Water UK

Water UK response to UKRN consultation on guidance for regulators on the methodology for setting the cost of capital

16 November 2022

www.water.org.uk

Summary

Water UK is the representative body and policy organisation for water and wastewater service providers across the UK. We welcome the opportunity to respond to the UK Regulators Network (UKRN) draft guidance to regulators on the cost of capital; this response represents the considered and consolidated views of our members.

We entirely support the BEIS Secretary of State's (SoS) attempts to provide greater regulatory certainty to support growth and the UKRN's work in this important area. Given the future investment requirements of the water sector stability and predictability in the regulatory framework is more important than ever.

However, we are disappointed with the draft guidance and believe that more could be done to better meet the request made by the Secretary of State (SoS) to provide greater long-term certainty to support growth and deliver the key objectives of supporting resilience and improving the environment for the benefit of customers. **In particular:**

- **the guidance is too flexible** and covers too few regulators to provide the long-term certainty that the SoS was perhaps seeking;
- **very limited evidence is provided to support the guidance and the perspective of the Competition and Markets Authority (CMA) is unclear**, which also materially weakens the extent to which it can be relied upon to drive alignment across regulators; and
- **whilst we support many of the recommendations, we do not support all of the methodologies and approaches put forward in the guidance** which, taken together, we consider could have a significant negative impact on customers and the environment by not supporting the investment that we need now and in the future.

Overall, we question whether the draft guidance meets the spirit of the request made by the Secretary of State. In particular, **we do not see the guidance having any significant effect on encouraging regulators to adopt a consistent approach beyond anything that they were already doing**. It will not stop regulators from eroding the allowed return through opportunistic methodological changes. To better achieve its stated purpose, we suggest that the following changes would be required:

1. **The guidance should be changed to better reflect the recent CMA decisions in relation to the PR19 water redeterminations**. These decisions reflect a 'de novo' appeal mechanism in which the CMA thought deeply about the best or 'right' approach to setting the allowed return rather than one that was simply 'not wrong' in the recent energy sector appeals. Moreover, that precedent also represents the longest and most detailed consideration of these matters since privatisation.

2. **Whilst we recognise that the Civil Aviation Authority (CAA) and the Utility Regulator of Northern Ireland (UREGNI) have had some involvement in the guidance, it is not clear to what extent they are party to it. The guidance should be extended at least to formally cover the CAA, UREGNI and the Office of Rail and Road (ORR).** This broader list of economic regulators represent the 'core' economic regulators as set out in the UKRN's own 'investor guide'[1] who are regulating private investment and would better meet the spirit of the SoS request for consistency in setting the allowed return. It would also be likely to provide some of the challenge and debate that is inevitably expected in seeking to reach a consistent approach and viewpoint across regulators on common topics.

3. **Whilst we recognise that the CMA is not part of UKRN, the CMA should either formally endorse the guidance and become a party that follows the guidance, or set out its own views on the appropriate methodology to drive consistency.** There is a tension between this and the panel structure of CMA appeals but the CMA is no more or less independent than the sector regulators. Without this history and practice will lead companies to consider that the CMA will be likely to reject elements of the guidance in the future, as they have done for similar recent UKRN papers in recent regulatory appeals.

If the above changes are made then the guidance could provide a helpful and enduring arrangement, providing long-term certainty of a reasonable and fair return for investors. This would best support the substantial long-term investment requirements that these sectors have as set out in the original National Infrastructure Commission (NIC) report and the economic growth that investment would deliver.

Clearly additional investment is likely to increase customer bills which represents a significant challenge in the current economic context. We therefore also welcome the UKRN's recent work on practical steps to help customers in the cost of living crisis[2]. The water sector offers a wide range of support to customers who struggle to pay their bills and we welcomes the UKRN proposals in this area. Water UK recently undertook a significant study into water poverty[3] to inform ongoing work by the Government which is seeking to introduce a single social tariff across the industry to support customers struggling to pay their bills. In the remainder of this response, we provide responses to the specific consultation questions and then provide our full response to the consultation.

Q1) Do you agree with the proposed recommendations?

We support:

- The continued use of the notional company (recommendation 1); and
- The use of the capital asset pricing model (CAPM) as the primary approach for estimating the cost of equity (recommendation 2).

We propose changes to:

- The setting of the RFR solely using index-linked gilts (recommendation 3). This is inconsistent with the PR19 CMA precedent and ignores the convenience premia that exists.
- The recommendation as drafted that the equity risk premium (ERP) should be calculated as the difference between the total market return (TMR) and the risk-free rate (RFR) within the CAPM and that the TMR should be based on historical ex-post and ex ante evidence (recommendation 4). Within the discussion of these issues the guidance, whilst acknowledging the problems with both historical inflation series, suggests that greater weight should be placed on the historical

[1] See: https://ukrn.org.uk/app/uploads/2018/06/Investor-guide.pdf
[2] See: https://ukrn.org.uk/publications/cross-sector-work-on-the-cost-of-living-crisis-ukrn-announcement/
[3] See: https://www.water.org.uk/publication/water-poverty-analysis/

CPI(H) series. We consider, as both the CMA and the ONS have, that there are issues with both series and a weighted average would be most appropriate.

- The use of comparable listed companies and standard regression techniques in (i.e. ordinary least squares) to estimate the equity beta including the need to de-lever and re-lever the beta under the Harris-Pringle approach (recommendation 5). This recommendation could be clarified by adding 'using the established Harris-Pringle approach' at the end but we also disagree with the conclusions in relation to the treatment of the Covid pandemic period. This is also inconsistent with both the CMA PR19 and CAA H7 decisions.
- The recommendations that the mid-point of the range should be used as the central estimate for the CAPM cost of equity (recommendation 6) and the recommendation with regard to cross-checks (recommendation 7) appear overlapping and somewhat duplicative; it may be sensible to combine them. In the recent PR19 redeterminations by the CMA they 'aimed up' on the allowed cost of equity by 25bps. There were several reasons given for this and the arguments are fair and well-founded particularly in the current context of the water sector where from 2025 the sector is expecting to see a material uplift in their investment requirements. We similarly do not agree with the guidance that the Market-to-Asset-Ratio (MAR) is 'the primary example of a market cross-check that is important in regulated sectors' the CMA was definitive in the PR19 redeterminations in dismissing this evidence and suggesting that no weight that should be placed on such cross-checks preferring instead to focus on financeability analysis. We have recently completed further work on other cross-checks that could be applied including the potential use of Multi-Factor Models (MFM), these models are effectively an alternative to the CAPM. They are widely used in other financial contexts and have the clear of advantage of considering a wider range of factors than the CAPM, which is a single factor model.
- The recommendation that regulators should estimate an allowance for an efficient company under a notional financing structure with actual debt costs suitably benchmarked against other market evidence (recommendation 8). Effectively using a 'balance sheet' approach for a sector like water where there are multiple regulated companies. This is consistent with what the CMA did in the PR19 redeterminations. However, the recommendation is not terribly helpful in providing certainty about how the cost of debt will be set since there are so many factors to consider in how the allowances will be calculated that are not covered in the guidance. The guidance needs to either focus on the cost of equity alone or say more about the calculation of the cost of debt.
- The recommendation that the notional gearing assumption should reflect the balance of risks facing the regulated company and a wide range of benchmarks (recommendation 9). However, we continue to consider that the greatest weight should be placed on the companies in the relevant sector particularly where that sector contains a range of companies. These companies are most likely to reflect the efficient capital structure for the sector in question.

