

PR24 and beyond:
Discussion paper on risk
and return

South East Water response

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1. Key messages on the risk and return & financial resilience discussion papers

We welcome the opportunity to respond to Ofwat's recent discussion papers, *PR24 and beyond: discussion paper on risk and return* and *Financial resilience in the water sector: a discussion paper*.

Our response is structured as follows:

- Section 1 covers our overarching messages in relation to both the risk and return & financial resilience discussion papers
- Section 2 sets out an executive summary to our response to the risk and return discussion paper
- Sections 3-6 provides our analysis of and commentary on Ofwat's proposed risk and return frameworks, and corresponding discussion paper questions.

Whilst we agree with the focus on customer service levels and how to meet key challenges which water companies face on climate change and population growth are critical, it is unclear from the financial resilience discussion paper what resilience 'problem' Ofwat is seeking to address. Ofwat interprets the Southern Water case study cited in the discussion paper as an example of weak financial resilience driving a deterioration in customer service level. However, we consider that: (1) existing protections for customers appear to have worked well; and (2) the example is a clear case study in poor operational performance, but there is no evidence that this poor performance was caused by weak financial resilience or that this should have wider implications for other companies.

As a result, Ofwat's proposals for new regulation and changes to company licences in relation to financial resilience seek to address a problem that has not been defined or evidenced – and these changes could result in sub optimal capital structures, perverse incentives, additional costs for customers and the sector becoming less attractive to investors. We consider that this is not in the interests of customers or in accordance with Ofwat's statutory duties, particularly given the need for the sector to invest and strengthen operational resilience for factors such as climate change, population growth and additional environmental pressures. We would expect Ofwat to focus on these important issues directly rather than conflating delivery of customer service levels and financial resilience, particularly without clear evidence that existing regulatory mechanisms are not functioning as intended to protect customers.

Ofwat's definition of and approach to financial resilience does not appear to be supported by careful analysis of company risk exposure or protections from existing regulatory mechanisms, licence requirements and corporate structures. For example, Ofwat's proposal to increase the credit rating threshold for cash lock up to Baa2/BBB negative outlook – absent analysis of whether the current lock up threshold at the minimum investment grade rating is sufficient to protect customers – is unproven.

We are disappointed that Ofwat's focus on financial resilience has not been translated into its proposals for risk and return at PR24, which imply reductions in returns (unsupported by market evidence) and financial flexibility available to manage risk. The balance of risk and return underpins financial resilience but the implications of Ofwat's proposals for the resilience of the sector do not appear to have been explored even though they are key to protecting customers long term interests. We strongly recommend that Ofwat combines its assessment of the issues

raised in both of these papers to avoid changes in regulation driving increased risk, undermining the resilience of the sector and creating a problem that did not exist prior to these unproven proposals.

The overall calibration of risk and return and other regulatory interventions in themselves have a direct impact on the financial resilience of the water sector. However, neither discussion paper considers changes in these areas to *improve* financial resilience. There is a clear juxtaposition between Ofwat's focus on water company financial resilience and the proposed unjustified methodological changes to cost of equity which, all else equal, will reduce returns, reduce the projected equity buffer available to manage risk and reduce the financial resilience of the sector. In turn, this reduction discourages asset investment which is not in the interest of customers or in accordance with Ofwat's statutory duties.

Further, we consider that Ofwat should not use sector-wide mechanisms, such as a one-size-fits-all cost of capital, for a diverse group of companies. Specifically, mechanisms which create random "winners and losers" on debt financing costs. These approaches undoubtedly put a number of companies under more financial stress than others. We view this as a material consideration, which is not covered by Ofwat, when assessing financial resilience.

Financeability

Ofwat has proposed changes to the financeability test that are not in the long term interests of customers. For example, the notional gearing should be set based on the average gearing of the sector of around 70 per cent, reflecting the market level¹. Financeability constraints should not be artificially "resolved" by reducing gearing below the market level. This would result in inconsistencies, with companies unable to both (i) optimise gearing/financing costs at the efficient level of above 60 per cent, and (ii) achieve financeability which would require de-gearing at or below 60 per cent. These changes to the notional company undermine the importance of Ofwat's financeability duty as a cross check on allowed returns.

The financial resilience and risk/return balance are of significant importance for the sector. This is especially true of the risks a company like South East Water faces as a business. SEW is a small water only company located in one of the most water stressed area in the UK, with a network close to capacity. We face challenges arising from the imbalance of totex allowances and ODIs between the water service and wastewater service, with the industry overspending on water service totex and incurring net ODI penalties in 2015-2020, compared to the opposite performance on the wastewater service. We also have additional financing costs due to less frequent debt issuance, access to fewer sources of finance and higher cost of carry. In particular, SEW has significant investment requirements in the future due to population growth, climate change and our location in a water stressed area. These investment requirements were not considered fully by Ofwat in PR19, which resulted in an under-estimate of totex funding required for enhancements.

It is imperative that the risks associated with the efficient running of our business are properly priced to ensure financial resilience in the short and long term.

Gearing Outperformance Sharing Mechanism

We are pleased that Ofwat acknowledges a number of the reasons why the Competition and Market Authority's (CMA) March 2021 PR19 redeterminations did not include the Gearing Outperformance Sharing Mechanism (GOSM). As we stated, at the time this mechanism is fundamentally flawed and not in the customers' interest. After careful consideration, the CMA decided in principle that the mechanism's design is not supported by finance theory or practice. As a result, it would not be appropriate to include a reduction in AMP8 revenue due to the AMP7 GOSM at PR24.

¹ Average gearing across the sector was 70.2% in 2020/21 as per the Annual Performance Reports.

2. Executive summary – risk and return discussion paper

The changes proposed in the risk and return discussion paper are not in the long-term interests of customers. The proposals would reduce the attractiveness of the water sector to new investment at precisely the time when significant new investment is required to address the challenges of population growth, climate change, and a reduction in environmental impact of supplying water to customers.

The proposals will also most likely reduce the financial resilience of the water sector. The proposed methodological changes for the cost of capital, alongside proposed adjustments to financeability cross checks and the potential use of market-to-asset ratios (MAR) analysis, ignores and in large part contradicts, the recent and carefully considered decisions of the CMA at the water re-determinations in 2021. This deviation from the CMA's recent approach at PR19 will damage confidence of investors in the checks and balances in the regulatory system.

We believe it is in the long-term interests of customers and the environment for Ofwat to pursue a more stable and predictable approach to regulation that takes due account of the guidance given by the CMA and encourages investment to meet the significant challenges the sector faces.

Cost of equity

Ofwat's PR24 proposals for the cost of equity rely on the selective choice of estimation methodologies for each Capital Asset Pricing Model (CAPM) parameter that will result in downwards-biased estimates.

There is a clear juxtaposition between Ofwat's focus on water company financial resilience and the proposed unjustified methodological changes to cost of equity which, all else equal, will reduce returns and projected equity buffer available to manage risk.

There is no market evidence to support a reduction in equity returns at PR24.

There has been unprecedented focus over the last two years from the CMA, the ultimate decision body for the water sector, on cost of capital issues.

Although the CMA's determinations for PR19 were thorough, carefully considered and recent, Ofwat's proposed approach to estimating the cost of equity for PR24 significantly departs from the methodologies adopted by the CMA and ignores relevant data points which the CMA expressly relied on for its PR19 re-determination.

In particular, we note that the proposals to de- and re-lever beta from Mason & Wright (MW) incorrectly apply the Modigliani-Miller (MM) framework. Moreover MW's proposed approach to specifying beta would introduce additional distortions which (1) contravene the MM principle that the cost of capital should be invariant to gearing; (2) are inconsistent with the CMA's PR19 redeterminations; and (3) would result in material under-estimation of the cost of equity.

Ofwat appears to selectively adopt regulatory precedent and cross checks for the cost of equity to consistently reduce the allowed return.

