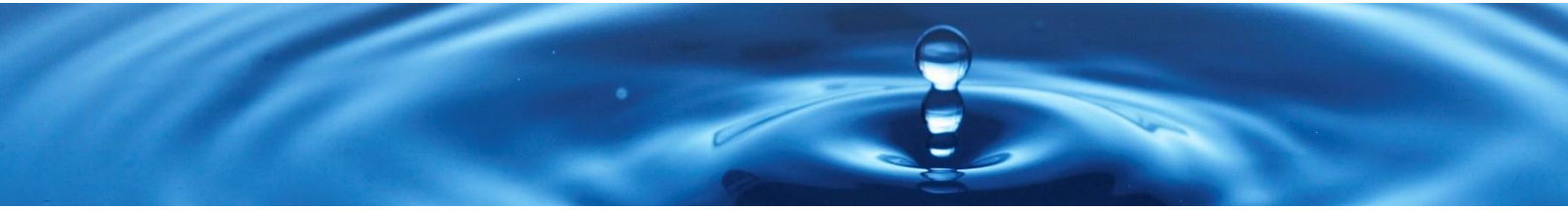


# Funding efficiently incurred embedded debt at PR19

A report for SES Water

June 2017



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## Executive Summary

In September 2016, Ofwat published a consultation on its approach to setting the cost of debt at PR19.<sup>1</sup> Ofwat proposed to set the cost of debt as a weighted average of the cost of embedded (i.e. existing) debt and the cost of new debt, and that the cost of embedded debt would be based on a benchmark measure of the industry's debt costs.

Such an approach would mean that companies with relatively expensive debt would have a higher cost of debt than the allowed cost of debt. Companies which had raised debt efficiently, but which because of unexpected events turned out to be relatively expensive, would be faced with a funding gap – the difference between the allowed cost of debt and the actual cost of embedded debt. Recognising this, and the potential implications it might have for companies' financeability, Ofwat stated:<sup>2</sup>

“Companies may also wish to argue for a company specific adjustment to the allowed cost of debt to reflect their particular costs.”

SES Water's debt financing, reflecting its relatively small size and infrequency of debt issuance, is predominantly comprised of a single index-linked bond issued in 2001 which matures in tranches over the 2027 – 2031 period. SES Water expects that the cost of this existing debt – raised when interest rates were higher than they have been over most of the past decade and a half – will exceed the benchmark cost of existing debt Ofwat is likely to adopt at PR19. If unaddressed this would mean SES Water would not be fully funded for its actual cost of debt, which might in turn have implications for its financeability.

In this context SES Water has commissioned EY to explore:

- whether SES Water's embedded debt (i.e. its index-linked bond) was efficiently raised;
- whether SES Water could mitigate those costs now (or could have mitigated those costs previously); and
- Ofwat's role and responsibilities in relation to funding relatively expensive, but efficiently incurred, debt.

### **Was SES Water's index-linked bond efficient?**

To assess the efficiency of SES Water's index-linked bond, we have considered evidence about what SES Water was advised at the time and available market data along five key dimensions:

- cost – was the “all in” interest rate (including issuance costs) more expensive than alternative options at the time of issuance?
- timing – was it reasonable to raise the bond at the time that they did?
- amount – was it reasonable to raise £100m?
- tenor – was it reasonable to raise debt with tenor of approximately 30 years?
- index-linkage – was it reasonable to raise index-linked debt, as opposed to nominal debt?

Our assessment of the efficiency of SES Water's bond along these dimensions is summarised in Table 1 below.

<sup>1</sup> [http://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap\\_con20160906costofdebtv2-1.pdf](http://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap_con20160906costofdebtv2-1.pdf)

<sup>2</sup> [http://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap\\_con20160906costofdebtv2-1.pdf](http://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap_con20160906costofdebtv2-1.pdf), p22



**Table 1: Summary of our assessment of the efficiency of SES Water's bond**

<b>Dimension</b>	<b>SES Water's bond</b>	<b>Conclusion</b>
Cost of debt	Headline coupon of 2.874%, but effective all in cost of 3.8% (taking into account transaction costs and amortisation)	Our analysis of other long-dated index-linked bonds issued by other UK utilities over the 1999 – 2003 period suggests those bonds had coupons in the range of 3.4 – 3.8% (real, excluding transaction costs). The effective cost of the bond is also significantly lower than the 4.9% cost that the Competition Commission thought SES Water might achieve if it continued to use short-term financing, or 4.0% if SES Water was able to issue a 20 year bond, when it re-determined SES Water's PR99 Final Determination, just a few months before SES Water issued its bond. <sup>3</sup>
Amount	£100m	The decision to raise £100m was based on two factors: (1) repaying the existing inter-company loan and financing the ~£80m (1998 prices) AMP3 capex programme; and (2) SES Water had been advised that it would not be possible to issue a bond for a smaller amount. Data about other UK utility bond issuances over the 1999 – 2003 period suggests other utilities did not issue stand-alone bonds of less than £100m during this period unless they were larger and more regular issuers than SES Water.
Timing	March 2001	Noting the Competition Commission's determination of SES Water's appeal of PR99 (see above), the bond appears to have been cheaper than continuing to use short-term financing. The timing of issuance was also influenced by SES Water's need to repay its existing inter-company loan. Even if, at the time SES Water issued its bond, interest rates were expected to fall significantly over coming years, those decreases in interest rates would have been priced into the coupon. SES Water could only be expected to have deferred issuing its bond if it ought to have expected interest rates to decrease more rapidly than the market did, an assumption that would imply SES Water should have known better than the market (which does not seem to be a reasonable assumption).
Tenor	Average life of 27.5 years	Several other utilities issued bonds with similar 20 – 30 year maturities at around the same time. For example, the Artesian bond facility, accessed by several other water only companies (WoCs) in 2002-03, had a similar tenor, as did another index-linked bond issued by National Grid around the same time. Noting that other utilities issued similarly long-dated bonds at around the same time, SES Water's decision to issue a long-dated bond does not appear unusual.
Index-linking	SES Water's bond was index-linked to Retail Price Index (RPI) inflation	While SES Water was among the first utilities to issue an index-linked bond, this was consistent with the inflation-linked nature of the regulatory regime. Issuing RPI-linked debt could, given the RPI-linked revenue stream, reduce risks for investors. Many other utilities have subsequently issued index-linked bonds.

