard Harris and Rajesh Tharyan, 18 Jan 2021

and to test for invariance to gearing in line with MM. As MW have not performed their analysis on this basis, it is likely to materially overstate the impact of the effect MW seeks to estimate.

First, the MM test should be performed based on the cost of new debt alone as the theorem assumes that *“the firm borrows at the market rate of interest”*.<sup>37</sup> Both Ofwat<sup>38</sup> and MW have acknowledged that embedded debt is outside the MM framework. However, they have not performed the test on the basis of new debt only. Instead, MW calculate WACC using new debt only under PR19 and alternative approaches to de and re-levering but present the 15bps increase in WACC on the basis of total debt only. Where only the Ofwat estimate of the **cost of new debt** (and associated issuance and liquidity costs) is used in the analysis, the increase in WACC is 6bps rather than 15bps.

Second, the approach used by regulators to estimate WACC applies CAPM to derive the cost of equity whilst relying on market data for debt (rather than CAPM-implied cost of debt). The result of this partial application of CAPM – as referred to by MW – is that the difference between the CAPM-implied and the market-based cost of debt affects the behaviour of WACC under different gearing assumptions.

The UKRN study acknowledged this difference between CAPM-implied and market-based costs of debt is driven by debt premia. *“The “pure” CAPM-WACC [i.e., one that uses CAPM for both debt and equity] does not include the **observed premium element** in the cost of debt that is unexplained by the CAPM. As a result, it is typically lower than the CAPM(E)-WACC, that uses CAPM to estimate the cost of equity, but **uses bond yields to estimate the cost of debt** (although in practice for most of the time the two estimates have moved broadly in line).*<sup>39</sup>

MW have also acknowledged that CAPM is a poor model of debt returns. Whilst they propose an option based on the application of CAPM to both debt and equity, they do not attempt to strip out the impact of the distortion due to difference between CAPM and market-based costs of debt when measuring the impact of changes in gearing on the original PR19 FD WACC. However, when the assessment of how WACC behaves under different gearing assumptions is based on **CAPM cost of new debt**<sup>40</sup>, PR19 FD WACC does not vary with gearing.

The above suggests that perfect invariance with gearing is not possible in a regulatory setting due to differences between Ofwat’s methodology for estimation of debt costs, which results in a premium to the CAPM-cost of debt. Instead small deviations from the MM framework can be expected arising from pricing in efficient debt costs for water companies. As noted in the UKRN study *“we acknowledge that the **unexplained premium component of the cost of debt is a cost companies do face when issuing debt**”*.<sup>41</sup> The debt premium faced by companies reflects efficient costs for water companies and should be priced in.

By contrast the approaches proposed by MW which “force” cost of equity to be invariant to gearing introduce departures from the MM principles and introduce distortions. For example, MM Proposition II stipulates that an *increase* in leverage results in an *increase* in the expected returns on equity. This relationship holds where cost of debt is assumed to be constant and when cost of debt is assumed to increase due to higher default risk associated with increasing leverage.

The use of raw betas directly, for example, rather than de- and re-levering in line with standard corporate finance principles, introduces a departure from MM because results in adopting a beta for

<sup>37</sup> Modigliani, F. and Miller, M. H. (1958), ‘The Cost of Capital, Corporation Finance and the Theory of Investment’, The American Economic Review, 48:3, June, pp. 289, footnote 48.

<sup>38</sup> Ofwat (2020), ‘Reference of the PR19 final determinations: Risk and return – response to common issues in companies’ statements of case’, May, para. 3.81.

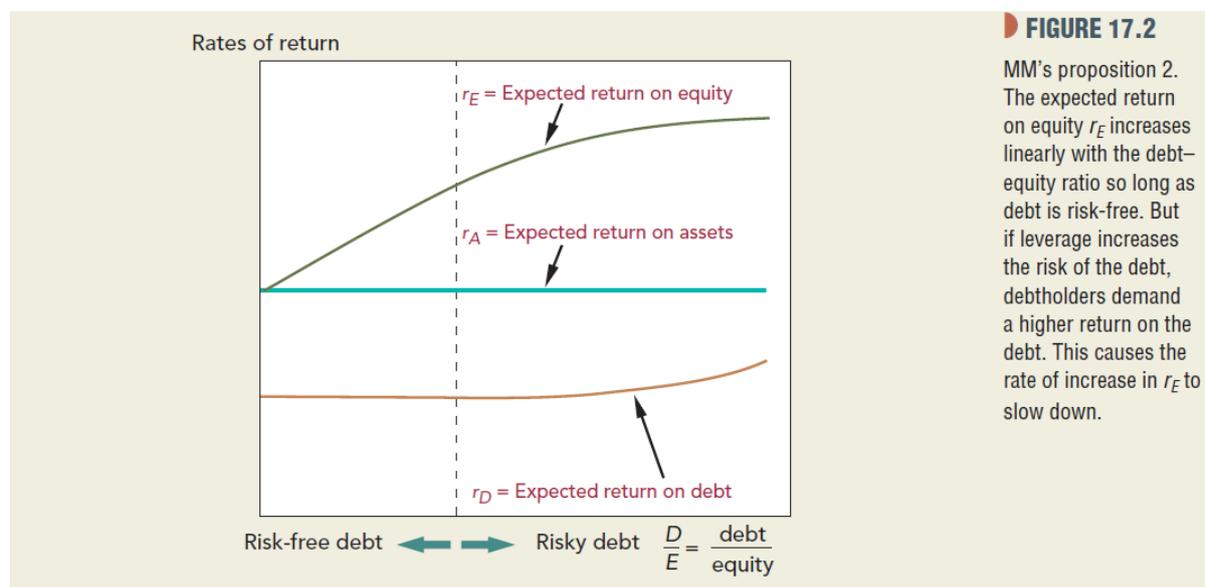
<sup>39</sup> Wright et al (2018). Estimating the cost of capital for implementation of price controls by UK Regulators, page 77

<sup>40</sup> The formula for CAPM-derived cost of debt is  $R_d = R_f + \beta_d \times (R_m - R_f)$

<sup>41</sup> Wright et al (2018). Estimating the cost of capital for implementation of price controls by UK Regulators, page 77

listed comparators with 54% gearing for a notional capital structure at 60% without recognising that higher leverage implies higher expected returns on equity in line with MM.

