KPMG

PR24 cost of debt: analysis of the infrequent issuer premium

Report prepared for
South East Water Limited

March 2025

Contents

Important notice

This Report has been prepared by KPMG LLP ('KPMG', 'we' or 'our') for South East Water Limited (SEW) under a private contract, set out in our Engagement Letter and should be read in conjunction with the Engagement Letter. As stated in our Engagement Letter, SEW has agreed that this final written Report supersedes all previous oral, draft or interim advice, reports and presentations, and that no reliance will be placed by SEW on any such oral, draft or interim advice, reports or presentations other than at its own risk.

SEW commissioned this work to assist in its considerations regarding the Water Services Regulation Authority (Ofwat)'s PR24 Final Determination (FD) on the cost of debt. Ofwat published the FD on 19th December 2024.

The agreed scope of work is included in section 2.2 of this Report. Our findings do not constitute recommendations as to whether or not SEW should proceed with any particular course of action.

This Report is for the benefit of SEW only. It has not been designed to be of benefit to anyone except SEW. In preparing this Report we have not taken into account the interests, needs or circumstances of anyone apart from SEW, even though we may have been aware that others might read this Report. We have prepared this Report for the benefit of SEW alone.

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In particular, and without limiting the general statement above, since we have prepared this Report for the benefit of SEW alone, this Report has not been prepared for the benefit of any other person or organisation who might have an interest in the matters discussed in this Report, including for example other water companies or regulatory bodies.

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Information in this Report is based upon on financial information platforms, financial datasets, and publicly available sources. Our analysis is based on data available up to January 2025 and reflects prevailing conditions as of that date, all of which are accordingly subject to change. We have not undertaken to update the Report for events or circumstances arising after this period. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. Information sources and source limitations are set out in the Report. We have satisfied ourselves, where possible, that the information presented in this Report is consistent with the information sources used, but we have not sought to establish the reliability or accuracy of the information sources by reference to other evidence. We relied upon and assumed without independent verification, the accuracy and completeness of information available from these sources. KPMG does not accept any responsibility for the underlying data used in this Report.

Where our Report makes reference to 'KPMG analysis' this indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented. We do not accept responsibility for the underlying data.

KPMG has not made any decisions for or assumed any responsibility in respect of what SEW decides, or has decided to, include in its response(s) to the FD.

The findings expressed in this Report are (subject to the foregoing) those of KPMG and do not necessarily align with those of SEW.

This engagement is not an assurance engagement conducted in accordance with any generally accepted assurance standards and consequently no assurance opinion is expressed.

1. Executive summary

1.0.1. Ofwat set its Final Determination ('FD') for the next price control ('PR24') on 19 December 2024. The FD includes an allowed return which is based on Ofwat's calculation of the allowed cost of capital for the five-year period to Financial Year ('FY') 2030. The allowed cost of capital is a sector-wide allowance and applies to all water companies.

1.0.2. Ofwat set a sector-level allowance for the cost of debt. For embedded debt, Ofwat set a single allowance based on the median cost of embedded debt ('CoDE') of WaSCs and large WoCs.[1]

1.0.3. Ofwat indicated in its Final Methodology that it may apply a company-specific adjustment ('CSA') on the cost of debt ('CoD'). It indicated that it would require companies to justify an adjustment in terms of higher costs faced by a notionally-structured company with their higher cost characteristic (e.g. small size) against the sector benchmark. Ofwat noted that adjustments should not insulate companies from the consequences of risks under direct company control (e.g. timing or tenor) or whose effects could be mitigated through a diverse debt issuance strategy, in order to maintain strong incentives for companies to finance themselves efficiently.[2]

1.0.4. South East Water ('SEW') requested a CSA on the CoD, but Ofwat did not include a CSA for SEW in its FD.

1.0.5. SEW has commissioned KPMG to consider: (i) whether SEW meets the criteria of an infrequent issuer; and (ii) the implications of being an infrequent issuer of debt on the CoD.

1.0.6. The analysis set out in this Report finds that:

- An infrequent issuer of debt issues debt less frequently than other companies, due to its smaller RCV size, and does not need to issue benchmark size debt each year.
- Infrequent issuers of debt are exposed to higher variability of debt costs.
- SEW meets the definition of an infrequent issuer of debt in relation to its cost of embedded debt.
- A CSA of 30bps on the cost of embedded debt would be appropriate to price in the marginal financing risk faced by SEW as an infrequent issuer of debt.

1.1. Defining an infrequent issuer

Definition of an infrequent issuer of debt

1.1.1. Small and infrequent issuers have several specific and non-controllable characteristics driven by their relatively small size. They have more limited control, relative to large issuers, over their frequency and timing of issuance, maturity concentration and debt composition, which are material drivers of the cost of debt. Further, for these issuers, each issuance represents a more material proportion of the debt book and thus has a more material impact on the CoD.

1.1.2. In line with regulatory precedent, an infrequent issuer is defined as an issuer that issues less frequently than benchmark size annually on average.

[1] Ofwat (2022), Creating tomorrow, together: Our final methodology for PR24 – Appendix 11: Allowed return on capital. Available here. Pages 66 to 69.
[2] Ofwat (2022), Creating tomorrow, together: Our final methodology for PR24 – Appendix 11: Allowed return on capital. Available here. Section 4.6.

SEW's notional issuance profile

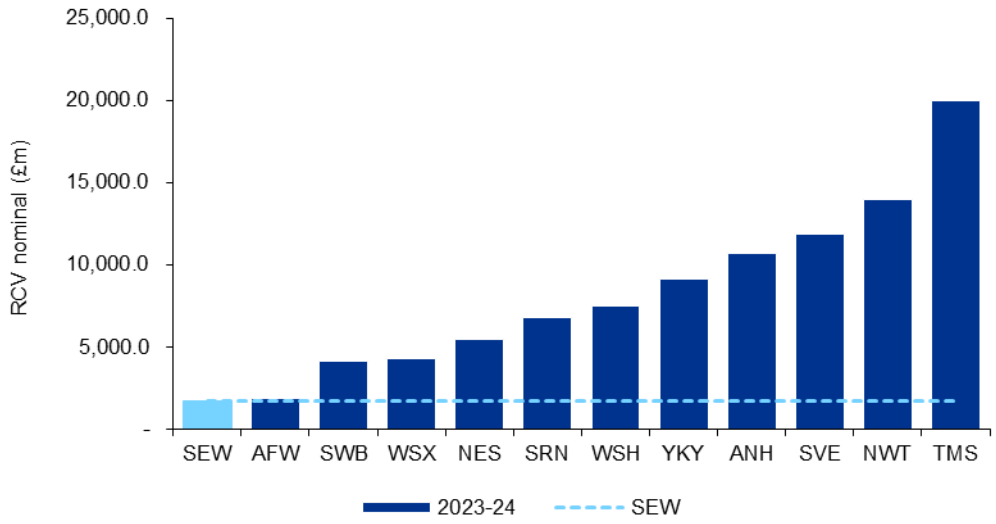
1.1.3. Analysis has been undertaken to identify the implied frequency of debt issuance for SEW as compared to the sector on the basis of RCV growth. The analysis finds that SEW's historical level of RCV growth indicates an annual issuance size of £48m, which is significantly below the threshold benchmark size of debt.[3] The analysis also indicates that SEW would issue debt every 4 years and three months, which is also below the annual issuance profile indicated for a frequent issuer of debt. On a notional basis, SEW is therefore considered to be an infrequent issuer of debt.

1.1.4. By comparison to the rest of the WaSC and large WoC group, SEW is the least frequent issuer of debt and its notional issuance profile of every four years is significantly higher than for the majority of water companies, with eight of the twelve companies anticipated to issue benchmark-sized debt annually, on average.

SEW's actual historical issuance profile

1.1.5. SEW is a small company relative to the WaSC and large WoC group which is used to estimate the cost of embedded debt for the sector in RCV terms.

Figure 1: SEW's nominal RCV compared to WaSCs and large WoCs in 2024



Source: KPMG analysis

1.1.6. SEW has the smallest nominal RCV of the WaSC and large WoCs in 2024, indicating a significantly less frequent need to issue debt on the basis of RCV on a comparative basis. On an actual company basis, SEW has issued debt approximately every three years, thereby meeting the definition of an infrequent issuer being one which issues debt less frequently than threshold size annually on average.

1.1.7. Analysis of SEW's notional issuance profile based on historical RCV indicates that it is an infrequent issuer of debt, which is corroborated by a review of its actual historical issuance profile.

[3] For inclusion in the iBoxx a benchmark of £100m was in place up until 2010 at which point it was increased to £250m to reflect the increase in the average size of new issues.

1.2. Pricing higher risk faced by an infrequent issuer

1.2.1. SEW's infrequent issuance of debt is a function of its size characteristic which is outside of its control. Being an infrequent issuer of debt drives higher financing risks as compared to the median company on which the cost of embedded debt allowance is based. This is driven by infrequent issuers: (i) having to wait to allow debt requirements to build to a sufficient size to issue debt; (ii) having more limited control over the timing of issuance (as compared to a larger, more frequent issuer of debt); and (iii) higher point in time risk.

1.2.2. Point in time risk refers to the risk that debt is issued when interest rates are relatively high (in terms of the combination of underlying reference rates and credit spreads). For a company which issues infrequently, it is exposed to heightened risk of issuances coinciding with high (or low) interest rates i.e. higher point in time risk. This can result in a wider spread of cost of debt outcomes for an infrequent issuer relative to other companies.

1.2.3. The analysis in this Report has sought to identify the implications for an infrequent issuer's risk profile relative to a more frequent issuer and its cost of capital.

1.2.4. Ofwat's determinations recognised that an infrequent issuer would have greater volatility of debt financing costs and hence higher risk but did not price this into its cost of capital allowance on the basis that it did not consider the risk to be systematic.[4] This Report considers that there is a systematic component of the risk exposure as point in time risk for an infrequent issuer is ultimately driven by macroeconomic factors which affect interest rates.

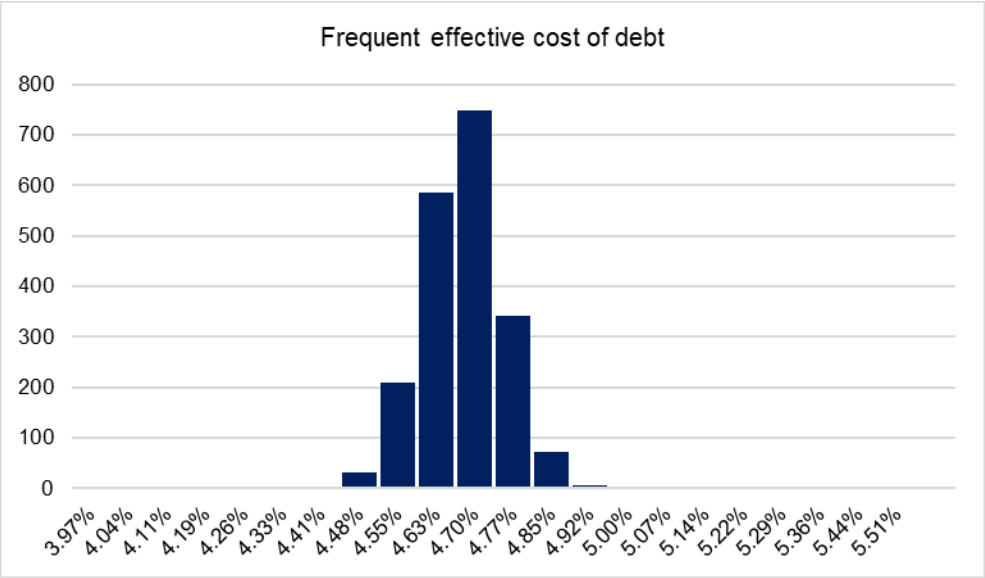
1.2.5. The Report undertakes risk analysis to model the volatility of financing risk and associated Return on Regulated Equity (RoRE) performance range in PR24 to assess additional equity risk between a notional infrequent issuer and a frequent issuer (which the allowance is based on). It translates this risk differential and higher volatility on financing risk arising from infrequent debt issuance into a beta adjustment.

1.2.6. This approach estimates the financing risk differential between the notional infrequent issuer and the rest of the sector, measured as the increase in standard deviation of financing risk distributions under plausible scenarios to reflect the systematic notional risk of the infrequent issuer compared to the rest of the sector.

1.2.7. The figures below set out the results of the risk simulation for notional efficient frequent and infrequent issuers and show that there is a wider range of potential outcomes on cost of debt for an infrequent issuer of debt compared to a frequent issuer.

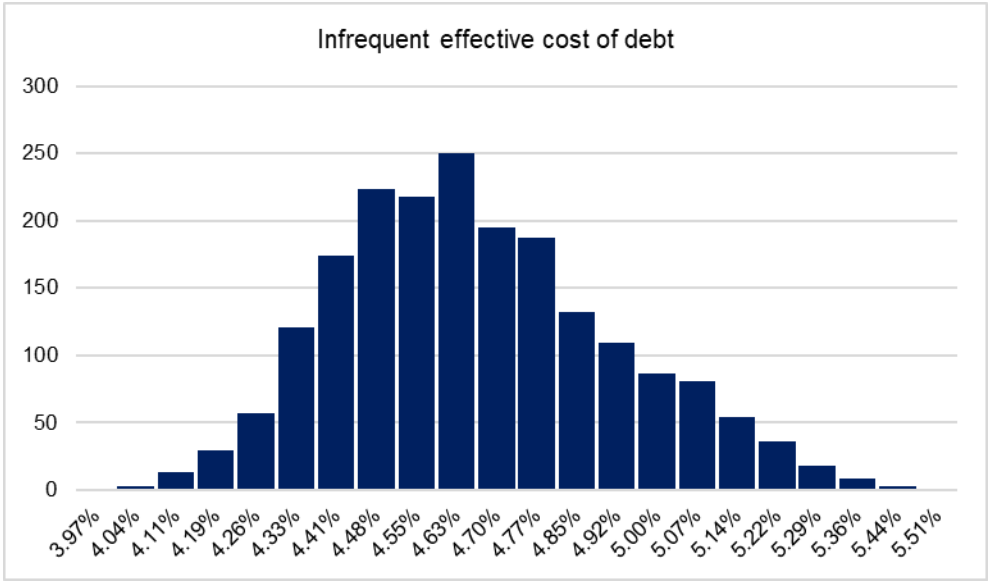
[4] Ofwat (2024) *Aligning risk and return- allowed return appendix.* Available here, p.91

Figure 2: Distribution of cost of debt outcomes for a frequent issuer based on risk simulations



Source: KPMG analysis

Figure 3: Distribution of cost of debt outcomes for an infrequent issuer based on risk simulations



Source: KPMG analysis

1.2.8. The increase in RoRE variance indicates higher return volatility for the notional infrequent issuer, which can be translated into a higher beta for the infrequent issuer and hence higher cost of capital.

1.2.9. At one extreme, if the increase in volatility is driven entirely by systematic factors, the correlation between the company's returns and the broader market is likely to increase, resulting in a higher beta. At the other extreme, if the increase in volatility is driven entirely by idiosyncratic risk, the correlation with the broader market is likely to decrease.

1.2.10. Under the benchmark assumption that the increase in volatility arises from a proportionate increase in both systematic and idiosyncratic components, the correlation will remain unchanged. As a result, the increased standard deviation translates into a proportionate increase in beta.

1.2.11. The equity beta impact on pricing this marginal systematic risk in the cost of capital is translated into an equivalent uplift on the cost of embedded debt, recognising that this is a financing risk that arises directly from debt issuance. This approach indicates an uplift on the embedded cost of debt of 35bps.

1.2.12. The Report considers this implied uplift from the analysis of pricing marginal financing risk alongside the actual differential between SEW's actual cost of embedded debt across AMP8 and the allowance of 49bps.

1.2.13. Recent regulatory precedent has indicated CSAs on debt in the range of 25bps to 35bps. On this basis, an adjustment to SEW's embedded debt allowance of 30bps – which is materially below the delta between the SEW's actual cost of embedded debt and the allowance – would recognise that SEW as a relatively small company and infrequent issuer has higher financing risk than the sector average company on which the cost of embedded debt allowance is based.

2. Context and scope

2.1. Context

I Ofwat's approach to setting the CoD

2.1.2. The PR24 FD sets a single sector-wide allowance for the cost of debt (CoD), based on the median costs of water and sewerage companies ('WaSCs') and two large water-only companies ('WoCs'). The total allowed return on debt, set at 3.15%, reflects Ofwat's estimates of: (i) the cost of embedded debt; (ii) the cost of new debt; (iii) the share of new debt; and (iv) issuance and liquidity costs. These components are summarised in the table below.