Overall, the evidence we have reviewed does not suggest to us that there is reason to consider SES Water's bond was inefficient.

<sup>3</sup> See [http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/rep\\_pub/reports/2000/fulltext/445c8.pdf](http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/rep_pub/reports/2000/fulltext/445c8.pdf), p128

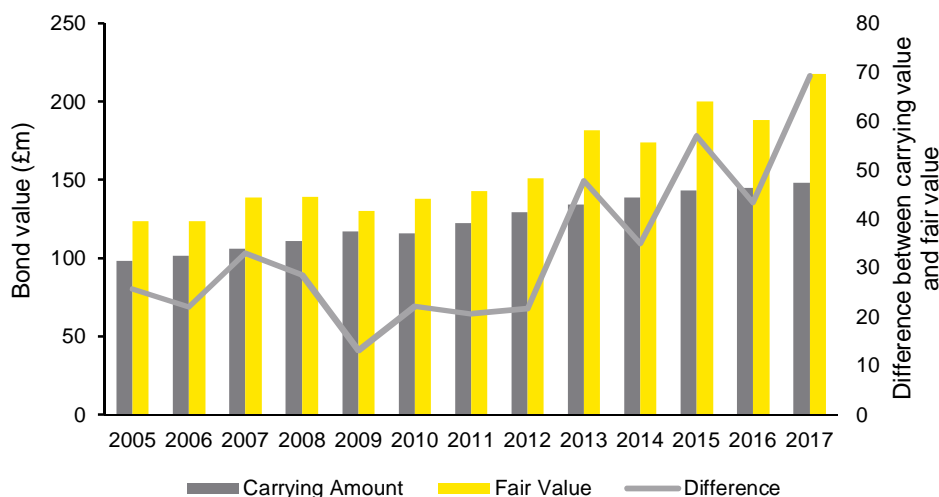


### Could SES Water mitigate these efficient, but higher, costs?

SES Water’s bond financing arrangements include terms governing the re-financing of the bond. The consent of the bond-holders would be required for any re-financing, meaning that SES Water would need to offer to pay bondholders an amount reflecting prevailing market interest rates. As interest rates are now lower than they were at the time the bond was issued, this would mean SES Water paying bondholders an amount greater than the amount they owe to bondholders under the current bond agreement. In effect, SES Water would not be able to achieve a lower cost of debt by re-financing – the difference between current interest rates and the bond coupon would be transferred to bond holders. Moreover, SES Water would incur additional, potentially significant, transaction costs as part of executing this refinancing. Given the above, there would not appear to be any benefit to SES Water or its customers from re-financing the bond.

Further, given that the situation described above – i.e. interest rates have been lower than the coupon – has prevailed over the period since the bond was issued, SES Water could not have benefited by re-financing the bond at some point in the past. As Figure 1 below shows, the fair value of the bond (reflecting market interest rates) has exceeded the carrying value (reflecting the accretion of the principal outstanding on the bond in line with RPI inflation) over the period since the bond was issued, such that SES Water would have had to pay its bondholders an amount significantly greater than the amount owed to the bondholders under the current bond agreement in order to get them to agree to a refinancing.

**Figure 1: Carrying and fair values of SES Water’s bond (2005 - 17) (£m)**




Source: EY analysis of SES Water Annual Reports and information. Note: Fair values were not reported in the 2001 – 04 SES Water Annual Reports as it was not required under accounting practice at the time.

### Solutions for the potential funding gap

Noting that SES Water’s index-linked bond has a cost of 3.8% (real, pre-tax, including transaction costs and taking into account amortisation of the bond) and Ofwat has signalled that the cost of debt at PR19 is likely to be lower than it was at PR14 (when the cost of existing debt was 2.75% (real, pre-tax, including transaction costs)), it seems likely that the cost of SES Water’s existing index-linked bond debt will exceed the cost of existing debt that Ofwat will allow at PR19.

In this context, Ofwat and companies need to consider how this funding gap should be addressed.

A number of sector economic regulators in the UK, including Ofwat, have considered similar issues in the past and a range of approaches have been adopted. For example, Ofwat has a long history of making embedded debt adjustments and has allowed WoCs a higher cost of



capital than Water and Sewerage Companies (WaSCs) at every price control since privatisation, recognising the higher cost of debt these companies have faced. The Competition and Markets Authority (CMA) has also taken into account more expensive, but efficiently incurred, embedded debt when determining the cost of debt at Bristol Water's appeals of both PR09 and PR14<sup>4</sup> and during Northern Ireland Electricity's (NIE's) appeal of its price control determination in 2014.<sup>5</sup> Ofgem and the CAA have also taken into account efficiently incurred embedded debt when setting price controls in the past.

A range of options for addressing the funding gap may be available. Traditional solutions, similar to those adopted by economic regulators in the past, might include adding an uplift – or premium – on the cost of debt. For example:

- Ofwat could set the allowed cost of debt for SES Water to incorporate the index-linked bond, i.e. the cost of existing debt could be set equal to the index-linked bond cost of 3.8% in real, RPI-stripped, terms.
- Ofwat could set the premium equal to the difference between the cost at which a WaSC and SES Water would typically raise debt at; or
- Ofwat could set the premium taking into account the higher benchmark cost of debt at the time that SES Water's bond was issued. This would be like setting SES Water's cost of debt equal to the average benchmark interest rate over (say) the year of 2001.