Ofwat has treated the RIIO-2 CMA ruling as effectively more relevant than the CMA's PR19 decision for the water sector. This approach cannot be sustained. The CMA RIIO-2 ruling resulted from the CMA's approach to the different legal test that the CMA applied in the energy appeals. Importantly, the RIIO-2 decision of the CMA did not seek to depart from the PR19 determination. The CMA's finding that Ofgem had not made errors under the statutory appeal test for RIIO-2 cannot be equated to water where the CMA is obliged to reach its own

conclusions on the approach to cost of equity. There are no grounds to consider that the CMA would reach a different decision on a future water redetermination to that which it adopted for PR19. It is not appropriate, or in accordance with Ofwat's statutory duties, for Ofwat to give such little weight to an important redetermination from the CMA in the water sector.

We also disagree with Ofwat's proposals to use MARs as the primary cross check on the cost of equity. We note that MARs have significant limitations as indirect benchmarks and are generally unreliable as market sources to inform estimates of required returns on capital. A high degree of judgement and multiple assumptions are required to decompose a MAR such that it cannot provide a useful input into the calibration of allowed returns.

Alternative cross checks, such as risk analysis, financeability assessment, multi factor models and hedge ratios represent more relevant approaches on a CAPM derived cost of equity.

Cost of debt for a small company like SEW

We are disappointed that Ofwat has ignored relevant regulatory precedent on the cost of debt and has neither (1) proposed differentiated treatment for WaSCs and WoCs; nor (2) considered company specific factors, when setting cost of debt allowances.

WoC cost of debt

We consider that a further review is needed by Ofwat in relation to the cost of debt for WoCs, which have fundamentally different characteristics to larger WaSCs. In general, WoCs issue debt less frequently, have access to fewer sources of finance, have higher cost of carry, and face higher issuance and liquidity costs. Accordingly, we consider Ofwat should differentiate between WaSCs and WoCs when setting the cost of debt allowance.

For example, the median WoC cost of embedded debt is currently 5.68 per cent, compared to an equivalent WaSC cost of 4.41 per cent². Consequently, a one-size-fits-all approach to the cost of debt is not appropriate as it benefits large over small companies. A possible approach that would help Ofwat to tackle this issue is to consider the average cost of WoCs debt and use this to develop a WoC-specific cost of debt for PR24. This methodology would provide market-based evidence of the differential in the cost of debt for WoCs compared to WaSCs.

It will also be important for Ofwat to specify ex ante the basis on which the WoC average cost of debt position will be calculated in terms of (1) treatment of different instruments; and (2) the averaging methodology.

Company specific cross check

We have previously set out company specific circumstances that justify a tailored cost of debt for SEW. We would welcome further discussion with Ofwat on how best to reflect the differences in the underlying characteristics of companies in the sector when setting the cost of debt allowance.

Generally, when financing infrastructure, companies secure financing to match investment requirements. Where there is a departure from this, and revenues do not match actual financing costs, companies are exposed to higher risk of cost of debt underfunding. This is particularly the case when there are large market movements, differences across companies in capex and RCV growth profile, and different issuance profiles due to size. These factors exacerbate and can result in major deviations in embedded debt costs across companies with different characteristics.

In these circumstances, regulatory policy becomes imbalanced when one-size-fits-all approaches are used. In this context we note that the CMA applied a company-specific approach

² CMA (January 2020) Water Redeterminations 2020, Cost of debt – Working Paper, Table 2, p. 51

to estimate Bristol Water's cost of debt, including a careful cross check to Bristol's costs. Closely reflecting the costs incurred by each company can reduce variance between costs and allowances and improve financial resilience for the sector.

Risk differentials between water and waste

We detailed in our *PR24 and beyond* consultation response that we were disappointed by the lack of recognition of the risk differential between water and wastewater services. We welcome that Ofwat has signalled that further analysis is required in this area.

During AMP6, the industry overspent their water service totex allowances and incurred net ODI penalties, compared to the opposite performance on the wastewater controls – where there was overall underspend on totex allowances and net ODI rewards.

We believe that this issue should be addressed at source, with adjustments to totex allowances for water services to address this imbalance. In addition, ODI targets should be recalibrated to present a consistent risk profile across water and wastewater services.

If Ofwat does not address the risk imbalance between water and wastewater services, higher risk in the water price controls should be priced through adjustments to the cost of equity for water only companies.

Financeability and the notional capital structure

We are disappointed that Ofwat has proposed changes to the specification of the notional company which are inconsistent with market evidence and do not present benefits for customers. The level of notional gearing should be set based on market evidence and consistent with sector average gearing of c.70 per cent.³ Ofwat's proposed further reduction in notional gearing artificially 'resolves' the financeability test and undermines the importance of this cross check on the allowed return.

We are not clear why the proposed reduction in notional gearing and increase in the notional level of index linked debt would be appropriate. Neither of these changes are supported by market evidence or analysis.

It is also not clear how Ofwat proposes to reflect the heightened uncertainty and risk articulated in its Long-Term Delivery Strategies paper, or higher risks associated with water services in the financeability assessment. Ensuring that we can finance our plan in different future states of the world and across the common reference scenarios is critical to support our customer objectives.

We disagree that financeability tests are not relevant for calibration of returns – returns are the primary driver of financial resilience. Decoupling the notional financeability test and the balance between risk and return is likely to jeopardise financial resilience for the sector.

³ Average gearing across the sector was 70.2% in 2020/21 as per the Annual Performance Reports.

3. Risk analysis

Ofwat has included risk analysis as a key consideration at PR24 in the context of expected increases in risk exposure arising from long term risks around population growth, climate change demand, environmental factors, calibration of water incentives and macroeconomic volatility. The relationship between risk analysis and calibration of the overall package (and most critically allowed returns) will be crucial to ensuring a balanced price control that supports financial resilience and supports strategic investments in AMP8 and beyond.

Risk methodologies for PR24 will need to include company specific quantification of risk exposure which reflects:

- When risks are likely to occur
- Scale and probability of risks
- Interconnectivity of risks; and
- Structural breaks implied by changes in regulation, business activities/operational risks or macroeconomic factors.

Ofwat's proposed approach in this discussion paper, to place "*significant weight*" on historical data is unlikely to adequately quantify the downside risk exposure we face. Ofwat has not provided a clear methodology for how it will measure operational risks on a forward-looking, company-specific basis to inform price control calibration.

In particular, we consider that risk analysis will need to better capture the dynamics for different service types / price controls. It is clear, from data published by Ofwat for AMP6, as well as AMP7 to date, that the relative stretch between water and wastewater service targets is different.

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 welcome the proposal to reduce complexity and improve understanding of risk at PR24.

Overall, we consider that many of the existing regulatory mechanisms, which support risk allocation to the party best able to manage it, should be retained. These include the cost of new debt indexation, cost sharing and tax reconciliation mechanisms set out in the PR19 reconciliation rulebook.

Gearing Outperformance Sharing Mechanism (GOSM)

As strongly argued by SEW during PR19, this mechanism is fundamentally flawed and not in the customers' interest – therefore it would not be appropriate to apply this mechanism at PR24 and to AMP8 revenues.

Furthermore, the CMA found that there is not enough evidence to support the implementation of GOSM in PR19. Specifically, the CMA stated that "*We consider that the GOSM as designed was ineffective either as a benefit sharing mechanism or as a tool to improve financial*

resilience⁴.

The CMA also noted that:

*“We recognise that the quantification of risks is difficult, but **we have not seen evidence suggesting that material harm to customers is likely** should further default events occur in the water sector.”⁵*

*“It is also **possible that the design of the GOSM could exacerbate some of the risks**, by taking money away from companies that Ofwat believes have poor financial resilience. If the payments reduce cashflow in times of distress and companies cannot raise additional equity, this approach could harm resilience and increase gearing.”⁶*

Considering whether highly geared companies, when financially stressed, have little or no equity buffer and so will likely cut back investment, the CMA concluded that *“an inability to raise new equity to support investment in such a situation would be a significant concern. **While plausible, we consider this scenario to be unlikely where the cost of capital is set correctly.**”⁷*

In this context we are concerned that Ofwat considers that there is a financial resilience problem while also proposing methodological changes to the cost of equity which ignore relevant evidence and will exacerbate any resilience problems in the sector.

Moreover, the CMA has recognised that the GOSM was ineffective, might exacerbate financial resilience issues and did not address any clearly evidenced problem. This corroborates the analysis and commentary on this mechanism included in SEW representations on this matter at PR19. The CMA’s careful consideration and review of this mechanism has supported our position and we would welcome recognition from Ofwat in this context that it would be inappropriate for the GOSM set out in Ofwat’s PR19 determination to be applied in AMP8.