We expand on these points later this response and provide substantial additional evidence to support those conclusions through a variety of external reports which are referenced and available online.

Q2) Do you have any views on how this guidance could evolve over time, including views on potential issues for further investigation?

The guidance should set out more explicitly the timescales over which it would apply and this should reflect the long-term certainty it is designed to achieve based on the investment horizon of the sectors it covers. This suggests that it should span more than a single control period at a minimum and in practice we suggest that it should be reviewed every 6-10 years[4].

[4] This is less than the investment horizon set out in the guidance document (see page 16 of UKRN guidance document) but represents a pragmatic approach

A major area that we consider would benefit from further investigation is the area of cross-checks. The guidance suggests that the MAR is the 'primary' cross-check on the allowed return. This and other market-based evidence such as broker reports and valuations was robustly rejected by the CMA in the PR19 redetermination. At the same time, we consider that there is much more scope to examine the role of MFMs as reasonable cross checks to the allowed return and would encourage greater investigation into those approaches.

Our response to the consultation

Water UK is the representative body and policy organisation for water and wastewater service providers across the UK. We welcome the opportunity to respond to the UK Regulators Network (UKRN) draft guidance to regulators on the cost of capital; this response represents the considered and consolidated views of our members.

Overall, whilst we support several of the recommendations, we are disappointed with the draft guidance and believe that more could be done to better meet the request made by the BEIS Secretary of State (SoS) to provide greater long-term certainty to support growth and deliver the key sector objectives of supporting resilience and improving the environment for the benefit of customers.

The guidance is far too flexible to provide the long-term certainty that the SoS was clearly requesting in their letter earlier this year.

The guidance states that:

'This guidance would not be binding and each regulator would continue to make decisions in accordance with its own statutory duties. Nothing in the guidance overrides relevant legislation or the principles of regulatory independence. However, the expectation is that the regulators named above would commit to having regard to this guidance in their future price control decisions where this is permitted by their statutory duties and deviate only where they consider there are good reasons to depart from it. We recognise that the development and publication of this document is at a time when some regulators have made or are in the process of making draft or final price control decisions. The approach to making those decisions will have been subject to appropriate consultation and careful consideration and we therefore do not expect the recommendations in this draft guidance to be adopted for those decisions. Nothing in this document should be taken as suggesting that any regulator should change its approach to such decisions' UKRN, 2022, pp3-4

The guidance is therefore clear that regulators must 'have regard' to the guidance but can choose to do something else 'where they consider there are good reasons to depart from it'. A 'good' reason is not defined and effectively could be any reason that they come up with. This makes it very easy indeed for the regulators to adopt completely different approaches.

In this context it is instructive that some regulators are indeed taking materially approaches from those set out in the guidance, for example both the Civil Aviation Authority (CAA) and the Utility Regulator for Northern Ireland (UREGNI)[5] have adopted entirely different approaches to several parameters. In the table below we summarise those differences which are significant for the CAA H7 Final Proposals, which were published in June of this year. In the recent UREGNI decision they also take a different approach to calculating the risk-free rate.

[5] See: https://www.uregni.gov.uk/publications/gas-distribution-price-control-gd23-final-determination-annexes

Table 1: Parameter comparison between UKRN recommendations and the CAA H7 approaches

UKRN recommendation	CAA H7 Position (Final proposals)	Are they consistent?
1. Notional company- Regulators should continue to estimate the allowed rate of return in price controls based on the weighted average cost of capital for a notionally finance firm within their sector.	Proposes a WACC for Heathrow based on a notional gearing of 60%	Yes
2. CAPM: Regulators should continue to use the CAPM as their primary approach for estimating the cost of equity	Allowed WACC set using the CAPM	Yes
3. Risk-free rate: regulators should use recent yields on the index-linked gilts, with a maturity which matches the assumed investment horizon for their sector.	Set the risk free rate by placing equal weight on the one-month trailing average yield on ILGs to 31st March 2022 and the one-month trailing average yield on ILGs over the same period plus a convenience yield of 32bps, using AAA bonds.	No
4. Equity risk premium: Regulators should estimate the ERP within the CAPM as the difference between the TMR and the RFR. We recommend that the TMR should be primarily based on historical ex post and historical ex ante evidence. The guidance notes that both arithmetic and geometric plus uplift approaches to averaging are acceptable, while recognising that there remains a role for judgment in interpreting the data and deriving a range for the historical ex post evidence.	Adopts the midpoint of the CMA's PR19 range. That assessment (1) took a balanced view of both historical RPI and CPI inflation data rather than focussing on the CPI series as the UKRN paper suggests and (2) relied upon both overlapping and non-overlapping arithmetic averages.	No
5. Equity Beta: Regulators should estimate the equity beta for the notional company using comparable listed companies and standard regression techniques (OLS). Where the listed comparator has different gearing to the notional company, regulators should continue to de-lever and re-lever the raw equity beta. The guidance leaves the door open for regulators to strictly enforce the invariance of the forward-looking WACC to gearing.	Adopts an approach looking at comparable listed companies, uses OLS and levers and de-levers using the Harris Pringle Method. Notes that this approach is 'consistent with the CMA at PR19'. The CAA does not enforce invariance of WACC with gearing. It uses different debt beta assumptions for de- and re-levering on the basis of gearing differences between Heathrow and comparators. The resulting debt beta assumptions are significantly lower than proposed by Ofwat for PR24 to enforce strict invariance to gearing.	No
6. CAPM point estimate: The RFR, TMR and (re-levered) equity Beta assumptions should be combined using the CAPM to produce a cost of equity range. The mid-point of the range should be used as the central estimate for the CAPM cost of equity.	Adopts a point estimate at the mid-point of the range.	Yes
7. Cross-checks: Regulators should only deviate from the mid-point of the CAPM cost of equity range if there are strong reasons to do so.	Explicitly considers the case for a) welfare effects and investment, b) asymmetry in WACC assumptions, c) asymmetry in the overall price control settlement, d) market benchmarks (MAR) and e) financeability. Rejects use of MAR as it is difficult to draw meaningful conclusions from this evidence.	No