Other options may also be available for addressing the funding gap, such as:

- allowing companies to calibrate the level of service that the company commits to deliver, Outcome Delivery Incentives (ODIs), totex targets and totex incentives such that they expect to outperform target levels of costs and service and consequently achieve additional returns such that the expected rate of return on equity is not less than the required rate of return on equity due to unfunded costs of debt;
- Ofwat could assess SES Water and other affected companies on the basis of a notional capital structure that takes into account the time at which embedded debt was issued; and
- noting that Ofwat is likely to adopt a notional capital structure at PR19 that includes a proportion of existing debt – consistent with its approach in the past – the efficient cost of actual debt could be applied to the proportion of existing debt within Ofwat's assumed notional capital structure for PR19.

### **Recommendations and next steps**

The treatment of efficiently incurred embedded debt and solutions to any funding gaps will need to be considered carefully as part of PR19. Companies which might face a material funding gap will need as much advance warning as possible in order to plan effectively. In the interests of fostering a constructive discussion around these issues, Ofwat should engage with companies as soon as practicable around the range of potential solutions to the funding gap – such as those outlined in this report – that it is considering for PR19.

<sup>4</sup> See

[https://assets.publishing.service.gov.uk/media/56279924ed915d194b000001/Bristol\\_Water\\_plc\\_final\\_determination.pdf](https://assets.publishing.service.gov.uk/media/56279924ed915d194b000001/Bristol_Water_plc_final_determination.pdf)

<sup>5</sup> See [https://assets.publishing.service.gov.uk/media/535a5768ed915d0fdb000003/NIE\\_Final\\_determination.pdf](https://assets.publishing.service.gov.uk/media/535a5768ed915d0fdb000003/NIE_Final_determination.pdf) paragraph 13.58.



## 1. Introduction

In September 2016, Ofwat published a consultation on its approach to setting the cost of debt at PR19.<sup>6</sup> It proposed, in keeping with its approach at both PR09 and PR14, to set the cost of debt as a weighted average of the cost of embedded debt and the cost of new debt. The cost of embedded debt would be based on a benchmark measure of the industry's debt costs. Such an approach would mean that companies with relatively expensive debt would have a higher cost of debt than the allowed cost of debt. Recognising this, and the potential implications it might have for companies' financeability, Ofwat stated:<sup>7</sup>

"Companies may also wish to argue for a company specific adjustment to the allowed cost of debt to reflect their particular costs."

SES Water expects that the cost of its index-linked bond facility raised in 2001 (when interest rates were higher than they have been over most of the past decade and a half) will exceed the benchmark cost of existing debt Ofwat is likely to adopt at PR19. If unaddressed this would mean SES Water would not be fully funded for its actual cost of debt, which might in turn have implications for financeability.

In this context SES Water has commissioned EY to explore the appropriate approach to an embedded debt adjustment for its 2001 index-linked bond (which does not fully mature until 2031). Specifically, SES Water has asked us to consider:

- whether SES Water's embedded debt (i.e. its index-linked bond) was efficiently raised;
- whether SES Water could mitigate those costs now (or could have mitigated those costs previously); and
- Ofwat's role and responsibilities in relation to funding relatively expensive, but efficiently incurred, debt.

We have been asked to focus our work on the first two bullet points above.

This report is intended to be a constructive contribution to the industry's approach to company-specific embedded debt adjustments and is structured as follows:

- Section 2 describes SES Water's index-linked bond financing arrangements;
- Section 3 considers whether SES Water's index-linked bond was efficient;
- Section 4 considers whether SES Water could have mitigated the higher cost of its index-linked bond (e.g. by refinancing); and
- Section 5 discusses some ways that Ofwat could address the funding gap which arises if the cost of efficiently incurred debt exceeds the industry benchmark cost of debt.

The Appendix includes further relevant detailed supporting analysis.

<sup>6</sup> [http://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap\\_con20160906costofdebtv2-1.pdf](http://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap_con20160906costofdebtv2-1.pdf)

<sup>7</sup> [http://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap\\_con20160906costofdebtv2-1.pdf](http://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap_con20160906costofdebtv2-1.pdf), p22



## 2. SES Water's index-linked bond

In March 2001, SES Water became the first UK water only company (WoC) to issue secured, structured, covenanted and credit wrapped long dated index-linked bonds.

The bond was packaged with an innovative covenant package designed to mitigate risks by matching the regulatory structure of the water industry. In combination, the characteristics of the issue and the predictable and stable revenue streams underpinning the company, enabled the bond to attract many investors and achieve a coupon rate of 2.874% (in real, RPI-stripped, terms).

Some of the key characteristics of the bond are summarised in the table below:

**Table 2: Selected features of SES Water's index-linked bond<sup>8</sup>**

Amount	£100m
Type	Index-linked (to RPI inflation)
Average Life	27.5 years
Maturity	2027 – 2031
Term	30 year
Coupon	2.874%
Amortisation	5 equal instalments 2027-2031
Sinking fund	10% p.a. for years 20-25
Rating	Aaa (based on a guarantee from Financial Security Assurance (FSA), a financial guarantee insurance company)

The bond has a number of features that place restrictions on the company, providing investors with increased certainty about earning their return. These features include<sup>9</sup>:

- the bond matures over a 5 year period – the bondholder will start receiving repayment of the inflation adjusted principal in five instalments from 2027. This creates an additional certainty for the bondholder that the company will be able to repay the outstanding principal, although it also means that the company needs to consider refinancing before the full term of the bond.
- the company is required to pay annual instalments of 10% of the (inflated) value of the bond into a sinking fund from 2022 (part way through AMP7). This creates confidence for the bondholder that the company will have funds in place to start making the repayment of the principal from 2027 as a significant portion of the funds will already have been set aside. This creates a challenge for the company to ensure that it has the reserves in each of these years ahead of redemption.
- the company should “operate, maintain and conduct its business in a safe, proper and efficient manner and in accordance with the Instrument of Appointment, the Memorandum and Articles of Association, Good Industry Practice (taking its business as a whole).
- Net Debt to Regulatory Capital Value (RCV) is restricted to 80% before SES Water is allowed to raise new debt.<sup>10</sup> At the time of issuance the ratio was 65% but increased to 75% over the following few years as the full value of the bond was drawn down to fund SES Water's capex programme. In practice this means that the company is not

<sup>8</sup> This information was sourced from a presentation describing the planned bond issue at the time the bond was being marketed, provided to us by SES Water.