RPI-CPIH wedge mechanism

The discussion paper notes that the RPI-CPIH wedge mechanism would not be required in the event of a full transition to CPIH. Whilst removal of the wedge mechanism would reduce regulatory complexity, an accelerated transition to CPIH would create material exposure to basis risk for companies that continue to hold RPI-linked debt instruments in AMP8, as they would have CPIH-linked assets and RPI-linked liabilities.

As a result, we consider that a phased transition should be retained for PR24 to minimise the additional costs and complexity associated with management of basis risk on transition to CPIH. This is of particular importance given the uncertainty around the ability to hedge CPIH exposure in full considering the illiquidity of the CPIH market at this stage.

Cost of equity indexation

There is a market consensus that interest rates will rise in the medium term, and we consider that it is more likely that interest rates will increase rather than decrease, with ONS forecasts implying an increase in base rates of 100bps by 2023. For example, the January 2022 KPMG Economic Outlook paper highlights:

“The current elevated level of inflation could see the Bank of England act relatively swiftly this year in an attempt to stem any permanent rise in inflation expectations. We currently pencil in three possible interest rate rises in 2022; in February, August, and November. This would represent a shift towards a significantly tighter monetary policy stance when considering the

⁴ CMA (2021), PR19 Final Determination, paragraph 102

⁵ CMA (2021), CMA PR19 re-determination final report, para 9.1209

⁶ Ibid, para 9.1206

⁷ Ibid, para 9.1218

implications these rises will also have for the divestment of assets accumulated under the QE programme in line with the MPC's latest guidance.”⁸

We consider that the least complicated methodology for capturing this would be to apply forward rate adjustments in setting the risk-free rate. Absent this, cost of equity indexation would protect customers from forecasting risk whilst recognising the volatility of the current macroeconomic environment.

Q2.2: Do you have any comments on our proposed approach to producing risk ranges, including but not limited to (a) risk ranges for the efficient notional company prepared by Ofwat; and (b) company-specific risk ranges produced by companies?

We welcome Ofwat's emphasis on risk analysis for PR24. Robust risk analysis underpins the design of the regulatory framework, setting of allowances, calibration of incentives and provides insight into the risk exposure faced by individual companies.

The CMA's PR19 re-determination included a direct link between risk analysis and the balance of risk and return. First, the CMA made changes to the cost allowances and incentives, to address underlying risk exposure at source. Second, the CMA provided a significant upwards adjustment to the cost of equity for the remaining asymmetry in the ODI package to address the view that the expected return would be below the allowed return. We consider that such an explicit link is appropriate for PR24 to ensure that the overall return is commensurate with the risk exposure, where risk exposure is not adjusted at source.

Ofwat's allowed CoE was reduced from 5.65% in the PR14 FD to 3.18% in the PR19 FD. Only a small proportion of the reduction can be attributed to changes in financial markets. The largest part of the reduction was driven by changes in estimation methodology⁹ – but this has in turn resulted in an inconsistency between risk exposure and returns. The scale of the changes in methodology at PR19 as well as implied by the discussion paper provides significant uncertainty over time for investors, especially long term investors in the water industry.

This reinforces the importance of financeability and risk analysis as a cross check on the cost of capital estimate. The financeability assessment and associated stress tests will be critical to sense check that the cost of capital is estimated on a basis that is consistent with risk exposure implied by the PR24 determination on a forward-looking basis.

Importance of forward-looking risk analysis

Ofwat has indicated that it intends to project risk exposure based on historical performance data across the sector. We consider that a backward-looking assessment of risk – whilst useful – will not capture structural breaks between price control determinations, as it will inherently assume mean reversion of risks. This is particularly important as forward-looking risks and uncertainty implied by the determination might be increasing, as recognised by Ofwat in its Long-Term Delivery Strategies paper. The risks identified by Ofwat include climate change, population growth and meeting Net Zero targets. Similarly, regulatory judgment in price control calibration (for example the level of stretch and asymmetry implied by incentive targets, or the assumed relationship between cost and service) can create a structural break in the wider risk environment.

As a result, it is essential to consider risk analysis to inform overall calibration of the PR24 determinations.

Relatedly, Ofwat has indicated that its RoRE analysis is designed to capture risks which may crystallise within a 5-year horizon. We consider, in line with Ofwat's Long Term Delivery Strategies, that it will also be important to assess the implications of PR24 for customer and

⁸ KPMG(2022), UK regional economic outlook, page 2

⁹ Northumbrian Water (2020), NWL PR19 Statement of case, Table 45

company risk over the long term. It is not clear at this stage how this will be captured in Ofwat's approach to risk at PR24.

Defining risk analysis in a notional setting

The delineation between notional and company-specific risk analysis proposed by Ofwat omits key risks that SEW is likely to face across PR24.

When considering notional company risk it is important that Ofwat considers a notional company *like SEW* which reflects its characteristics including *inter alia* (1) its region and how demand and climate change risks could impact on operational risk; (2) the implications of operating a water service business only (rather than both water and wastewater services – see below); (3) its relatively small size; (4) company specific risks associated with SEW's business as a water only company located in one of the most water stressed area in the UK; and (5) the increasing risk of breaching ex ante ODIs and of material pressures on costs. This approach will be crucial to ensure that risk analysis, which is used to inform price control calibration, is reflective of a company like SEW. Additionally, capital structure risks relating specifically to SEW's business characteristics and size, such as infrequent debt issuance, should also be considered.

Ofwat's proposed approach to risk analysis assumes that companies meet their cost and service targets over the course of a given price control. However, past performance for AMP6 suggests that companies do not perform in line with ex ante cost allowances and service targets. The risk that ex ante allowances are not a good proxy for efficient costs and service delivery levels should also be taken into careful consideration as part of any ex ante risk assessment.

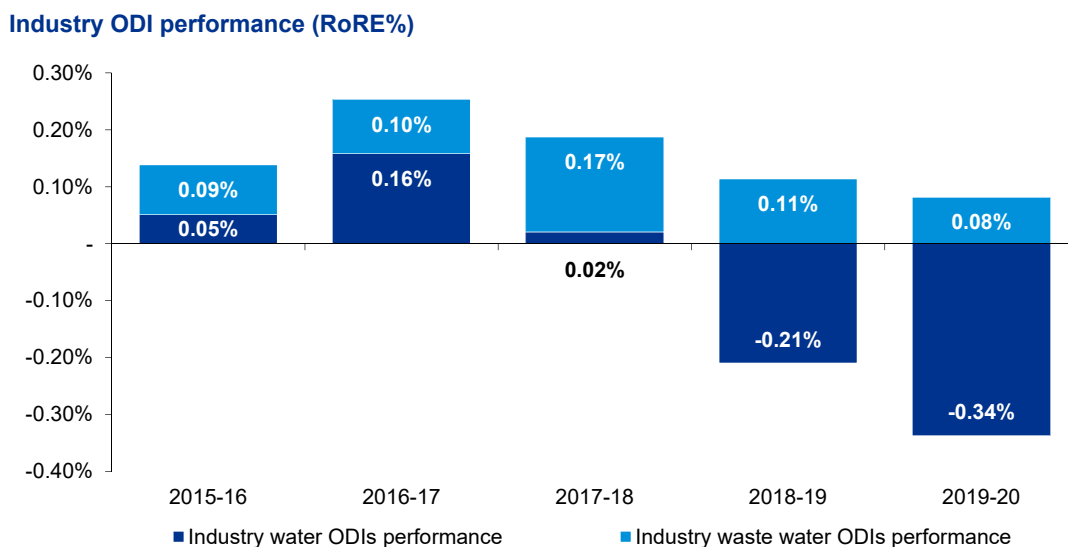
As a result, risk analysis from a notional company defined at the sector level is likely to inadequately capture the overall risk exposure of a specific company. We would welcome more clarity and guidance on how notional and company-specific actual risk analysis will interact with each other to help inform price control calibration for Ofwat's PR24 determinations.