Figure 4: MM's proposition 2



Source: Brealey, Myers, Allen (2011), Principles of Corporate Finance, 10th edition, McGraw-Hill.

MW recognise that it may be acceptable to retain the existing approach if the effect on the WACC of the regearing procedure is relatively small. In this context the CMA at PR19 also noted that WACC increased with gearing in its model, but as the impact was relatively small and there was no evidence justifying an alternative level of notional gearing, it did not consider that any changes to the approach or notional gearing were required.<sup>42</sup> Furthermore, during the redetermination Ofwat suggested adopting the gearing of the listed water companies as the notional gearing for the purposes of estimating the allowed return<sup>43</sup> – an approach that the CMA did not adopt.

9.529 As a sense check to the debt beta that we have calculated using this range, we recalculate the appointee WACC using the observed 54.2% gearing used within our beta calculations as the notional level of gearing – thus removing the need to consider a debt beta. Using all component metrics at the midpoint of their range, we note that this produces an estimate of the appointee WACC that is only 4bps lower than the estimate using a debt beta at the middle of our range (with the middle of the range debt beta value being 0.075).

9.530 While this does suggest that WACC rises with gearing in our model, the impact is relatively small. In the absence of evidence justifying an alternative level of notional gearing, we believe that 60% notional gearing and 17% new debt match the reality of a notional company within this sector, and that these are the factors which should be considered in the WACC analysis and financeability assessment. **As such, we choose to retain 60% notional gearing and the de-gearing, re-gearing method of calculating the equity beta.**

We agree with the view set out by Phil Burns – one of the authors of the 2018 UKRN Cost of Equity Study – that the effect of the proposal to use raw betas directly (or set the notional gearing to the enterprise value gearing of listed comparators)<sup>44</sup> is that “the regulator’s estimate of the cost of equity becomes conditional on company-specific levels of gearing for those companies which are listed,

<sup>42</sup> CMA PR19 FD, 9.530

<sup>43</sup> Ibid. para. 9.505

<sup>44</sup> The outcome of both proposals is the same.

*which creates potentially significant endogeneity problems and increases scope for regulatory gaming. For companies that aren't listed, but where their beta is set by reference to comparator stocks, their allowed cost of equity is directly influenced by another company's capital structure... For those companies, their allowed cost of equity becomes essentially arbitrary*<sup>45</sup>. Direct reliance on raw betas will extrapolate company specific risk factors and company specific capital structures and leverage (rather than a stable and predictable notional capital structure) to the whole sector.

Lastly, we do not consider that the NATS precedent is directly relevant to water given that the difference between the observed gearing of listed comparators and the assumed notional level is significantly smaller in water (c. 6%) than for NATS (30%). We also note that, in addition to the issues discussed above, the use of understated CAPM parameters that are not consistent with finance theory – for example, an RFR based solely on ILDR rate which is not accessible to all market participants consistent with the requirements of CAPM – would have exacerbated the variance of WACC at different levels of gearing in NATS.

Whilst we do not agree that any amendments to the established approach in UK regulation are required – given that the premise of MW arguments is an accurate assessment of how WACC behaves under different gearing assumptions – we comment, at a high level, on the alternative proposals put forward by MW.

Figure 5: Comments on MW alternatives

MW Alternatives to de- and re-levering beta	Comments
<b>Set notional gearing equal to observed gearing</b>	As discussed in our response to Q5.1  Ofwat's proposals on gearing lack justification as they are not supported by robust evidence that the current structure is suboptimal, lack support from market evidence and contradict the CMA PR19 outcome. The CMA was clear that there was no evidence to move from notional gearing and the degree of variance in the WACC due to gearing did not justify such a change. Therefore, there is no robust basis for this proposed approach.
<b>Use the CAPM for both debt and equity</b>	The use of CAPM to price debt costs will result in an underestimation of efficient cost of debt for water companies. As MW themselves have recognised CAPM is a poor model of debt returns and omits premia which are priced by the market and is included in water company cost of debt.
<b>Use the raw equity beta</b>	As discussed above, this introduces a departure from MM because it results in adopting a beta for listed comparators with 54% gearing for a notional capital structure at 60%, without recognising that <i>higher</i> leverage implies <i>higher</i> expected returns on equity in line with MM. In addition – as noted by Phil Burns – the cost of equity becomes conditional on the gearing of listed companies, extrapolating company specific risk factors and company specific capital structures and leverage
<b>Assume that the WACC is constant</b>	As with the previous option.
<b>Departing from MM: explicit recognition of the U-shape in the WACC</b>	This approach departs from established corporate finance theory and long-standing regulatory practice, thereby undermining stability and predictability of the framework on the basis of the flawed analysis undertaken by MW which overstates the variance of WACC with gearing.