<sup>9</sup> This is a summary of the covenants highlighted in the investor marketing materials prior to the issue date, provided to us by SES Water.

<sup>10</sup> The bond documents technically refer to Regulatory Asset Value (RAV), but RCV is the more accurate term in the water industry so we use it instead.



able to raise considerably more debt unless the value of its regulatory asset base increases proportionately to the bond.

- the interest coverage ratio must be above 1.5x. Following the issuance this metric was 2.6x. In practice, this places restrictions on the company to live within its means.
- SES Water had to be ring-fenced from the rest of the East Surrey Holdings group. A bankruptcy remote special purpose vehicle (SPV) was created between the operating company and the holding company for this purpose.
- the cash borrowed had to be used in the water business and could not be used for other purposes.



### 3. Was SES Water's index-linked bond efficient?

The efficiency of SES Water's index-linked bond can be assessed along a number of dimensions, including:

- cost – was the “all in” interest rate (including issuance costs) more expensive than alternative options at the time of issuance?
- timing – was it reasonable to raise the bond at the time that they did?
- amount – was it reasonable to raise £100m?
- tenor – was it reasonable to raise debt with tenor of approximately 30 years?
- index-linking – was it reasonable to raise index-linked debt, as opposed to nominal debt?

To assess the efficiency of the bond we have considered different types of evidence, including:

- advice that SES Water received at the time it was considering issuing the bond and documents used to market the bond to investors.<sup>11</sup> We have also discussed the bond issuance with members of the team that worked on the structuring of the bond; and
- market data, such as the bonds issued by other regulated utilities at a similar point in time.

We set out our assessment of the evidence below. The Appendix contains a summary of bonds issued by UK utilities between 1999 and 2003.

#### **Cost of debt**

The “all in” real cost of debt on the bond is equal to the coupon (2.874%) adjusted for the amortisation of the bond over its final five years, transaction costs and any discount to face value. The transaction cost was £13.7m which covered legal fees, insurance premiums, underwriting costs and structuring fees. The bond was issued at very close to face value. Our analysis indicates the effective real cost of the bond was 3.8%, the same as the rate SES Water submitted during SES Water's 2009 Substantial Adverse Effects case.<sup>12</sup> This rate does not take into account the fees associated with the FSA credit wrap.

Our analysis of other bond issuances by UK utilities over the 2000 – 2003 period suggests the 3.8% total effective cost is similar to other index-linked bonds issued around the same time. For example, as part of issuing £600m of debt in July 2001, National Grid issued two long-term index-linked bonds for £200m and £40m with coupons of 3.806% and 3.589%, respectively. Two other larger utilities that issued debt regularly, Scottish Power and Thames Water, issued long-term index-linked bonds in the same three year window with coupons of around 3.4 – 3.5%. All of these bonds had solid investment grade credit ratings, so should be broadly comparable to SES Water's bond. While we have not been able to calculate an effective interest rate on these bonds as we do not have data on the transaction costs in each case, even leaving these additional costs to one side, the coupons on these bonds issued by other utilities at a similar point in time would be broadly in a range of 3.4 – 3.8%, not dissimilar to the 3.8% effective coupon on SES Water's bond.

<sup>11</sup> This information included: the RBS press release following the bond issue, correspondence with Ofwat including a letter from RBS to Ofwat from June 2003 highlighting the financial covenants of the bond. SES Water also provided us with the bond prospectus and a summary of the bond issue.

<sup>12</sup> See <https://assets.publishing.service.gov.uk/media/55194778ed915d14270000d7/549.pdf>, para 4.79.



## Timing

At the time that SES Water decided to issue the bond in 2001, the alternative would have been not to issue a bond and instead persist with the current financing arrangements. Maintaining the then-current financing arrangements would have been a sensible decision had that strategy been expected to deliver lower cost financing over the life of the bond, or had it been expected that a bond with a lower coupon could have been issued at a later date.

*Would maintaining the then-current financing have been a better option?*

Prior to the bond issue, SES Water was financed through a combination of an inter-company loan and short-term bank debt. We understand from SES Water that while continued access to short-term bank debt might reasonably have been expected, the inter-company loan had to be repaid. This means that SES Water would have needed to find an alternative source of borrowing, but we understand that according to the advice SES Water received at the time no other long-term borrowing facility was available.

We also note that in the Competition Commission's (CC's) September 2000 determination of SES Water's appeal of its PR99 Final Determination the CC considered that the real cost of new debt for SES Water would be around 4.9% if it continued to use short-term financing (and that this was significantly higher than the 4.0% cost that might be achieved if SES Water was able to issue a 20 year bond).<sup>13</sup> This suggests that SES Water's long-term bond – which achieved an effective coupon of 3.8% when issued only a few months later in March 2001 - was a significantly cheaper way of financing the business than using short-term financing, and still cheaper than the CC's estimate of the cost at which SES Water might issue a 20 year bond.

Aside from the cost implications of the alternative financing strategies, it does not seem unreasonable to us that SES Water would have considered it attractive to lock in long-term debt that would have significantly reduced the risk of not being able to deliver the company's capex programme. We also assume that any alternative financing arrangements would not have been accompanied by the same package of covenants as the bond, which may have made it more difficult to raise the same quantum of debt. There may, therefore, have been a range of reasons to proceed with the long-term bond issuance rather than maintain the previous financing arrangements (had that even been an option).

*Was it expected to be cheaper to issue a bond at some later date?*

If it is assumed that SES Water had an alternative source of funding available to it, such that it could meet its financing needs (including capex) until some later date, then SES Water could reasonably have been expected to ask itself whether it was likely to be better or worse to issue the bond in March 2001 or wait till a later date and then try to issue a bond.

