# Customer benefits assessment of South Staffordshire Water as a comparator

Prepared for South Staffordshire Water

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Confidential

## 1 Introduction

Based on Ofwat's approach during PR19, this note estimates the benefits to customers of South Staffordshire Water (SSC) as a comparator, as evidence to support its submission on a small company premium. The note draws on Ofwat's PR19 methodology,[1] its technical appendix on company-specific adjustments to the cost of capital at the Initial Assessment of Plans (IAP),[2] and its accompanying model (hereafter 'SCP benefits model').[3] This methodology was developed by Ofwat to assess the customer benefits of allowing a small company premium to three water-only companies: Bristol Water (BRL), Portsmouth Water (PRT) and Sutton and East Surrey Water (SES).

Ofwat's approach examines three questions:[4]

- has the company had a beneficial impact on its cost benchmarks?
- has the company had a beneficial effect on its service benchmarks?
- are there benefits in other areas?

[1] Ofwat (2017), 'Delivering Water 2020: Our final methodology for the 2019 price review', 13 December, section 10.7.3. Ofwat (2017), 'Delivering Water 2020: Our final methodology for the 2019 price review. Appendix 12: Aligning risk and return' 13 December, section 7.
[2] Ofwat (2019), 'IAP Technical Appendix 4 – Company Specific Adjustments to the cost of capital', 7 February.
[3] Ofwat (2019), 'Company-Specific Adjustment CBA model.xlsm', February.
[4] Ofwat (2019), 'IAP Technical Appendix 4 – Company Specific Adjustments to the cost of capital', 7 February, p. 25.

Ofwat states that evidence submitted on the third question—benefits in other areas—while a '…helpful starting point to inform future work…' will not provide point estimates that can be used in assessment at PR19.[5]

The scope of this note is restricted to the first question—the impact of SSC on cost benchmarks. We note that the quantified impacts on service quality were in the single figures in Ofwat's assessment at the IAP. Moreover, Ofwat's forward-looking approach, which is its primary method of assessing outcomes, considers only the impact on cost benchmarks.

# 2 Approach

Ofwat applied two approaches to assess the impact of a company on cost benchmarks:

- **single-period approach**: the extent to which each company's historical data would strengthen the PR19 cost efficiency *and* service benchmarks;[6]
- **forward-looking approach**: a company's future contribution to Ofwat's ability to set stringent benchmarks beyond 2020–25, *focusing on only the water TOTEX impact*.[7] This model estimates the probability of a company moving to the upper quartile in one of the next six[8] price control periods.

Ofwat focused on the result from the forward-looking approach to make its assessment on the benefit of a small company. The single-period approach was considered only as a cross-check to the result from the forward-looking approach.

Within the forward-looking approach, Ofwat estimates the probability of a company moving to the upper quartile in future, for which it estimates the probability of changes in rank. Ofwat considered two methodologies for forecasting rank changes:

- **the 'changes' approach:** forecasting future rank changes (into or out of the upper quartile) taking no account of the starting rank;
- **the 'transitions' approach:** forecasting future rank changes (into or out of the upper quartile) taking into account the starting quartile position.

Ofwat considered the midpoint across the two approaches.

An important change for the forward-looking approach since the publication of Ofwat's SCP benefits model is the update to Ofwat's PR19 position, as published in the slow-track determinations (DD).[9] The key input required for Ofwat's SCP benefits model that has changed is the efficiency rank of SSC over the historical period in Ofwat's base water econometric models. SSC's rank improved from 6th over the historical period at the IAP to 4th at the DD.[10]

[5] Ofwat (2019), 'IAP Technical Appendix 4 – Company Specific Adjustments to the cost of capital', 7 February, p. 36.
[6] Ofwat (2019), 'IAP Technical Appendix 4 – Company Specific Adjustments to the cost of capital', 7 February, p. 25.
[7] Ibid.
[8] PR19–PR44.
[9] Ofwat (2019), 'Feeder model 2: Wholesale water – Water Catch up adjustment', 18 July, https://www.ofwat.gov.uk/slow-track-and-significant-scrutiny-draft-determinations-models/.
[10] Ofwat considers a 16-company industry (excluding Dee Valley Water/Hafren Dyfrdwy). Therefore the rank for SSC used in the models is 1 rank better than presented in Ofwat's feeder model.