Table 1: Ofwat's PR24 FD decision on cost of debt

Metric	Ofwat's FD
Cost of embedded debt (CoD_E)	2.77%
Cost of new debt	3.74%
Share of new debt	24%
Issuance and liquidity costs	0.15%
Allowed return on debt	3.15%

Source: Ofwat (2024), PR24 Final Determinations: Aligning risk and return – allowed return appendix, available here, table 1.

2.1.3. Ofwat has recognised that, in some cases, a company-specific adjustment ('CSA') to the sector-wide CoD may be necessary. A 35bps premium on the CoD was allowed for Portsmouth Water ('PRT') and South Staffs Water ('SSC'), but no CSA was applied to SEW.

2.1.4. The CoD_E was determined based on the median company within WaSCs and large WoCs. The implication is that, where a company's debt portfolio differs from the median company, there is a risk of the company being over- or under-funded.

2.1.5. Water companies issue debt in discrete amounts. These borrowings typically have maturities that extend across multiple price control periods, meaning that companies' interest costs at any given time will reflect the weighted average of multiple past issuances.

2.1.6. Each company in the sector has a different actual cost of debt based on its cumulative debt position determined by, inter alia, the specific dates when companies issued debt and the market conditions (i.e. interest rates) on these dates.

2.1.7. On this basis, where companies have not issued debt at a similar time to the median company, their costs of debt will similarly diverge from the median.

II Macroeconomic conditions – which are outside company control – can be volatile and have a material impact on debt costs

2.1.8. In principle, every company faces point in time risk due to daily variation in rates. This risk may not create material exposure for a company that issues relatively frequently, provided that rates are stable on average, with moderate daily volatility and shorter-term fluctuations.

2.1.9. However, in practice market rates have been unpredictable, highly volatile, and subject to marked step changes. This is illustrated in the chart below, which shows the evolution of yields on the iBoxx A/BBB 10+ year index, historically used to proxy water company debt costs. Rates were – on average – relatively flat from 2002 to 2010 and then fell significantly post the Global Financial Crisis ('GFC'), before increasing again in recent years.

Figure 4: iBoxx A/BBB non-financial 10 year+ index annual yield (1 Jan 2002 to 1 Jan 2025)

Source: Eikon, KPMG analysis

2.1.10. This volatility is driven by macroeconomic and geopolitical factors (GFC, the economic impact of Covid-19 and the subsequent recovery, Russia-Ukraine war) that are beyond the control of individual companies and could not have been predicted when companies were establishing their debt portfolios.

2.1.11. Significant changes in the macroeconomic environment can cause companies' costs of debt to diverge from prevailing rates and from each other, depending on the timing of debt issuance. Given the volatility of interest rates, it is impossible to envisage how companies could all have converged on the same average interest rate. Since companies borrowed on different dates, and in different ways (tenor, debt type), means that there will inevitably be a spread of average interest rates across the sector going into the new price control period.

2.1.12. Regulated utilities – including water companies – have generally adopted long term financing strategies to match the long-term nature of their assets. This is a widely accepted principle, known as the asset-liability matching principle. Companies take this approach because it means that the tenor of financing sources mirrors the duration of cashflows implied by the regulatory framework and manages refinancing risk in this context.

2.1.13. However, despite this approach being used to provide stability by linking financing to asset-based cash flows, downside risk arises in the form of interest rate risk. By issuing long-term debt companies effectively lock in the prevailing rate for several price control periods, potentially facing a situation where rates change, and the allowance no longer covers the costs.

2.1.14. For example, companies that issued long-term debt in the early 2000s would have faced higher costs than companies issuing at shorter tenors. While long-term issuances locked in the higher rates for the life of the debt, companies with shorter tenor agreements could refinance at lower rates when market conditions changed after the GFC. However, market expectations at the time did not indicate that rates were likely to fall. As a result, companies would not have anticipated the ability to refinance at lower rates in the future, which made long-term financing appear more advantageous at the time of issuance. Given how rates actually evolved, with a significant step-down around 2010, the long-term issuance ultimately turned out to be more expensive in hindsight.

2.1.15. The timing of debt issuance can therefore have a material impact on CoD, particularly where there is volatility in interest rates. The market rate at the date of each debt issuance may contribute positively or negatively to CoD performance[5] depending on the long-term evolution and shorter term (daily) variability in rates.

III Company issuance profiles are impacted by a variety of factors

Timing of issuance

2.1.16. While companies generally aim to manage issuances to optimise costs, the timing of each issuance will likely depend on several factors, a number of which are not within a company's control. The most material are:

1) **Refinancing requirements:** when existing debt matures, companies may need to refinance to maintain liquidity and may not have the option to wait to improve, such as a decrease in rates or a reduction in volatility..

2) **Capex requirements:** companies may be required to issue debt to raise cash to support capital expenditure. Where there are capex requirements, companies will seek to avoid raising funding too far in advance (which would expose them to carry costs)[6] or deferring for too long (to avoid compromising the delivery of capex programmes). Companies have generally had limited ability to optimise issuances on a long-term basis given uncertainty around the scope and size of capex programmes.

Frequency of issuance

A key characteristic that impacts the frequency of debt issuance is company size, which influences the ability to issue debt at benchmark size. Since 2010, benchmark-sized debt has been defined as debt of at least £250m. Large companies with significant refinancing needs and the requirement to finance RCV growth can easily accumulate enough financing requirements to reach this threshold frequently. In contrast, smaller companies require more time to work up to this threshold.

IV Size and timing of issuance are drivers of CoD risk differential for an infrequent issuer

2.1.18. Smaller companies have two options:

- Issue frequently to manage the risk associated with interest rate volatility but make small issuances under benchmark size, resulting in higher cost on each instrument; or
- Issue at benchmark size but less frequently, exposing the company to higher interest rate risk.

2.1.19. In essence, smaller companies must choose between higher costs upfront or greater exposure to risks that can, in turn, result in higher costs if those risks materialise.

2.1.20. Ofwat's PR24 decision focusses on the former, i.e. where companies have issued smaller, sub-benchmark size debt, which has resulted in higher costs for companies. However, the latter also represents a legitimate approach for smaller companies. Ofgem considered both approaches in its RIIO-2 determinations and concluded that both approaches implied equivalent additional costs.[7]

[5] CoD performance is the term used to compare a companies' actual CoD and prevailing market rates. For example, where a company has a CoD which averages as lower than the prevailing market conditions, it would be considered to have a strong or positive performance. Where a companies' CoD is higher than prevailing market rates, then that company would have a weak or negative performance.
[6] Cost of carry reflects the cost of issuing debt ahead of need (for example, pre-financing maturing debt, capital expenditures, working capital requirements
[7] Ofgem (2022), *RIIO-ED2 Draft Determinations Finance Annex*. Available here, appendix 2, page 155.

2.1.21. Regulatory precedent supports the idea that the timing of debt issuance significantly impacts the cost of debt. In its 2010 redetermination, the Competition Commission ('CC'), now the Competition and Markets Authority ('CMA'), recognised the impact of timing of issuance in a volatile rate environment. The CC stated:

2.1.22. "*Ofwat sets a single rate for all companies of a particular size…However, one of the main factors affecting the cost of fixed-rate debt is the time it was taken out, and interest rates fluctuate over time. As debt issuance may be affected by company-specific factors (for instance, the timing of capex) and the cost of fixed-rate debt is affected by unpredictable changes in interest rates, there may be a danger of this approach penalising companies that need to borrow at times of high interest rates. It might prove unsustainable if such companies are unable to finance their functions, or in order to avoid this, it might require headroom over and above the actual average to the detriment of consumers*."[8]

2.1.23. Further, Ofgem recognised in its RIIO-ED2 Final Determinations that an infrequent issuance premium was needed to reflect the risks associated with less frequent issuance of debt.[9]

2.1.24. Determining a company's relative size and, more importantly, whether it is an infrequent issuer is crucial for assessing how similar the company is to the 'median' company used by Ofwat to set the sector-wide CoD_E. This, in turn, helps evaluate whether the allowed CoD_E is appropriate for that company.

2.2. Scope and structure of the Report

2.2.1. This Report was commissioned by South East Water Limited ('SEW') to evaluate whether an adjustment to SEW's cost of debt is necessary and, if so, to determine the appropriate quantum of such an adjustment.

2.2.2. The Report is structured as follows:

- First, the Report explores the use of CSAs on debt in Ofwat's PR24 as well as in previous regulatory decisions.
- Second, the Report defines an infrequent issuer. The Report presents analysis of the materiality of differences in characteristics between a notional small and infrequent issuer and explores the additional risks facing a notional company with such characteristics, relative to the rest of the sector on average. The Report also analyses Ofwat's implicit criteria for an infrequent issuer.
- Third, the Report considers SEW's company-specific characteristics to determine if it is a small and infrequent issuer both on a notional basis, in consideration of its RCV and a benchmark threshold, and by considering its historical financing decisions and the evolution of its cost of debt as a cross check. These steps are used to assess SEW against Ofwat criteria for a CSA.
- Fourth, the Report determines approaches for quantification of marginal risks for an infrequent issuer through a CSA.

[8] Ofwat (2019), Allowed return on capital technical appendix. Available here. Section 6.
[9] Ofgem (2022), *RIIO-ED2 Final Determinations Finance Annex*. Available here, appendix 3, page 166.

3. Company-specific adjustments – Ofwat's approach at PR24 and wider regulatory precedent

3.0.1. This section considers Ofwat's approach to implementing CSAs on debt at PR24, as well as wider regulatory precedent. It is structured as follows:

- First, it sets out an overview of Ofwat's approach to assessing the requirement for a CSA to the CoD in PR24.
- Second, it summarises Ofwat's decision on CSAs in PR24.
- Third, it sets out the approach to setting CoD adjustments in other price determinations.

3.1. Overview of Ofwat's decision on company specific adjustments in PR24

3.1.1. With regard to Ofwat's approach to setting a CSA, Ofwat considered that the appropriate perspective for considering the required CSA is that of a small notional company, unless there is strong evidence from the company's actual financing that an uplift is not needed.[10]

3.1.2. Ofwat did not allow a CSA for SEW, as it considered that SEW's request for an uplift of 30bps on the overall cost of debt did not meet the tests it set, including both in terms of the level of uplift or customer support assessment requirements. Ofwat awarded a 35bps uplift to two water companies, comprising 30bps on the cost of embedded debt and 5bps associated with issuance and liquidity costs.[11]

3.1.3. Ofwat concluded that the successful applicants likely face a continuing premium on their cost of new debt related to their small size, and that the 30bps estimate used for the embedded debt CSA is a reasonable estimate for this premium. For issuance & liquidity costs, Ofwat applied an uplift of 5bps, consistent with the CMA's PR19 decision on Bristol Water, reasoning that the circumstances of smaller companies may drive higher costs in this category.[12]

3.2. Approach to setting cost of debt adjustments in other price determinations

3.2.1. There are a number of cases of regulatory precedent in which the CoD has been adjusted based on company characteristics. This section has regard to key decisions made by Ofwat, the CMA and Ofgem.

I Ofwat at PR09 and PR14

3.2.2. Ofwat has historically set a CoD which takes into account company specific characteristics, in particular where companies are smaller. In PR04, Ofwat stated its view *"that certain fixed and variable costs, both on debt and equity, have a proportionally larger impact on smaller companies and their investors, and that they should be compensated accordingly."*[13] On this basis, Ofwat divided the water-only companies into four groups based on size, and provided a small-company premium to the allowed cost of debt, scaled on that basis.[14]

[10] Ofwat (2024), *PR24 final determinations: Aligning risk and return – Allowed return appendix*. Available here. Page 110.
[11] Ofwat (2024), *PR24 final determinations: Aligning risk and return – Allowed return appendix*. Available here. Table 25.
[12] Ofwat (2024), *PR24 final determinations: Aligning risk and return – Allowed return appendix*. Available here. Page 111.
[13] Ofwat (2004), *Future water and sewerage charges 2005-10: Final determinations*. Available here. Page 59.
[14] Ofwat (2004), Future water and sewerage charges 2005-10: Final determinations. Available here. Page 59.

3.2.3. In its PR09 Final Determination, Ofwat reflected the same logic in providing a small company premium on the cost of debt, noting that *"there is evidence that small companies face different challenges to larger companies in accessing debt. Therefore, there is a need for a small company cost of debt premium."*[15]

3.2.4. In both cases, Ofwat provided an uplift on the industry WACC allowance for SEW, as a result of its relatively smaller size as a large Water-Only Company ('WoC').

II CMA decisions on Bristol Water at PR19 and PR14

3.2.5. A focus on size as a company specific characteristic is consistent with the approach applied by the CMA in its re-determinations for Bristol Water at PR19 and prior determinations, providing an adjustment in relation to the cost of embedded debt across three appeals.

3.2.6. In each of its three re-determinations of the cost of debt allowance for Bristol Water ('BRL'), the CC/CMA assigned weight to the actual costs incurred by the company, although there are some differences in the exact approach. For example, at PR14 adjusted actual costs were used as a cross-check, whereas at PR19 they were used as a direct input.

3.2.7. In the case of BRL at PR19, the CMA determined that:

- Bristol Water should be provided a differentiated allowance relative to larger companies given its differentiated characteristics (i.e. its size).[16]
- Bristol Water's differentiated allowance should be partially set with reference to its actual debt costs.[17]

3.2.8. The uplift provided by the CMA at PR19 reflected "*the higher historical financing costs of a small company relative to our cost of embedded debt allowance which is based on the actual costs of the larger companies in the sector*."[18] In coming to a view on the differential between the financing costs for small and large companies, the CMA considered costs for both a notional company like BRL and BRL company-specific actual costs.[19]

3.2.9. At PR14 the CMA stated that assigning weight to BRL's actual cost evidence "*reflects the reasonable expectation that investors will, on average, be able to recover their efficiently-incurred financing costs. This suggests the need for caution prior to making any assumptions which might imply that, taken in the round, investors in the sector would not be expected to recover their financing costs.*"[20]

3.2.10. The CMA noted that its PR14 redetermination had placed it in a position to "*conduct a more detailed examination*" of BRL and that the specific actual costs incurred by the company "*provided a cross-check as to whether the notional level derived from industry costs was reasonable for a company such as Bristol Water*." [21]

[15] Ofwat (2009), *Future water and sewerage charges 2010-15: Final determinations*. Available here. Page 132.
[16] CMA (2021) *Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report.* Available here. Para 9.986 to 9.993.
[17] CMA (2021) *Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report.* Available here. Para 9.1000 to 9.1006.
[18] CMA (2021) *Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report.* Available here. Para 13.48.
[19] CMA (2021) *Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final report.* Available here. Para 9.1000 to 9.1006.
[20] CMA (2015) *Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991*. Available here. Para 10.05.
[21] CMA (2015) *Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991*. Available here. Para 10.15.

3.2.11. The CMA also noted that "*the aim of the SCP [small company premium] is to ensure that we set a level for the cost of capital which a small company could reasonably achieve. The need for an SCP is predicated on the assumption that smaller companies, will, on average, face a higher cost of debt than larger companies. This principle was supported by Ofwat's own analysis in PR14. If the cost of debt for both small and large companies were used to decide the cost of debt for all companies then, in the absence of an SCP, smaller companies would tend to face an assumed cost of debt that is lower than their actual financing costs on average, over time. In contrast, larger companies would tend to face an assumed cost of debt that is higher than their actual financing costs on average, over time.*"[22]

III Ofgem allowance at ED2

3.2.12. In RIIO-ED2, Ofgem implemented a 6bps infrequent issuer allowance on the overall cost of debt. It explained that "*the infrequent issuer premium reflects an increase in the cost of new debt for those notional licensees that are expected to issue smaller size new debt or issue new debt less frequently than other networks, due to their smaller RAV sizes and/or lower RAV growth for RIIO-ED2.*"[23]

3.2.13. Ofgem's approach for estimating the premium for small infrequent issuers was based on two headline decisions for the purpose of setting a CoD allowance that provides for the recovery of efficiently incurred debt costs:

- the appropriate test to identify infrequent issuers; and
- the appropriate size of the premium that is sufficiently reflective of the additional costs and risks faced by small infrequent issuers relative to their larger counterparts.

3.2.14. The basis of this was the inability of small issuers to fully match the CoD allowance. Ofgem's approach indicates that the specific characteristics of small, infrequent issuers can result in risk differentials relative to large, frequent issuers.