We do not know what SES Water expected at the time. However, we note:

- assuming efficient and liquid financial markets, the coupon on SES Water's bond should have already factored in the market's expectations for future movements in interest rates. If the market thought interest rates would rise in future, they would require a higher coupon in order to invest, all else equal. The reverse is also true. So unless SES Water had some greater foresight than the market, the timing of the bond issuance should not be linked to expectations about future interest rates; and
- SES Water had recently concluded its appeal of the PR99 Final Determination, so had maximum clarity about its future revenues at the time the bond was issued. This visibility of future revenues may have been important to the attractiveness of the bond to investors.

Had SES Water been aware that the Artesian Financing facility would be developed and available to assist smaller WoCs, like SES Water, to access capital markets, SES Water might have been expected to consider whether waiting to access finance through Artesian

<sup>13</sup> See [http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/rep\\_pub/reports/2000/fulltext/445c8.pdf](http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/rep_pub/reports/2000/fulltext/445c8.pdf), p128





would achieve a lower cost of finance. However, SES Water has told us that it was not aware the Artesian facility was being developed at the time it was considering issuing its own bond. Indeed, in SES Water's view, the SES Water bond paved the way for the Artesian facility and significantly lower finance costs that facility has achieved to the benefit of customers of a range of water companies.

### **Amount**

SES Water has told us that the decision to issue a £100m bond reflected the company's then capital structure and its expected £81m (1998 prices) capex programme over the coming AMP (AMP3). The roadshow marketing materials also indicate the proceeds of the bond were to be used to fund the capex programme and to repay a pre-existing £37m inter-company loan.<sup>14</sup> The gearing restrictions in the bond's covenant package were also calibrated taking into account the expected use of funds for capex.

SES Water also told us that it was advised at the time that it would not be possible to issue a bond of less than £100m because it would have been less attractive to investors and the relative size of the transaction costs would have been higher.

Our review of bonds issued over the 1999 – 2003 period supports this assessment. Our analysis indicates that the only utilities to raise less than £100m through bond issues during this period were those that issued bonds on a more regular basis than SES Water. This evidence is suggestive that SES Water would have found it difficult to issue a one-off bond for a smaller amount, consistent with the advice the company received at the time.

### **Tenor**

SES Water's bond had a tenor of around 30 years, albeit the average life was slightly shorter due to the amortising repayment schedule as the bond approached maturity.

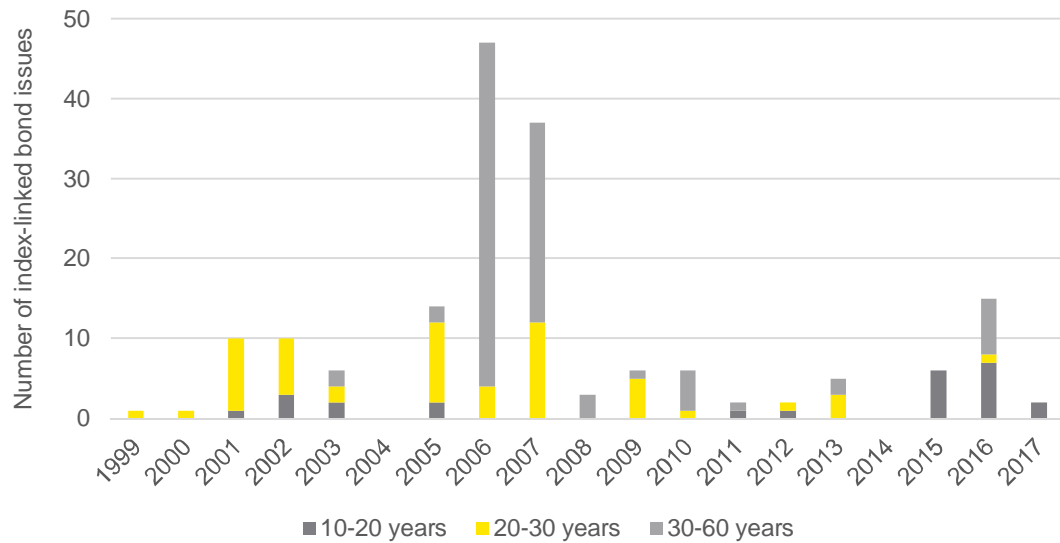
The long life of the bond is comparable with other bonds issued at the time, in particular those on the Artesian Finance arrangement. Companies that access the bond market frequently can issue debt with a variety of tenors to manage risk and achieve optimal pricing. However, companies which issue debt infrequently, and which incur substantial transaction costs in the process, might be more likely to issue longer-tenor debt.

Our analysis of the tenors of bonds issued by UK utilities since 1999 – presented in Figure 2 below - indicates that while relatively few companies had issued debt with a tenor of around 30 years before SES Water issued its bond, many companies have subsequently done so. That many other companies raised similarly long-dated bonds is indicative that SES Water's decision to issue a bond with a tenor of around 30 years was not unreasonable.

<sup>14</sup> See SES Water and Royal Bank of Scotland (Lead Manager and Book Runner) "£100m IL 2027-2031 Sutton and East Surrey Water PLC", March 2001, p4.



**Figure 2 - tenors of index-linked bonds issued by UK utility companies (1999-2017)**



Source: Bloomberg, EY analysis. The bonds shown are issued by UK utility companies, denominated in GBP, have fixed rate coupons and have bullet repayments or sinkable features. Bonds which have been issued elsewhere, are callable, denominated in other currencies or which have variable or step coupons have been excluded.

### Index-linkage

As noted earlier, SES Water's bond was innovative – it was one of the first index-linked bonds issued by a UK water company. In such circumstances, it may be natural to consider if index-linking the bond was appropriate or not. However, the decision to index-link the bond could be explained by the nature of the regulatory framework and the characteristics of bond investors. For example, since Ofwat indexed a number of key regulatory parameters, including revenue and RCV, to RPI inflation, the use of RPI-inflation linked bonds acted as a hedge to align funding costs of the business with revenues. It therefore helped to de-risk returns to equity investors. Index-linked debt also benefitted water companies by postponing cash interest costs relative to nominal debt. The reduction in cash interest costs improved (in the short-term) financial ratios monitored by credit rating agencies. Pension fund and insurance company appetite for index-linked revenue streams (which matched their index-linked liabilities) also meant that there was strong demand for water companies' index-linked bonds.