<sup>45</sup> Wright et al (2018). Estimating the cost of capital for implementation of price controls by UK Regulators

**Extract from PR19 CMA Redetermination NWL Reply to Ofwat Response to Statement of Case (8.6.20), Section 6.5, para 447:**

It is our view that the CMA's issues with the de-gearing/re-gearing formula were largely a function of it **not changing debt beta/Cost of Debt (CoD) when flexing gearing and using a very low RFR in the CoE**, rather than there having been an issue with the de-gearing/re-gearing formula itself. This is because:

- **debt costs vary with gearing:** The provisional analysis conducted by the CMA in NERL assumes flat costs of embedded and new debt (though with varying proportion of new debt). WACC estimates at different levels of gearing critically depend on the cost of debt schedule, as the cost of debt varies with gearing;
- **debt beta varies with gearing:** The CMA has not flexed debt beta, with changes in gearing. However, the theory suggests that as debt becomes more 'like equity' at high levels of gearing, the risk of that debt increases;
- **COE and CoD parameters ought to be consistent and set at MV:** The Modigliani-Miller theory stipulates how the premia on debt and equity change with gearing at a particular point in time, i.e. under a given set of market conditions, and that they are set at MV. The CMA's provisional analysis in NERL uses inconsistent assumptions on the underlying market parameters for CoE and CoD, e.g. for CoE it uses current RFR (and its view of TMR), combined with the cost of embedded debt. These are based on different assumptions about prevailing market conditions, e.g. RFR (e.g. using a long term RFR removes the implied WACC increase); and
- **vanilla vs post tax WACC needs to be accounted for:** Higher levels of gearing generate tax benefits and push post tax WACC down with gearing which the CMA does not take into account. The post-tax WACC is relevant for customers because the benefits of debt tax shields are passed on to customers.

In any event, **there is a stark contrast between the NERL case and the water sector**. NERL's starting RP3 gearing level was broadly in-line with the comparators used for estimating beta, whereas using the comparator's gearing of 56% in the water sector would result in the notional firm having a level of gearing that sits below the bottom of the range of gearing levels for the equity-owned companies. The notional gearing should bear some resemblance to the gearing of the sector, which is illustrated in the figure below. Indeed, even at 60% the notional gearing is still at the lower end of the levels of gearing across the sector.

Even if the CMA is minded to adopt a 56% (or 54% being the gearing over the same period as the beta estimation) level of notional gearing, then the ratio of embedded to new debt should increase proportionately as a result. As such, **the properly calibrated vanilla WACC would not change materially**.

Nonetheless, the notional gearing for financeability purposes and the gearing assumed in setting the allowed WACC should be consistent and realistic. We discuss the financeability implications of such a change in section 7.6.2 but in summary there would likely be costs of such a change for customers and the financeability benefits would be negligible because of the corresponding impact on the ratio of new to embedded debt - which would introduce an offsetting effect.

## Section 6.5

### Q3.3. How should we convert RPI-linked yields into their CPIH-linked equivalents when deriving a RFR point estimate?

We recognise that as we approach RPI reform in 2030 the implied RPI-CPIH wedge may change – as the definitions of the two indices will be aligned from this date.

Ofwat is proposing to infer a hypothetical market CPI-linked 20-year yield by: (1) interpreting the 20-year yield-to-maturity as a geometric average of RPI and CPI (post 2030) returns; (2) adjusting the pre-2030 years for the short-run wedge; and (3) recalculating the annual yield. This approach could be reasonable in principle as an ex-ante calculation.

We note that Ofwat could derive a time-varying RPI-CPIH wedge based on the comparison of the rates on zero coupon RPI and CPI inflation swaps. This data – which can be sourced from Bloomberg – would allow Ofwat to calculate the implied wedge over a 20Y investment horizon for each year of the price control.

However, we note that there remains material uncertainty around inflation pricing in the lead up to RPI Reform which will, absent indexation, impact the RFR estimate regardless of the exact methodology for adjusting for the ex-ante estimate of the wedge. Therefore, we suggest caution is applied to estimation of RFR and the wedge on an ex-ante basis to ensure that the chosen approach does not result in an understated RFR across AMP8.

### Q4.1. Do you agree with our proposed role for benchmark bond indices in cross-checking a cost of debt allowance based on a balance sheet approach?

We agree with the retention of the separation of the cost allowances for embedded and new debt. The calculations for the two values are necessarily separate and any attempt to merge them would reduce transparency for all stakeholders and increase complexity. This approach also maintains stability and predictability in the regulatory framework.

The paper does not address how an average cost of debt for the industry should be calculated. As noted by the CMA<sup>46</sup>, the calculation choice of simple or weighted average, mean or median and Wascos or Wascos & large Wocos all have an impact on the calculation. The CMA used a median approach based on Wascos and large Wocos.<sup>47</sup> It would be very helpful if Ofwat agreed this was best practice well in advance of the PR24 Determination.

The CMA took the approach of using the actual cost of debt for the industry and cross checking that against the IBoxx benchmark.<sup>48</sup> We agree with that approach with the proviso that the actual costs for the balance sheet approach are calculated using all data, including swaps.

#### Swaps should be included in the assessment of the cost of debt

The paper proposes to exclude swaps from the calculation of the notional cost of debt. However, section 5.3.2 and table 5.1 refers to measuring index-linked debt as a proportion of net debt **on a post swap basis**. It is not consistent to apply swaps for one debt component assumption and not for another.

In its PR19 Final Determination, the CMA included swaps in its calculation of the balance sheet actual costs:

*We undertook further analysis of actual costs, primarily based on adjustments to Ofwat's Annual Performance Report (APR) data rather than the balance sheet data that had been used in Ofwat's assessment of actual costs. **This analysis included all debt costs, including those 'non-pure' costs previously disputed in Ofwat's balance sheet approach, negating much (but not all) of the disagreement on the correct measurement of actual debt costs.***<sup>49</sup>

The discussion paper takes a partial extract from the CMA Cost of Debt Working paper on derivatives. We include the paragraph in full below. It shows that the CMA recognises that companies may have valid reasons to issue swaps alongside straight debt and that these may well be economically efficient.