3.2.15. Ofgem noted that its approach is consistent with Bristol CC/CMA precedent given that Bristol is a materially smaller network in terms of the asset base and there has been a move away from more significant premiums in more recent determinations.[24]

The appropriate test to identify infrequent issuers

3.2.16. Ofgem allowed an additional provision for notional licensees expected to issue smaller size or less frequently than other networks due to their lower RAV size and RAV growth for RIIO-ED2.[25]

3.2.17. Whether a licensee received an adjustment for infrequent issuance was determined based on whether their implied debt issuance (on a notional basis) would be equivalent to less than £250m per year on average across the ED2 price control period.[26] This is based on the minimum threshold for bonds to be included in the iBoxx GBP Utilities 10yr+ index, which is the index used as the benchmark for Ofgem's cost of debt index.[27]

[22] CMA (2015) *Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991*. Available here. Para 10.64 and 10.65.
[23] Ofgem (2022), *RIIO-ED2 Final Determinations Finance Annex.* Available here, para 2.46.
[24] Ofgem (2022), *RIIO-ED2 Draft Determinations – Finance Annex*. Available here, page 157.
[25] Ofgem (2022), *RIIO-ED2 Final Determinations Finance Annex.* Available here, para 2.46.
[26] Ofgem (2022), *RIIO-ED2 Final Determinations – Finance Annex.* Available here, para 2.51.
[27] Ofgem (2022), *RIIO-ED2 Final Determinations – Finance Annex.* Available here, para 2.55-2.56.

The appropriate size of the premium

3.2.18. Ofgem allowed a premium of 26bps on new debt based on Constant Maturity Swaps (CMS) "*to hedge interest rate risk from less frequent issuance*" based on a methodology proposed by Southern Gas Networks plc and Scotland Gas Networks plc (SGN) in the RIIO GD2 price control. Ofgem determined that while CMS may be imperfect, it provided a "*suitable proxy for risk mitigation associate with infrequent issuance and determining an allowance for infrequent issuer costs*." It noted that "*the use of CMA transaction costs to proxy additional costs is reasonable and proportionate to the issue faced.*"[28]

IV Decisions in other industries

3.2.19. Where companies have different characteristics, more weight is attached to their company specific costs and position, as compared to a sector benchmark. This is evident in the case of single-company price controls, such as NATS and Heathrow, where the actual cost of debt serves as a direct input to the notional allowance for embedded debt.

3.2.20. In case of Heathrow's H7 Price Control, the CAA included a HAL-specific premium of 8bps on both embedded and new debt, reflecting the difference between the spreads at issuance of HAL's Class A bonds and the contemporaneous spreads on benchmark indices.[29]

3.2.21. The CAA considered that the use of HAL's actual cost of debt does not undermine the efficient issuance cost incentive properties, stating:

3.2.22. "*HAL will face an exogenously determined allowance for new debt costs throughout the H7 period and will bear any under- or out-performance against that allowance during the five-year period. As such, it has a clear incentive to issue debt at an efficient cost. We also consider that that it is necessary to ensure that our cost of debt allowance appropriately remunerates HAL's efficiently incurred debt costs. Since we lack robust alternative market benchmarks with which we can estimate a fully independent cost of debt allowance, it is reasonable to have regard to HAL's actual investment grade debt costs*."[30]

3.2.23. In addition, the allowance for embedded debt for the two Northern Irish gas distribution companies (Phoenix Natural Gas and Firmus Energy) is based on the costs of their existing instruments, on the basis that these costs are directly observable.[31]

3.2.24. This indicates that there is regulatory precedent for pricing the CoD based on company-specific characteristics.

[28] Ofgem (2022) *RIIO-2 Final Determinations – Finance Annex*, Available here, p170.
[29] CAA *Economic regulation of Heathrow Airport Limited: H7 Final Decision – Section 3*: Financial issues and implementation (CAP2524D), Available here.
[30] CAA *Economic regulation of Heathrow Airport Limited: H7 Final Decision – Section 3*: Financial issues and implementation (CAP2524D), Available here. Para 9.137 and 9.138.
[31] Utility Regulator, Final determination for the gas distribution price control, GD23. Available here.

4. Characteristics of and criteria to identify infrequent issuers

4.0.1. This section seeks to identify the characteristics of and criteria to identify infrequent issuers. This forms the basis

4.0.2. This section is structured as follows:

- First, it outlines the non-controllable characteristics of an infrequent issuer.
- Second, it considers the size and frequency of issuances of infrequent issuers.
- Third, it sets out approaches to assessing the frequency of issuance.
- Fourth, it sets out the implications of risk differentials for an infrequent issuer.
- Fifth, it discusses the costs implied by characteristics of an infrequent issuer

4.0.3. By determining the characteristics of and criteria to identify infrequent issuers, it will next be possible to determine whether SEW can be classified as an infrequent issuer of debt.

4.1. Outline of non-controllable characteristics of a small, infrequent issuer

4.1.1. Small and infrequent issuers have several specific and non-controllable characteristics driven by their relatively small size. They have more limited control relative to large issuers over their frequency and timing of issuance, maturity concentration and debt composition, which are material drivers of the cost of debt. Further, for these issuers, each issuance represents a more material proportion of the debt book and thus has a more material impact on the cost of debt.

4.2. Size and frequency of issuance

4.2.1. Small, infrequent issuers have a smaller asset base relative to the sector and smaller implied debt requirements in each year (sub-benchmark) which means they have to 'build up' to benchmark size before raising debt. As a result, they have more limited control over factors that affect cost of debt (such as maturity concentration, timing of issuance and debt composition) and each issuance more materially impacts on the cost of debt.

4.2.2. £250m is considered to be the appropriate benchmark size threshold by Ofgem at RIIO-ED2 because (1) threshold for inclusion in the iBoxx index is £250m and (2) financing strategies recommended by banks for utilities typically have suggested £250m is the minimum efficient size to optimise pricing tension, flexibility and execution risk on public bond issues.

4.2.3. Small issuers have limited control over the frequency of debt issuance at benchmark size as they have a low financing requirement in absolute terms compared to the benchmark size. Infrequent issuers have a small debt book in proportion to a relatively small asset base. Each issuance represents a large proportion of the total debt book and leave them with less control over factors like timing, maturity concentration and debt composition.

4.2.4. For small, infrequent issuers each issuance represents a material proportion of the total debt book and each issuance at benchmark size is material relative to the debt book. As a result, small, infrequent issuers have a low debt requirement in each year (sub-benchmark size) to refinance maturing debt and finance new capex, so can only 'build up' a financing requirement at benchmark size on an infrequent basis.

4.2.5. For infrequent issuers, changes in financing strategies can take longer to implement as there are less frequent intervals between issuances. These issuers have limited scope to make incremental changes in financing strategies as each issuance materially changes the portfolio (due to materiality of each issuance).

4.2.6. Small and infrequent issuers also inherently have less scope to spread maturity concentration and manage refinancing risk (due to the combination of frequency of issuance and materiality of each issuance).

4.2.7. In summary, small, infrequent issuers have several specific and non-controllable characteristics driven by their small size. They have more limited control relative to large issuers over their frequency and timing of issuance, maturity concentration and debt composition, which are material drivers of the cost of debt. Further, for these issuers, each issuance represents a more material proportion of the debt book and thus has a more material impact on the cost of debt.

4.2.8. Additional risks are implied by characteristics of small, infrequent issuers which are not within company control. These include:

- Greater exposure to point in time risk (due to frequency of issuance and materiality of each issuance); and
- More limited ability to match the sector average and respond to changes in the macroeconomic environment and regulatory policy (due to control over CoD); and

4.2.9. Each of these risks is summarised in turn.

I Greater exposure to point in time risk on cost of debt (due to frequency of issuance and materiality of each issuance

4.2.10. Point in time risk is the risk that debt is issued when rates are high (in terms of the combination of underlying interest rates and credit spread). Infrequent issuers are more likely to raise debt at high (or low) points in the evolution of the yield curve and credit spread. Hence, infrequent issuers have a higher risk of mismatch with the allowance due to point in time risk.

4.2.11. Changes in financing strategies can take longer to implement as there are longer intervals between issuances (due to frequency of issuance).

4.2.12. Timing of issuance is constrained by refinancing and capex requirements which cannot be funded too early (without unavoidable carry costs) or deferred for too long (without compromising delivery of capex programmes). Companies have generally had limited ability to optimise issuances on a long-term basis given uncertainty around the scope and size of capital programmes.

4.2.13. Companies are also exposed to timing of issuance by other networks, as the allowance is based on a weighted average of costs for the sector.

4.2.14. Timing of issuance may also be constrained by inherent characteristics of the issuer, for example, some companies have to adopt an infrequent issuer profile where more frequent issuance would not be economically efficient due to size.

4.2.15. Companies are price takers that cannot predict the prices in global debt markets and must therefore make choices over timing based on the best available information about future rates which may turn out to be wrong with the benefit of hindsight.

4.2.16. As small, infrequent issuers issue infrequently, they are exposed to heightened risk of issuances coinciding with high points in the evolution of the yield curve and credit spreads. This can result in a wider distribution of CoD outcomes. By contrast a frequent issuer has less exposure to a mismatch as it is less likely that multiple issuances will coincide with high yields.

4.2.17. Moreover, for infrequent issuers each issuance represents a material proportion of the debt book and hence the yield on each issuance has a correspondingly material impact on the overall CoD. This widens the distribution of CoD outcomes associated with point in time risk.

4.2.18. The CoD mechanism for the allowance implies a very frequent issuer profile as it reflects all issuance across the sector for the cost of embedded debt and daily debt issuance for the cost of new debt.

4.2.19. For small, infrequent issuers who may issue only once or twice on average during a price control, the risk of material mismatches with the allowance (due to point in time risk from infrequent issuance) and associated costs of hedging the allowance to manage this risk arising from its characteristics are significantly larger.

II More limited ability to match the sector average and respond to changes in macroeconomic environment and regulatory policy

4.2.20. Small, infrequent issuers have less flexibility to manage factors outside of their control, such as changes in the regulatory policy and the macroeconomic environment over time. 'Lags' in their responses to such events relative to large companies issuing frequently could widen variances with the sector average and thus the allowance.

4.2.21. Regulatory policy for setting cost of debt allowances is not constant over time, and there can be structural breaks in the macroeconomic environment, such as the observed step change in interest rates post the GFC.

4.2.22. Small, infrequent issuers have less flexibility to manage and hence are more impacted by factors outside of their control, such as:

- Large shifts in interest rates as they have limited control over timing of issuance, for example, they may be unable to issue in a favourable rate environment if their prevailing debt requirements are below benchmark size; and
- Changes in regulatory policy as any change in financing strategy to align with policy will only be reflected in their cost of debt position with a long delay and, in the meantime, they may suffer losses.

4.2.23. Infrequent issuers have less flexibility to respond to these factors which impact on CoD performance. This is important over the long term as the allowance is calibrated to match the sector average and infrequent issuer financing costs and variance to the allowance may cumulatively widen over time due to 'lags' for the infrequent issuer in responding to changes in macroeconomic dynamics, regulatory policy.

4.2.24. Companies also will change and refine debt strategy and treasury policy over time. The dynamic of infrequent issuance implies reduced flexibility to iterate and refine strategies relative to frequent issuers and hence the sector average.

4.2.25. By contrast, larger water companies, as more frequent borrowers, are less likely to see their interest costs deviate from the water sector average.

4.3. Approaches to assessment of frequency of issue

4.3.1. Establishing robust criteria for identifying infrequent issuers is a key first step to facilitate remuneration of the risk and efficiently additional costs associated with this issuance profile The assessment requires a representative and objective measure to assess whether each issuer is frequent or not. This Report proposes the following three criteria which allow for assessment on both absolute (for each water company) and relative (to other water companies) basis:

- Criterion one: the implied average annual debt issuance needed to fund RCV growth and refinancing
- Criterion two: the implied issuance frequency in years

- Criterion three: ratio of implied issuance frequency between SEW and water companies

4.3.2. The analysis applies the following parameters for the assessment:

- Time horizon of 25 years of backward-looking data;
- Debt tenor of 20 years; and
- Threshold consistent with threshold for inclusion in the benchmark index and market data on issuance size from utilities and broader investment grade bond universe. A threshold of £150m is used from FY2000 to FY2010, and £250m thereafter.

4.3.3. For context, the benchmark size for inclusion in iBoxx GBP indices was raised from £100m to £250m on 31 December 2010 "*to reflect the increase in the average size of new issues*".[32] Although this £150m change in the benchmark took effect overnight, it was the culmination of a longer-term increase in issuance sizes. In this regard, HM Treasury noted in 2010 that the minimum issuance size in wholesale corporate bond markets was around £100m to £200m.[33]

4.3.4. This suggests that while £100m was the absolute minimum over the period FY2000-2010, in later years a significantly higher amount was required to optimise liquidity and was more consistent with prevailing issuance sizes.

4.3.5. For this reason, a threshold of £150m has been adopted over the period FY2000-2010. This is because a £150m threshold strikes a balance between earlier years where issuance sizes were likely lower than this level and later years where they were likely higher. A threshold of £250m has been used thereafter, consistent with the iBoxx benchmark.

4.3.6. The calculations used to derive the values in each the criteria below can be found in Appendix 1.

I Criterion one: the implied average annual debt issuance needed to fund RCV growth and refinancing

4.3.7. The average size of issuance across separately a backward-looking 20-year period implied by annual water company RCV growth and refinancing of existing debt consistent with the notional gearing level. Where the resultant issuance size is below the threshold, this is indicative of infrequent issuance profile on an absolute basis.

II Criterion two: the implied issuance frequency in years

4.3.8. The implied frequency of issuance, measured as once per n years, to target minimum benchmark issuance size. This allows for assessment of infrequency of issuance on a relative basis, whereby the greater the n, the more infrequent a particular issuer.

III Criterion three: ratio of implied issuance frequency between SEW and water companies

4.3.9. The implied frequency of issuance, measured as once per n years, to target minimum efficient benchmark issuance size for SEW versus the sector. This allows for the quantification of the extent to which SEW is an outlier relative to the sector.

4.3.10. It is appropriate to cross check the results of this assessment against the outturn frequency of issuance observed from actual water company portfolios given the reliance on actual company data to calibrate the trailing average and additional costs of borrowing.

[32] Markit (2024) *Markit iBoxx GBP Benchmark Index Guide April 2024*, page 7. Available here.
[33] HM Treasury (2010) *Financing a private sector recovery*, para 3.12. HM Treasury also noted that smaller issues did occur occasionally but these were unlikely to be at economic rates. Available here.

4.4. Implications of risk differentials for a small and infrequent issuer

4.4.1. The factors outlined above result in higher risk exposure, most notably under unfavourable market conditions. Small, infrequent issuers are exposed to a different scale of risk in relation to cost of debt, with greater exposure to factors outside of the company's control, such as varying interest rates.

4.4.2. The CoD mechanism for the allowance implies a very frequent issuer profile as it reflects all issuances across the sector for the cost of embedded debt.

4.4.3. Whilst no issuer can match the issuance profile of the sector as a whole without incurring material hedging costs, for the small, infrequent issuer who may issue debt one to two times during the price control period, the risk of mismatch and associated hedging costs are significantly larger. There is a higher probability of infrequent issuers issuing above or below the sector average issuance profile due to inherent nature of infrequent issuance.

4.4.4. This risk can result in higher costs which make smaller companies less resilient to shocks, both in terms of varying interest rates and their ability to respond to sudden changes in their assets (for example, if there an unexpected need to undertake unplanned works at a water treatment plant).

4.4.5. This higher level of risk, where it is not priced in, can also make smaller companies less attractive to investors which in turn can make it more expensive to borrow money to invest in assets.

4.4.6. Economic theory states that investors require compensation for bearing systematic risks, as these risks cannot be hedged through diversification, and the market pricing of this additional exposure would lead to higher debt cost in the long-term. It is important that the allowed cost of capital reflects systematic risk to which infrequent issuers are exposed.

4.4.7. This is supported by regulatory precedents that suggest that these systematic risks warrant marginal cost of capital compensation.

4.4.8. Ofwat's determinations recognised greater volatility of debt financing costs but did not price this into its cost of capital allowance and did not provide reasoning as to why this risk is not systematic.[34] The risk associated with infrequent issuance arises from fluctuations in the iBoxx index, which are determined by broader market forces and hence are systematic in nature.

4.4.9. As a consequence of the risk differentials set out above, the small, infrequent issuer may also be exposed to additional costs of borrowing. In particular the infrequent issuer may be exposed to the direct costs of hedging and managing risk differentials for an infrequent issuer.