Water service vs. wastewater service risk differentials

As part of the proposed risk assessment, Ofwat has indicated that it will seek to understand any differences in risk and performance between WoCs and WaSCs. We consider that the more relevant assessment will be to understand the differences in risk and performance between the water and wastewater wholesale controls, and in the provision of a single (water) service versus dual service.

Figure 1 below sets out ODI performance in RoRE terms for both water and wastewater ODIs, indicating that there are material variances on companies' exposure on water ODIs and wastewater ODIs. There has been significantly higher downside exposure observed on water incentives which, all else equal, signals that there is higher risk exposure in the water service business based on current price control calibration.

Figure 1: AMP6 industry ODI water and wastewater performance



We would welcome engagement with Ofwat on how this observed risk differential can be addressed as part of incentive calibration at PR24.

Ofwat has also suggested that it will seek to understand the extent to which differences in performance over PR19 in outturn RoRE are statistically significant. We agree that such analysis would be helpful to assess and understand any differentials in performance. We also consider such analysis could be disaggregated by water and wastewater controls. This would support targeted and proportionate price control calibration which ensures that the water price controls are not exposed to higher downside risk.

We agree with Ofwat’s view that any differentials in risk should be addressed ‘at source’ through the regulatory settlement (and the use of risk-sharing mechanisms where appropriate) rather than through the allowed return.

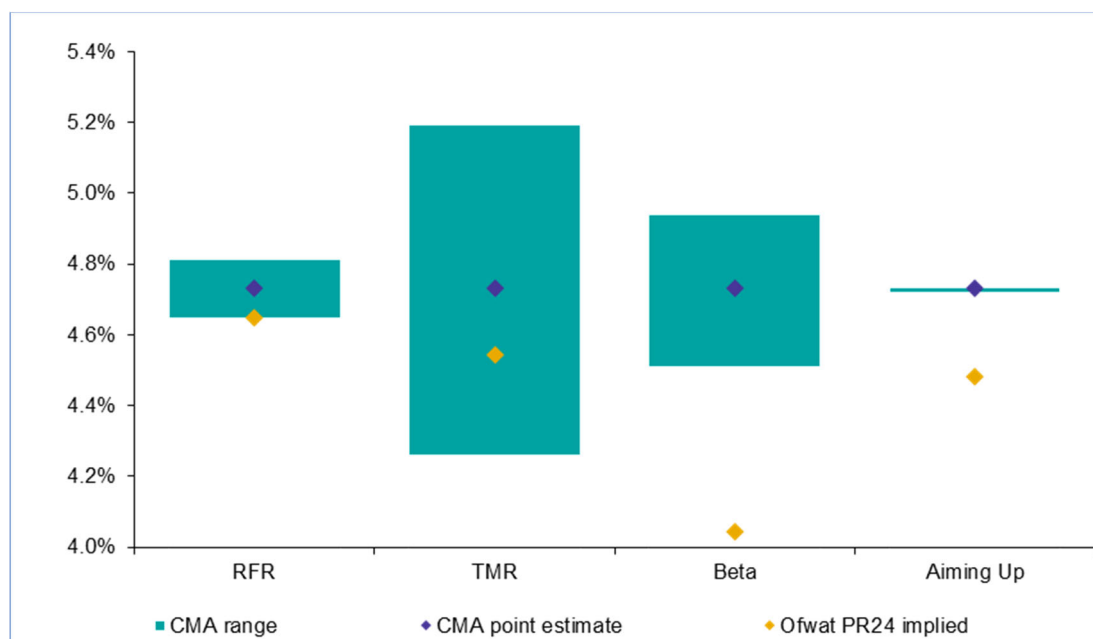
4. Cost of Equity

Ofwat has not given appropriate weight to a balanced range of available evidence in its methodology to develop an estimate for the cost of equity. Ofwat’s approach omits relevant evidence and estimation methodologies for each cost of equity parameter which has resulted in systematic downwards pressure on the cost of equity overall. The resulting cost of equity materially understates the required return commensurate with the risks borne by WoCs.

Figure 2 below shows the position implied for each cost of equity parameter based on Ofwat’s risk and return discussion paper. Estimates for RFR, TMR and beta are all below the point estimates selected by the CMA, and in the case of beta below the full range of data considered by the CMA during the PR19 re-determinations.

As a result, there is a marked contrast between Ofwat's concern about water companies’ financial resilience and its planned methodological changes to the cost of equity, which would lower returns and reduce projected equity cash flows available for the management of risk.

Figure 2: CoE implied by Ofwat's proposals vs CMA range and point estimate



The estimation of the cost of equity was the topic of unprecedented, detailed consideration during the recent PR19 CMA appeal, and the CMA evaluated a wide range of information in its re-estimation of the cost of equity. The appeal's conclusions are current. Since the CMA would again be the body that would re-examine any decision of Ofwat’s for PR24 according to the same procedure, we consider it is incumbent upon Ofwat to attach paramount weight to the evidence and methodologies upon which the CMA based its PR19 re-determination. There is no reason to consider that the CMA would reach any other views than those expressed in the PR19 re-determination if it were to examine these issues afresh in the water context.

This section will consider each cost of equity parameter in turn, with further details included in the appendix.

4.1 Beta

We agree that limited weight can be placed on Pennon at this stage given the lack of empirical evidence for Pennon as a 'pure play' water company at this stage. However, estimation of beta using only Severn Trent and United Utilities does not accurately reflect the risks we face as a small WoC. Both companies are large WaSCs and we consider their delivery of wastewater services offsets the higher risk of water services. This risk differential should either be addressed at source or priced within the cost of equity.

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

Detailed analysis is required to understand the impact of Covid-19 on beta to ensure Ofwat's approach is not distorted by Covid-affected periods.

Covid-19 has had a significant influence on water company betas, in particular during the early phases of the pandemic. We are of the view that Ofwat should not place full weight on Covid-affected data given the material non-recurring impact of the pandemic on water company betas, which was acknowledged by the CMA at both PR19 and RIIO-2.

Analysis of Covid's influence on water company betas, involving structural break tests, will be necessary to determine the proper calibration of Covid-affected data when estimating beta for PR24. Ultimately 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.

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

MW incorrectly apply the Modigliani-Miller (MM) framework given the dynamics of the regulatory framework for pricing debt costs. MW's proposed approach to specifying beta would introduce additional distortions which contravene the MM principle that the cost of capital should be invariant to gearing, are inconsistent with the CMA's PR19 re-determination and would result in material under-estimation of the cost of equity.

Section 5 of Mason and Wright (2021, "MW") argues that the current regulatory approach to adjusting equity beta for gearing is flawed as it leads to a WACC that is increasing in gearing, whereas Modigliani and Miller (1958, "MM") show that WACC should be independent of gearing.

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 as 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 must be explicitly adjusted for to allow for an accurate assessment of how WACC behaves under different gearing assumptions 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.

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. Ofwat's approach, based on the sector average, results in a premium to the CAPM-Cost of Debt.

Instead small deviations from the MM framework can be expected arising from Ofwat's methodology for setting the cost of debt, which prices 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".¹⁰ The debt premium faced by companies reflects efficient costs for water companies and should be priced in.

Indeed, we would not expect MM to apply in the presence of market distortions. As a result, there is no contradiction that the MM prediction of a gearing independent WACC no longer holds since MM should not apply in the first place. If there is a regulator (assumed away by MM) and regulatory policy depends on gearing, then clearly firm value will depend on gearing; thus, the cost of capital must also depend on gearing (a higher firm value must mean a lower cost of capital).

Regulatory policy effectively causes "distortions" that affect firm value and cause it to depart from the assumptions on which the MM framework is based; if these distortions cause firm value to depend on gearing, the cost of capital must depend on gearing.

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.

Furthermore, Ofwat cites increasing uncertainty as a factor for the reduction in notional gearing. This represents an inconsistency with the approach to beta, where anticipated increases in uncertainty and risk are not priced in based on the current proposed methodology.

4.2 Risk-free Rate

We do not agree with Ofwat's proposed approach to disregard AAA bonds, as theoretical and empirical evidence indicates that ILGs alone understate the RFR. ILG rates are not accessible as lending and borrowing rates to all market participants, which violates the CAPM's requirements. This approach directly runs counter to the recent guidance given by the CMA in its PR19 re-determinations without justification.