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<sup>46</sup> CMA FD para 9.600

<sup>47</sup> CMA FD 9.610-9.611

<sup>48</sup> CMA FD para 9.791-9.792

<sup>49</sup> CMA FD para 9.552

176. In addition, the efficacy of this approach is predicated on being able to accurately measure ‘actual’ costs despite the difficulties in doing so, for example deciding how to treat derivative instruments. **The companies may reasonably expect that if issuing straight debt plus a swap instrument were economically equivalent but more flexible than issuing index-linked debt (at any particular moment) these two approaches should be treated equivalently in any assessment of actual costs.** We also note that Ofwat’s objections to having to assess and count such instruments would seem to match the CMA’s own concerns about a regulator’s ability to properly audit the many different types of potential derivative instruments – and accurately conduct such an assessment may not be in the customer interest in the round<sup>50</sup>

This working paper this is taken from was published before the Final Determination where the CMA confirmed that the gathering of evidence over the process gave them sufficient confidence to include all debt costs in their assessment:

*As discussed above in paragraph 9.624, the CMA’s consultation processes and the incremental evidence provided by the Main Parties has allowed us to build confidence in the accuracy of our actual costs estimates and, as a result, the appropriateness of actual costs as the underlying basis of our cost of embedded debt allowance. This was not possible in advance of our Provisional Findings.*<sup>51</sup>

By excluding swaps, even if they are economically efficient, Ofwat is excluding a component of debt issuance from its calculation. Ofwat’s grounds for doing so are:

*Swaps are not used to raise finance to support investment, but to reprofile cash flows.*

*Derivatives can be used to shift financing costs from one period to another and future derivative use is difficult to predict.*

*The differing approaches to the use of derivatives suggests that their use represents company-specific risk management decisions.*

We do not agree with these points. By excluding interest rate swaps, Ofwat are only including a partial debt transaction in the calculations. Excluding them means that the cash flows assumed in Ofwat’s financial modelling will not align to those that companies will experience.

#### **Q4.2. Given the persistent issuance discount of water company bonds against the iBoxx A/BBB index, how should this be reflected in our new debt allowance-setting?**

The CMA removed Ofwat’s adjustment for outperformance in the PR19 Final Determination<sup>52</sup>. The CMA’s grounds for doing so were:

*(a) Ofwat’s evidence on superior credit ratings is predominately focused on issuance in previous price controls. When focusing on new debt, most companies in the sector are now at or below the notional Baa1/BBB+ target, with only Dŵr Cymru having a rating superior to this. As such, we consider it significantly less likely that future issuance will have the same credit rating benefit as past issuance;*

*(b) With the completion of Brexit, it is unclear whether water companies will retain access to EIB-style debt on the same advantageous terms. At this stage, we would consider it more prudent not to assume that such debt is available until we see tangible evidence.*

*(c) While the inclusion of floating debt could have justified a material matching adjustment to the embedded debt allowance, this impact is largely negated by Ofwat’s new debt ‘true-up’ mechanism. Companies’ outturn allowance will reflect subsequent movements in the benchmark, and so will already incorporate prevailing market rates*

<sup>50</sup> CMA Cost of Debt Working paper, para 176

<sup>51</sup> CMA FD para 9.634

<sup>52</sup> CMA FD para 9.824

It is less than 12 months since the CMA concluded that an adjustment for outperformance of the index was unnecessary. Six company credit ratings have deteriorated since the Ofwat PR19 Determination<sup>53</sup>. We note Ofwat plan to keep the data under review and we agree that for PR24, a longer-term analysis will be required with consideration of the tenor and credit rating for each issuance.

**CMA conclusions on the cost of new debt: CMA Final Determinations for PR19**

*9.823 As discussed above in relation to embedded debt, we have concluded that there is insufficient evidence of like-for-like outperformance of water company debt versus the broader market. We note Ofwat's updated evidence of issuance since its PR19 final determination, and also Yorkshire's evidence on the potential inaccuracies in Ofwat's adjustments to account for differences in tenor and credit rating. In the round, we consider this sample size in Ofwat's later submission to be too small to draw statistically significant conclusions. If we instead focus on Ofwat and KPMG's larger studies of water debt issuance (see paragraph 9.750) we retain the conclusion that there is insufficient evidence of a material or sustained 'halo effect'.*

*9.824 By contrast, our assessment of embedded debt outperformance noted that superior credit ratings, lower tenor at issue and the inclusion of EIB and floating rate debt could all explain why realised costs could be lower than those suggested by an unadjusted bond-only benchmark. However, we do not think that it would be appropriate to apply Ofwat's 15bps outperformance wedge (or any other adjustment) to the cost of new debt for the following reason:*

*9.825 As a result, only the potential to issue at lower tenors than suggested by the benchmark would seem to justify any adjustment to the new debt allowance. We have not received evidence that this issue alone is material enough to justify any adjustment. As a result, and as per the approach at Provisional Findings and described in our consultation on the cost of debt, we do not adjust the benchmark estimate for anticipated outperformance.*