4.4.10. Ofwat's PR24 methodology stated that where it provided a CSA to any company, the uplift it provided would be subject to a sense check of the company in question facing higher actual costs than its sector benchmarks.[35]

4.4.11. In subsequent sections, this Report explores potential approaches to price in this differentiated risk for a small and infrequent issuer.

[34] Ofwat (2024) *Aligning risk and return- allowed return appendix.* Available here, p.91.
[35] Ofwat (2024) *Aligning risk and return- allowed return appendix.* Available here. Section 4.

5. Determining whether SEW has the characteristics of an infrequent issuer

5.0.1. This section assesses whether SEW has the characteristics of an infrequent issuer. It is structured as follows:

- First, it considers SEW's size relative to the sector average.
- Second, it presents the results of analysis which explores the issuance size and frequency required to be characterised as an infrequent issuer, and whether SEW meets these criteria.
- Third, it analyses SEW's historical issuance profile.
- Fourth, it considers the risk exposure of SEW's issuance profile.
- Fifth, it considers Ofwat's arguments around this in its FD.

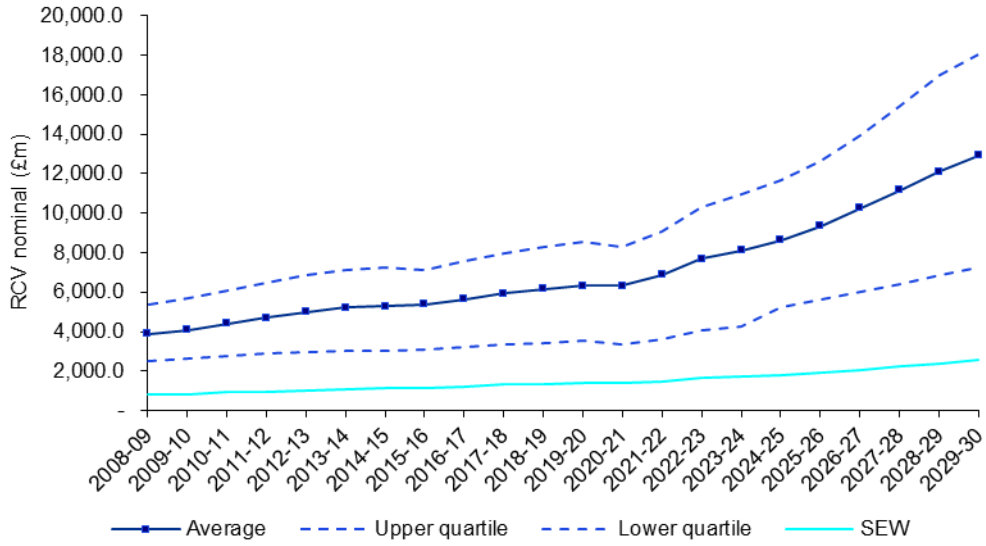
5.0.2. The analysis finds that SEW is a smaller water company which has historically issued debt less frequently than the sector average. The result of the analysis indicates that SEW meets the criteria of an infrequent issuer.

5.1. SEW's size relative to sector average

5.1.1. A comparison between SEW and other WaSCs and large WoCs is made to assess SEW's size relative to the sector. The analysis first compares SEW's nominal RCV relative to the sector average (WaSC and large WoCs) from 2009 to 2030 (being the end of AMP 8) followed by a comparison of SEW's nominal RCV relative to other companies in 2024. It finds that SEW has a materially smaller RCV than the average for the WaSCs and large WoCs. The historical differential from 2009 to 2024 between SEW and sector average RCV is c£4.5bn which is c.5 times smaller than the sector average during this period.

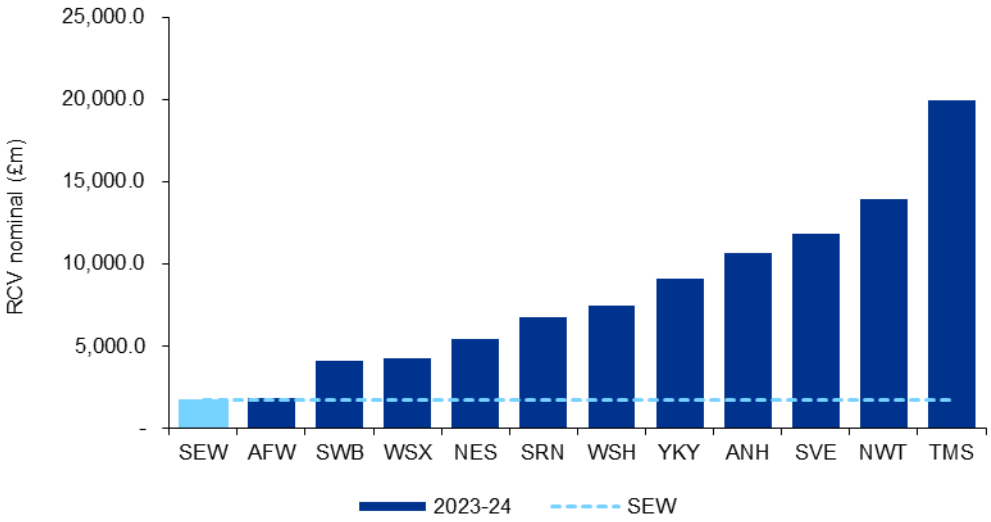
5.1.2. Figure 5 shows SEW's nominal RCV relative to the sector average (WaSC and large WoCs) from 2009 to 2024 and demonstrates that SEW sits significantly below the average and lower quartile of the range.

Figure 5: SEW's nominal RCV relative to sector average (WaSC and large WoC) from 2009 to 2030



Source: KPMG analysis

Figure 6: SEW's nominal RCV (£m) relative to WaSCs and large WoCs in 2024



Source: KPMG analysis

5.1.3. Both Figure 5 and Figure 6 demonstrate that SEW is a smaller company relative to the broader sector. As a result of its smaller size, SEW has not been able to issue at benchmark size in each year of previous price controls and has had to wait for its financing requirement to 'build-up' to a benchmark size, which exposes SEW to additional interest rate risk.

5.1.4. The importance of relative size is driven by the design of cost of debt policy, which is based on sector average costs. Companies with relatively infrequent debt issuance have higher risk exposure relative to an allowance based on sector average costs than a more frequent issuer.

5.1.5. From an economic perspective, the financing requirements for a company are proportional to its RCV, which serves as a key determinant of its capital requirements. Given SEW's relatively smaller RCV, its financing needs have historically been significantly lower than those of larger companies within the sector.

5.1.6. This smaller scale introduces systematic challenges in accessing public debt markets. Unlike larger companies that can issue debt more frequently and in smaller tranches, SEW must allow its financing requirements to accumulate over time to reach a benchmark size necessary for market issuance.

5.1.7. This in turn means that SEW has issued debt less frequently than larger peers and has a higher exposure to interest rates prevailing at the time of each issuance (point in time risk).

5.1.8. Overall, the assessment of the CSA is grounded in whether SEW meets the definition of an infrequent issuer, arising from its relatively smaller size.

5.2. Assessment of SEW against infrequent issuer criteria

5.2.1. This section sets out the results of analysis which explores the relative differences in frequency of issuance between SEW and the sector.[36]

5.2.2. Table 2 presents the implied frequency of issuance at threshold size for each water company based on RCV size, notional gearing, notional proportion of index-linked debt and the length of 20Y trailing average (as a proxy for the maturity of embedded debt). In other words, the analysis has a notional or stylised framing and does not take account of actual past frequency of issuance.

5.2.3. Table 2 captures a 25Y backward-looking period (2000 - 2025) from the iBoxx start date to PR19 end date.

5.2.4. The table presents three columns:

- **Criterion one: the implied average annual debt issuance needed to fund RCV growth and refinancing** (average issuance size): this column estimates the average issuance size on an annual basis with regard to the company's RCV growth.
- **Criterion two: the implied issuance frequency**: this column takes the average issuance size and identifies over how many years it would take for the company to be able to issue debt at the benchmark size (being £150m from 2000 to 2010, and £250m from 2011). This allows for a comparison to the definition of an infrequent issuer of debt being one which issues debt less frequently than threshold size annually on average
- **Criterion three: ratio of implied issuance frequency between SEW and water companies**: this column allows for a relative comparison between SEW and other companies. It explores how more (or less) frequently the comparator companies are issuing.

[36] The analysis compares SEW with WaSCs and large WoCs as Ofwat's PR24 FD sets a single sector-wide allowance for the CoD based on the median costs of these companies.

Table 2: Implied frequency of issuance over 25Y backward-looking period (2000 to 2025)

Company	Criterion 1: Average Issuance Size (£m)	Criterion 2: Implied issuing frequency to target threshold size (years)	Criterion 3: Implied issuing frequency to target threshold size relative to SEW
TMS	549.13	0.38	11.35
UUW	383.87	0.54	7.94
SVE	321.74	0.64	6.65
ANH	292.10	0.71	6.04
YKY	255.73	0.81	5.29
WSH	213.04	0.97	4.40
SRN	186.28	1.11	3.85
NES	155.33	1.33	3.21
WSX	121.89	1.69	2.52
SBB	115.98	1.78	2.40
AFW	48.54	4.24	1.00
SEW	48.37	4.26	1.00

Source: KPMG analysis

5.2.5. The analysis above demonstrates that a notional company with SEW's size characteristic would have – on average – had a lower average annual issuance size as compared to comparators in the sector. It historically would have had an annual issuance size of £48.37m which is significantly lower than the threshold benchmark size applied by Ofgem at RIIO-ED2 FD of £250m, and 2.4x lower than the smallest WaSC (annual issuance size of £115.98m).

5.2.6. The analysis indicates that over the backwards looking period, SEW would have needed to issue debt just over once in every four years reach threshold size.[37]

5.2.7. Further, the notional analysis implies that the frequency of issuance for SEW is low compared to the majority of the sector. All of the WaSCs and the other large WoC sit above SEW, with an average implied issuing frequency to target threshold size of 5.37[38] compared to SEW's 1 – i.e. comparator companies are issuing at least five times more frequently than SEW.

5.2.8. The three criteria indicate that SEW is an infrequent issuer in relative and absolute terms. Whilst SEW's frequency of issuance on an absolute basis is relevant, its frequency of issuance relative to other water companies is the key measure when considering the potential impact of the "frequency of issuance" characteristic. This is because the allowance is primarily based on the debt costs of the median water company. On a relative basis, the differences in frequency of issuance between SEW and other water companies has been material over the backward-looking period.

[37] Threshold size is consistent with threshold for inclusion in the benchmark index and market data on issuance size from utilities and broader investment grade bond universe. A threshold of £150m is used from FY2000 to FY2010, and £250m thereafter.
[38] This excludes Affinity which has the same implied issuing frequency as SEW.

5.3. Analysis of SEW's historical issuance profile as a cross-check

5.3.1. SEW's actual issuance profile is compared against the notional company to assess whether the notional profile reflects the reality of company issuance. On average, SEW has issued debt approximately every three years, making it an infrequent issuer of debt on the basis that this is less than once per year.[39] SEW is more highly geared than the notional company, which indicates that the number of SEW's actual historical issuances is greater than what could be expected of a notionally geared SEW. On this basis, the analysis may understate the extent to which a 'notional SEW' is an infrequent issuer.

5.3.2. SEW's issuances have been infrequent and lumpy because, as a relatively small water company, SEW has historically had a low annual debt requirement relative to the benchmark size for public debt issuance and therefore has issued debt infrequently. The types of issuances made by SEW have evolved from primarily RPI-linked debt prior to 2013 to fixed and floating rate debt post 2019, and a CPI debt issuance in 2024.

5.3.3. Additionally, around 40% of SEW's debt book was raised prior to the merger of SEW and MKW in 2006 when each company was small in RCV terms.[40]

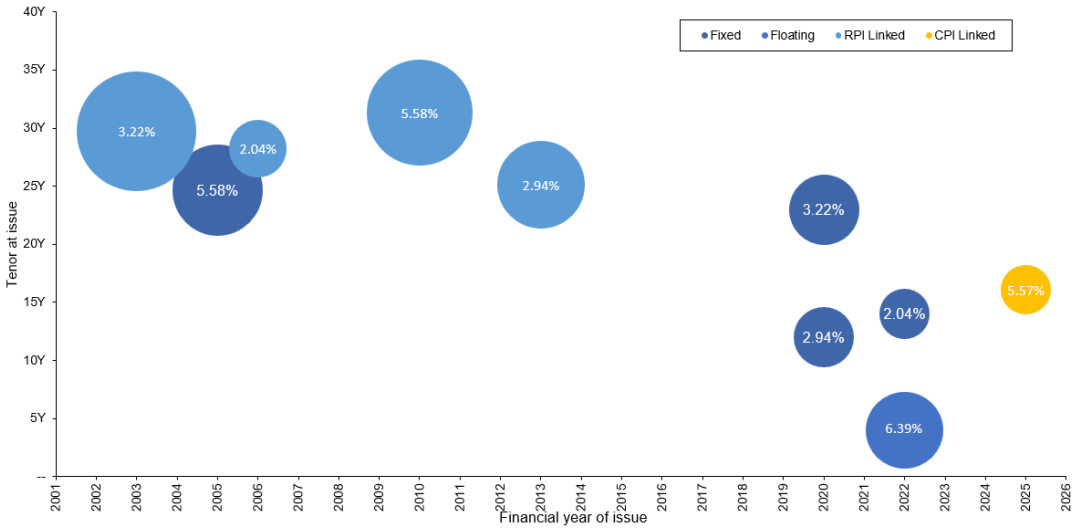
5.3.4. Figure 7 shows that SEW's issuance profile up to 2025 is relatively infrequent, with issuances concentrated in specific periods of 2002 to 2006 and 2020 to 2024. There are relatively long periods during which SEW did not issue any new debt, for example 2006 to 2010 and 2013 to 2019.

5.3.5. The maturity profile of SEW's issuances varies, with the majority between 10 and 35 years. This trend for long maturities is not uncommon within the utilities sector, for several reasons:

- utility investors calibrate their bond portfolio to achieve a certain level of asset-liability matching; typically pension and life insurance companies favour maturities which are 25 years and above;
- the issuer typically prefers to align the tenor of its bonds to the relatively long economic life of its assets. This allows the issuer to minimise refinancing risk; and
- the UK has a history of stable regulatory regimes which has encouraged a long-term perspective to financing.

[39] This is based on a review of SEW's embedded debt position as per Ofwat (2022) *PR24 balance sheet cost of debt model* (henceforth the 'Ofwat PR24 CoD Model') for it's PR24 FD. This considers SEW's bonds, loan notes, and bank loan across the 25 year period from 2000 to 2024 (consistent with the target threshold analysis carried out within this Report). This comprises nine total debt issuances over the period, which results in an average issuance profile of every 2.78 years. However, SEW made two issuances on 16th September 2019. Where these are combined as one issuance, the embedded debt book comprises eight issuances, resulting in an average issuance profile of every 3.13 years.
[40] Based on principal amount outstanding as at 31 March 2024.

Figure 7: SEW frequency of issuance between 2001 and 2025[41]



Source: KPMG analysis of Ofwat PR24 CoD Model [PR24RR02], available here.

5.3.6. The percentage shown within each bubble in Figure 7 represents the effective nominal interest rate

Table 3: SEW debt issuances compared to threshold size[42]

Instrument ID	Type	Issue date	Threshold size at FY	Original issuance / facility size	Effective nominal interest rate
SEW309	RPI Linked	06/12/2002	150	135	6.70%
SEW1	Fixed	27/07/2004	150	166	5.58%
SEW310	RPI Linked	24/06/2005	150	34	5.78%
SEW307	RPI Linked	11/02/2010	250	130	5.52%
SEW308	RPI Linked	16/10/2012	250	100	5.40%
SEW8	Fixed	16/09/2019	250	75	2.94%
SEW9				100	3.22%
SEW10	Fixed	02/12/2021	250	50	2.04%
SEW154	Floating	22/12/2021		120	6.39%[43]
SEW0000	CPI Linked	09/08/2024	250	50	5.57%
Total				**960**	

Source: KPMG analysis of Ofwat PR24 CoD Model [PR24RR02], available here.