8. Cost of debt: Regulators should estimate an allowance for an efficient company under the notional financial structure, with actual debt costs suitably benchmarked against other market evidence.	Principally uses and iBoxx index to benchmark debt but with a balance-sheet cross-check.	Yes
9. Gearing: The notional gearing assumption should reflect the balance of risks facing the regulated company and a wide range of benchmarks on gearing levels, not just that of the actual company (or companies) in question.	Assumes notional gearing of 60% using a range of information not just the companies in question.	Yes

Source: Water UK analysis of UKRN guidance and CAA H7 Final Proposals, see: https://publicapps.caa.co.uk/docs/33/CAP2365D%20H7%20Proposals%20Section%203-kb.pdf

The guidance overplays the differences across UK regulated infrastructure sectors and in doing so underrepresents the scope for consistency and alignment of decisions. Whilst the sectors do have differences between them, they have similar economic characteristics that drive the need for independent economic regulation, including for example high fixed network costs and essential service characteristics.

It is also noteworthy that whilst regulators' duties do vary there is also substantial consistency, for instance they all focus on the protection of customers or service users and they all seek to ensure the delivery of the essential service and the financeability of the investment[6]. We consider that the similarities actually provide a much stronger basis upon which to improve consistency than is implied by the guidance. Moreover, investors in UK infrastructure frequently invest across multiple regulated sectors suggesting a more common asset class. There are much stronger arguments for consistency than divergence and the guidance could have gone much further and therefore represents a missed opportunity.

Very limited evidence is provided to support the guidance and the perspective of the Competition and Markets Authority (CMA) is unclear, which also materially weakens the extent to which it can be relied upon to drive alignment.

The document is refreshingly brief for something considering the technical detail of setting the allowed return for regulated utilities. But this brevity also means that the evidence base to support its conclusions is limited. Instead, the document is presented as a narrative of recent regulatory appeals and redeterminations and areas of consistency or inconsistency in those decisions. No real evidence is presented to support the final proposals set out in the guidance and in some areas, whilst we find the presentation of the past decisions fair the interpretation of those decisions to arrive at the core recommendations of the guidance is too brief and one-sided.

In particular, those judgements support entirely the arguments of Ofwat and Ofgem even where the considered redeterminations of the CMA do not. Surprisingly, the guidance would require not a single deviation from Ofwat's previous plans for setting allowed returns, for example, and there is no evidence at all of concessions being reached even across this small group.

They also report the CMA redetermination decisions by giving equal weight to the decisions from both the water and energy redeterminations even though the former represents a full 'de novo' appeal where the CMA has sought to find the 'best' approach to setting the allowed return and the latter represents a blunter cross check that the level of the allowed return is within a wide range of plausible outcomes that would not reasonably constitute 'an error'.

In simple terms the former approach sought, through detailed and very rigorous analysis, challenge and debate to find the 'best' methodologies and the latter just sought to check that the approach taken by regulators was 'not wrong'. The former is quite obviously the more appropriate approach for enduring guidance. We are disappointed that the UKRN has chosen to reject almost all of the CMA's decisions from what was the longest and most considered water price review redetermination ever undertaken. Instead, the UKRN should be setting itself a high bar from deviating from those decisions. Interestingly, we note

[6] Some of these similarities and differences are described, for example, in the UKRN investor guide, https://ukrn.org.uk/app/uploads/2018/06/Investor-guide.pdf

that most of those decisions *are* reflected in the approach taken by the CAA in relation to the recent H7 control.

Parliament set out a legal framework for water companies and their investors at privatisation that allows companies the opportunity to seek a full 'de novo' redetermination in extreme circumstances. Up until PR19 that framework was rarely triggered, and the regulatory model enjoyed a significant degree of stability and predictability[7].

Where companies do seek a CMA appeal both sides have a responsibility to accept the decisions and the precedent it sets; otherwise, the same issues are returned to the CMA on multiple occasions damaging confidence in the checks and balances in the regulatory system. Indeed, this is likely to be part of the basis for the SoS's request earlier this year.

Reading the guidance, on the face of it UKRN appears to have accepted very few of the CMA decisions and only those that would reduce companies' allowed returns, rejecting any that would increase them. As can be seen in Table 2 below and is consistent with the approach taken by Ofwat.

Table 2: Comparative assessment of UKRN guidance with the PR19 CMA appeal decisions

CAPM parameter	Was it changed by CMA @ PR19?	Indicative impact of CMA change on allowed return	Is UKRN's guidance for PR24 consistent with CMA?	Indicative impact of UKRN guidance on allowed return
Cost of Equity				
Risk Free Rate	Yes	Upward	No	Downward
Total Market Return	Yes	Upward	No	Downward
Beta	Yes*	N/A	No**	Downward***
Aiming-up	Yes	Upward	No	Downward
Cost of Debt				
Embedded debt	Yes	Flat	No****	Flat
New debt	Yes	Upward	Somewhat*****	Downward
Notional gearing	No	N/A	Somewhat******	Flat/Downward
Cross-checks	Yes	Upward	No	Downward

Source: Water UK analysis of CMA final decision versus UKRN guidance

*Whilst the beta value determined by the CMA at PR19 was not materially different to that in Ofwat's FD, the CMA's decision established important principles for the treatment of such events. Based on its approach to use two cut off dates, exclude outliers and place more limited weight on Covid-affected data, only c. 3.7% of the data used by the CMA to derive PR19 beta estimates may have been Covid-affected. In the context of a 20-year investment horizon employed by the CMA, this corresponds to an assumption that a pandemic of a similar scale as experienced during the first ten months of Covid19 would occur during c 0.74 years out of 20. Ofwat's proposed approach for PR24, which the consultation effectively endorses, implies a much greater weight on Covid-affected data.

** The treatment of Covid and significant structural breaks more generally is left up to the sector regulator's judgment which, in case of the proposed methodology for PR24, is likely to imply significantly greater weight attached to one-off events such as the pandemic and the Russia-Ukraine war than under the CMA's PR19 approach. The proposed approach for "*regulators sense-check the combination of their asset beta, debt beta and gearing, and specifically, investigate the relationship between the forward-looking cost of capital and gearing*" may imply.