# 3 Results

## 3.1 Forward-looking approach

We first ran Ofwat's SCP benefits model to check whether we could replicate Ofwat's results for PRT, BRL and SES. Given the nature of Ofwat's SCP benefits model,[11] each run of the model will result in slightly different outcomes. Our results were broadly consistent with Ofwat's published results.

The results from estimating the forward-looking benefits for SSC are set out in Table 3.1. This gives a range of benefits of £22.4m–38.6m, with a midpoint of £30.5m. This compared with £64.0m for PRT at the IAP. The other two companies assessed and rejected by Ofwat at the IAP—BRL and SES—had estimated benefits from the forward-looking approach of between £0.7m and £2.5m, or 2% and 8% of SSC's estimated benefit.

**Table 3.1 Forward-looking approach: forecast base TOTEX benchmarking benefits PR24–PR44 (£m, 2017/18 values and prices)**

| Metric | South Staffordshire Water (SSC) |
|---|---|
| Benefits (changes approach) | 38.6 |
| Benefits (transitions approach) | 22.4 |
| Benefits—midpoint | 30.5 |

Source: Oxera analysis using Ofwat (2019), 'Company-Specific Adjustment CBA model.xlsm', February.

We do not update the result to reflect the new PR19 outcome at the DD within the scope of this paper. We would expect the key changes to result from including the DD to have a positive impact on SSC's position for the following reasons:

- improvement in the company-specific likelihood of future rank changes from SSC's better efficiency ranking in the base water models evaluated over the historical period at the DD (transitions approach only);[12]
- the increase in the pre-efficiency level of TOTEX resulting from company re-submissions and the inclusion of growth and low pressure within base expenditure—£17.49bn at the DD against £16.48bn at the IAP. A higher level of TOTEX creates more potential for customers to benefit from a more demanding UQ driven by small companies.[13]

The update of the PR19 outcome would also be expected to change the sample mean and standard deviation of TOTEX efficiency scores at PR19.[14] While it is not possible to predict what the impact of these changes would be, from Ofwat's feeder model 2 at the DD and the IAP these do not seemed to have changed substantively.[15]

[11] Ofwat uses a Monte Carlo simulation over 1,000 iterations.
[12] Ofwat (2019), 'IAP Technical Appendix 4 – Company Specific Adjustments to the cost of capital', 7 February, p. 30.
[13] Ofwat (2019), 'IAP Technical Appendix 4 – Company Specific Adjustments to the cost of capital', 7 February, p. 49, bullet 6.
[14] Ofwat (2019), 'IAP Technical Appendix 4 – Company Specific Adjustments to the cost of capital', 7 February, p. 49, bullet 4.
[15] 100.3% and 0.0886 at the IAP against 100.6% and 0.1098 at the DD. Oxera analysis using Ofwat (2019), 'Feeder model 2: Wholesale water – Water Catch up adjustment.xlsx', February, and Ofwat (2019), 'Feeder model 2: Wholesale water – Water Catch up adjustment.xlsx', July.

### 3.2 Single-period approach

This positive outcome in the forward-looking approach holds for the single-period approach.

We set out the results from the single-period approach in Table 3.2. At the IAP SSC ranked in the upper quartile for retail and below the upper quartile in wholesale water. Its outcome in the single-period approach is better than that of BRL and SES. However, SSC provided a lower benefit than PRT, which was assessed to contribute a net benefit to cost benchmarks from the single-period approach of +£118.9m (comprising £125.0m on base wholesale TOTEX and -£6.1m on retail).

**Table 3.2 Single-period approach: base TOTEX benchmarking benefits PR19, (£m, 2017/18 values and prices)**

| Metric | SSC | PRT |
|---|---|---|
| Base wholesale water TOTEX | -11.2 | +125.0 |
| Retail TOTEX | +57.2 | -6.1 |
| Net benefit | +46.0 | +118.9 |

Source: Oxera.