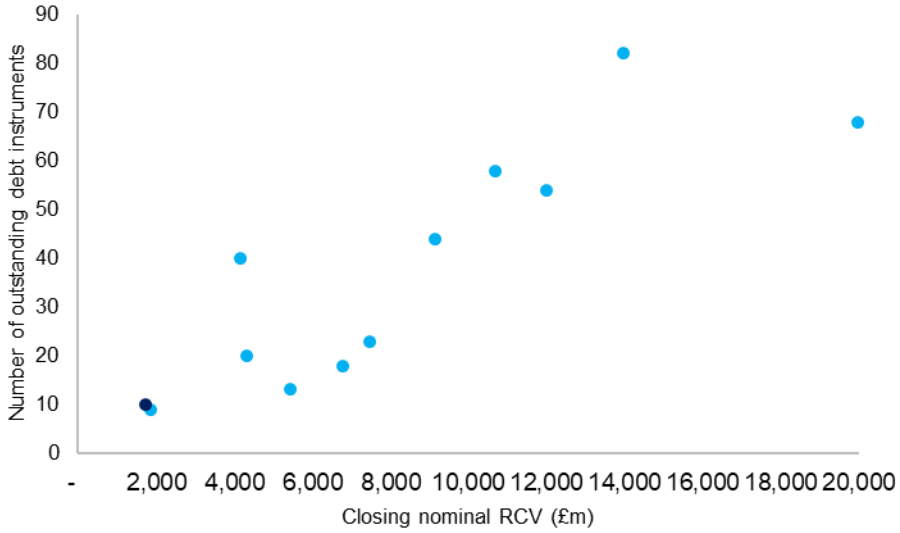
[41] Note that Ofwat's PR24 CoD Model shows outstanding debt as at 31 March 2024 and it therefore does not include SEW's 2004 bond issuance.
[42] Note that Ofwat's PR24 CoD Model shows outstanding debt as at 31 March 2024 and it therefore does not include SEW's 2004 bond issuance.
[43] Note that Ofwat's PR24 CoD Model shows the effective nominal interest rate for this instrument as 6.39%. This differs from the amount calculated in Table 5 of this Report, which calculates an effective nominal interest rate (being the interest cost over AMP8 / principal outstanding over AMP8) of 6.15%.

5.3.7. Table 3 above shows that SEW has issued debt infrequently, and in a number of cases below threshold size. The significant periods of where there is an absence of issuances from 2006 to 2010 and 2013 to 2020 mean that on average, between 2001 to 2025, SEW issued £40.0m per annum, significantly below the threshold size.

5.3.8. In its PR24 FD, Ofwat undertook analysis to explore likely issuance profiles of water companies based on their RCV balances and increases across the period from 1999 to 2025, on a notional basis.[44] Replicating the analysis for SEW indicates that Ofwat assumes that SEW would have issued debt in every year since 1998/1999 apart from 2009 and 2021. This analysis significantly overstates SEW's actual issuance profile, indicating that the assumptions used by Ofwat to calculate its allowed cost of debt do not capture the reality of smaller issuances of infrequent issuers of debt, such as SEW.

5.3.9. Further, a comparison of outstanding embedded debt between SEW and the broader sector shows that SEW has a significantly smaller debt book than comparators, particularly on an RCV comparative basis, as set out in Figure 8 below.

Figure 8: Comparison of embedded debt book and RCV – SEW (dark blue) compared to WaSCs and large WoCs



Source: KPMG analysis of Ofwat PR24 CoD model, [PR24RR02], available here.

5.3.10. Overall, notional analysis indicates that over the backward-looking period SEW could have only raised issuances at threshold size on average once every 4 years. On an absolute basis, this suggests that SEW's frequency of issuance has been low in the past but has increased over time.

5.3.11. Analysis of actual frequency of issuance can provide a useful and relevant cross-check for the results implied by the notional analysis.

5.3.12. This indicates that in practice SEW has issued materially less frequently that other companies. SEW has on average issued debt once every three years whereas water companies on average have issued debt more frequently. These observations are consistent with and corroborate those from the notional analysis.

[44] Ofwat (2024) *PR24 Notional debt indexation cross check* [Excel Model PR24RR07], available here.

5.4. Implications of SEW's infrequent issuance for risk exposure

5.4.1. The inherent characteristics of small, infrequent issuers result in company specific risks and costs for these issuers which are outside of management control and need to be taken into account in allowance pricing.

5.4.2. SEW as a small, infrequent issuer has less control over timing of issuance at benchmark size as it is constrained by low financing requirements in each year. It must wait to build up to benchmark size before issuing debt and would not seek to refinance this too soon after by issuing at shorter tenors.

5.4.3. SEW's infrequent issuer characteristic means that it has less scope to spread maturity concentration and manage refinancing risk (due to the combination of frequency of issuance and materiality of each issuance) as well as corresponding point in time risk due to its small RCV combined with the requirement to issue at least benchmark size.

5.4.4. The interest rate risk that it is exposed to has a systematic component, which should be priced.

5.5. Commentary on and analysis of Ofwat's FD position on a CSA for SEW

5.5.1. Ofwat did not include a CSA allowance in its FD for SEW on the basis of rejecting its position that it is an infrequent issuer. Ofwat's rationale was as follows:

- A comparison to AFW, which is expected to have a lower CoDE than SEW over AMP8. On this basis, Ofwat stated that SEW's higher CoDE is driven by management decisions rather than structural factors related to size.
- Credit risk – Ofwat explained that Moody's recognises the risk of small WoCs in its rating methodology, and did not consider SEW as part of this category.
- Gearing – Ofwat indicates that SEW's higher CoDE may, in part, be driven by a historically high level of gearing.

5.5.2. Each of these points is considered in turn.

I Comparison between SEW and AFW

5.5.3. Ofwat observed that Affinity Water (AFW) – a similarly sized company to SEW – is expected by Ofwat to have a cost of embedded debt below the sector benchmark for 2025 to 2030. Ofwat said that this indicates that SEW's 'projected underperformance' (which is interpreted in this Report to mean SEW's higher cost of debt as compared to the sector benchmark) 'might be due to previous management decisions rather than structural factors related to its size'.[45]

5.5.4. However, the comparison to AFW (also a large WoC) is indicative of the variability of interest rates at the time of issuance linked to being an infrequent issuer, driving higher risk which should be priced into the allowed cost of debt.

5.5.5. A significant portion of SEW's debt was issued before or during the global financial crisis (between 2002 and 2006, and in 2010) when interest rates were relatively high.

5.5.6. In contrast, AFW – also an infrequent issuer – issued more debt after the global financial crisis, when interest rates were substantially lower.

[45] Ofwat (2024) *Aligning risk and return- allowed return appendix*. Available here, p.106.

5.5.7. Both SEW and AFW are infrequent issuers, have high point in time risk and are almost the highest and lowest cost companies in the sector. Their issuance frequency is very similar, as indicated by Table 3 and Table 4 above.

5.5.8. The differential in CoDE between SEW and AFW demonstrates the principle that timing of issuance plays an important role in determining the cost of debt – in particular for companies which issue debt relatively infrequently. The exposure to variability in debt costs faced by the infrequent issuer indicates that companies may at some points in time be exposed to a higher or lower cost of debt, but regardless are exposed to a higher risk, which should be priced.

II Risk arising from infrequent issuance

5.5.9. Ofwat's FD comments on the link between company size and credit risk, noting that Moodys recognises the risk of small WoCs in its rating methodology.[46] Ofwat explains that Moodys' recent credit ratings assessments for SSC Water, Portsmouth Water and SES Water note that these companies need to achieve better credit metrics than would apply to a larger company. Since, this note is not present in SEW's recent ratings assessment, Ofwat concludes that Moodys does not see the company's size as a driver of credit risk.

5.5.10. However, in the context of CoDE, it is the higher risk associated with infrequent debt issuance as a result of company size that drives the requirement for an uplift to the allowance. This is the interest rate risk that companies are exposed as are unable to raise debt at optimal time, rather than the credit risk associated with default on that debt, as is implied by Moodys' credit ratings assessments.

III The impact of SEW's gearing level

5.5.11. Ofwat stated its view that SEW's decision to maintain a gearing of above 70% across AMP7 – which is higher than the notional level – is within management's control, is a driver of higher risk exposure, and explains to the difference between SEW's actual debt costs and the allowance.

5.5.12. To isolate this risk exposure, a simulation was conducted to assess what proportion of the differential between SEW's actual costs and its allowance could be driven by gearing. The approach to this analysis is set out in Appendix 2, and results indicate that the impact of gearing could be up to 13bps based on the following two scenarios: (1) the factual scenario where SEW increased gearing to actual levels from 2004, and (2) the counterfactual scenario where SEW increased gearing to notional levels from PR99 to PR19. [47]

5.5.13. The delta between SEW's embedded cost of debt and Ofwat's allowed cost of debt is 49bps. Adjusting this for the 13bps which the analysis indicates may be driven by gearing would indicate a 36bps difference driven by factors which do not relate to SEW's capital structure.

5.5.14. In its FD, Ofwat suggested that it does not follow that all of the delta between (1) SEW's higher CoDE compared to the allowance and (2) the gearing simulation can be attributed to factors outside of company control.

5.5.15. However, Ofwat has also accepted that there is evidence that infrequent issuers may face a higher standard deviation of debt financing performance in RoRE terms than frequent issuers – i.e. they are exposed to a higher level of risk.[48] The analysis undertaken in this Report focusses on the notional infrequent issuer to quantify this risk (i.e. it does not focus on the delta between SEW's actual costs and Ofwat's allowance).

[46] Ofwat (2024) *Aligning risk and return- allowed return appendix*. Available here, p.109.
[47] Note that this analysis is based on updated data analysis which explores the 20-year period to 31 March 2024 and so results differ from the analysis presented in SEW's Draft Determinations Response which utilised data for the 20-year period to 31 March 2023.
[48] Ofwat (2024), *PR24 draft determinations: Aligning risk and return – Allowed return appendix*. Available here. Pages 91-92.

5.5.16. Analysis of actual company costs is not a primary approach to quantifying any potentially higher costs faced by an infrequent issuer of debt as compared to frequent issuers, and so is not directly relevant to the pricing methodology adopted in this Report.

5.6. Conclusions

5.6.1. This section has explored whether SEW has the characteristics of an infrequent issuer, based on a range of criteria and comparisons.

5.6.2. First, this section explored whether SEW is a small company, finding that it is a small company relative to the average of WaSCs and large WoCs. SEW had an average RCV over 2009 to 2030 that is below the lower quartile of the range. SEW's has the smallest nominal RCV of the WaSCs and large WoCs in 2024.

5.6.3. Second, the analysis sought to identify whether – based on notional criteria – SEW could be classified as an infrequent issuer of debt. Based on RCV growth over time, the analysis identifies average issuance size, implied issuing frequency, and implied issuing frequency to target threshold size relative to SEW. This allowed a sector-wide comparison, which found that SEW – on an RCV basis – could reasonably be expected to be issuing debt every four years and has an implied annual issuing size significantly below the benchmark threshold.

5.6.4. Third, the analysis explored SEW's actual historical issuance profile, finding that it has issued debt on average every three years, which – on the basis of the definition of an infrequent issuer being one that issues less frequently than threshold size annually on average– indicates that SEW is an infrequent issuer of debt. This is consistent with SEW's significantly smaller RCV, and small outstanding debt book as compared to the rest of the sector.

5.6.5. Fourth, this section noted that SEW's position as an infrequent issuer indicates higher risk.

5.6.6. Fifth, this section considered the commentary set out by Ofwat in its FD and other considerations which Ofwat has or may consider drives the risk differential between SEW as an infrequent issuer of debt and the sector allowance.

5.6.7. In the round, the analysis shows that SEW is relatively small (with the smallest RCV of the WaSCs and large WoCs) such that it is not able to issue as frequently as the rest of the sector at benchmark size. This infrequent issuance, corroborated by a historical lumpy issuance profile for SEW, leads to higher point in time risk and scope for variance in financing costs relative to the allowance.

5.6.8. The adjusted infrequent issuer tests indicate that SEW is an infrequent issuer in both absolute and relative terms, based on the results in set out in this section.

6. Approaches to pricing risk and cost differentials for SEW

6.0.1. Infrequent issuers like SEW have different characteristics relative to the sector average which increases risk of a mismatch with the median company used to set the allowance. Infrequent issuers are exposed to higher risks relating to CoD performance, a more limited degree of controllability of the underlying drivers of performance and in consequence a larger financeability impact.

6.0.2. This section first seeks to quantify the risk differential between a notional frequent issuer of debt, and a notional infrequent issuer of debt. It discusses the results of analysis which simulates the CoDE differential between these notional frequent and infrequent issuers.

6.0.3. Following the identification of this differential, it explores how this differential in financing risk may be priced through an adjustment to the CoDE.

6.1. Identifying the CoDE risk differential between a notional frequent and infrequent issuer

6.1.1. First, this Report seeks to identify the CoDE risk differential between a notional frequent and notional infrequent issuer.

6.1.2. The analysis starts with a CoDE simulation for two notional companies based on assumed issuance profiles, with one being a frequent issuer (i.e. issuing at benchmark size annually) and one being an infrequent issuer (i.e. issuing benchmark sized debt less frequently than annually).[49] The yield at issuance aligns with the average iBoxx 10Y+ A and BBB at the issuance date, and the interest payment and debt balance for both issuers are calculated annually over a 20-year period, on the basis of 20 years being a standard tenor.[50] The annualised cost of debt for each issuer is determined as the cumulative annual interest payment divided by the total debt balance at the end of the 20-year period.

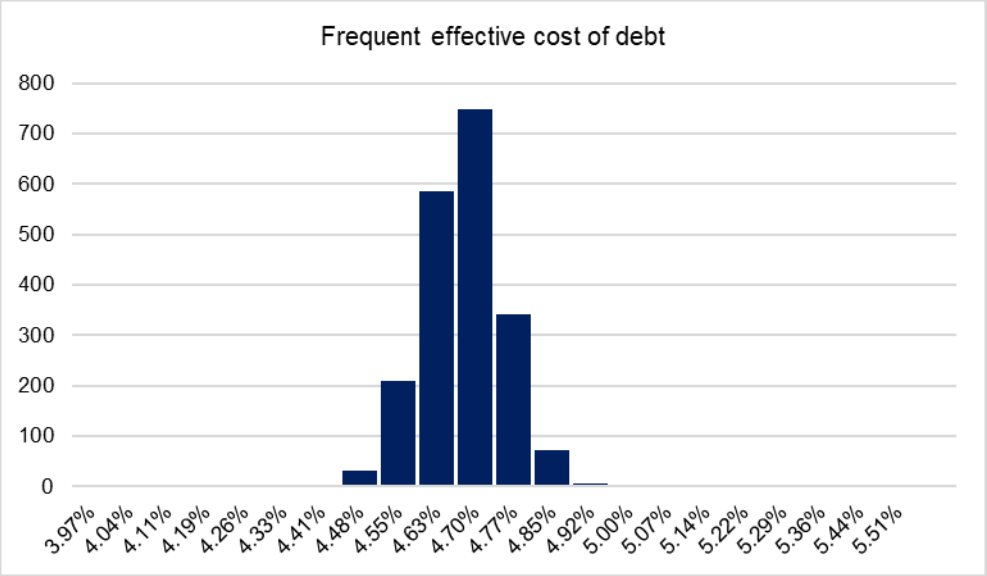
6.1.3. The analysis was run for 2,000 simulations to identify a range of plausible scenarios and how frequent and infrequent costs could evolve across scenarios. As a result, the simulation captures the aggregate CoDE for a frequent and infrequent issuer to generate a CoDE distribution.

6.1.4. The analysis found that the financing risk exposure for an infrequent issuer is materially higher than that of a frequent issuer. This is illustrated by comparison of Figure 5 and Figure 6 below, which demonstrate the results of the analysis run assuming that the notional infrequent issuer issues every three years.

6.1.5. For reference, SEW undertook nine total debt issuances over the 25-year period from 2000 to 2024, which results in an average issuance profile of every 2.78 years.[51] The notional analysis above indicates that, based on SEW's RCV, its historical average issuing frequency to target threshold benchmark size was every four years. The analysis is run on the assumption of a notional infrequent issuer issuing every three years, for consistency with the average actual issuance profile of SEW.