*** Whilst the consultation recommends the retention of the Harris-Pringle approach to de- and re-levering beta, it also recommends regulators sense-check the combination of their asset beta, debt beta and gearing, and specifically, investigate the relationship between the forward-looking cost of capital and gearing. This recommendation leaves the door open for regulators to introduce changes in debt beta or notional gearing to strictly enforce the invariance of the forward-looking WACC to gearing (as Ofwat has proposed for PR24). The CMA considered this issue at PR19 and concluded that the variance of the WACC with gearing was relatively immaterial and did not require any amendments.

[7] This stability and predictability was, for example, recognised by the independent rating agency Moody's in its assessment of the Water regulation model for England and Wales but this was adjusted in 2018, Moody's, 28 May 2018, *Regulator's proposals undermine the stability and predictability of the regime*

**** The consultation omits the fact that the CMA's PR19 allowance for embedded debt included derivative costs and junior debt. Similarly, the allowance for GD&T2 cost of debt included sufficient headroom to cover the derivative costs of the sector which CMA commented on during the appeal. The guidance leaves full discretion in terms of how the cost of debt would be calculated under the balance sheet approach, for example, on the averaging approach.
***** The consultation does not overtly recommend the application of the outperformance wedge on new debt but leaves the door open for said adjustment despite the finding from the PR19 appeal that it is not justified.
****** The CMA did not set out a holistic framework for considering the appropriate level of gearing for PR19. Its consideration of gearing focused on the impact on beta, the gearing outperformance sharing mechanism and financeability, rather than the notional level of gearing itself. However, the CMA did conclude that changes in notional gearing were not an effective financeability remedy and that changes in notional gearing to address variance of WACC with gearing were not required.

We also understand that the guidance would not apply to the CMA. For both investors and regulators to have confidence in the guidance it needs to be seen as firm and enduring. The position of the CMA is critical because in the event of a dispute between companies and the sector regulator, those appeals would be heard by the CMA. Whilst it is helpful to hear that the CMA have been engaged in the process the status of the guidance for them is unclear and we assume that it will not apply. If this is the case then neither the sector regulators nor companies can have much confidence in the guidance because it will be unclear how the CMA would consider these questions in an appeal where they would not be bound by the guidance.

In this context we note that a similar exercise was undertaken by the UKRN on the cost of equity in 2018[8]. The exercise, which was a much deeper and more rigorous consideration of these issues came up with slightly different conclusions to the new UKRN paper and was not consistently applied by either sector regulators or the CMA in the redeterminations that followed the NATS, PR19 and RIIO2 final determinations. Put simply the CMA didn't feel obliged to follow the UKRN's work before so why should anyone expect them to now? Whilst we acknowledge that the status of the CMA is perhaps elevated by its role in appeals, and that it adopts a panel structure, it is no more or less independent than the sectoral regulators. If they can sign-up to common guidance, then it is not obvious why the CMA could not.

We consider that the proposals set out in the document will not provide long-term certainty and could have a significant negative impact on customers and the environment

We were pleased to see the letter from the Secretary of State to encourage consistency in the setting of the cost of capital parameters earlier this year[9]. That letter was clearly and squarely focussed on supporting economic growth and attracting inward investment by providing enduring certainty to investors around how the allowed return is set. This is particularly important in regulated utility sectors like the water sector where the investment horizon is around 20 years, some of the assets have lives of more than 100 years and where there is a huge forward-looking requirement for new capital. In this context recent price resets in the sector and precedent from the Competition and Markets Authority (CMA) demonstrates an indefensible amount of uncertainty, change and inconsistency over time in how the allowed return is set.

In Figure 1 we show the evolution of the allowed cost of equity from the 2014 Price Review (PR14) through the 2019 Price Review (PR19) the subsequent appeals to that determination by the CMA and the implied Cost of Equity (CoE) for the 2024 Price Review (PR24). In the chart we can see:

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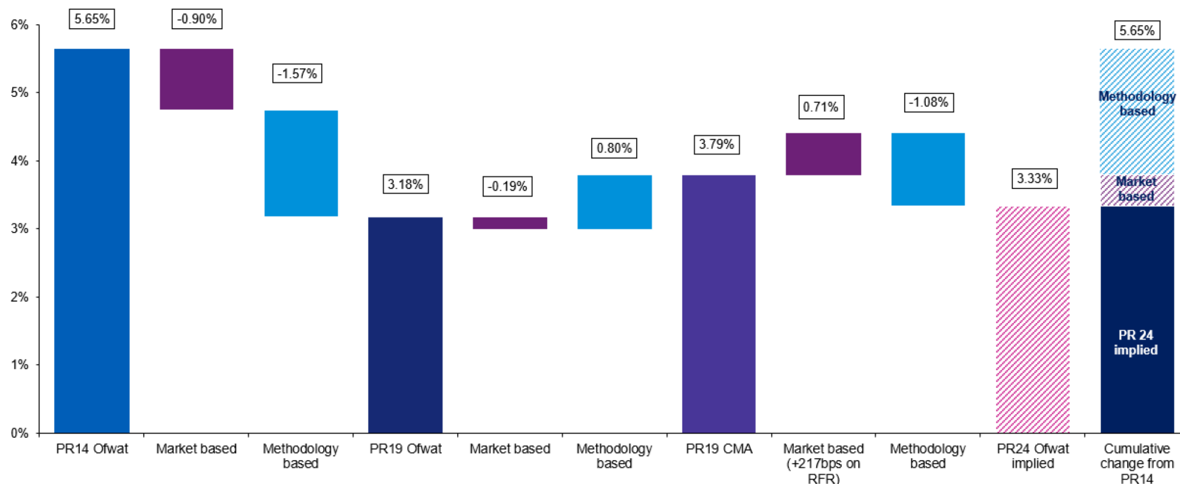
[8] See: https://ukrn.org.uk/app/uploads/2018/06/2018-CoE-Study.pdf
[9] See: https://www.gov.uk/government/speeches/strategic-priorities-and-cross-sectoral-opportunities-for-the-utilities-sectors-open-letter-to-regulators

- There has been substantial volatility and change to the allowed cost of equity across the last three price control resets (looking ahead to PR24 based on Ofwat's current proposals). In RPI terms the CoE has fallen by 247bps between PR14 and PR19, then risen by 61bps at the CMA redetermination and is then falling again by perhaps 46bps for PR24[10]. The 46bps reduction relative to the CMA PR19 is largely as a result of the offsetting increase in market rates – based solely on methodological changes, the decrease would be closer to 110bps. This level of volatility is not consistent with stable and predictable regulation.
- Whilst the allowed CoE will change according to market movements and that is accepted and understood by investors actually c 80% of the implied change to the allowed CoE has been driven by 'methodology based' changes, i.e. regulatory amendments to the methodology for calculating the CoE or allowed return parameters rather than movements in the market data. Returns have not changed because of markets but instead because regulators cannot set them in a consistent way across different price determinations.