It is difficult to forecast how these would change at the IAP. Although SSC's efficiency ranking over the historical period has improved, results in the single period approach can be driven by small changes in the spread of efficiency scores around the company that defines the upper quartile.

We note that Ofwat considers the single-period approach as a cross-check to the forward-looking approach. It states that:

> We have placed most weight on our forward-looking approach, using the single period approach as a cross-check. This is because the 2020-25 benchmarking impacts implied by companies' submissions will not be affected by any impact on merger probability triggered by the decision to allow an uplift, and also because companies which do not currently strengthen our benchmarks may do so in future (and vice versa).[16]

As the results from the single period can be substantially affected by small changes in the spread of efficiency scores, we would consider that of the approaches that Ofwat uses, it is better to use the forward-looking approach as the means of assessing the benefit associated with the small company premium.

[16] Ofwat (2019), 'IAP Technical Appendix 4 – Company Specific Adjustments to the cost of capital', 7 February, p. 26.

# PR19 cost of debt issues for small water-only companies

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## 1 Introduction

This note examines two issues for determining the PR19 cost of debt for individual small water-only companies (WOCs) in England and Wales.

In particular,

- it compares the Ofwat approach to the small company premium (SCP) on the weighted average cost of capital (WACC) with that of the CMA;
- it compares the Ofwat approach to estimating the cost of embedded debt for small WOCs with that previously adopted by the UK Competition and Markets Authority's (CMA).

It concludes by inferring the approach that the CMA may adopt in an appeal of the PR19 final determinations by a small WOC, and the potential impact on the PR19 cost of debt for South Staffordshire Water (SSW).

## 2 Ofwat approach to the SCP and cost of debt

### 2.1 PR14

#### 2.1.1 SCP

In PR14, Ofwat implemented a new approach by introducing a two-step test to determine whether a company-specific uplift to the WACC was required. Companies seeking an uplift on the basis of size needed to show both that:[1]

- they faced a higher cost of financing; and
- there was an associated benefit to customers.

[1] CMA (2015), 'Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991: Report', 6 October, para. 10.34.

Based on the outcome of this two-step test, Ofwat allowed two companies (Portsmouth Water and Sembcorp Bournemouth) a 0.25% increase in their cost of debt (both embedded and new), equating to a 0.15% uplift on the overall WACC.[2]

### 2.1.2 Cost of embedded debt

In PR14, Ofwat used a notional industry embedded cost of debt and arrived at a range of 2.2–2.8% (RPI, real) for the real embedded cost of debt. The lower bound of the range was informed by historical yields on corporate bonds for water companies and the upper bound based on investment grade corporate bond indices.

The final determinations set an embedded cost of debt of 2.75% (RPI, real), which included a 0.1% uplift for issuance fees.[3]

## 2.2 PR19

### 2.2.1 SCP

For PR19, Ofwat has only considered the relevance of an SCP on the cost of debt. It set out a three-step test to determine whether a company-specific uplift to the WACC would be required.:

1. Is there compelling evidence that the level of the requested adjustment is appropriate?
2. Is there compelling evidence that there are benefits that adequately compensate customers for the increased cost?
3. Is there compelling evidence of customer support for the proposed adjustment?[4]

In relation to the first step, the Ofwat approach appears to have evolved since PR14. In particular, the test no longer seems to focus on the validity of an SCP. Rather, the phrasing of the test focuses the debate on the appropriate level of an SCP for smaller WOCs. In essence, this step implicitly recognises that small WOCs are likely to face higher financing costs.

The second step is largely similar in spirit and letter to that introduced in PR14 and the third step is a new addition for PR19.