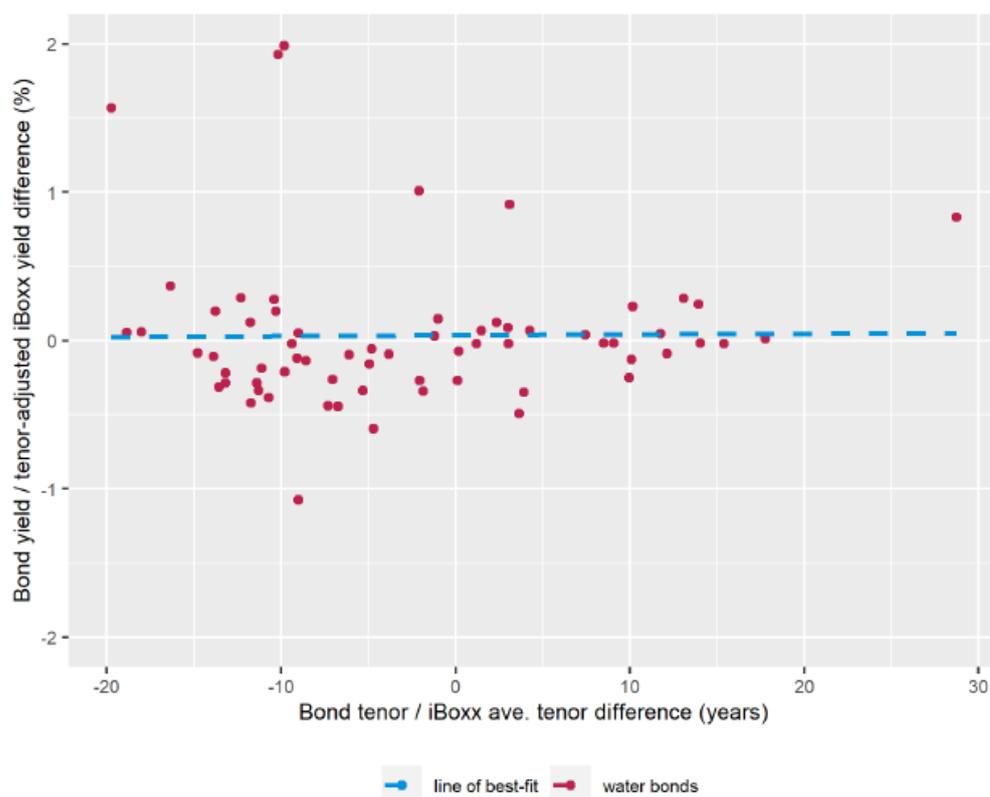
As part of our PR19 submissions, KPMG carried out a comparison of Water Bond Yields and iBoxx after controlling for credit and tenor<sup>54</sup>. It confirmed that, *when yields on water bonds are compared to the iBoxx benchmark for equivalent tenors and credit-ratings, there is no material systematic over- or underperformance.*<sup>55</sup>

<sup>53</sup> Ofwat Monitoring Financial Resilience report 2020, slide 4

<sup>54</sup> KPMG report for Northumbrian Water, Estimating the cost of capital for PR19, SoC416 in CMA submissions

<sup>55</sup> Ibid, para 5.5.7

**Figure 6:** Difference in water bond yields compared to the iBoxx controlling for credit and tenor<sup>165</sup>



Source: IHS Markit, Capital IQ, KPMG analysis

**Q4.3 Do you agree with our proposal to restrict company specific adjustments to reflect only factors due to small size, and to remove the benefits test?**

Whilst we are not directly involved, we agree that the benefits test was not appropriate for a decision relating to the cost of debt.

More generally we agree with the principle that regulation should take into account factors which the notional company cannot control, which includes size but also might include other characteristics specific to each company’s region and network.

**Q5.1. Do you agree with the framework we have set out for determining an appropriate notional structure and PR24 and beyond?**

**The framework as set out is subjective and requires more detailed principles to make it meaningful and predictable**

The assessment of the notional gearing rate should be based on clear principles and evidence. The paper sets out a framework for selecting the notional structure:

- *incentivises efficient financing choices given the balance of risk faced by the company;*
- *reflects the scale and nature of investment needs;*
- *takes account of a range of appropriate benchmarks and evidence; and*

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- allows the regulator to set a price control that is in the best interests of current and future customers.<sup>56</sup>

There are important criteria missing from this framework. For instance, criteria that require proper consideration include those which address the need for:

- consistency with the logical sequencing of financeability tests (i.e. the notional structure should not be set to solve for financeability issues). Rather a reasonable notional structure should be based on market evidence which serves as an input into the financeability test;
- internal consistency of the notional structure (i.e. if the proportion of index-linked debt is based on sector average then, for consistency, gearing should also be based on sector average);
- stability and predictability of regulation (i.e. the notional structure should be stable over time with a high hurdle applied for changes that must be based on market evidence);
- the notional structure to be realistic and based on market evidence if the financeability assessment is to be meaningful – e.g. if the reduction in gearing can only be justified using market evidence from enterprise value gearing for listed companies while relevant evidence from the rest of the sector is dismissed; and
- not making assumptions about reallocation of risks between capital providers without pricing those risks. Ofwat argues that the combined effects of a more uncertain future and revenue at risk from service performance may indicate a greater role for equity in order to provide a buffer against supply-side or demand-side shocks. Ofwat's approach does not change the overall risk exposure for the business but just reallocates it to equity whilst at the same time reducing equity returns further.

**The paper suggests that the water industry faces a more uncertain future. This implies that a higher cost of equity may be required to compensate for these risks:**

***Extract:** We propose a framework for considering notional gearing. We consider that there may be benefits to adopting a lower notional gearing level at PR24 and we are exploring this further. **The combined effects of a more uncertain future** (for example, driven by less predictable weather and the effects of climate change) and revenue at risk from service performance (including reviewing whether the PR19 gearing reduction was sufficient for this) may indicate a greater role for equity in order to provide a buffer against supply-side or demand-side shocks.<sup>57</sup>*

Ofwat thus suggests that the water industry faces a more uncertain future and heightened risk exposure under different states of the world, but in the same paper suggests that risk is reduced through uncertainty mechanisms: *These mechanisms reduce the risk of under-recovery of revenues because of unexpected developments*<sup>58</sup> (such as demand shocks).