Figure 1: Evolution of the allowed cost of equity (CoE) from PR14 to PR19, the CMA and the (implied) PR24 CoE (RPI) showing market and methodology-driven movements



***Source: NWL, Supporting long-term investment, p. 10, see**: https://www.ofwat.gov.uk/wp-content/uploads/2022/06/Northumbrian-Water-Supporting-long-term-investment.pdf Updated for market movements between the CMA's PR19 FD cut-off and 31 October 2022.*

Notes: Methodology based changes for PR24 include: (1) removal of AAA evidence from RFR, (2) use of unadjusted October 2022 spot betas, (3) for TMR dismissal of RPI series, dismissal of non-overlapping averages, move to CPIH backcast series with lower inflation (and higher real TMR), no weight assumed on fwd-looking evidence, (4) use of 0.21 debt beta, (5) removal of aiming up.

In light of the volatility we now experience in markets from the Covid pandemic, the war in Ukraine which is having a significant impact on share prices[11] and the uncertainty around the future trajectory of interest rates given inflation[12] (see Figure 2 below), as well the material future investment requirements needed, now more than ever there is a strong case for certainty and regulatory consistency over the long-term.

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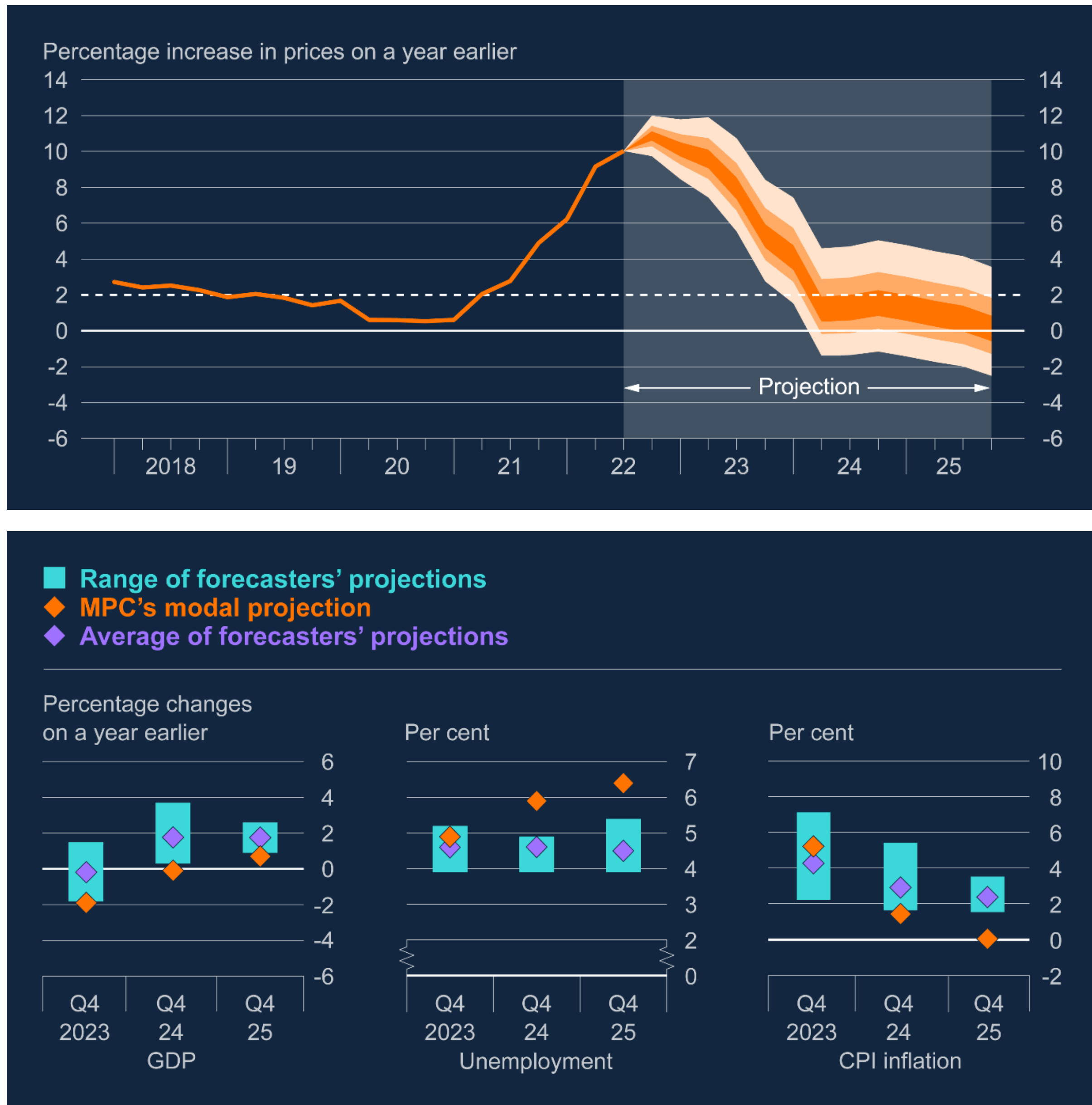
[11] All three share prices for United Utilities Group Pls, Severn Trent Plc and Pennon Group Plc have shown substantial volatility during the 2020-22 period following the Covid pandemic and the war in Ukraine

[12] The Bank of England base rate rose to 3% in November 2022, this compares to just 0.1% a year ago with successive rapid rises during 2022 to combat high inflation. Current expectations are that interest rates could be around 4.7% in a year's time, see: https://www.bbc.co.uk/news/business-57764601

Figure 2: CPI inflation based on market interest rate expectations and range of forecasters predictions for GDP, unemployment and inflation (CPI)



Source: Bank of England November 2022 Monetary Policy Report, https://www.bankofengland.co.uk/monetary-policy-report/2022/november-2022

Instead of seeking to reduce or remove this uncertainty and volatility this process appears to have been used by a small group of regulators to continue to press their views of how the allowed return should be set whilst also ensuring that maximum flexibility remains to continue to tinker with the methodological approaches.

The methodologies proposed would also result in a further deterioration of the allowed return for the regulated sectors. Whilst the proposals in the guidance would reduce customer bills, and at a difficult time,

as we look ahead to the long-term in line with Ofwat's PR24 principles and objectives[13] and the UK Government's Strategic Policy Statement[14] there is also a clear need for substantial new capital investment that these changes would not support.