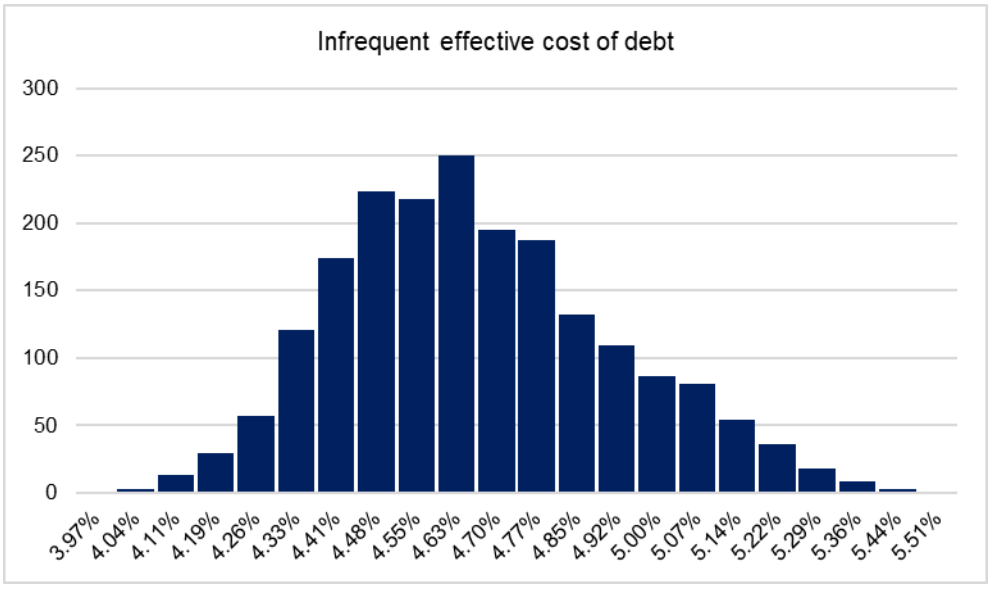
[49] These characterisations are in line with Ofgem's definition of a frequent issuer.
[50] The analysis assumes no debt repayment over the 20-year horizon, given that debt is issued with a 20-year tenor.
[51] This is based on the period to 31 March 2024. Note that Ofwat's PR24 CoD Model shows outstanding debt as at 31 March 2024 and it therefore does not include SEW's 2004 bond issuance, which is captured in this total. This total regards the two instruments issued in September 2019 as one issuance, as these were two tranches of the same bond.

Figure 9: Range of CoDE outcomes faced by a frequent issuer of debt



Source: KPMG analysis

Figure 10: Range of CoDE outcomes faced by an infrequent issuer of debt

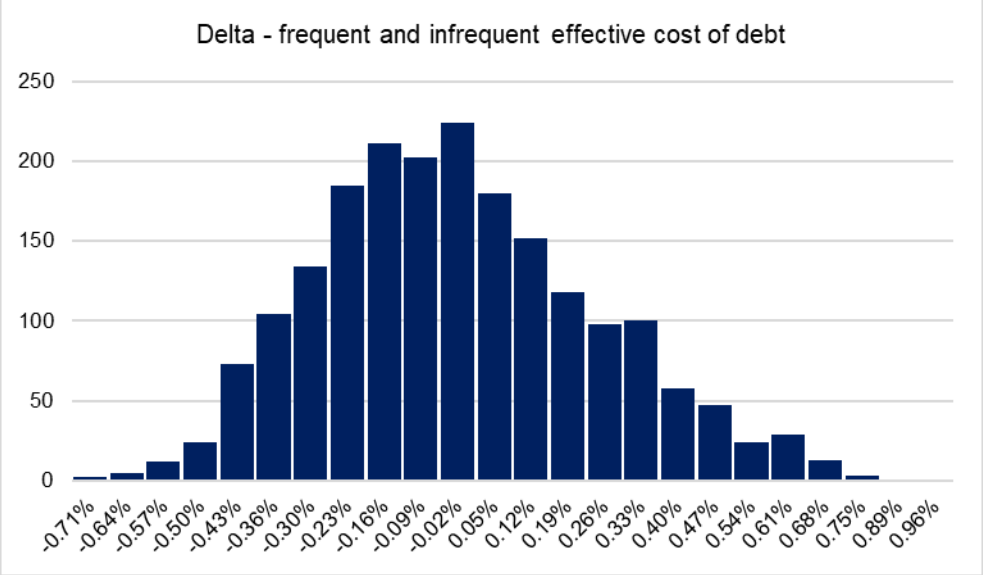


Source: KPMG analysis

6.1.6. Figure 9 and Figure 10 above both present the range of CoDE outcomes faced by a frequent and infrequent issuer, respectively, within the simulation analysis. Figure 9 demonstrates that the range of outcomes for an infrequent issuer is in the range of 4.5% to 4.85%, with a significant distribution around the middle of the range. For the infrequent issuer, as shown in Figure 10, there is a significantly greater spread of results, from just higher than 4.00% to just under 5.60%. This broader range is more varied, with the distribution spread more broadly across the results.

6.1.7. This differential in CoDE outcomes is set out in Figure 11 below.

Figure 11: The differential in CoDE outcomes for infrequent and frequent issuers of debt



Source: KPMG analysis

6.1.8. The analysis finds that the financing risk for an infrequent issuer is significantly greater than that for a frequent issuer, on the basis that there is a much broader range of outcomes for the infrequent issuer.

6.1.9. This higher financing risk must be priced, which can be implemented via either the cost of equity (CoE) or the CoDE.

6.2. Pricing marginal financing exposure for an infrequent issuer

6.2.1. In its FD, Ofwat acknowledged KPMG's evidence that infrequent issuers face greater variability in debt financing costs, as reflected in RoRE volatility. It therefore recognised that infrequent issuers are exposed to higher risk, but did not consider that the additional risk would have an impact on required returns and did not make any adjustments to the allowance. As such, while Ofwat recognised that SEW – as a historically infrequent issuer of debt – has relatively higher risk, it has not priced this marginal exposure into the cost of capital allowance, implicitly assuming that none of this additional risk is systematic.

6.2.2. Systematic risks include macroeconomic factors such as interest rate fluctuations, inflation, and market-wide financial crises, which are unavoidable and can have significant impacts on a company's cost of capital. The risk associated with infrequent issuance arises from fluctuations in the iBoxx index, which are determined by broader market forces and hence are systematic in nature.

6.2.3. Ofwat did not consider that greater variability in debt financing costs justifies an adjustment to the equity beta. Ofwat's approach therefore implies that no element of higher volatility is systematic. The approach in this Report assumes that there is at least some systematic component. Economic theory states that investors require compensation for bearing systematic risks because these risks cannot be hedged through diversification, and the market pricing of this additional exposure would lead to higher debt cost in the long-term, so the systematic component should be priced. It is therefore important that the allowed cost of capital reflects systematic risk to which infrequent issuers are exposed.

6.2.4. Whilst a company specific adjustment to CoDE compensates investors for this risk through cost of capital, it is possible to consider the required uplift to beta in order to estimate the value of this adjustment.

I Description of approach

6.2.5. The approach undertakes risk analysis to model the volatility of financing risk and associated RoRE performance range in PR24 to assess additional equity risk between a notional infrequent issuer and a frequent issuer (which the allowance is based on). It translates this risk differential and higher volatility on financing risk arising from infrequent debt issuance into a beta adjustment.

6.2.6. This approach considers the financing risk differential between the notional infrequent issuer and the rest of the sector, measured as the increase in standard deviation of financing risk distributions under plausible scenarios to reflect the systematic notional risk of the infrequent issuer compared to the rest of the sector. To calculate the financing risk differential, the analysis utilises the RoRE risk ranges calculated for the notional WaSC in the sector.[52] The notional WaSC is used as the basis for the risk ranges, as the purpose of the analysis is to calculate the impact on equity beta. As Ofwat's beta estimates rely on data from SVT and UU – both WaSCs – this risk data is considered to be the most appropriate appropriate input.

6.2.7. The input risk profile for the notional WaSC is calculated by risk component (i.e. totex, retail, ODIs & MeXes, financing, revenue, DPC) and then in total. The total risk profile is considered on a simulated rather than additive basis. This Report adopts results based on Monte Carlo simulation (as compared to additive) as it is deemed to more robustly incorporate the shape of the risk distributions of the constituent risks and the relationship between them, thereby allowing for a more accurate exploration of the risk profile.

6.2.8. The approach used in this analysis controls for factors such as credit rating and gearing, which might be different between infrequent and frequent issuers, and the risk differential is instead driven by different frequency of issuance assumptions – once every three years for an infrequent issuer, every year for a frequent issuer.

6.2.9. The analysis assumes that the marginal financing risk for a notional efficient infrequent issuer is systematic in nature. By isolating risk differentials driven by frequency of issuance, this approach focuses on those risks that are exogenous, such as point-in-time interest rate fluctuations and the evolution of the iBoxx index. These factors are determined by broader market conditions, making them systematic in nature.

6.2.10. All else equal, this risk needs to be captured within the equity beta as equity investors would be exposed to the financial impact of any unfunded debt cost relative to the CoDE allowance.

6.2.11. A simulation of notional efficient frequent and infrequent issuers is carried out and the distribution of the respective CoDE estimates is compared. The respective change in equity beta is therefore quantified to reflect the increase in financing risk exposure, which is measured as standard deviation.

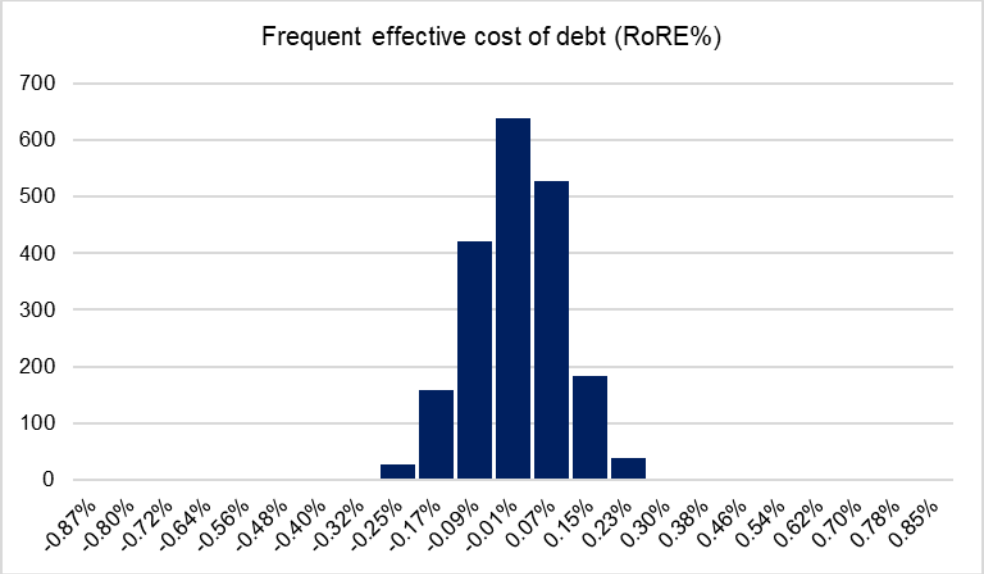
6.2.12. The equity beta impact on pricing this marginal systematic risk in the cost of capital is translated into an equivalent uplift on the cost of embedded debt, as this is an associated cost with raising finance.

II Results of analysis

6.2.13. The analysis in Figure 12 and Figure 13 below demonstrates the systematic nature of being a notional efficient frequent issuer as compared to an infrequent issuer.

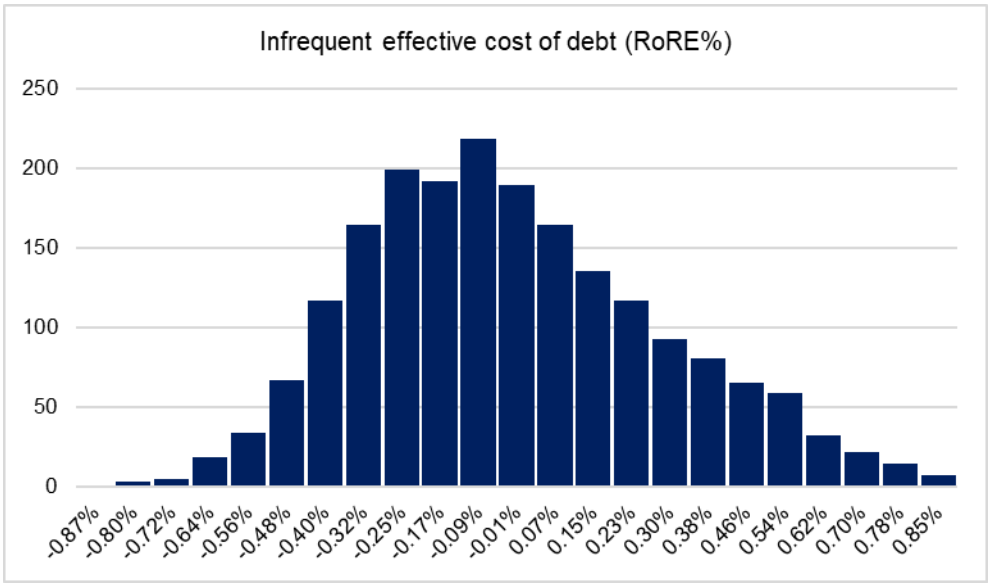
[52] KPMG, PR24 Final Determinations – risk analysis for a notional company, 24 January 2025.

Figure 12: Frequent effective cost of debt (RoRE %)



Source: KPMG analysis

Figure 13: Infrequent effective cost of debt (RoRE %)



Source: KPMG analysis

6.2.14. The results of analysis indicate that being an infrequent issuer would increase the RoRE (%) P10-P90 risk range by 59bps.

6.2.15. Based on this simulation, the infrequent issuer's total risk exposure, measured as standard deviation σ_P, should be 1.09x higher to price in the marginal systematic financing risk of being an infrequent issuer. The infrequent issuer's equity beta should therefore increase proportionally, i.e. by 1.09x, to price in this systematic marginal financing risk of being an infrequent issuer.

6.2.16. The corresponding cost of equity and embedded debt adjustments are presented in Table 4 below. A 35bps uplift on embedded debt would be required to align marginal systematic financing risk of an infrequent issuer to that of a frequent issuer.

Table 4: Ofwat PR24 FD WACC compared to infrequent issuer adjusted PR24 WACC for higher risk arising from infrequent issuer status

	Ofwat PR24 FD WACC		Infrequent issuer adjustments	
Notional gearing	55%	55%	55%	55%
RFR	1.52%	1.52%	1.52%	1.52%
TMR	6.68%	6.98%	6.68%	6.98%
Adjusted equity beta	0.59	0.65	0.65 (0.59*1.09)	0.71 (0.65*1.09)
Allowed CoE range	4.56%	5.07%	4.85%	5.40%
Allowed CoE point estimate		**5.10%**		**5.43%**
Allowed CoD	3.15%	3.15%	3.15%	3.15%
Allowed WACC	4.03%%	4.03%	4.18%	4.18%
Implied WACC uplift				**0.15%**
Implied embedded debt uplift instead of an increase in equity beta				**0.35%**

Source: KPMG analysis

6.3. Ofwat's PR24 determinations

I Ofwat's view on the analysis in its PR24 DD

Ofwat's PR24 DD position

6.3.2. Ofwat raised concerns with the analysis which prices marginal financing exposure for an infrequent issuer, stating that because the correlation coefficient between the company and the market may change when the company's RoRE risk changes, an adjustment to beta was inappropriate.

6.3.3. Ofwat noted that assumptions are required to link the simulation modelling of the cost of debt and equity beta used in the analysis, and challenged the assumptions that the distributional results of 2,000 trials of the 20-year cost of debt simulation can be used to infer the increase in standard deviation of 5 year RoRE for a notional infrequent issuer compared to the (implicitly, frequently-issuing) notional company.

6.3.4. Ofwat regarded this as involving a mismatch of time periods and ignoring that companies' embedded debt is fixed going into the 5-year control period. It therefore argued that there is no return distribution relating to frequency of issuance for this allowance, for the PR24 control period.

6.3.5. Ofwat argued that even where these factors are put aside and it is accepted at face value that infrequent issuance increases the standard deviation of daily returns, Ofwat found there to be insufficient evidence that infrequent issuance would increase beta.

6.3.6. Ofwat also did not agree that an infrequent issuance drives higher costs in the long-run and expectation of underperformance.[53]

Response to Ofwat's PR24 DD concerns

6.3.7. This Report considers that, when translating marginal risk exposure for an infrequent issuer into an equity beta adjustment, there is an assumption that the correlation coefficient between the company and the market would remain constant.

[53] Ofwat (2024) *Aligning risk and return- allowed return appendix*. Available here, Section 4.4.

6.3.8. The increase in RoRE variance indicates higher return volatility for the notional company. The effect on the correlation between the company's returns and the broader market will depend on the underlying causes of the increase in volatility.

6.3.9. At one extreme, if the increase in volatility is driven entirely by systematic factors, the correlation between the company's returns and the broader market is likely to increase, resulting in a higher beta. At the other extreme, if the increase in volatility is driven entirely by idiosyncratic risk, the correlation with the broader market is likely to decrease.