Ofwat has provided no evidence that an equity buffer of 40% of RCV would be insufficient to provide a financial buffer against supply or demand side shocks. Industry Regulatory Capital Values at 31/3/21 of £77bn means there is a notional 40% industry equity buffer of over £30bn. This is over 250% of annual industry turnover of £12bn pa or covers three full years of industry investment (£10bn pa). There has never been a cost shock in water company history of that scale.

As noted in our response to the Financial Resilience discussion paper (Dec 2021), the water industry has had a good record in relation to absorbing supply or demand side shocks. There is no evidence to suggest that the notional company – based on PR19 CMA specification of the price control and risk allocation – is not resilient to risks. Where financeability constraints are identified under certain

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<sup>56</sup> p40 of the paper

<sup>57</sup> p2 of the paper

<sup>58</sup> p12 of the paper

scenarios this suggests in the first instance that re-calibration of the price control is required, rather than the notional capital structure.

### **Enterprise Value has no relevance to financeability**

We find Ofwat's reference to calculating gearing by using enterprise value unhelpful. Enterprise value is a concept applied for non-regulated companies where a Regulated Capital Value does not exist. The Rating Agencies, experts on assessing financial risks, do not use enterprise value to calculate gearing for the England and Wales regulatory regime:

**Moody's:** *For the utilities regulated under a RAB-based model where the RAB accurately represents the invested capital on which the water utility will earn a return over time, we measure leverage as Net Debt to RAB.*

*For water utilities that (1) are regulated under tariff models without a RAB; (2) are regulated under a RAB based model but where the RAB may not accurately represent the invested capital on which the water utility will earn a return over time (e.g. because of ex-post rate-setting); or (3) where the RAB may not be consistently available, we use Debt to Capitalisation as a measure of balance sheet leverage.<sup>59</sup>*

### **In setting an efficient capital structure, company and customers interests are aligned**

*Extract: In setting an appropriate capital structure, we need to take into account the interests of current and future customers. Whilst benchmark data may be useful in considering an appropriate notional structure, as noted above, company choices would be expected to focus on maximising the interests of companies and investors, whereas our choice of notional gearing needs to consider what is likely to be in the best interests of current and future customers.<sup>60</sup>*

We do not believe there is a contradiction between companies' choices and customer interests. The regulatory regime has always incentivised companies to minimise their cost of capital, which includes the choice of capital structure. This is the interests of customers, who benefit from the lower cost of capital in the longer term. In setting a notional gearing level far removed from the industry average, Ofwat is suggesting it 'knows better than the market' what an efficient capital structure is.

### **Q5.2. Do you agree the proportion of index-linked debt should be increased and what are your views on the composition of index-linked debt for PR24?**

There is an inconsistency between the Ofwat proposal to set the proportion of index linked debt using industry average data and setting the notional level of gearing with no reference to the industry average.

We agree that, for financial modelling notional company purposes, the proportion of index-linked debt could be increased to reflect the average industry proportion. We note that the proportions used in Table 5.1 include swaps, so using these would require Ofwat to include swaps in the assessment of cost of debt.

In assessing the cost of embedded debt in PR24, Ofwat should use the company balance sheet approach that includes index linked debt and swaps with a mix of RPI and CPIH linked debt<sup>61</sup>.

If, from 2030 onwards, the full RCV is CPIH based, then debt should also be CPIH-based to avoid mismatches between assets and liabilities. This is the approach adopted by Ofgem, with an allowance for costs of swapping RPI to CPIH linked debt.

### **Q6. Do you agree with our proposed framework to evaluate the transition to CPIH indexation, and our proposal to transition fully at the start of PR24?**

<sup>59</sup> Moody's Rating Methodology, Regulated Water Utilities, June 2018

<sup>60</sup> p45 of the paper

<sup>61</sup> PR24 AND BEYOND: NWL Consultation Response, Section 11.4

We could support full transition to CPIH if costs associated with hedging CPI/CPIH were priced appropriately and if the transition were applied consistently to both asset and liability sides (i.e. all debt were assumed to be CPI or CPIH linked). Otherwise, our preference would be for natural progression where index linked debt for the notional company is assumed to comprise of both RPI and CPI/CPIH.

As the proportion of RPI debt is materially higher in water relative to energy, the small uplift for managing basis risk provided by Ofgem and referred to by Ofwat is unlikely to be sufficient.

### **Q7.1. Do you agree that financeability is likely to be less constrained at PR24 than at PR19?**

We do not believe it is possible or even helpful to speculate on this at this stage. It is true that a full transition to CPIH will increase real returns (but reduce RCV growth), but these could be offset by an increase in the cost of new debt, for example. Ratings Agencies policies and thresholds could change, so this is an assumption that Ofwat should be cautious about making.

Financeability is closely linked to the cost of capital that is set, so any movement to lower returns as due to the proposals set out in this paper will require a consequential check on the impact on financeability.

It seems likely that the investment requirements will be at least as high in PR24<sup>62</sup>, placing strain on some financial ratios in the same way as PR19.

We also draw Ofwat's attention to the CMA's conclusions on financeability as a valuable cross check when setting the cost of capital:

*We therefore continue to assume that financeability should be a valuable cross-check when picking an appropriate point estimate from a calculated cost of capital range.*<sup>63</sup>

### **Q7.2. Do you agree that real RCV growth should be funded through a combination of debt and equity such that gearing of the notional company remains consistent with the notional gearing set at the start of the control period?**

We assume this question refers to Ofwat's assumptions in its notional financial modelling and has no further applicability to companies own financial structure decisions or sources of investment. Ofwat should not be prescribing how companies should finance themselves in practice.