'The government has committed to taking a long-term approach to investment, recognising that a system that works in the enduring interests of consumers does not simply mean lower prices in the short-term at the expense of future generations.' The government's strategic priorities for Ofwat, 2022

Work by the National Infrastructure Commission suggests that £21bn of new investment would be required to address the supply demand imbalance in water resources[15], there has been significant recent focus on river quality and combined sewer overflows[16] which the UK Government has estimated will require some £56bn of investment[17] and Water UK's own work achieving Net Zero suggests some £2-4bn of investment would also be required[18]. This is set against a total industry Regulated Asset Base of c.£80bn, effectively the investment requirements of the future are the same as the total scale of the current asset base.

'This plan is the largest infrastructure project to restore the environment in water company history.' Storm Overflows Discharge Reduction Plan, 2022[19]

This will require the sector to attract new capital in a competitive and international market for that investment, with much of that needed precisely in the next five-year period. Without that investment the detriment to consumers and the environment would be very significant[20], for example the NIC report notes that the impact on 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[21]. However, taken together the changes proposed in the guidance could offer significantly lower returns to that equity, with perhaps 100-150bps reduction to the cost of equity implied by the changes.

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[13] 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'

[14] See: https://www.gov.uk/government/publications/strategic-policy-statement-to-ofwat-incorporating-social-and-environmental-guidance/february-2022-the-governments-strategic-priorities-for-ofwat

[15] See: https://nic.org.uk/app/uploads/NIC-Preparing-for-a-Drier-Future-26-April-2018.pdf pp.4

[16] EAC, 2021, Water quality in rivers, see: https://committees.parliament.uk/publications/8460/documents/85659/default/ The summary of the report notes: *'The sewerage system is overloaded and unable to cope with the increasing pressures of housing development, the impact of heavier rainfall, and a profusion of plastic and other non-biodegradable waste clogging up the system. Successive governments, water companies and regulators have grown complacent and seem resigned to maintaining pre-Victorian practices of dumping sewage in rivers. There has been investment in the network since privatisation, but underlying problems have not been resolved and capital investment has not kept pace with housing and other development pressures on the drainage and treatment network.'*

[17] See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1101686/Storm_Overflows_Discharge_Reduction_Plan.pdf

[18] See: https://www.water.org.uk/routemap2030/wp-content/uploads/2021/03/Water-UK-Net-Zero-2030-Routemap-Summary-updated.pdf pp.7

[19] See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1101686/Storm_Overflows_Discharge_Reduction_Plan.pdf

[20] 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 pp.1094-6

[21] 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

These changes would occur at a time when, as Ofwat recognises, sector risks are already increasing[22], when more than 80% of the sector is failing to earn their base allowed return[23] and when there has been substantial market volatility driven by the Covid-19 pandemic and the war in Ukraine, all of which will generally make the sector less attractive to new capital.

Taken together we do not support the methodologies and approaches put forward in the guidance.

A group of Water UK's members have undertaken further work on many of the Cost of Equity parameters ahead of PR24 in response to Ofwat's emerging methodology for that price review. This detailed evidence and analysis provided by a range of independent experts is referenced in this response for the UKRN's consideration and is available online. The table below summarises the findings of this work against the UKRN recommendations and guidance areas.

[22] 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

[23] 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/

Table 3: UKRN recommendations and Water UK views

UKRN recommendation	Water UK response	Comment
1. Notional company- Regulators should continue to estimate the allowed rate of return in price controls based on the weighted average cost of capital for a notionally finance firm within their sector.	Support	• We support the continued use of the notional company in setting allowed returns.
2. CAPM: Regulators should continue to use the CAPM as their primary approach for estimating the cost of equity	Support	• We agree that the CAPM is long-established as the primary approach for setting the allowed return. • We have undertaken separate work on alternative Multi-Factor Models which are widely used elsewhere and could be used a sensible 'cross-check'[24] but we are not suggesting that they become the 'primary approach'.
3. Risk-free rate: regulators should use recent yields on the index-linked gilts, with a maturity which matches the assumed investment horizon for their sector.	Propose changes	• We do not support the use of ILGs as the sole benchmark for the RFR. This is inconsistent with the PR19 CMA redeterminations and the recent CAA H7 final proposals as well as the recent determination by UR. • Two separate independent reports highlight the existence of a convenience premia to be reflected in the RFR[25]. First Economics concludes that '*In these circumstances, we think that it would be prudent for a regulator to look beyond just index-linked gilts to a wider basket of proxies for the riskless assets*'. Oxera concludes that '*We provide evidence for the existence of a convenience premium in the returns of gilts, which indicates that using gilt yields to estimate the RFR is likely to result in an underestimation of the 'true' rate…we take a more practical approach that is consistent with the CMA's approach for the PR19 redetermination, whereby the RFR is estimated as an average between the yield on AAA bonds and the yield on gilts. Our empirical analysis on the historical betas of government bonds and AAA bond indices shows that both are equally valuable inputs to estimating the 'true' RFR'*. • The UKRN recommendation should be amended to accept the clear existence of a convenience premium on gilts and suggest a wider basket of proxies should be used for a riskless asset or indeed to propose the use of a blend of ILGs and AAA bonds as the CMA did.
4. Equity risk premium: Regulators should estimate the ERP within the CAPM as the difference between the TMR and the RFR. We recommend that the TMR should be primarily	Propose changes	• We support and agree with the specific, high-level, wording in the recommendation. • However, the detail in the guidance suggests that *'relying on back-cast CPI or CPIH data is preferrable'*. The CMA considered the relative merits in the historical inflation data in the PR19 appeals in much more careful detail and chose to adopt a blended approach of both series (RPI,

[24] KPMG, 2022, Exploring Multi-factor Models as a cross-check on allowed returns at PR24