6.3.10. Under the benchmark assumption that the increase in volatility arises from a proportionate increase in both systematic and idiosyncratic components, the correlation will remain unchanged. As a result, the increased standard deviation translates into a proportionate increase in beta. With regard to Ofwat's point on whether infrequent issuance drives higher costs in the long-run and expectation of underperformance, infrequent issuance will not inherently drive higher costs relative to the sector average but more variation in costs for infrequent issuer as companies issuing relatively infrequently bear higher point in time risk and hence are more likely to incur costs which depart from the sector average. While Ofwat sets the allowed return on debt on a price control basis – i.e. over a period of five years – companies raise long-term finance and as such consideration of how risk could crystallise on a longer-term basis is important to ensure that the allowed CoD within a price control matches the risk profile being considered by companies as part of their longer-term debt financing.

II Ofwat's view on the analysis in its PR24 FD

Ofwat's PR24 FD position

6.3.11. In its FD, Ofwat stated that the analysis appears to assume that the assertion of higher risk exposure implies stock returns are multiplied by the scaling factor, but that the analysis only reports a scaled higher standard deviation of returns for an infrequent issuer and therefore does not demonstrate that this would lead to a covariance of returns that of the same scaled amount higher. Ofwat expressed the equation by substituting in the expression for Pearson's correlation coefficient, giving:

Equation 1:

$$\beta_i = \frac{Covariance(i,m)}{\sigma_i * \sigma_m} * \frac{\sigma_i}{\sigma_m}$$

6.3.12. It noted that the σ_i expressions cancel, giving:

Equation 2:

$$\beta_i = \frac{Covariance(i,m)}{(\sigma_m)^2}$$

6.3.13. On this basis, Ofwat argued that to demonstrate that a higher σ_i leads to a higher β_i, it is necessary to demonstrate that a higher σ_i leads to either a higher $Covariance(i,m)$, or a lower $(\sigma_m)^2$, and that the arguments are not valid in the absence of this. In summary, Ofwat argued that in order to demonstrate that a higher standard deviation of returns for the infrequent issuer leads to a higher beta for that same infrequent issuer, the analysis is required to show that a higher standard deviation of return for the infrequent issuer leads to either:

- A higher covariance between the infrequent issuer and the market index; or
- A lower squared standard deviation of the market.

Response to Ofwat's PR24 FD position

6.3.14. In order to demonstrate that a higher standard deviation of return for the infrequent issuer creates a higher beta for that infrequent issuer, Ofwat's positioning in the FD is that the analysis must also prove that the higher standard deviation of return for the infrequent issuer leads to: (i) a higher covariance between the infrequent issuer and the market index; or (ii) a lower squared standard deviation of the market. This is on the basis of the rearranged formula as set out above.

6.3.15. However, a mathematical formulation is not necessary to demonstrate this point. The analysis finds an increase in the standard deviation of returns for the infrequent issuer, driven by an increase in the variance in the interest rates that the infrequent issuer is exposed to. The interest rate exposure directly links to the infrequent issuer's financing risk and is a key systematic driver of risk. As demonstrated through the analysis – and corroborated by Ofwat – the volatility of returns would be higher for the notional infrequent issuer than the notional frequent issuer of debt (representative of the median firm). The higher risk exposure is caused by a systematic driver of risk – i.e. financing risk – and therefore intuitively results in a higher beta. Alternatively, the notional infrequent issuer could seek to hedge the risk (i.e. via the Ofgem CMS approach) which would require a bespoke hedging product. This would be costly but provides an alternative to pricing the higher risk.

6.3.16. On this basis, in response to Ofwat's argument that the evidence does not show that infrequent issuance changes the expected performance against the sector cost of debt allowance, the analysis in this Report seeks to quantify the impact of systematic interest rate risk for the purpose of pricing said risk into the allowance. Imprecision in the ability to quantify this based on unknowable data does not negate the existence of the risk. The analysis undertaken above seeks to proxy the value of this risk

6.3.17. Market-based interest rate variability is driven by macroeconomic factors and so there must be some systematic component to interest rate risk which should be priced in. The analysis set out throughout this Report demonstrates that this risk is increased for infrequent issuers of debt – such as SEW – and the analysis seeks to demonstrate the quantification of this risk.

6.3.18. Ofwat disputes the precise approach taken to quantify the differential. However, the increase in RoRE variance indicates higher return volatility for the notional company and the effect on the correlation between the company's returns and broader market is dependent on the underlying causes of the increase in volatility. Under the benchmark assumption that the increase in volatility arises from a proportionate increase in both systematic and idiosyncratic components, the correlation remains unchanged, and so the increased standard deviation can be translated into a proportionate increase in beta.

6.4. Pricing a CSA for SEW

6.4.1. The analysis above identifies a CoDE differential for a notional frequent and infrequent issuer, before pricing the marginal financing exposure for the infrequent issuer. For an infrequent issuer issuing debt, on average, every three years, the analysis implies an uplift to embedded debt of 35bps.

6.4.2. Following this and having identified SEW as an infrequent issuer of debt, this Report next seeks to price in the infrequent issuer risk for SEW (rather than the notional infrequent issuer).

6.4.3. To do so, it considers:

- A cross check of SEW's embedded debt performance against Ofwat's allowance
- The CMA's PR19 decision on BRL's CSA
- A balanced assessment of an appropriate CSA for SEW

I Cross check of SEW's embedded debt performance against Ofwat's allowance

6.4.4. The above sections evidence that SEW is an infrequent issuer (issuing around every three years, as opposed to the defined average annual issuance at benchmark size of a frequent issuer), is exposed to higher risk. This is reflected in SEW's historical debt issuance costs, which are important to take into account to understand the higher risks for SEW which have crystallised as higher compared to the median company, on which the sector allowance is based. The higher risk can be seen between SEW's CoDE and the median company's CoDE.

6.4.5. Table 5 below considers the performance of SEW's embedded debt compared to the allowance, set based on an assumption of full recovery of the actual projected costs in AMP8, which is informed by the PR24 Ofwat FD balance sheet model.

Table 5: SEW embedded cost of debt relative to the allowance, based on PR24 FD balance sheet model[54]

Instrument description	Instrument type	Date of issuance	Principal outstanding over AMP8 (£m)	Interest cost over AMP8 (£m)	Effective nominal interest	Effective CPIH interest rate (using 2% long-term CPIH inflation)
			31/03/26 – 31/03/30	*31/03/26 – 31/03/30*		
			A	B	A/B	
Fixed Rate Listed Bond	Fixed	27/07/2004	581	32.44	5.58%	
Loan Note (Series 1)	Fixed	16/09/2019	375	11.03	2.94%	
Loan Note (Series 2)	Fixed	16/09/2019	500	16.10	3.22%	
USPP Loan Note (Series 3)	Fixed	02/12/2021	250	5.10	2.04%	
Bank Loan	Floating	22/12/2021	60	3.69	6.15%	
Index Linked Listed Bond	RPI Linked	11/02/2010	1,184	65.32	5.52%	
Index Linked Listed Loan	RPI Linked	16/10/2012	807	43.58	5.40%	
Index Linked Listed Loan	RPI Linked	06/12/2002	1,498	100.34	6.70%	
Index Linked Listed Loan	RPI Linked	24/06/2005	350	20.23	5.78%	
CPI-linked private placement	CPI Linked	09/08/2024	258	14.35	5.57%	
Total			**5,881**	**313**	**5.32%**	**3.26%**

Source: KPMG analysis of Ofwat PR24 CoD model, [PR24RR02], available here.

6.4.6. Table 5 indicates that a 49bps uplift on embedded debt would be required to align SEW's cost of embedded debt (3.25%) with the sector allowance (2.77 %).

II The CMA's PR19 decision on BRL's CSA

6.4.7. The CMA's PR19 decision on BRL's CSA is a recent example of regulatory precedent in allowing a CSA and provides a cross-check on an appropriate level of uplift. The CMA set an allowed cost of embedded debt at an industry level of 2.47% and allowed a 29bps uplift for BRL, setting its allowed cost of embedded debt at 2.76%.

[54] Note that Ofwat's PR24 CoD Model shows outstanding debt as at 31 March 2024 and it therefore does not include SEW's 2004 bond issuance.

III Implications of SEW costs for the CSA

6.4.8. The Report finds that the key driver of variance in financing risk – when analysis is controlled for gearing and credit risk – is the exposure to interest rate risk (as captured by the frequent / infrequent issuer simulation) which is likely to be systematic in nature as it is driven by changes in the macroeconomic environment and is therefore outside of company control.

6.4.9. The equity beta impact on pricing this marginal systematic risk in the cost of capital is translated into an equivalent uplift on the cost of embedded debt, recognising that this is a financing risk that arises directly from debt issuance. This approach indicates an uplift on the embedded cost of debt of 35bps.

6.4.10. The analysis in this Report has identified that SEW is an infrequent issuer of debt. With regard to SEW's actual costs, the analysis finds a delta of 49bps between SEW's embedded cost of debt and the allowance. The analysis in this Report recognises that up to 13bps of the differential between SEW's actual cost of embedded debt and the sector allowance may be driven by SEW's gearing level. This indicates that a 36bps uplift on the cost of embedded debt could be an appropriate pricing in for the higher financing risk it faces as an infrequent issuer of debt.

6.4.11. Recent regulatory precedent has indicated CSAs on debt in the range of 30bps to 35bps. On this basis, an adjustment to SEW's embedded debt allowance of 30bps – which is materially below the delta between the SEW's actual cost of embedded debt and the allowance – would recognise that SEW as a relatively small company and infrequent issuer has higher financing risk than the sector average company on which the cost of embedded debt allowance is based.

7. Conclusions and implications

7.0.1. The analysis set out within this Report finds:

- SEW meets the criteria set out in this Report to define an infrequent issuer and has a higher risk exposure than larger water companies as a result of being an infrequent issuer.
- Risk analysis is undertaken to model the volatility of financing risk and associated RoRE performance range in PR24 to assess additional equity risk between a notional small and infrequent issuer like SEW and a frequent issuer (which the allowance is based on). It translates this risk differential and higher volatility on financing risk arising from infrequent debt issuance into a beta adjustment. The risk analysis indicates that an adjustment to the cost of embedded debt equivalent to 35bps would be required to price in SEW's higher financing risk arising from infrequent issuance. This is compared to the 35bps uplift awarded by Ofwat to PRT and SSC, comprising 30bps on the cost of embedded debt and 5bps associated with issuance and liquidity costs.
- This risk should be priced, or the costs of hedging that risk funded, as this higher risk is driven by (1) regulatory policy focussed on the sector median company, which is significantly larger than SEW (2) SEW's size, which is a company specific characteristic outside of its control.
- SEW has significantly higher costs than the allowance, even adjusting for potential gearing impacts, which corroborates the importance of an adjustment as the risk that infrequent issuance could contribute to a variance to the allowance has crystallised.
- This Report considers than any adjustment applied to the cost of embedded debt should be no higher than SEW's under-funded costs (adjusted for the effects of gearing).
- Recent regulatory precedent has indicated CSAs on debt in the range of 25bps to 35bps. On this basis, an adjustment to SEW's embedded debt allowance of 30bps – which is materially below the delta between the SEW's actual cost of embedded debt and the allowance – would recognise that SEW as a relatively small company and infrequent issuer has higher financing risk than the sector average company on which the cost of embedded debt allowance is based.

7.0.2. There is strong evidence to support an adjustment to the CoD to recognise the higher risk faced by an infrequent issuer of debt, like SEW. The key driver of this risk is the volatility and variability in interest rates, as driven by macroeconomic conditions. It follows that some element of this risk must be systematic and failing to price any of this additional risk driven by SEW's characteristics into the allowed CoD under-states required returns for an infrequent issuer like SEW.

Appendix 1: Criteria for identification of infrequent issuers in PR24

Criterion 1: The implied average annual debt issuance needed for each water company to fund RCV growth and refinancing

7.0.3. The implied annual debt issuance is calculated in each year using:

Equation 3: Calculation for implied annual debt issuance

$$D = (RCV_t - RCV_{t-1}) * \mathrm{G} + \frac{RCV_{t-1} * G}{p} - (RCV_t * G * ILD) * \frac{RPI_t - RPI_{t-1}}{RPI_{t-1}}$$

7.0.4. Where:

- D is the implied annual debt issuance required to fund RCV growth and refinancings after taking account of indexation on index-linked debt, measured in £m
- RCV_t is nominal closing RCV at current year
- RCV_{t-1} is nominal closing RCV at previous year
- G is gearing, assumed to be at FD notional level of 55%
- p is the tenor of embedded debt maturity, assumed to be 20Y
- ILD is the proportion of index-linked debt, assumed to be at FD notional level of 33%.
- RPI_t is the financial year-end RPI in current year
- RPI_{t-1} is the financial year-end RPI in previous year

An average of D across years is then taken over the relevant period ($Average\ D$).

7.0.5.

Criterion 2: The implied issuance frequency in years

7.0.6. The implied issuing frequency to target threshold size is calculated using:

Equation 4: Calculation for implied issuing frequency to target threshold size

$$n = \frac{B}{Average\ D}$$

7.0.7. Where:

- n is the implied issuing frequency required to target threshold size, measured in number of years
- B is the weighted average efficient benchmark issuance size over the period

$Average\ D$ is the average implied annual debt issuance derived at group level as set out above

Criterion 3: The ratio of implied issuance frequency between SEW and other water companies

7.0.8. The implied issuing frequency to target threshold size relative to SEW is calculated using:

Equation 5: Calculation for implied issuing frequency to target threshold size relative to ENWL

$$R = \frac{n_{SEW}}{n_{Other\ water\ company}}$$

7.0.9. Where:

- R is the implied issuing frequency of SEW to target threshold size relative to other water companies, measured as a ratio.
- n_{SEW} is the SEW implied issuance frequency, measured using number of years, needed to target minimum efficient benchmark issuance size from criterion 2
- $n_{Other\ water\ company}$ is the implied issuing frequency of other water companies to target threshold size from criterion 2

Appendix 2: Simulation of gearing

7.1. Approach to simulations

7.1.1. SEW is assumed to increase gearing to 80% and 50% at 2004 under factual and counterfactual scenarios respectively.

7.1.2. SEW's actual gearing is mapped against corresponding notional gearing levels of 50%, 55%, 57.5%, 62.5% and 60% for PR99, PR04, PR09, PR14 and PR19 respectively.

7.1.3. 1,000 simulations were run to capture (1) issuance size under both factual and counterfactual scenarios to target actual and notional gearing levels respectively, which is based on SEW's issuance timing set out in Appendix 2, and (2) issuance date for each issuance year to model all plausible outcomes of issuance cost based on iBoxx A/BBB non-financial 10 year+ index.

7.2. Key conclusions from the simulations

7.2.1. The pricing differential between factual and counterfactual scenario is 12bps under mean expected P50 position and the risk exposure differential (the P10-P90 range) is narrow at 7bps.

7.2.2. These results indicate that SEW's decision to maintain gearing above 70%, all else being equal, (1) doesn't fully explain the gap between SEW's embedded debt cost and sector allowance and (2) is unlikely to result in higher risk exposure based on the narrow P10-P90 range.

7.2.3. This suggests that, all else being equal, the gearing up due to WBS accounts for approximately 26% of the gap (49bps) between SEW's actual embedded debt and the sector allowance. This implies that the majority of the gap could be driven by factors outside management's control, such as point-in-time risk.

Appendix 3: CSA estimation on the cost of embedded debt

Underlying assumptions of the risk modelling

7.2.4. For infrequent issuers the impact of timing of issuance may be greater given that each debt issuance represents a larger proportion of the debt book and there would be a wider gap between individual issuances.

7.2.5. Infrequent issuers must wait to build up to benchmark size before issuing debt and would not seek to re finance this too soon after by issuing at shorter tenors.

7.2.6. Whilst no issuer can match the daily issuance profile without incurring material hedging costs, for the small, infrequent issuer who may issue debt one to two times during the price control period, the risk of mismatch and associated hedging costs are significantly larger.

Table 6: Underlying risk model assumptions

Marginal financing risk driver	Risk model underlying assumptions to capture the driver
Issuance size	Underlying assumptions: • **Frequent issuer:** Issue annually at benchmark size £250m • **Infrequent issuer:** Issuance by SEW once every 3 years at benchmark size £250m
Point in time	Underlying assumptions: • **Frequent issuer:** Can issue at any given trading day annually • **Infrequent issuer:** Can issue at any given trading day during each 3-year issuance window

7.2.7. A simulation is run to quantify the effective cost of debt for notionally efficient frequent and infrequent issuers based on the assumptions set out above over a long-run 20-year window from 2003 to 2024.