We do not consider SONIA swaps to represent an appropriate cross check. The underlying rate for SONIA swaps is an overnight rate which needs to be converted in a tenor of 20Y to be suitable for input into Cost of Equity estimation for PR24. This adjustment in tenor via swaps is likely to create distortions. For example, there has typically been limited liquidity in OIS contracts beyond the 5Y horizon rendering swap rates unreliable for the long-term 20Y window.

In addition, a forward rate adjustment to RFR would be appropriate given (1) the uncertainty in the macroeconomic environment and (2) the expected increase in market rates. Absent this we consider Cost of Equity indexation would be appropriate.

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

There is uncertainty around evolution of the RPI-CPIH wedge. As a result, we consider that caution is required when estimating the wedge ex ante. This forecasting risk could potentially be addressed through the introduction of cost of equity indexation.

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

Ofwat could derive a time-varying RPI-CPIH wedge based on the comparison of the rates on

¹⁰ Wright et al (2018). Estimating the cost of capital for implementation of price controls by UK Regulators, page 77

zero coupon RPI and CPI inflation swaps. This would allow Ofwat to calculate the implied wedge over a 20-year investment horizon, for each year of the price control.

However, there remains uncertainty around inflation pricing in the lead up to RPI Reform. Caution will be required before pricing in this market expectation to ensure that the chosen approach does not result in an understated RFR, as we understand Ofwat is not minded to introduce Cost of Equity indexation.

4.3 Cost of equity indexation

Given the uncertain macroeconomic environment for PR24, we consider that there is a strong case for either (1) application of a forward rate adjustment; or (2) Cost of Equity indexation.

Absent both RFR indexation and a forward rate adjustment in the context of increasing rates, companies are exposed to losses arising from under-estimation of required returns in a rising interest rate environment.

First, given the market consensus that rates will increase materially during the next five years, as well as uncertainty around the movements in the RPI-CPIH wedge ahead of RPI Reform in 2030, there is a risk that a fixed ex ante cost of equity allowance does not reflect outturn market conditions. Introducing indexation of the cost of equity allowance would be expected to improve the accuracy of the allowance compared to a fixed ex ante allowance.

Second, RFR indexation is likely to have a non-trivial impact on financeability by reducing the downside exposure to factors outside company control.

Third, companies and investors are not better placed to manage market risk than customers. In fact, when deciding to index the cost of new debt, Ofwat noted that “*companies have struggled to manage the forecasting risk in the past, which has potentially increased either the Cost of Equity or the allowed Cost of Debt*”.¹¹

As a result, given anticipated macroeconomic volatility and companies’ limited ability to manage this risk, there is a strong case in favour of considering either indexation of the RFR or the use of a forward rate adjustment. We would welcome further engagement with Ofwat in this area as macroeconomic conditions evolve ahead of PR24.

4.4 TMR

We disagree with Ofwat’s proposals to use forward-looking evidence when deriving a point estimate TMR. In accordance with the CMA’s recent guidance in PR19, we also consider it is appropriate to use a combination of RPI and CPIH series in the context of estimating real ex post historic returns, and that excluding RPI series omits relevant evidence which CMA relied on for its PR19 re-determination.

Use of forward-looking approaches

Forward-looking evidence is widely acknowledged to be the least robust of available estimation approaches. At PR19 the CMA placed limited weight on forward-looking evidence given reservations about its robustness and its preference to maintain its assumption of a constant TMR over time.

Deflating the TMR

The inflation series available to Ofwat for deflating nominal historical returns both have merits and demerits. For RPI, actual values are available for a longer proportion of the historical

¹¹ Water 2020: consultation on the approach to the Cost of Debt for PR19

window. By contrast CPIH is a more reliable measure of inflation, however, it (like CPI) is based on modelled rather than actual observed values for a large proportion of the historical window. As a result, it will not be possible to ascertain the accuracy and robustness of the CPIH series.

As a result, both RPI and CPIH series have relevant strengths and weaknesses in the context of estimating real historic returns which means that weight should be placed on both; otherwise it risks introducing a bias through omission of relevant data. This is consistent with the approach adopted by the CMA at PR19.

Further detail on TMR is included in the appendix.

4.5 Cross-checks for the cost of equity

We disagree with Ofwat's proposals to use MARs as the primary cross check on the cost of equity. We note that MARs have significant limitations as indirect benchmarks and are generally unreliable as market sources to inform estimates of required returns on capital. A high degree of judgement and a number of assumptions are required to decompose a MAR such that it is incapable of providing any clear insight as a cross-check for the calibration of allowed returns.

Alternative cross checks, including risk analysis, financeability assessment, multi factor models and hedge ratios represent a more relevant approaches on the CAPM derived cost of equity.

Details of alternative cross checks are set out in more detail in the appendix.

4.6 Aiming up

Ofwat's removal of the aiming up adjustment, which included 25bps to account for investment incentives, parameter uncertainty and asymmetric risk on ODIs, represents an additional departure from the PR19 CMA methodology.

The relevant factors to be considered in relation to aiming up include, *inter alia*, calibration of the price control package and any implied asymmetry, forward looking risk exposure, parameter uncertainty arising from chosen estimation methodologies, investment incentives and financeability.

The Cost of Equity is not directly measurable, and the parameters are subject to both theoretical debate and statistical uncertainty. In the context of this uncertainty, the regulator's objective is to select a point estimate of Cost of Equity (and WACC) that will balance the potential welfare loss resulting from under-estimation against welfare loss from over-estimation.

Therefore, to maximise consumer welfare, or equivalently minimise the expected consumer welfare loss, a degree of aiming up above the estimated market-based Cost of Equity would be required to align with the CMA's approach. This measure partially mitigates the risk of underinvestment.

We consider it particularly important that the risk exposure faced through delivery of water and wastewater services are considered separately. Given that the CMA found that it was necessary under its own, and Ofwat's statutory duties, to adopt an aiming up approach for PR19, it is not clear on what basis Ofwat considers it could lawfully depart from aiming up consistently with its statutory duties.

5. Cost of Debt

5.1 Cost of embedded debt

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 recognise that this might be an appropriate policy for companies with similar characteristics which are captured by the sector average position. However, this one size fits all approach is not appropriate for all companies.

We are disappointed that Ofwat has ignored relevant regulatory precedent on the cost of debt and is not proposing differentiated treatment for WaSCs and WoCs when setting cost of debt allowances. We consider a further review is needed by Ofwat in relation to the cost of debt for WoCs, which have fundamentally different characteristics to larger WaSCs. In general, WoCs issue less frequently, have access to fewer sources of finance, have higher cost of carry and face higher issuance and liquidity costs.

Treatment of WoC costs

WoCs and WaSCs have fundamentally different characteristics in relation to raising debt efficiently, which should be reflected in Ofwat's methodology for setting the cost of embedded debt. As a smaller company, we *inter alia* issue debt less frequently and face higher issuance and liquidity costs.

There are effectively two distinct groups of companies (WaSCs and WoCs) – and a one-size-fits-all approach to the cost of debt is not appropriate. Indeed, the WoCs median cost of embedded debt is 5.68 per cent compared to an equivalent WaSC cost of 4.41 per cent¹². A possible approach that would help Ofwat to tackle this issue is to consider the average cost of WoCs debt and use this to develop a WoC-specific cost of debt for PR24. This methodology would provide market-based evidence of the differential in the cost of debt for WoCs compared to WaSCs.

It will also be important for Ofwat to specify ex ante the basis on which the WoC average cost of debt position will be calculated in terms of (1) treatment of different instruments; and (2) the averaging methodology.

Balance sheet approach – methodological considerations

We consider that many aspects of the balance sheet approach are unspecified at this stage, and that this lack of clear ex-ante principles for how the balance sheet approach will be applied, generates uncertainty. We consider that the CMA's PR19 methodology is appropriate and can inform the ex ante principles required. We would welcome further engagement with Ofwat on the principles and factors which require ex ante specification including:

- Companies included in the sector average calculation – particularly important in light of the different characteristics of WaSCs and WoCs above
- Averaging methodology – the CMA, for example, argued that using median values across a broad range of companies would ensure that the allowance is not skewed by the performance or risk decisions of outlier companies¹³.