[25] First Economics, 2022, The Risk-free Rate, see: https://www.ofwat.gov.uk/wp-content/uploads/2022/09/NWG_Risk_Free_Rate_FE.pdf and Oxera, 2022, RFR methodology for PR24, see: https://www.ofwat.gov.uk/wp-content/uploads/2022/09/NWG_Risk_Free_Rate_Oxera.pdf

based on historical ex post and historical ex ante evidence.		CPI). This recognised that, as the UKRN guidance notes, *'there are potential issues with both measures'*. The guidance should be amended to reflect the challenges with these historical series and propose the use of a blended approach. We also note that CPIH series is preferable to CPI as the former is the measure used for RCV indexation. The new ONS backcast for CPIH addresses some of the issues with the CPI backcast and suggests that CPIH inflation was 0.24% lower than the old estimates of CPI inflation over the period 1900–2021. • We also consider that there is no rationale to depart from the averaging approach deemed appropriate by the CMA at PR19 (i.e. arithmetic average with both overlapping and non-overlapping evidence included).
5. Equity Beta: Regulators should estimate the equity beta for the notional company using comparable listed companies and standard regression techniques (OLS). Where the listed comparator has different gearing to the notional company, regulators should continue to de-lever and re-lever the raw equity beta.	Propose changes	• We support and agree with the specific wording in the recommendation, subject to adding (1) 'using the established Harris-Pringle approach' at the end and (2) a new sentence to the effect of 'small deviations from the invariance of the forward-looking WACC with gearing are acceptable as trying to strictly enforce invariance is difficult to apply objectively, can introduce new distortions and does not recognise that there might be various other factors affecting the cost of capital that might cause departures from Modigliani and Miller"). • Whilst the consultation recommends the retention of the Harris-Pringle approach to de- and re-levering beta, it also recommends regulators investigate the relationship between the forward-looking cost of capital and gearing which leaves the door open for regulators to introduce changes in debt beta or notional gearing to strictly enforce the invariance of the forward-looking WACC to gearing. We note that any adjustments to assumptions or the Harris-Pringle approach to de- and re-levering betas are liable to introduce distortions as the WACC as there is no expectation that MM should hold precisely due to market frictions and distortions. The CMA considered this issue at PR19 and concluded that the variance of the WACC with gearing was relatively immaterial and did not require any amendments. • The consultation notes that the treatment of Covid is a sector-specific issue but recognises that beta estimates should not be *'influenced by atypical and transient events which may not be representative of the ensuing control period'*. We consider this point should be clarified as the horizon for setting beta is not just the five years of the next price control, but the long-term investment horizon implied in the overall WACC which is closer to 15 – 20 years. As a result, the exam question is to set a beta that is expected to best capture the fundamental business risk of these assets over the next 15 – 20 years (depending on the investment horizon of each sector). • As the impacts of Covid and the Russia-Ukraine war are transient by nature, bespoke treatment of the data from the affected periods is required to ensure that their impact is not over-weighted in forward-looking, long-horizon beta estimates. The guidance should be more prescriptive in terms of what the appropriate range of weight for the data from the affected periods could be. This would go some way to mitigate the risk of materially inconsistent principles being adopted by different regulators.

		• The guidance notes that in estimating the unlevered beta, *'Traditionally, gearing is defined as the ratio of book value of debt to the enterprise value. For practical reasons using book values of debt is likely to be reasonable, although, if appropriate, market values of debt could also be considered'*. We don't support this use of market values as these are difficult to estimate and suffer similar challenges to the MAR (see later). The CMA also used book value of debt in its estimation of beta for PR19. This should be amended to focus on the established 'traditional' approach. • We have commissioned work on the setting of the Beta for PR24 – which covers both the treatment of one-off events and the de- and re-levering question – this can be found online[26].
6. CAPM point estimate: The RFR, TMR and (re-levered) equity Beta assumptions should be combined using the CAPM to produce a cost of equity range. The mid-point of the range should be used as the central estimate for the CAPM cost of equity.	Propose changes	• We support the first sentence in the recommendation. • We consider that the second sentence would be better reflected in recommendation 7 separating the process as set out in the guidance to calculate the CoE range from the selection of a point estimate within that range. Without this change recommendations 6 and 7 overlap and appear somewhat duplicative. It may be sensible to combine them. • The guidance suggests that *'[w]e propose that the starting assumption should be that the distribution of values in this range is broadly symmetric, and that the mid-point of range would therefore represent a suitable point estimate for the CAPM cost of equity…Whilst this may not be precisely right, there is unlikely to be a different way of picking a point estimate'*. Whilst we accept that the cost of equity point estimate will always be an estimate, the symmetry or otherwise in the overall price control package can be assessed objectively based on historical information and using scenario analysis and it would clearly not be appropriate to 'assume' symmetry in the first instance. Moreover, regulated companies are always required to carry out this type of analysis as part of financeability testing so it is well established and understood. We consider that the guidance should be amended to say that when selecting a point estimate within the range, regulators should simply consider the symmetry in the overall package alongside other factors (see below).
7. Cross-checks: Regulators should only deviate from the mid-point of the CAPM cost of equity range if there are strong reasons to do so.	Propose changes	• During the PR19 appeals, the CMA carefully considered the different factors that may justify aiming up – consistent with those set out on pages 24 – 25 – and concluded that 25bps uplift relative to the mid-point of the cost of equity range was warranted. We would expect some of those factors to continue to apply going forwards. As a result, a starting presumption should be that aiming up 10 – 20 bps from the mid-point of the range may be appropriate. The guidance would then request explicit consideration by regulators of whether the context of prevailing circumstances and regulatory framework for each price control warrant departure from this scale.

[26] KPMG, 2022, Relative risk analysis and beta estimation for PR24, see: https://www.ofwat.gov.uk/wp-content/uploads/2022/09/NWG_Estimation_of_beta_and_treatment_de_and_relevering.pdf

		• The guidance suggests that *'[t]he primary example of a market cross-check that is important in regulated sectors is the Market-to-Asset Ration (MAR)'*. In relation to the MAR the CMA concluded in both the PR19 redeterminations and the RIIO 2 appeals that *'it is difficult to accurately infer small adjustments to a CAPM-based estimate of the cost of equity'*[27]. In the PR19 redetermination the CMA remained *'cautious about using market prices to determine the point estimate for the cost of equity'* and did not give MAR analysis significant weight in its decisions. As a result, MAR evidence is of limited relevance and reliability. • Separately we recently completed a report that has considered the role of Multi-Factor Models (MFMs) as an alternative cross-check to the CAPM. The report finds that MFMs are empirically more robust than CAPM based on UK and US data, have higher explanatory power than the CAPM, are adopted by academics as a primary methodology for estimation of returns and are strongly supported by economic theory. That report concludes that *'The qualitative and quantitative evidence set out in this Report implies that (1) MFMs warrant inclusion in the suite of cross-checks for PR24 and (2) given that MFMs have stronger explanatory power than CAPM (which does not apply to for example the MAR cross check included in the PR24 DM), MFMs should be treated as a primary cross check.'*[28]
8. Cost of debt: Regulators should estimate an allowance for an efficient company under the notional financial structure, with actual debt costs suitably benchmarked against other market evidence.	Propose changes	• We support and agree with the specific wording in the recommendation. • Effectively the guidance proposes using a 'balance sheet' approach for a sector like water where there are multiple regulated companies. This is consistent with what the CMA did in the PR19 redeterminations. However, the recommendation is not terribly helpful in providing certainty about how the cost of debt will be set since there are so many factors to consider in how the allowances will be calculated that are not covered in the guidance (eg averaging approach, treatment of outlier companies within sector average). We consider that the guidance should either focus solely on the cost of equity alone or say more about the calculation of the cost of debt to make the recommendation and guidance more meaningful as it stands the recommendation provides no real certainty or utility. • The consultation also omits the fact that the CMA's PR19 allowance for embedded debt included derivative costs and costs associated with for example junior debt. Similarly, the allowance for GD&T2 cost of debt included sufficient headroom to cover the derivative costs of the sector which CMA commented on and emphasised during the appeal. • The consultation does not overtly recommend the application of the outperformance wedge on new debt but leaves the door open for said adjustment despite the finding from the PR19 CMA re-determination that it is not justified.