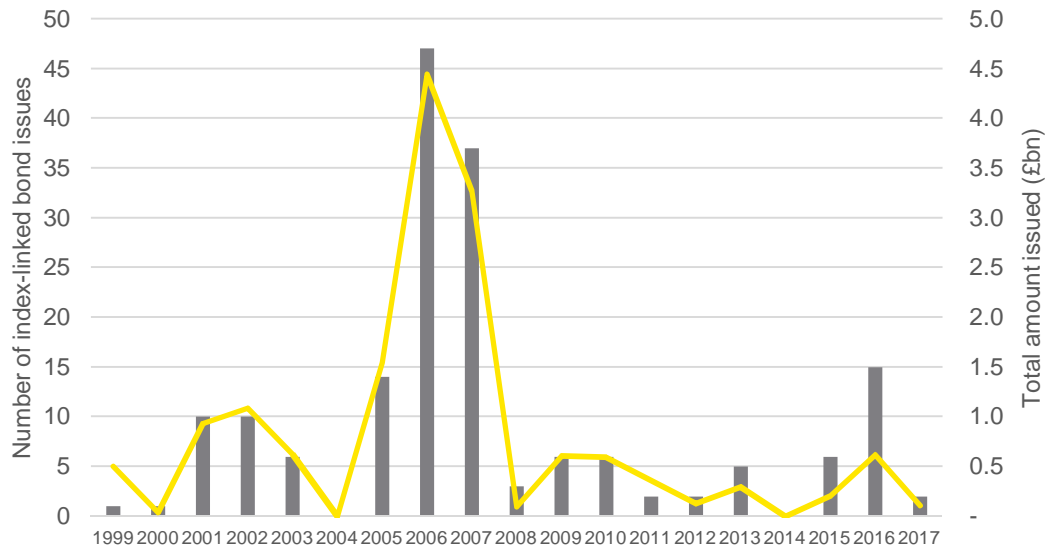
The decision to issue index-linked debt due to the nature of the regulatory regime was also consistent with the advice SES Water received at the time which included statements that *"The 30-year transaction will also be unusual for the sector in being index-linked. The structure is inherently suitable for water companies, since they are allowed to increase prices annually based on an inflation-linked formula"*.<sup>15</sup>

The reasonableness of SES Water's decision to issue index-linked debt is borne out from the number of water companies – and indeed other UK regulated utilities with similar RPI-inflation linked regulatory regimes – that subsequently accessed this market (as Figure 3 below shows).

<sup>15</sup> See Royal Bank of Scotland press release "The Royal Bank of Scotland Issues £100m Indexed-Linked Bond for Sutton and East", 13 March 2001, p2.



**Figure 3– number of index-linked bonds issued by UK utility companies (1999-2017)**



Source: Bloomberg, EY analysis. The bonds shown are issued by UK utility companies, denominated in GBP, have fixed rate coupons and have bullet repayments or sinkable features. Bonds which have been issued elsewhere, are callable, denominated in other currencies or which have variable or step coupons have been excluded.

## Summary

Our assessment of the efficiency of SES Water's bond along a number of dimensions is summarised in Table 3 below. Overall, the evidence we have reviewed does not suggest to us that there is reason to consider SES Water's bond was inefficient.

**Table 3: Summary of our assessment of the efficiency of SES Water's bond**

Cost of debt	The effective all-in real cost of SES Water's bond is around 3.8%. Our analysis of other long-dated index-linked bonds issued by other UK utilities over the 2000 – 2003 period suggests those bonds had coupons in the range of 3.4 – 3.8% (excluding transaction costs). The effective cost of SES Water's bond is also significantly lower than the 4.9% cost that the Competition Commission thought SES Water might achieve if it continued to use short-term financing, or 4.0% if SES Water was able to issue a 20 year bond, when it re-determined SES Water's PR99 Final Determination, just a few months before SES Water issued its bond. <sup>16</sup>
Amount	The decision to raise £100m was based on two factors: (1) repaying the existing inter-company loan and financing the ~£80m (1998 prices) AMP3 capex programme; and (2) SES Water had been advised that it would not be possible to issue a bond for a smaller amount.
Timing	Noting the Competition Commission's determination of SES Water's appeal of PR199 (see above), the bond appears to have been cheaper than continuing to use short-term financing. The timing of issuance was also influenced by SES Water's need to repay its existing inter-company loan. Even if, at the time SES Water issued its bond, interest rates were expected to fall significantly over coming years, those decreases in interest rates would have been priced into the coupon. SES Water could only be expected to have deferred issuing its bond if it ought to have expected interest rates to decrease more rapidly than the market did, an assumption that would imply SES Water should have known better than the market (which does not seem to be a reasonable assumption).
Tenor	SES Water's bond has an average life of 27.5 years. Several other utilities issued bonds with similar 20 – 30 year maturities at around the same time. For example, the Artesian bond facility accessed by several other WoCs in 2002-03 had a similar tenor, as did another index-linked bond issued by National Grid around the same time. Noting that other utilities issued similarly long-dated bonds at around the same time, SES Water's decision to issue a long-dated bond does not appear unusual.
Index-linkage	While SES Water was among the first utilities to issue an index-linked bond, this was consistent with the inflation-linked nature of the regulatory regime. Many other utilities have subsequently issued index-linked bonds.