¹² CMA (2021), Cost of debt working paper, Table 2

¹³ CMA PR19 FD, para. 9.635 (b)

- Treatment of different instruments – for example, identification and assessment of outliers, treatment of swaps (below).

At this stage, Ofwat has provided limited detail on the calculation methodology for the balance sheet approach as well as the specification of cross-checks. This lack of detail means significant uncertainty remains which makes incentives unclear and makes it difficult to recover our efficient debt costs over time.

Treatment of swaps

Swaps are a standard part of financing structures in the sector and it is important Ofwat has sufficient information to understand and evaluate these instruments, both when assessing financial resilience and when setting the cost of debt allowance.

We consider that the majority of swaps in the sector are designed to achieve economic hedges and should be included in the calculation of the actual Cost of Debt:

- Ofwat's approach of fully decoupling swaps from the underlying conventional bonds does not take into account the fact that swaps in a number of cases are indivisible from instruments raised as part of defined hedging strategies.
- The exclusion of swap costs is not consistent with the CMA PR19 position, which was based on reported APR data and did not adjust to exclude swaps.

We consider transparent reporting on swaps could be beneficial and (1) support clear understanding of risks implied by swaps (2) allow swaps to be better captured in calibration of Ofwat's balance sheet approach for setting cost of debt allowances.

Overall we consider that Ofwat should not apply a sector wide methodology, such as a one-size-fits-all cost of embedded debt, for a diverse group of companies – in particular mechanisms which create random “winners and losers” on debt financing costs. We would welcome further engagement with Ofwat on the allocation of risk and pricing of efficiently incurred embedded debt costs.

5.2 Cost of new debt

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?

Ofwat's inclusion of an outperformance wedge on new debt is not consistent with the approach taken by the CMA at the PR19 re-determinations. We understand that Ofwat has not isolated the drivers of the wedge by adjusting for factors such as tenor and rating. We would expect that this wedge will not be observed when these factors are controlled for, and as a result we do not consider inclusion of an outperformance wedge to be appropriate.

As a result, we disagree with the proposed inclusion of an outperformance wedge in the cost of new debt allowance.

It is important to recognise the observed outperformance wedge may be driven by factors for which it would not be appropriate to adjust PR24 allowances.

Extensive analysis was performed in this area during the PR19 CMA re-determinations. The analysis performed by the CMA isolated tenor and rating as the primary drivers of variances to the iBoxx A/BBB index, and as a result an outperformance wedge was not applied.

5.3 Company-specific cost of debt

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?

We welcome the removal of the customer benefits test and Ofwat’s recognition that company specific adjustments on the cost of debt for characteristics such as size are required to ensure efficiently raised debt is funded.

As has been noted above, smaller water companies access debt capital markets less frequently than larger water companies which issue debt more frequently. Less frequent issuance exposes a small company to a number of risks. First, a mismatch between the notional debt issuance profile (which assumes continuous, daily issuance) and the company debt issuance profile]. Second, concentration of debt issuance leads to higher risk that our debt is issued when interest rates are high. Third, we also, as a smaller company, face higher costs of carry and higher transaction costs relative to larger companies.

Each of these factors should be considered to ensure that the cost of debt allowance reflects the risks a smaller notional company would face.

We also note the CMA’s approach to estimation of Bristol Water’s cost of debt, which included a careful cross check to Bristol’s company-specific costs. We consider that this cross check will also be required at PR24 to ensure that allowances reflect business characteristics and issuance profile. We agree with the CMA that historical positions should be further considered when assessing the embedded cost of debt given the long tenor of water company debt. More accurately reflecting the costs companies face when raising debt efficiently, will improve financial resilience.

We welcome the opportunity to discuss with Ofwat potential approaches to estimation of cost of debt taking into account company specific characteristics such as size.

6. Financeability and the notional capital structure

Ofwat has provided no clear evidence that the proposed changes to the notional structure are demonstrably in the customer interest. Ofwat has proposed a reduction in notional gearing and an increase in the proportion of index linked debt. We do not support these proposed changes, which contradict market evidence.

Ofwat does not justify changes to the notional capital structure and has not provided evidence (1) to justify the proposed reduction in notional gearing and increase in proportion of ILD; or (2) of a potential benefit to customers arising from the proposed changes.

Internal consistency and consistency with market evidence

Ofwat's proposed changes imply internal inconsistency, represent a move away from market evidence and ignore the CMA's decisions during the PR19 re-determinations.

As set out in our response to the financial resilience discussion paper, the calibration of the allowed return and associated risk exposure are pivotal in ensuring financial resilience in the sector. The proposed changes to the notional structure result in an increase in risk exposure which is not priced in to the allowed returns.

It is important that the notional company is set based on market evidence and not to solve for financeability issues. Ofwat's current approach, which appears to solve for financeability, undermines the binding nature of financeability as a cross check.

Ofwat's methodologies for the proposed adjustments to the notional company represent a series of inconsistencies:

- The reduction in notional gearing contradicts market evidence, which shows that gearing was c.70% across the sector in the 2021 APRs. All else equal, this suggests that Ofwat should be considering an *increase* in notional gearing;
- Conversely Ofwat has increased the proportion of index-linked debt (ILD) to 50% to reflect market data.¹⁴ Crucially this market data is based on the post-swap position in the sector. This contradicts Ofwat's treatment of swaps in the cost of debt allowance, where swaps are not included;
- A high proportion of ILD is primarily a feature of securitised structures with higher gearing – adopting a higher proportion of ILD would not be consistent with the proposed reduction in notional gearing; and
- An increase in ILD to match the sector average (currently c.90% RPI-linked) would exacerbate basis risk associated with *increasing* RPI linked liabilities in the notional company, at a time when the proportion of the RCV linked to RPI is *reducing*.

This represents an inconsistent and selective approach to setting the notional capital structure and we do not agree with the proposed approach, which could undermine financeability as a cross check and result in a disconnect between risk and return. This in turn could result in a decrease in the attractiveness of the sector for equity investors and a reduction in credit quality.

¹⁴ Ofwat (2021), Risk and return discussion paper, Table 5.1

Considerations for changing the notional company

It is important the notional company is stable over time to ensure companies have a predictable basis on which the allowed revenues and the wider balance between risk and return are set.

Ofwat should address each of these questions in turn prior to the introduction of changes to the notional company:

- What is the problem which the change is seeking to address?
- Is this change consistent with market evidence?
- Is the basis of the change consistent with the rationale for other elements of the notional company?
- Are the changes made in the logical sequence for assessing financeability?

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

We do not agree with Ofwat's reduction in notional gearing which is inconsistent with market evidence of the observed sector average gearing of 70.2 per cent in 2020/21

We do not understand the problem Ofwat is seeking to address by decreasing the notional company gearing for PR24. Ofwat has provided no evidence that (1) the proposed changes are supported by market data; (2) the changes to the notional structure are in the customer interest.

The notional gearing should be set based on market evidence, and sector gearing is approximately 70%. This reduction in the notional gearing could lead to market distortions due to (1) equity issuance costs; (2) a reduction in the proportion of embedded debt which could increase the cost of debt allowance, and hence increase costs for customers; and (3) companies adopting inefficient capital structures. Each of these changes could increase customer bills without a corresponding customer benefit.

Ofwat's inclusion of Hafren Dyfrwdy in the assessment of sector gearing is incorrect. If this outlier is removed then the range of actual gearing across the sector is 60.2% to 83.2%, with Ofwat's proposed 55% sitting outside of this range. Historically, Ofwat has set the notional capital structure such that it follows (but does not match exactly) features of sector financing and capital structures¹⁵. Ofwat's proposals to reduce notional gearing represent a departure from this past methodology.

We are disappointed that Ofwat chose to ignore the CMA's position on gearing at the PR19 re-determinations. **The CMA stated less than 12 months ago that there was neither evidence to change the level of gearing nor that a different level of gearing would be in the interest of customers.**

Risk exposure at PR24 and implications for gearing

There is increasing risk and uncertainty in the sector due to macroeconomic volatility, uncertainty under the common reference scenarios which Ofwat sets out in its Long-Term Delivery Strategy paper, as well as stretching performance targets.