If Ofwat wish to assume equity funding, it will need to satisfy itself that there are sufficient incentives for equity investors to do so. This has implications for the allowed cost of equity and for the costs of equity issuance.

We do not believe there is a need for Ofwat to keep notional gearing constant throughout the control period. Targeting this requires additional regulatory modelling intervention, for little gain. Ofwat should focus instead on the credit rating metrics such as ACICR and FFO/Debt over the period, and only intervene should they fall below targeted thresholds.

We agree that it is reasonable for Ofwat in its notional modelling to set dividend yields in relation to the proposed cost of equity.

Ofwat states:

*Where companies, or ourselves, identify a financeability constraint that is due to a shortfall in cash flows for reasons other than increases to notional gearing because of financing RCV growth, we may also consider the use of revenue advancement (for instance through PAYG and RCV run-off rates).*<sup>64</sup>

We note that the CMA rejected this approach in its Final Determination, stating:

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<sup>62</sup> E.g. New water resources under RAPID, climate change, net zero and river and bathing water quality pressures

<sup>63</sup> CMA FD para 9.1383

<sup>64</sup> Page 57, bottom para

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*In addition, our assessment of Ofwat's PAYG advancement and RCV run-off financeability adjustments suggests that they result in higher bills for current customers, without actually improving credit quality according to at least some of the credit rating agencies. It would seem inconsistent to adopt an approach that leads to customers paying more for their water while not providing the intended support to the financeability of the notionally-structured company<sup>65</sup>.*

**Northumbrian Water**

**February 2022**

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<sup>65</sup> CMA FD para 9.1379

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### Annex B: Comparison of Ofwat risk and reward discussion document with CMA PR19 Redeterminations

In Figure 8 below we summarise the CMA’s PR19 redetermination decisions on each of the cost of capital parameters, including the assumptions around the notional structure as well as the cross-checks that were applied to either individual parameters or the overall cost of capital allowance (column A). It then sets out directionally whether the changes made by the CMA generally increased the allowed return, reduced it, or left it at the same level (column B). It then describes the Ofwat approach as proposed in the recent risk and return discussion paper (column C). This column is coloured reflecting the extent of Ofwat’s alignment with the CMA’s decisions. Finally it sets out the impact Ofwat’s new proposals would have on the allowed return at PR24 (column D).

**Figure 8: Summary of CMA changes in water appeals versus Ofwat’s discussion document with indicative impacts**

Parameter	A. PR19 CMA Approach	B. Impact on allowed return compared to Ofwat PR19 approach	C. PR24 Ofwat Proposed Approach (red shading denotes inconsistency with CMA, green is consistent amber denotes uncertainty at this point)	D. Impact on allowed return compared to CMA approach
<b>Risk-Free Rate</b>	<ol style="list-style-type: none"> <li>1. Relied on the evidence from index-linked Gilts ('ILGs') and AAA rated corporate bonds to estimate RFR. It constructed a range for the RFR based on the yield on ILGs at the lower end and AAA rated corporate bonds at the upper end and selected the point estimate at the mid-point of this range. The CMA did not consider any adjustments to the AAA rate were required given its approach to selecting the point estimate.</li> <li>2. Adopted 6-month period for estimation</li> <li>3. Rejected the SONIA swap rate as a cross check on the basis that it is inherently a short-term rate and investors borrowing at SONIA would need to post collateral, making it unsuitable as a benchmark for long-run RFR</li> <li>4. Used an estimate of the long-term RPI-CPIH wedge to translate the RPI-linked Gilt yields into CPIH.</li> <li>5. Did not adjust for forward rates.</li> </ol>	↑	<ol style="list-style-type: none"> <li>1. Ofwat propose to rely on index-linked Gilts ('ILGs') as the sole proxy for RFR, dismissing the evidence from AAA-rated corporate debt bonds.</li> <li>2. Propose an averaging period of 'several' months.</li> <li>3. Propose to use SONIA rates as a cross check.</li> <li>4. The approach and evidence for the RPI-CPIH wedge is unclear at this stage given uncertainty around market pricing of the wedge ahead of RPI reform in 2030.</li> <li>5. Proposes to exclude forward rate adjustments.</li> </ol>	↓
<b>Total Market Return</b>	<ol style="list-style-type: none"> <li>1. Relied upon evidence from historical ex-post and the historical ex-ante approaches. The CMA concluded that limited weight should be placed on forward-looking evidence given reservations about the robustness of the forward-looking evidence and preference to maintain the assumption of a constant TMR over time.</li> </ol>	↑	<ol style="list-style-type: none"> <li>1. Ofwat has proposed to use a range derived from both the historical approaches (ex-post and ex-ante) as a starting point, while considering forward-looking evidence to select a point estimate in that range.</li> <li>2. Ofwat has proposed to estimate a CPIH-based TMR directly using CPIH back series currently being developed by ONS.</li> </ol>	↓