Ofwat, having assessed the evidence for the SCP provided by companies against this three-step approach, found that only Portsmouth Water had provided sufficient evidence in support of its request for an uplift to its cost of capital. As a result, Ofwat has allowed a 30bp uplift to Portsmouth Water's overall cost of debt based on the company's own proposals.[5]

### 2.2.2 Cost of embedded debt

For PR19, Ofwat has confirmed that:

> Our allowance for the cost of embedded debt is **intended to remunerate the efficient debt financing costs incurred prior to the start of the PR19**

[2] CMA (2015), 'Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991: Report', 6 October, para. 2.65.
[3] Ibid., paras 10.30–10.33.
[4] Ofwat (2019), 'Technical appendix 4: Company-specific adjustments to the cost of capital', January, p. 3.
[5] Ibid.

> **control** period for a company with a notional financial structure.[6] [emphasis added]

In estimating the cost of embedded debt, Ofwat considered:

- debt and other financial instruments that companies had accumulated on their balance sheet as at March 2018 (as well as three listed bonds issued after this date);
- 10- and 15-year trailing averages of investment grade corporate bond indices.

The results from the first approach indicated that the weighted average embedded debt costs faced by small WOCs (5.60%, nominal) were 137bp higher than those of WASCs and large WOCs (4.23%, nominal) and 135bp higher than the sector-wide costs (4.25%, nominal).

The second approach resulted in a range of 3.82–4.50% in nominal terms (after including an outperformance adjustment of 25bp). It is important to note that Ofwat's analysis excluded debt raised between 1999 and 2004 (which would have accounted for 25% of the weights in the trailing average and constituted 16% of outstanding debt).[7]

Having reviewed potential benchmarks from both balance sheet and benchmark index approaches, Ofwat has set a point estimate of 4.50% (nominal), at the top end of the range from its second approach.[8]

In doing so, Ofwat specifically has not given any weight to the higher borrowing costs faced by smaller WOCs, arguing:

> Given that the four smaller WoCs account for less than 2% of total embedded debt used to inform our sector balance sheet approach estimate, it seems disproportionate to set a sector allowance according so much weight to smaller WoCs' borrowing costs.[9]

### 2.2.3 Implications of the Ofwat approach in PR19

There appears to be a contradiction in the Ofwat PR19 approach to setting embedded debt costs. Although in principle the regulator intends to allow companies to recover efficient debt financing costs, in practice, its draft determinations for the sector effectively set a notional cost of embedded debt for water and sewerage companies (WASCs).

This overlooks the clear findings from its own analysis that small WOCs (including SSW) face significantly higher debt costs than those incurred by WASCs. It also overlooks the fact that the forecast average share of embedded debt for small WOCs is more than 5% higher than the sector average.[10]

As a result, and assuming efficient financing, it follows that the draft determinations do not allow small WOCs to recover the cost of debt that already exists on the balance sheets of these companies. In the context of SSW, Oxera has previously assessed the financial strategy of SSW and

[6] Ofwat (2019), 'PR19 draft determinations: Cost of capital technical appendix', July, p. 71.
[7] Ibid., p. 77.
[8] This translates to 2.46% CPIH, real and 1.46% RPI, real embedded cost of debt. See Ofwat (2019), 'PR19 draft determinations: Cost of capital technical appendix', July.
[9] Ofwat (2019), 'PR19 draft determinations: Cost of capital technical appendix', July, p. 78.
[10] Ibid., p. 63.

indicated that past decisions by the management regarding its debt were efficient.[11]

# 3 The CMA approach in Bristol Water 2015

The CMA's determination in the appeal brought by Bristol Water in 2015 sets out a different approach to assessing the costs of embedded debt and the SCP for small WOCs.[12]

In the assessment made by the CMA, the primary consideration in setting the cost of capital was whether efficient companies could finance their functions. The CMA indicated that as long as small companies had, on average, a higher cost of capital, its starting point would be that this should be taken into account in the assumptions on the cost of finance.[13]

## 3.1 SCP on cost of debt

In its determination regarding the SCP on the cost of debt, the CMA focused solely on the first step of the two-step test set out by Ofwat in PR14 (i.e. whether small WOCs faced higher financing costs).