<sup>16</sup> See [http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/rep\\_pub/reports/2000/fulltext/445c8.pdf](http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/rep_pub/reports/2000/fulltext/445c8.pdf), p128



#### 4. Could SES Water mitigate the efficient, but higher, costs of its debt?

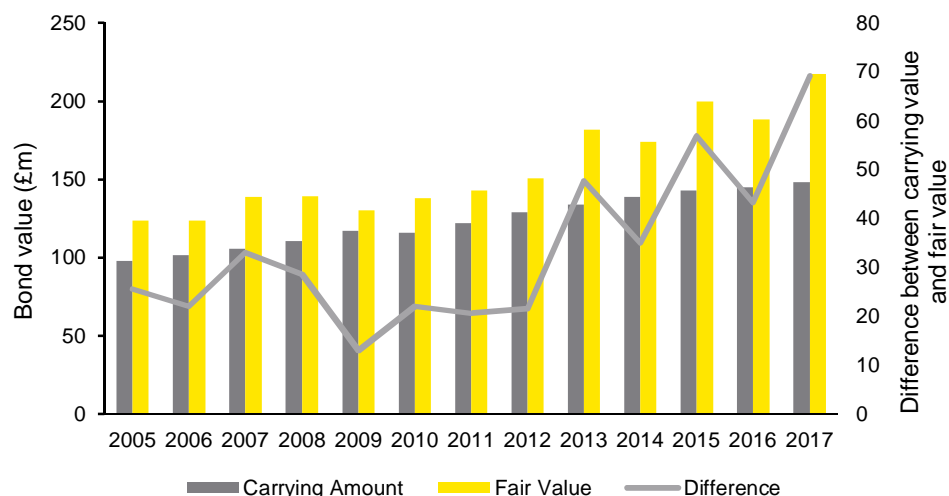
Under the terms of the bond financing arrangements, the consent of the bond-holders would be required for any re-financing. Consequently, SES Water would need to offer to pay bondholders an amount reflecting prevailing interest rates – which reflect the rate of return which existing bondholders could earn if they re-invested the funds in a similar bond – in order to induce them to accept an early repayment of the bond.

If interest rates were lower than they were at the time the bond was issued, this would mean SES Water paying bondholders an amount greater than the amount they owe to bondholders under the current bond agreement. In other words, the bondholders are “in the money” as long-term real interest rates are lower than the coupon on SES Water’s bond. In effect, SES Water would not be able to achieve a lower cost of debt by re-financing – the difference between current interest rates and the bond coupon would be transferred to bond holders. There would be no benefit to SES Water or its customers from re-financing the bond.


To test whether it would have made sense for SES Water to re-finance its bond, we have considered data on the carrying and fair values of the bond reported each year in SES Water’s annual reports. The carrying value is the amount that SES Water owes to its bondholders under the terms of the agreement – in effect, it is the original principal of the bond, plus the accretion on the bond in line with RPI inflation over the years since the bond was issued. The fair value, on the other hand, is determined using a quoted market bid price and reflects the amount that SES Water would have to pay to its bondholders to compensate them for accepting the lower market interest rate that they would be able to achieve if they took the money repaid to them by SES Water and reinvested it i.e. the opportunity cost faced by investors.

Figure 4 below shows that the fair value of the bond has exceeded the carrying value over the period since the bond was issued, indicating it would not have made commercial sense for SES Water to re-finance the bond. Moreover, unless there is a very significant increase in market interest rates, it will not make sense for SES Water to re-finance the bond in the foreseeable future (even leaving to one side the potentially quite significant transaction costs that SES Water would incur as part of executing the refinancing e.g. the costs of negotiating with existing bondholders, as well as the costs of arranging new debt). SES Water will therefore have to continue to pay the RPI inflation + 2.874% cost of its debt for the foreseeable future.

**Figure 4: Carrying and fair values of SES Water’s bond (2005 - 17) (£m)**



Source: EY analysis of SES Water Annual Reports and information. Note: Fair values were not reported in the 2001 – 04 SES Water Annual Reports as it was not required under accounting practice at the time.



## 5. How might the funding gap between SES Water's efficiently raised debt and the industry benchmark cost of debt be addressed?

Noting that SES Water's index-linked bond has an effective interest rate of 3.8% (real, pre-tax, including transaction costs) and Ofwat has signalled that the cost of debt at PR19 is likely to be lower than it was at PR14 (when the cost of existing debt was 2.75% (real, pre-tax, including transaction costs)), it seems likely that the cost of SES Water's existing index-linked bond debt will exceed the cost of existing debt that Ofwat will allow at PR19.

In this context, if SES Water's existing debt was efficiently incurred and cannot be mitigated (i.e. re-financed), then how this funding gap should be addressed needs to be considered.

In deciding how to address the funding gap, Ofwat might have reference to its statutory duties, the approach it has taken in the past and/or to regulatory precedent. We consider what lessons might be learned from these areas below.

### **Ofwat's duties**

Under Section 2 of the Water Industry Act 1991 Ofwat has a number of statutory duties which govern how it carries out its work as the economic regulator of the water sector. These duties include to:<sup>17</sup>

- further the consumer objective to protect the interests of consumers, wherever appropriate by promoting effective competition;
- secure that water companies (meaning water and sewerage undertakers) properly carry out their statutory functions;
- secure that water companies can (in particular through securing reasonable returns on their capital) finance the proper carrying out of their statutory functions;
- secure that water supply licensees and sewerage licensees properly carry out their licensed activities and statutory functions; and
- further the resilience objective to secure the long-term resilience of water companies' water supply and wastewater systems; and to secure that they take steps to enable them, in the long term, to meet the need for water supplies and wastewater services.

The interpretation of the third of these duties – the financing duty – has been the subject of much debate over the years. Ofwat has typically interpreted the financing duty as a duty to “ensure that an efficient company can finance its functions”.<sup>18</sup> Water companies have argued that the duty does not include a reference to “efficient” and more weight should be attached to the company's actual financing and performance when evaluating the financing duty. Ofwat's interpretation of the duty allows for significant flexibility in the assessment of what is or is not financeable and consequently what an appropriate treatment of embedded debt would be, but we note that the reference to “efficient” could mean that efficiently incurred embedded debt ought to be taken into account.