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	<p>2. The CMA placed weight on estimates calculated on the basis of both RPI and CPI inflation series (RPI figures adjusted by 30bps post 2010 owing to the formula effect).</p> <p>3. The CMA relied upon arithmetic means, namely both overlapping and non-overlapping estimators of returns over 10 and 20-year holding periods.</p>		<p>3. Ofwat has not discussed its approach to averaging.</p>	
<b>Beta</b>	<p>1. The CMA utilised United Utilities (UUW) and Severn Trent (STV) as proxies for beta.</p> <p>2. The CMA adopted an expansive approach estimating beta using a range of different time windows (2, 5, 10-year) and sampling frequencies (daily, weekly, monthly).</p>	→	<p>1. Ofwat intends to rely primarily on SVT and UUW data at this time.</p> <p>2. Ofwat has proposed to consider evidence from a range of estimation periods and frequencies to inform its best view of beta, although it is not clear to what extent Ofwat intends to follow the same approach as the CMA.</p>	→
<b>Treatment of Covid-affected data</b>	<p>The CMA set out to place equal weight on beta estimates from before and during the Covid-19 pandemic and applied an approach to testing outliers that further reduced the weight placed on Covid-affected data.</p>	→	<p>Ofwat has not signalled a proposed treatment of the data from the period affected by the pandemic and is seeking views on this.</p>	→
<b>Beta De and re-levering</b>	<p>The CMA applied the Harris-Pringle approach to derive the beta estimates for the notional company, de-levering raw betas from listed comparators using enterprise value gearing and re-levering to the notional gearing. It explicitly considered and rejected a similar approach to that proposed in the Mason and Wright paper that Ofwat references from the NATS redetermination.</p>	→	<p>Ofwat is considering alternative approaches to derive beta estimates for the notional company, including, setting the notional gearing equal to that of the listed comparators used for equity beta estimation. These changes would materially reduce the allowed return.</p>	↓
<b>Aiming Up</b>	<p>When setting the point estimate for the cost of equity, the CMA aimed up from the from the mid-point of the range by 25bp and emphasised the concept of aiming-up on the basis of:</p> <ul style="list-style-type: none"> <li>• the need to promote and retain investment;</li> <li>• asymmetry in the package (structural asymmetry commensurate with 0.1%-to 0.2% RORE resulting from the calibration of the performance package);</li> <li>• parameter uncertainty in the cost of equity; and</li> <li>• ensuring financeability.</li> </ul>	↑	<p>Ofwat intends to consider latest evidence on equity returns and wider implications of the PR24 package but has proposed not to 'aim up', as it considers:</p> <ul style="list-style-type: none"> <li>• that the PR24 package will not be designed in a way that requires an allowed return on equity above the midpoint;</li> <li>• asymmetry and investment incentives could be addressed at source; and</li> </ul>	↓

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			<ul style="list-style-type: none"> <li>financeability is best addressed by measures which are present value neutral in terms of customer bills – unlike aiming up on the allowed return.</li> </ul>	
<p><b>Embedded debt</b></p> <p>The CMA put weight on company specific evidence in setting the embedded cost of debt the ‘balance sheet approach’.</p> <p>They applied two cross-checks based on the iBoxx A/BBB index. The first used a 20 year trailing average which they adjusted for EIB and floating debt and the second used an index and a 15 year collapsing average.</p>	→	<p>Ofwat proposes to use the balance sheet approach to set the embedded debt costs. The methodology for setting the embedded cost of debt via the balance sheet approach is unclear.</p> <p>They propose to apply a cross check from relevant benchmark indices noting the CMA approach.</p>	→	
<p><b>Embedded debt- scope</b></p> <p>In its ‘balance sheet’ approach the CMA included swaps and subordinated debt.</p>	↑	<p>Ofwat is proposing to exclude swaps from its analysis of embedded debt as well as subordinated debt.</p>	↓	
<p><b>New debt</b></p> <p>CMA did not materially change Ofwat’s PR19 approach to indexing new debt. However, they removed the Ofwat proposed ‘outperformance wedge’.</p>	↑	<p>Ofwat provides similar analysis using new bond issuances since Jan 2020 which it states shows companies have issued debt with an average tenor of 18 years and with yields 55 basis points below the benchmark. It states that this implies that it should either amend the benchmark or apply an outperformance adjustment.</p>	↓	
<p><b>Customer benefits test</b></p> <p>CMA removed the ‘customer benefits test’ that Ofwat applied in the consideration of whether or not to allow adjustments to the allowed return (cost of equity or cost of debt) for specific companies, for example because the cost of raising finance for smaller companies is higher.</p>	↑	<p>Ofwat continues to propose to remove the customer benefits test.</p>	→	
<p><b>Notional gearing</b></p> <p>CMA used a 60% notional gearing assumption which it considered was appropriate and noted that this had already reduced from PR14. It made no other changes to PR19 notional company.</p>		<p>Ofwat is proposing to reduce the notional gearing assumption from the current level of 55%.</p>		
<p><b>Cross checks</b></p> <p><b>Financeability</b></p> <p>The CMA concluded that the overall determination, in the round, needs to include a consideration of whether the WACC assumptions chosen are consistent with the credit rating assumed throughout the determination. The CMA</p>	↑	<p>Ofwat is clear that it does not see the financeability assessment as a test for whether an individual component of the price control package, such as the allowed return (or the components of it), is reasonable.</p>	↓	

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	therefore applied financeability as a binding cross-check on the calibration of the price control.			
<b>Cross checks</b> <b>Alternative</b>	<p>The CMA rejected the use of MAR as a cross check, noting the difficulty of correctly interpreting MAR data, particularly in determining the suitability of a relatively minor adjustment.</p> <p>The CMA further noted the challenge of interpreting broker forecasts of the cost of equity in relation to utility companies. It highlights that such estimates may be no more accurate than its own and can be tailored to the needs of specific investors.</p>	↑	<p>Ofwat intends to make use of MARs analysis, noting that this approach is widely used by equity analysts to infer investor discount rates.</p> <p>Ofwat further notes that it intends to make use of broker forecasts/analyst reports as a cross check.</p>	↓