The CMA estimated the relative spread of bond issuances by WASCs and WOCs to the average iBoxx index. Based on its analysis, it concluded that an SCP of 0.4% for a WOC relative to a WASC was justified.[14]

The CMA made three key observations on the second step of the test set out by Ofwat:

(a) We were unconvinced that there was a causal link between the cost of debt required to finance the companies, and the benefits outlined by Ofwat.

(b) As a result, **we were not persuaded that the customer benefits test, as applied by Ofwat, was necessary to meet our duty to customers**. We note that customers of small companies would notionally pay more as a result of the SCP. However, there are many reasons why bills are different for customers of smaller companies. It was not clear to us that this implied a need to adjust the approach to the cost of capital.

(c) Regulatory consistency has a beneficial effect, particularly when considering cost of capital given the long-term nature of financing. We were concerned that removing the SCP from the notional cost of embedded debt calculation (without evidence of changing market conditions) raised the risk of stranded costs.[15] [emphasis added]

On this basis, the CMA concluded that:

> …we did not consider that there was a clear link between the relative position of small companies within the benchmarking and the efficient level of the cost of capital. **We did not apply a customer benefits test**.[16] [emphasis added]

[11] Oxera (2017), 'Towards a sustainable treatment of debt in the water sector', 30 June.
[12] CMA (2015), 'Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991: Report', 6 October.
[13] CMA (2015), 'Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991: Report', 6 October, para. 10.75.
[14] Ibid., para. 10.80.
[15] Ibid., para. 10.72.
[16] Ibid., para. 10.79.

### 3.2 Cost of embedded debt

In the Bristol Water appeal, the CMA was concerned with the cost of capital of Bristol Water as a stand-alone ring-fenced company.[17]

While the CMA supported Ofwat's use of a notional cost of embedded debt in the context of a multi-company framework, it also judged that a more specific examination of the company in question was relevant. It therefore considered that:

> … it was appropriate for us to consider both the notional level, consistent with the approach that Ofwat used and **also the specific actual costs incurred by Bristol Water**. **The latter provided a cross-check as to whether the notional level derived from industry costs was reasonable for a company such as Bristol Water**.[18] [emphasis added]

For estimating the notional cost of embedded debt, the CMA adopted a largely similar approach to Ofwat. It estimated a range of 2.4–2.95% for the RPI, real embedded cost of debt,[19] the lower bound of which was informed by historical yields on corporate bonds for WASCs and the upper bound of which relied on historical corporate bond indices.

In translating this range to a notional range for WOCs, the CMA then applied an SCP of 40bp (discussed above in section 3.1) to the lower bound and a WOC premium of 11bp to the upper bound. Including an additional 10bp for issuance costs, the CMA's final range for the real notional embedded debt costs for WOCs was 2.9–3.15%.[20]

The CMA then considered Bristol Water's actual embedded debt cost and estimated this to be 2.7–2.85% (RPI, real).[21]

In assessing the relevance of notional and actual embedded debt costs, the CMA recognised that:

> The CC/CMA's approach in the past has generally been to **give weight to both notional and actual cost of embedded debt**.[22] [emphasis added]

Giving weight to its prior approach, the CMA determined a mid-point estimate of 2.95% for Bristol Water's real cost of embedded debt.

## 4 Alternative approach to estimating the SCP and cost of debt for SSW in PR19

### 4.1 PR19 SCP

Based on the CMA precedent, in this section we consider an alternative approach that the CMA would be likely to adopt in an appeal of the PR19 final determinations to estimate the SCP in PR19 against the three-step test proposed by Ofwat.

In relation to the first step of the SCP test, Ofwat has estimated an SCP of 25–40bp as appropriate for the overall cost of PR19 debt:

[17] CMA (2015), 'Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991: Report', 6 October, para. 10.47
[18] Ibid., para. 10.50.
[19] Ibid., para. 10.63. The key difference between the CMA's and Ofwat's analysis was in the CMA's estimate of RPI leading to a difference in the range of the notional embedded debt costs.
[20] Ibid., para. 10.82.
[21] Ibid., para. 10.102.
[22] Ibid., para. 10.105.