Ofwat states that a reduction in notional gearing will increase the cash available for the management of downside risk. This is not correct. A reduction in notional gearing shifts the risk exposure from debt investors to equity investors.

¹⁵ Ofwat (2013), Setting price controls for 2015-20, final methodology and expectations for companies' business plans, page 129.

The change in risk exposure should be addressed at source, through the cost allowances and design of the incentive framework. If risk exposure is not mitigated at source then increased risk should be priced through the cost of capital. Ofwat's proposed changes do not include either of these remedies.

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?

Ofwat's approach to setting the proportion of ILD based on sector average is inconsistent with the approach to notional gearing as well as past Ofwat policy. We believe a consistent, evidence-based approach is required for all parameters in the notional company.

We do not agree with an increase in the proportion of ILD for the notional company. Ofwat's justification for increasing the proportion of ILD appears to rely on the inclusion of swaps. This contradicts Ofwat's treatment of swaps when setting the cost of debt, as swaps are *excluded* from the cost of embedded debt allowance but *included* when calculating the proportion of ILD for the notional company.

Moreover, a high proportion of ILD is primarily a feature of securitised structures with higher gearing – adopting a higher proportion of ILD would not be consistent with the proposed reduction in notional gearing.

The ILD from the sector average is primarily RPI-linked. However, with Ofwat's proposed full transition to CPIH, this would create a mismatch between the CPIH linked revenues and assets and RPI linked liabilities.

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?

A full transition to CPIH at the beginning of PR24 would result in an increase in customer bills in the short term and, given the proportion of RPI debt in the sector, would introduce substantial basis risk over PR24, which imply extra management and pricing costs.

We consider that a phased transition to CPIH based on the natural rate is in the customer interest. This is because a faster rate of transition to CPIH will create a mismatch between CPIH-linked assets and RPI-linked liabilities, which would imply:

- Material basis risk for companies (as companies would be exposed to the difference between RPI and CPIH across AMP8); and
- Additional costs for customers to price in the cost of hedging basis risk (assuming it is practicable to hedge the risk) to ensure that the transition is net present value neutral.

It is by no means clear that there is sufficient appetite in the market for water companies to be able to hedge CPIH exposure implied by a full transition. The relative lack of depth of liquidity in the CPI and CPIH swap markets mean the large transactions required to hedge RPI exposure may represent much more than the market's normal volumes and could mean that either it is not practicable to hedge the sector's current RPI exposure due to bank bandwidth and lack of appetite from institutional investors, or that the cost of hedging is substantive. All else equal, this would create additional costs to customers.

A more phased transition to CPIH is likely to avoid the asset liability mismatch and additional costs whilst facilitating further transition to CPIH ahead of RPI Reform in 2030. A full transition to CPIH at PR24 would be complex and imply significant basis risk management as well as a need to price in the associated costs for management of basis risk. If Ofwat does implement a full transition to CPIH, further engagement with Ofwat would be required to ensure that these risks and costs are priced.

Q7.1: Do you agree that financeability is likely to be less constrained at PR4 than at PR19?

The underlying financeability of a company like SEW is likely to be *more* constrained at PR24 in the context of Ofwat’s proposed reduction in allowed cost of equity, limited scope to recover efficient debt costs, increasing operational risk and an uncertain macroeconomic environment.

We consider each of these in turn below. First, notwithstanding commentary and analysis above Ofwat’s proposals for PR24 to date would imply increased pressure on financeability due to a reduction in allowed returns. Second, we anticipate that external pressures will increase over PR24 (and beyond) given climate change pressures, population growth as well as risks associated with our business which is located in one of the most water stressed areas in the UK. Third, there is a volatile macroeconomic environment which could result in an increase in interest rates and all else equal exert pressure on cashflows and metrics.

Taken together these changes in the risk landscape will result in increased financeability challenges at PR24. We do not agree with Ofwat’s proposed changes to the notional capital structure such as increased ILD and a reduction in notional gearing and do not consider that these would improve financeability at PR24.

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?

Dividend yield is an important consideration when assessing overall financeability. Ofwat’s assessment of financeability does not consider the importance of equity financeability in the sector.

Dividend yield is a key metric in assessing financeability from an equity perspective and is particularly important in the context of regulated utilities given that investments in utilities are often driven by the availability and consistency of dividend payments. Multiple studies show that investors in utilities expect to receive a proportion of return in the form of dividends.

Growth in the RCV is not a substitute for dividend yield. The payment of dividends supports the predictability and stability of our cash flows, which our shareholders rely on. Dividends directly benefit the numerous pensioners that are the ultimate beneficiaries of the investments in companies like SEW.

Corporate finance principles do not support the need for dividends to vary with capital growth. In practice companies might prefer to vary gearing over time depending on capital investment requirements rather than adjust a dividend yield to keep gearing constant. This is particularly true during the current low interest rate environment where it may be beneficial to fund growth through additional debt in the short term.

At this stage, Ofwat has not set out a proposed dividend yield for the sector. However, it is likely that the combination of (1) stated expectation of injections of equity, combined with (2) increased risk exposures, (3) proposed reductions in allowed returns that do not reflect these risks based on omission of evidence which CMA relied on (above), (4) assumed reductions in gearing and (5) reduced dividend assumptions, will likely make equity investors reluctant to provide further equity capital to the sector in general. We do not consider this to be in the customer interest.

While equity investors might tolerate some variations in distributions to equity, the pool of long-term capital with ability and willingness to tolerate prolonged periods of low distributions is small. As noted by Ofwat, our shareholders have agreed to an unsustainably low dividend yield over the period 2020-25, to enable reinvestment into the company. As a result, further deviations from the market benchmarks for dividend pay-out ratios in AMP8 would be significantly detrimental to attractiveness of water companies as an equity investment proposition which is not in the long-

term interests of customers.

Appendix

Additional considerations for setting the cost of equity at PR24

Risk free rate

Benchmark instrument

The CMA determined that the 'real' rate is likely to be lower than the level represented by AAA rates because of greater default, complexity, illiquidity, and inflation concerns. These components, according to the CMA, do not need to be explicitly adjusted since the CMA implicitly lowers its estimate by taking any estimate other than the 100th percentile from a range bordered at the top by AAA yields and at the bottom by ILGs. Moreover, by changing the yield to exclude outlier instruments, Ofwat's argument about illiquidity in the AAA index might be addressed. This would be a straightforward exercise that could be conducted in a way that was both factual and transparent.

One solution is that Ofwat could consider a direct adjustment to the convenience yield, which can be deduced from calculating the diversion of AAA index to ILGs, on corresponding ILGs estimate.

Cross checks

According to the BoE, the liquidity of OIS contracts beyond 5 years has improved and the BoE wants to publish OIS curves as soon as operationally practical. But it is not apparent whether the distortions have been addressed – the CMA referred to these distortions as possible vulnerabilities in SONIA swaps during the RIIO-2 CMA process.

Moreover, using SONIA swap rates across long maturities raises the possibility that they may be distorted by swap-specific variables. Factors including liquidity, credit risk, regulatory requirements, tightness of the repo market owing to the UK's huge QE programme, and need of insurance and pension funds to match the lengthening durations of their obligations all influence swap prices, according to study. Because of these aspects, swap spreads for long-maturity instruments are often evidenced to be negative.

For example, Ofgem's RIIO-2 FD for GD&T2 presents a 20-year SONIA swap rate that is much lower than the yield on 20-year nominal government bonds, indicating a materially negative swap spread even before the convenience yield on nominal Gilts is taken into consideration.

Due to the limitations listed above, we consider SONIA swaps as an unsuitable cross-check.

Forward rate adjustment and averaging

We consider that forward rate adjustments and averaging should be considered in combination with the macroeconomic climate and cost of equity indexation.

Rates are expected to rise during PR24, due to high inflation and the recent increase in the BoE base rate with additional increases forecast in 2022. Moody's forecasts that floating rates and 10-year UK government yields, will increase significantly to pre 2008 financial crisis levels.

Therefore, present spot rates are unlikely to be a better indicator of future spot rates than the forward curve. To prevent underestimation of the RFR in the absence of indexation, a forward rate adjustment is necessary.