7.2.8. The iBoxx A/BBB non-financial 10+ index Yield to maturity (YTM) is used to proxy YTM at each issuance for both frequent and infrequent issuers as presented below.

Figure 14: iBoxx A/BBB non-financial 10 year+ index – demonstrating volatility over time

Source: Eikon, KPMG analysis

7.2.9. The iBoxx has historically been volatile, demonstrated in the graph above, and therefore the timing of issuance has material impacts on CoD. This effect increases risk exposure for a small and infrequent company like SEW because a company such as SEW faces a heightened risk that it could end up borrowing in years when interest rates are particularly high (such as now), or particularly low.

Pricing differentials in systematic risk

7.2.10. This section presents the results of risk simulations, which quantify the effective cost of embedded debt for infrequent and frequent issuer.

I Approach to simulations

7.2.11. The graphs below show effective cost of debt for frequent and infrequent issuers as of 31/03/2024 (aggregated by 20 years of simulation starting from 01/04/2003).

7.2.12. 2,000 simulations were run to capture a range of plausible scenarios and how frequent and infrequent costs could evolve across scenarios.

7.2.13. The simulation captures the aggregated cost of debt for a frequent and infrequent issuer to generate a cost of debt distribution.

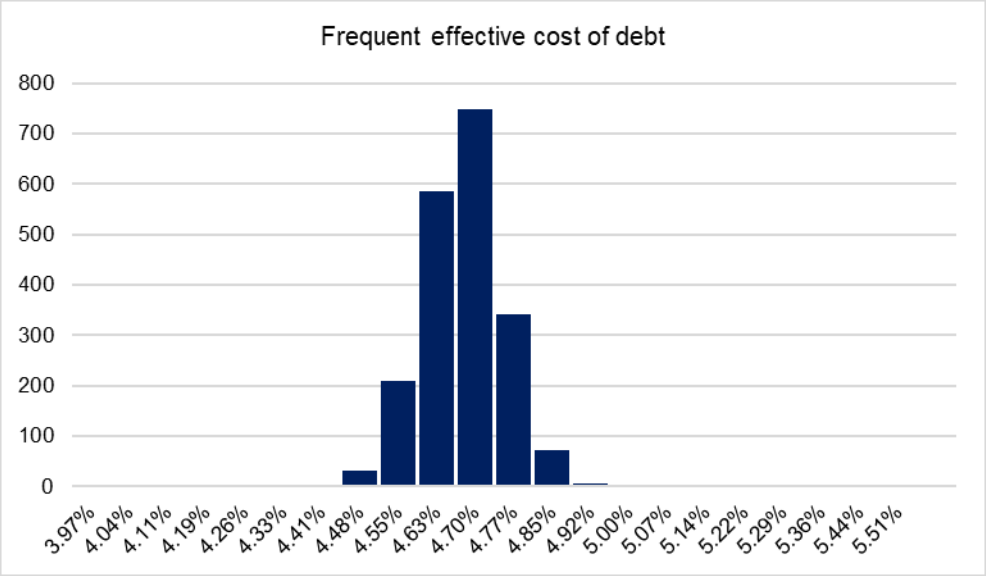
II Key conclusions

7.2.14. The financing risk exposure for an infrequent issuer is materially higher than that of an frequent issuer, which is evidenced by a wider range of CoD outcomes.

7.2.15. This implies that an infrequent issuer needs to have a higher beta to compensate investors for marginal risk exposure driven by lower frequency of issuance and higher point in time risks as set out in the previous slide.

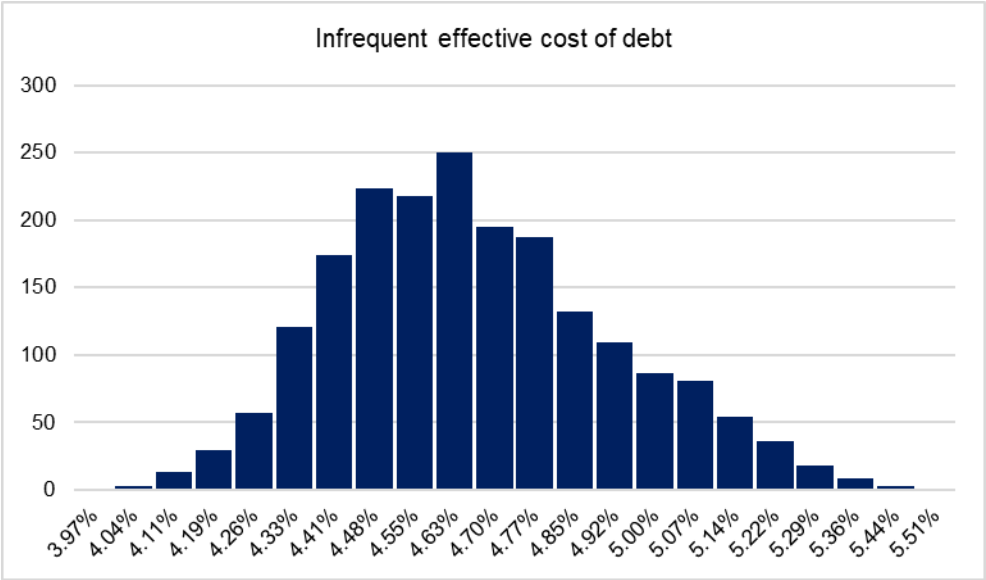
7.2.16. The graphs below show the P10/P90 range differential between infrequent and frequent issuers and the translation into the RoRE range at 55% notional gearing level.

Figure 15: Frequent effective cost of debt



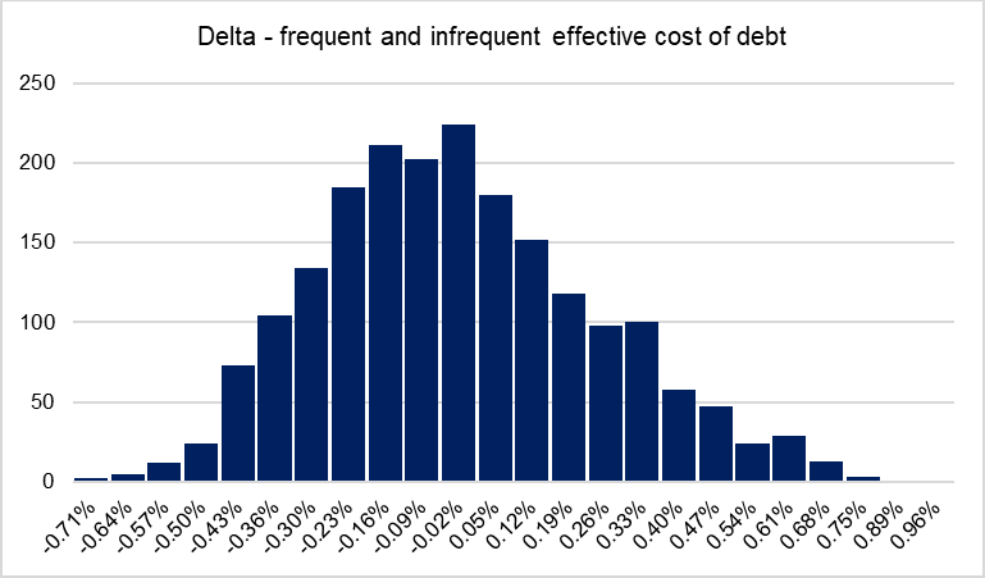
Source: KPMG analysis

Figure 16: Infrequent effective cost of debt



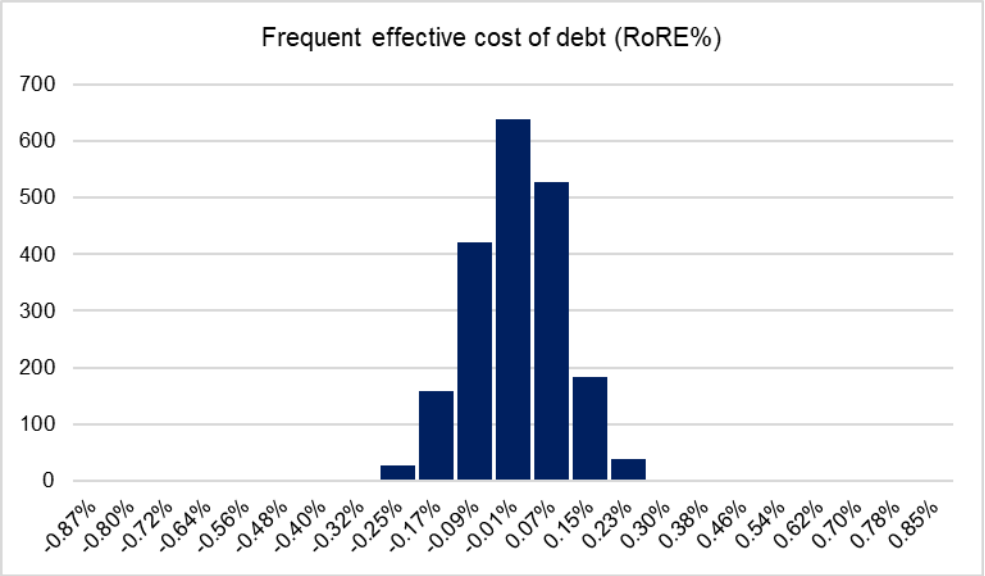
Source: KPMG analysis

Figure 17: Infrequent and frequent CoD differential



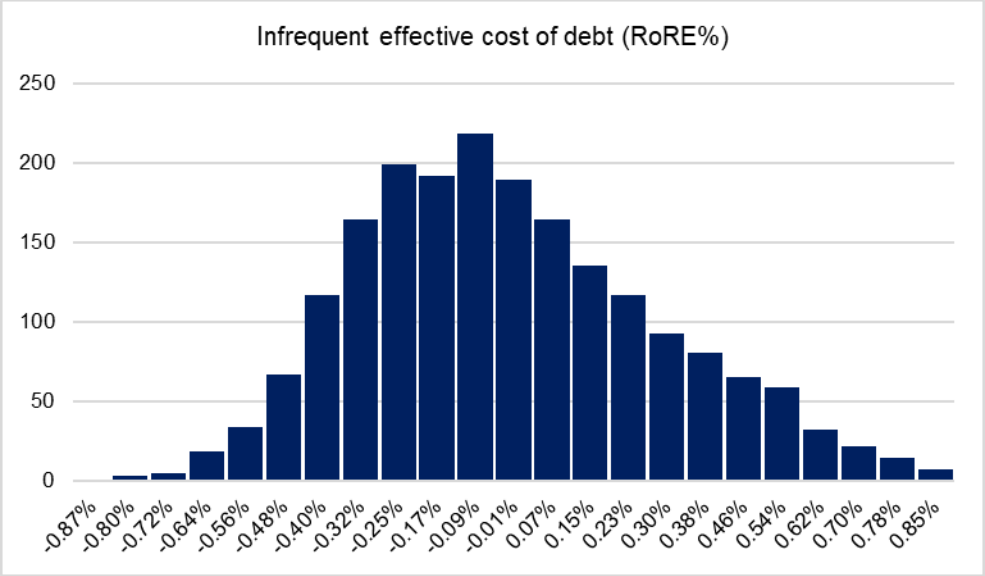
Source: KPMG analysis

Figure 18: Frequent effective cost of debt (RoRE%)



Source: KPMG analysis

Figure 19: Infrequent effective cost of debt (RoRE%)



Source: KPMG analysis

7.2.17. The graphs above show cost of debt risk exposure for both frequent and infrequent issuers in RoRE (%) term at notional 55% gearing.

7.2.18. Infrequent issuer is exposed to higher financing risk, evidenced by wider cost of debt performance range and P10-P50 delta of 29bps.

Summary of results

III Quantification of how an increase in financing risk exposure would translate to an increase in the total risk exposure of an infrequent issuer

7.2.19. In RoRE (%) terms, the total risk exposure for SEW is measured as:

Equation 6: Calculation for the total risk exposure

$$\sigma_P^2 = \sum_{i=1}^{n} \omega_i^2 \, \sigma_i^2$$

$$\sigma_p = \sqrt{\sigma_P^2}$$

7.2.20. Where:

- σ_P is the total risk exposure which is measured as standard deviation
- σ_i is the risk exposure of each driver, i.e. Totex, Retail, ODIs, Financing, etc.
- w_i is the relative weight of each risk driver.

7.2.21. The analysis then undertakes a risk exposure comparison to calculate the required scaling factor.

Table 7: Total risk exposure for notional WaSC

	Implied P50	Implied P90	Performance exposure relative to the expected position	Implied risk variance σP^2=∑(σ*w)^2	Implied total risk σP
Totex	-0.41%	-1.96%	55.96%	0.00458%	
Retail	0.00%	-1.01%	36.46%	0.00083%	
ODIs & MeXes	-0.30%	-1.42%	40.43%	0.00125%	
Financing	0.00%	-1.82%	65.70%	0.00871%	
Revenue	0.00%	-0.05%	1.81%	0.00000%	
DPC	0.00%	-0.03%	1.08%	0.00000%	
Total (simulated)	**-0.75%**	**-3.52%**	**100.00%**	**0.01536%**	**1.24%**

Source: KPMG analysis

Table 8: Quantification of the total risk exposure for notional infrequent issuer

	Implied P50	Implied P90	Performance exposure relative to the expected position	Implied risk variance σP^2=∑(σ*w)^2	Implied total risk σP
Totex	-0.41%	-1.96%	50.60%	0.00375%	
Retail	0.00%	-1.01%	32.97%	0.00068%	
ODIs & MeXes	-0.30%	-1.42%	36.57%	0.00102%	
Financing	0.00%	-2.11%	68.98%	0.01294%	
Revenue	0.00%	-0.05%	1.63%	0.00000%	
DPC	0.00%	-0.03%	0.98%	0.00000%	
Total (simulated)	**-0.75%**	**-3.81%**	**100.00%**	**0.01838%**	**1.36%**

Source: KPMG analysis

7.2.22. Based on the financing risk simulation, SEW's total risk exposure, measured as standard deviation σ_P, should be 1.36%%/1.24% = 1.09x higher to price in the marginal financing risk of being an infrequent issuer.

7.2.23. Given Equity beta is calculated as:

Equation 7: Calculation of Equity Beta

$$\beta_i = \rho_{i,m} \frac{\sigma_i}{\sigma_m}$$

7.2.24. Where $P_{i,m}$ is the q risk exposure of the market.

7.2.25. As a result, equity beta should increase in proportion to the increase in total risk exposure for a notional infrequent issuer (relative to a frequent issuer) based on the assumption that the correlation between the company and overall market remains constant. This means that SEW's equity beta should increase by 1.09x to price in the systematic marginal financing risk of being an infrequent issuer. The corresponding cost of equity and WACC uplifts are presented in Table 9 below.

Table 9: Corresponding cost of equity and WACC uplift – Ofwat PR24 FD WACC

	Ofwat PR24 FD WACC		Infrequent issuer adjustments	
Notional gearing	55%	55%	55%	55%
RFR	1.52%	1.52%	1.52%	1.52%
TMR	6.68%	6.98%	6.68%	6.98%
Adjusted equity beta	0.59	0.65	0.65 (0.59*1.09)	0.71 (0.65*1.09)
Allowed CoE range	4.56%	5.07%	4.85%	5.40%
Allowed CoE point estimate		**5.10%**		**5.43%**
Allowed CoD	3.15%	3.15%	3.15%	3.15%
Allowed WACC	4.03%	4.03%	4.18%	4.18%
Implied WACC uplift				**0.15%**
Implied embedded debt uplift instead of an increase in equity beta				**0.35%**

Source: KPMG analysis

Table 10: Corresponding cost of equity and WACC uplift – KPMG response to PR24 FD WACC

	KPMG WACC		Infrequent issuer adjustments	
Notional gearing	55%	55%	55%	55%
RFR	2.33%	2.85%	2.33%	2.85%
TMR	6.93%	6.93%	6.93%	6.93%
Adjusted equity beta	0.71	0.78	0.78 (0.71*1.09)	0.85 (0.78*1.09)
Allowed CoE range	5.60%	6.04%	5.90%	6.33%
KPMG CoE point estimate		**6.33%**		**6.63%**
Allowed CoD	3.71%	3.71%	3.71%	3.71%
Allowed WACC	4.89%	4.89%	5.03%	5.03%
Implied WACC uplift				**0.14%**
Implied embedded debt uplift instead of an increase in equity beta				**0.35%**

Source: KPMG analysis

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