> **We consider that our evidence on the higher overall cost of debt faced by a small notional company due to its size points to a plausible range of 25-40 basis points.** This range is derived from an overall allowance which incorporates the lower-bound figure for new and embedded debt and the upper-bound allowance for new and embedded debt.[23] [emphasis added]

This implicitly indicates that Ofwat accepts that small companies have, on average, higher financing costs.

In the Bristol Water appeal, the CMA's focus was to ensure that efficient companies could finance their functions. It stated:

> …in our view the primary consideration in setting the cost of capital was whether efficient companies could finance their functions. **Ofwat accepted that small companies have, on average, a higher cost of capital. While this remains the case, our starting point would be that this should be taken in to account in the assumption on the cost of finance**.[24] [emphasis added]

Assuming that the CMA's approach in PR19 would be consistent with its previous approach, and given Ofwat's own analysis indicating a higher cost of debt financing for small companies in PR19, it would be logical to consider a 25–40bp uplift to the overall cost of debt of small WOCs.

The second step of Ofwat's test is similar to the second test that it proposed in PR14. Given that the CMA was not persuaded to apply this test in its determination for Bristol Water (as noted earlier in section 3), there does not appear to be any obvious and compelling reason to consider this test in PR19.

Finally, and in relation to the third step, it remains to be seen what weight the CMA would attach to this step relative to assessing the level of efficient financing costs. Its implications are not analysed further in this note.

### 4.2 PR19 cost of embedded debt

In assessing the approach that the CMA would be likely adopt for the PR19 cost of embedded debt, it is important to review the principles set out by the CMA previously. These are established in its Bristol Water determination.

First, while the CMA has recognised that it would not be in the interests of consumers to simply allow embedded debt costs to be passed through,[25] it has also given importance to regulatory consistency and its own previous precedent of giving weight to both notional and embedded debt costs. In particular, it is reasonable to assume that the CMA would specifically consider the actual debt financing costs for any company that appeals.

Second, the CMA does not seek to provide any disincentives to efficient financing.[26]

As a result, and although the CMA would be likely to start from the same position as Ofwat—i.e. reviewing notional debt costs from across the industry—it would also review efficiently financed actual debt costs for small WOCs as part of a cross-check of its notional cost of debt. Furthermore, the notional embedded debt costs would be likely to include an SCP (discussed in section 4.1 above).

[23] Ofwat (2019), 'Technical appendix 4: Company-specific adjustments to the cost of capital', January, p. 22.
[24] CMA (2015), 'Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991: Report', 6 October, para. 10.75.
[25] Ibid., para. 10.103.
[26] Ibid., para. 10.106.

In contrast Ofwat has considered neither an SCP, nor the actual embedded debt costs for the individual small WOCs in its draft determinations.

Specific to SSW, we understand that SSW's nominal embedded debt cost is currently 5.86% (2.72% RPI, real).[27] This is higher than the upper bound of the Ofwat analysis for the average actual embedded cost of debt for the sector (4.65%, nominal), and for WASCs and large WOCs (4.45%, nominal).[28]

Regarding the relative weighting of notional and actual embedded debt costs, this is less straightforward to assess. In the Bristol Water appeal, the CMA found that Bristol Water's actual embedded debt costs outperformed those of a notional small WOC and considered that it was reasonable for customers to share some of the benefit of Bristol Water's lower actual cost of debt.

In contrast, SSW's actual embedded debt costs (2.72% RPI, real) are c. 100bp higher than the notional cost of embedded debt in PR19 for a small WOC (1.71–1.86% RPI, real, assuming a 25–40bp uplift to Ofwat's draft determination point estimate of 1.46% for the sector). As a result, and in the case of SSW, it remains to be seen what proportion of embedded debt costs the CMA would share with customers while also trying to ensure that efficiently incurred financing costs are recovered.

# 5 Potential outcome of a CMA appeal for SSW

Table 5.1 sets out Ofwat's draft determination for the PR19 cost of debt.