[27] CMA PR19 redetermination para 5.681. Also see CMA (2021), PR19 Final Determination, para 9.1358 see: https://assets.publishing.service.gov.uk/media/60702370e90e076f5589bb8f/Final_Report_---_web_version_-_CMA.pdf

[28] KPMG, 2022, Exploring Multi-factor Models as a cross-check on allowed returns at PR24, p.39

9. Gearing: The notional gearing assumption should reflect the balance of risks facing the regulated company and a wide range of benchmarks on gearing levels, not just that of the actual company (or companies) in question.	Propose changes	• The recommendations appear sensible at a high level but leave room for substantial judgment in practical implementation and are insufficiently focused on facilitating stability and predictability of regulation. • For example, the guidance should be clear that (1) the notional structure should be stable over time with high hurdle for changes, supported by clear identification of market failure to avoid introduction of distortions and unintended consequences, (2) the relevant measure of gearing to set notional gearing for these sectors is RCV gearing, (3) a robustly determined notional gearing is an independent input into the financeability assessment and should not be amended to affect the conclusions of this analysis, (4) as discussed above changing notional gearing should not be used to enforce strict invariance of the WACC with gearing. • We continue to consider that the greatest weight should be placed on the companies in the relevant sector particularly where that sector contains a range of companies. These companies are most likely to reflect the efficient capital structure for the sector in question. We have completed an independent report examining the role of the notional company in regulatory decisions and the factors that should be considered in setting the level of notional gearing. That report similarly emphasises the importance of market data including the actual observed sector gearing in setting the notional level, rating agency thresholds and competitive infrastructure benchmarks[29]. The report also clarifies that *'The relevant market metric is regulatory gearing. Gearing ratios based on enterprise value (EV) are not relevant'.*

[29] Frontier Economics, 2022, NOTIONAL CAPITAL STRUCTURE AN INDEPENDENT ASSESSMENT OF OFWAT'S PROPOSED APPROACH FOR PR24, see: https://www.ofwat.gov.uk/wp-content/uploads/2022/09/NWG_Setting_Notional_Gearing.pdf

We do not consider that the draft guidance meets the spirit of the request made by the Secretary of State for Business and suggest some changes to better achieve that purpose.

Beyond the specific points set out in Table 3 above we suggest the following changes to the guidance to better achieve its stated purpose:

1. **The guidance should be changed to better reflect the recent CMA decisions in relation to the PR19 water redeterminations**. These decisions reflect a 'de novo' appeal mechanism in which the CMA thought deeply about the 'best' approaches to setting the allowed return rather than one that was simply 'not wrong' in the recent energy sector appeals. Moreover, that precedent also represents the longest, most rigorous and detailed consideration of these matters since the privatisation of the water energy and telecoms sectors. The water sector has undertaken substantial further work on the cost of capital parameters which we consider to be very relevant to this guidance and could be reflected in here we provide these reports separately and summarise their impacts on the guidance in this reply.

2. **Whilst we recognise that the Civil Aviation Authority (CAA) and the Utility Regulator of Northern Ireland (UREGNI) have had some involvement in the guidance, it is not clear to what extent they are party to it. The guidance should be extended at least to formally cover the CAA, UREGNI and the Office of Rail and Road (ORR).** This broader list of economic regulators represent the 'core' economic regulators as set out in the UKRN's own 'investor guide'[30] who are regulating private investment and would better meet the spirit of the SoS request for consistency in setting the allowed return. It would also likely provide some of the challenge and debate that is inevitably expected in seeking to reach a consistent approach and viewpoint across regulators on common topics, such as the impact of Covid on beta.

3. **Whilst we recognise that the CMA is not part of UKRN, the CMA should either formally endorse the guidance and become a party that follows the guidance, or set out its own views on the appropriate methodology to drive consistency.** There is a tension between this and the panel structure of CMA appeals but the CMA does have a cost of capital panel and has set out guidance in other areas. Without this history and practice will lead companies to consider that the CMA will likely reject elements of the guidance in the future.

4. **The guidance should set out more explicitly the timescales over which it would apply and this should ideally reflect the investment horizon of the sectors it covers**, with suggests that it should be reviewed every 6-10 years and certainly it should span multiple short-term price review periods.

If the above changes are made then the guidance could provide a helpful and enduring arrangement providing long-term certainty of a reasonable and fair return for investors. This would best support the substantial long-term investment requirements that these sectors have as set out in the original NIC report and the economic growth that investment would deliver.

> "To achieve the transformational change required, public and political confidence in the system must be improved, to provide greater stability and certainty for investors." National Infrastructure Commission, 2019[31]

[30] See: https://ukrn.org.uk/app/uploads/2018/06/Investor-guide.pdf
[31] See: p.8 https://nic.org.uk/app/uploads/NIC-Strategic-Investment-Public-Confidence-October-2019.pdf

Without these changes the guidance will likely achieve very little. In the absence of any teeth the guidance, like previous UKRN studies, will be given little or no weight. Regulators will continue to feel empowered to lower the allowed return through methodological rather than market-based changes and the proposals suggested could in fact reduce the attractiveness of UK regulated infrastructure for investment and raise the cost of that investment for customers.

Clearly additional investment is likely to increase customer bills which represents a significant challenge in the current economic context. We therefore also welcome the UKRN's recent work on practical steps to help customers in the cost of living crisis[32]. The water sector offers a wide range of support to customers who struggle to pay their bills and we welcomes the UKRN proposals in this area. Water UK recently undertook a significant study into water poverty[33] to inform ongoing work by the Government which is seeking to introduce a single social tariff across the industry to support customers struggling to pay their bills.

[32] See: https://ukrn.org.uk/publications/cross-sector-work-on-the-cost-of-living-crisis-ukrn-announcement/
[33] See: https://www.water.org.uk/publication/water-poverty-analysis/