Additionally, it is important to use the most recent market data while also avoiding excessive short-term market volatility when deciding on an average period. Longer-term averages will understate RFR, especially in an environment with a clear increasing trend in rates.

TMR

We disagree with the proposed placement of material weight on forward-looking evidence as it is the least robust of available estimation approaches. Ofwat's approach omits relevant evidence and regulatory precedent and there is no rationale for the divergence from the averaging approach adopted by the CMA.

Methodology for estimating the TMR

Ofwat is proposing to generate the range for TMR using historical ex post and ex ante methodologies, however there is a risk that the point estimate is considerably altered by forward-looking approaches and divergence from the mid-point of the range as these approaches are typically considered to be the least reliable method for estimation. Ofwat's DGM technique is entirely reliant on assumptions, which results in a very large TMR estimation range.

The CMA gave little weight to forward-looking data at PR19 because of its doubts about the robustness of the evidence and its inclination to retain its assumption of a constant TMR over time. For the point estimate, the CMA did not examine forward-looking evidence, instead picking the midpoint of the range created using previous ex post and ex ante methodologies.

For PR24, limited weight should be given to forward-looking techniques and we do not believe that forward-looking approaches can reliably improve on or inform the point estimate provided by ex ante and ex post approaches.

Methodology for averaging

The CMA stated in the PR19 determinations that using both the arithmetic mean and range of estimators yields the same mid-point estimate, with the later technique producing a greater range. The CMA subsequently decided to utilise the arithmetic mean because of its simplicity and transparency.

With the long-term investments in UK water sector and the need for consistency across other costs of capital, the CMA assessed both overlapping and non-overlapping estimators of returns over 10- and 20-year holding periods, and to prevent 'cherry-picking,' the CMA gave equal weight to all estimators.

We consider that an approach consistent to the CMA is suitable.

Cross-checks for cost of equity

We do not consider MAR to be an appropriate cross check for the cost of equity due to significant difficulties with regards to MAR data decomposition and interpretation. It is important that Ofwat considers alternative cross checks to the CAPM model.

MAR

Ofwat has indicated that it is likely to use MAR evidence – based on evidence from listed companies and from recent transactions – to inform its selection of a point estimate for the Cost of Equity.

For PR19, the CMA did not give MAR analysis weight in coming to a final view on the point estimate for the cost of capital noting that it remained “cautious about using market prices to determine the point estimate for the Cost of Equity or overall cost of capital”. The CMA acknowledged that there are wide range of reasons why prices may rise and fall over time. On

balance it concluded that MARs did not present sufficient evidence of the WACC estimate's appropriateness for the sector.

We note that MARs as a cross check on the Cost of Equity have significant limitations as indirect benchmarks and are generally unreliable as the sources of market information to inform estimates of required returns on capital.

A high degree of judgement and a number of assumptions are required to decompose a MAR such that it might provide a useful input into the calibration of allowed returns.

All factors that might affect the market price – and assumed performance scenarios for these factors – are estimated with uncertainty in future periods. This means that isolating the contribution from assumed outperformance on CoE is inherently difficult. Even in the current price control period for which regulatory targets/revenue allowances are known, investors take a view on all different sources of performance against regulatory targets, which are individually and together estimated with great uncertainty. The uncertainty increases the longer the period covered by the analysis.

Ofwat acknowledges that the listed companies have tended to display above average performance but considers that it is possible to control for this differentiating factor by deducting the present value of expected net RoRE outperformance from the MAR premium. Such an analysis was attempted by Europe Economics at PR19 and landed at materially different conclusions for SVT and UUW which the CMA considered a good illustration of the difficulty of correct interpreting such analysis. The CMA concluded that “the variation between these two companies that are often categorised as being similar suggests to us that an average of just these two is unlikely to give a sufficiently clear picture of whether the cost of capital allowance is higher or lower than is required across all companies in the sector”.

The fact that MARs around recent water transactions have varied significantly (e.g. 1.4x for Bristol Water and <1.1x for Southern Water) underlines how there are company and transaction specific issues driving the valuations rather than a blanket assumption across the entire sector.

The MAR evidence is at a minimum the least robust cross check given it is the most indirect estimation.

Financeability

Financeability tests are crucial to verifying judgements made in determining key price control parameters such as the cost of capital, Totex, and incentives. A thorough examination of financial viability under the proposed regulatory framework can provide a clear indication of how the regulated company could retain financial resilience and attract investment under prescribed allowances, making it a vital cross-check on the cost of equity.

The financeability assessment is often based on a company's balance sheet, cash flow projections, credit indicators, and financial headroom available for risk management. The cost of equity is a primary driver to each of these outputs.

There are merits for market-based cross checks, but these are less relevant than the financeability assessment as they are fully exogenous to the company and the price control parameters and lack the linkage with the financeability duty.

As a result, we consider that consistent to the CMA PR19 determinations, financeability is an important cross-check for choosing equity allowances and disagree with Ofwat's proposal that credit measures must never be incorporated in the WACC evaluation. The CMA also noted that WACC is the most important factor in ensuring that an efficient firm can finance its functions, and if the WACC is set at a level that properly reflects the cost of debt and equity for investors in the sector, both debt and equity investors will earn sufficient returns to cover the costs of financing,

and therefore companies can be financeable.

Due to parameter uncertainty, the CAPM could be used to produce a broad range of CoE, where lower quartile estimates of CoE could be inconsistent with an investment grade rating. Therefore, the CMA noted that credit ratios from a financeability assessment provide a check on whether the cost of equity is set at a level commensurate with Ofwat's high-quality credit rating requirements.

Multi-factor models

Different ideas to explain excessive portfolio returns have emerged in the wake of the creation of Portfolio Theory. This includes the CAPM model, which uses a single risk component, beta, to explain the excess returns of an investment. Researchers and practitioners alike praised the model's clarity and simplicity, and UK regulators continue to use it to estimate the allowed CoE.

However, several studies have questioned the CAPM model's ability to explain excess returns, and the results have shown that the model has limits. When the CAPM failed to identify persistent anomalies, Eugene Fama and Kenneth French published a paper in 1992 to add the Size and Value factors to the CAPM model, suggesting that their three-factor model was better able to do so. According to the authors' research, in the long term, small companies have created greater returns than big stocks, and value investments have generated higher returns than growth investments, even though they carry a larger degree of risk.

In addition to the excess return on the market ($R_m - R_f$) element, the key variables leading to excess returns were identified as scale, value, profitability, and investment patterns in 2015 by Fama and French to form models with stronger explanatory power.

CAPM's explanatory power has also been criticised by other alternative models, including the Stambaugh and Yuan (2016) 4-factor model, the Hue, Xue and Zhang (2015) q-model, and the Fama-French 5-factor model ('FF5F').

As a result, these models, which are richer descriptors of systematic risk and have a stronger explanatory power than the CAPM, may serve as a cross check for CAPM-based returns.

Risk analysis

Risk analysis, as noted by the CMA during the PR19 determinations, serves as a vital cross-check on allowed returns. If there is a mismatch between risk exposure and return calibration, companies may be exposed to excessive downside risks resulting from a price control framework that fails to balance risk and return. Such a result might have a negative impact on the sector's financial resilience and long-term stability.

Concerns about the financial robustness from Ofwat and the corresponding statements about increased risk exposure indicate to a strong and explicit relationship between risk assessments and return calibrations.

The CMA PR19 determination established a relationship between risk analysis and return calibration. To begin, the CMA altered the cost assessment and the ODIs in order to better balance risk and reward while also bolstering the companies' financeability. Second, the CMA uplifted the cost of equity to account for the remaining asymmetries in the ODI package. For PR24, an explicit linkage is necessary to guarantee that the price control package's rewards are commensurate with the risk exposure.

Hedge ratios

Hedge ratios capture the sensitivity of a firm's debt values to changes in equity values. Debt values are sensitive to changes in the value of a company's excess equity return and the return of risk-free debt, according to empirical studies. It is, therefore, possible to infer the cost of equity

for a regulated water company that would be required on the basis of the returns on its debt and changes in firm values, which is a market-based cross-check and require fewer assumptions than the MAR approach.

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