Table 5.2 illustrates a potential CMA view of the PR19 cost of debt after including an SCP of 25–40bp in the cost of debt for SSW, and two possible scenarios for accommodating SSW's actual embedded debt costs:

- Scenario 1 places greater weight on allowing SSW to recover all efficiently financed costs and assumes a full pass-through of its embedded debt financing costs;
- Scenario 2 places some weight on the CMA's observation that it would not be in the interests of consumers to simply allow embedded debt costs to be passed through and assumes a 50% sharing of SSW's embedded debt costs over those of a notional small WOC.

The analysis indicates an overall impact of c. 50–100bp uplift for SSW's PR19 cost of debt relative to Ofwat's draft determination.

**Table 5.1 PR19 draft determination for cost of debt (RPI, real)**

| Parameter | | Draft determination |
|---|---|---|
| Cost of new debt | [a] | 0.35% |
| Cost of embedded debt | [b] | 1.46% |
| Ratio of embedded debt | [c] | 80%* |
| Ofwat overall cost of debt | [d] = [b]*[c]+(1-[b])*[a] | 1.34% |

Note: All figures are RPI, real using a CPIH–RPI wedge assumption of 100bp. * Ofwat's estimate is based on sector averages. Based on Ofwat's own analysis, we note that the forecast average share of embedded debt for all four small WOCs is higher (i.e. more than 85%).

Source: Ofwat (2019), 'PR19 draft determinations: Cost of capital technical appendix', July, p. 61.

[27] Based on data received from SSW. See Annex 1 for details.
[28] Ofwat (2019), 'Technical appendix 4: Company-specific adjustments to the cost of capital', January, p. 75.

### Table 5.2 Potential CMA view of SSW PR19 cost of debt (RPI, real)

| Parameter | | Analysis |
|---|---|---|
| SCP uplift to new and embedded debt | [e] | 0.25–0.40% |
| Notional cost of WOC embedded debt (including SCP) | [f]=[b]+[e] | 1.71–1.86% |
| SSW actual cost of debt | [g] | 2.72% |
| SSW PR19 cost of embedded debt (scenario 1—full pass-through) | [h]=[g] | 2.72% |
| SSW PR19 cost of embedded debt (scenario 2—50% sharing with customers) | [i]=(([h]-[f])÷2)+[f] | 2.22–2.29% |
| SSW cost of new debt (including SCP) | [j]=[a]+[e] | 0.60–0.75% |
| **Overall PR19 cost of debt for SSW (scenario 1)** | [k] = [b]*[h]+(1-[b])*[j] | ***2.30–2.33%*** |
| **Overall PR19 cost of debt for SSW (scenario 2)** | [l] = [i]*[h]+(1-[b])*[j] | ***1.89–1.98%*** |

Note: All figures are RPI, real using a CPIH–RPI wedge assumption of 100bp.

Source: Oxera analysis, SSW, and Ofwat (2019), 'PR19 draft determinations: Cost of capital technical appendix', July, p. 61.

# A1 SSW cost of embedded debt

### Table A1.1 SSW embedded debt portfolio (2018/19)

| Debt facility | April 2018 balance (£m) | March 2019 balance (£m) | FY 2018/19 average (£m) | Weighting | Coupon (actual, real) | Coupon (nominal)* |
|---|---|---|---|---|---|---|
| Artesian debt | 158.7 | 163.8 | 161.2 | 65.50% | 3.76% | 6.94% |
| Euro debt | 45.2 | 46.3 | 45.7 | 18.58% | 1.84% | 4.96% |
| Cambridge debt | 30.0 | 30.0 | 30.0 | 12.19% | -0.29% | 2.76% |
| Debenture | 1.6 | 1.6 | 1.6 | 0.66% | 1.02% | 4.11% |
| Revolving facility | 7.4 | 7.7 | 7.6 | 3.08% | -1.78% | 1.23% |
| **Total** | **242.86** | **249.46** | **246.16** | | **2.72%** | **5.86%** |

Note: * Converted to nominal rates using the Fisher equation based on the 2018/19 average RPI of 3.06%

Source: SSW.