<sup>17</sup> See <http://www.ofwat.gov.uk/about-us/our-duties/>

<sup>18</sup> See, for example, <https://www.ofwat.gov.uk/wp-content/uploads/2016/11/Monitoring-financial-resilience-Updated-Slide-18-14-December-2016.pdf>, p11



## Ofwat's past approach

Ofwat has a long history of making embedded debt adjustments. Ofwat has allowed WoCs a higher cost of capital at PR94,<sup>19</sup> PR99,<sup>20</sup> PR04,<sup>21</sup> PR09<sup>22</sup> and PR14.<sup>23</sup> While the magnitude of these adjustments, and the way they have been applied (e.g. introduction of size bandings or a customer benefits test), has changed over time, the underlying rationale has always included that WoCs are unable to raise debt on the same terms as WaSCs. That Ofwat has consistently recognised the higher cost of WoCs' debt, including at several periodic reviews since SES Water had issued its bond and various other WoCs had accessed the Artesian facility, suggests that Ofwat has recognised that this debt was efficiently raised: if it had not been, Ofwat would presumably not have allowed a higher cost of debt for these companies. Moreover, Ofwat has taken advantage of the lower cost of debt achieved by the WoCs through these arrangements, reducing the size of the small company premium to share some of these savings with customers: at PR04 Ofwat stated:<sup>24</sup>

"There is evidence that the small company debt premium (both on interest rates and transaction costs) has decreased since the last review. This is in part due to developments in the sector, enabling the smaller companies to gain greater access to a variety of debt sources."

Ofwat maintained this position at PR09, notwithstanding that the Artesian financing facility was not expected to be available going forward after the credit crisis of the preceding years had undermined the structure of that facility.<sup>25</sup>

## Other regulatory precedent

A variety of economic regulators have considered similar issues in the past and proposed a range of different approaches to compensating for relatively expensive embedded debt.

The CMA considered the treatment of more expensive, but efficiently incurred, embedded debt recently as part of Bristol Water's appeal of PR14.<sup>26</sup> The CMA considered it appropriate to consider both "the notional level, consistent with the approach that Ofwat used and also the specific actual costs incurred by Bristol Water" (paragraph 10.50) when assessing the cost of debt. This approach was consistent with "the CC/CMA's approach in the past [which] has generally been to give weight to both notional and actual cost of embedded debt" (paragraph 10.105), but that "it was reasonable for customers to share some of the benefit of Bristol Water's lower actual cost of debt, whilst applying a range consistent with our assessment of the notional cost of debt." (paragraph 10.107) These comments imply that it would be appropriate for Ofwat to place some weight on SES Water's embedded debt costs when determining the allowed cost of debt for PR19.

We also note, however, that the CMA went on to state that "regarding additional costs associated with the timing of issuances, we considered that WoCs had sufficient flexibility around timing to be expected to manage their costs." (Para 10.70) and therefore proceeded to set the cost of debt on the basis of the industry benchmark cost of debt (measured as a

<sup>19</sup> See [http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/det\\_pr\\_fd94.pdf](http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/det_pr_fd94.pdf), p50.

<sup>20</sup> See [http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/pr99/det\\_pr\\_fd99.pdf](http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/pr99/det_pr_fd99.pdf), p133.

<sup>21</sup> See [http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/pr04/det\\_pr\\_fd04.pdf](http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/pr04/det_pr_fd04.pdf), p225ff.


<sup>22</sup> See [https://www.ofwat.gov.uk/wp-content/uploads/2015/11/det\\_pr09\\_finalfull.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2015/11/det_pr09_finalfull.pdf), p132.

<sup>23</sup> See [http://www.ofwat.gov.uk/wp-content/uploads/2015/10/det\\_pr20141212riskreward.pdf](http://www.ofwat.gov.uk/wp-content/uploads/2015/10/det_pr20141212riskreward.pdf), p49.

<sup>24</sup> See [http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/pr04/det\\_pr\\_fd04.pdf](http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/pr04/det_pr_fd04.pdf), p227.

<sup>25</sup> See [https://www.ofwat.gov.uk/wp-content/uploads/2015/11/det\\_pr09\\_finalfull.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2015/11/det_pr09_finalfull.pdf), p133.

<sup>26</sup> See [https://assets.publishing.service.gov.uk/media/56279924ed915d194b000001/Bristol\\_Water\\_plc\\_final\\_determination.pdf](https://assets.publishing.service.gov.uk/media/56279924ed915d194b000001/Bristol_Water_plc_final_determination.pdf)



long term average of historical benchmark bond yields) plus a premium for WoCs' higher cost of debt. In effect, the CMA did not take into account the impact of Bristol Water having issued its debt in a different pattern to WaSCs.

On the other hand, there is a range of regulatory precedent in support of taking a company's actual embedded costs directly into account when setting the allowed cost of debt.

For example, in Northern Ireland Electricity's (NIE's) appeal of its price control determination in 2014 the CMA stated "we followed the established regulatory approach of estimating the cost of embedded debt based on NIE's actual debt, with appropriate consideration of whether it had been incurred prudently and efficiently through examination of the yield on NIE's bond and comparable bonds issued by GB electricity distribution companies"<sup>27</sup> and that "it is our view that the cost of the licence holder's existing debt should be assessed based on the actual interest cost of NIE's outstanding bonds".<sup>28</sup>

In the Competition Commission's consideration of Bristol Water's earlier appeal of the PR09 Final Determination the CC "estimated the company's cost of debt (its cost of existing debt is a known quantity), and applied benchmark data from the bond market to estimate the cost of new debt (taking into account yields on traded and recently issued bonds, together with expected trends in interest rates)" (para 9.11).<sup>29</sup> In other words, the CC determined the cost of Bristol Water's existing debt by reference to the actual cost of Bristol Water's debt – regardless of when it was issued. In reaching this position, the CC referenced earlier airports enquiries and the inquiry into Mid Kent Water in 2000.<sup>30</sup> In SES Water's appeal of the PR99 Final Determination, the CC had regard to the actual financing arrangements of the company.<sup>31</sup>

Ofgem has also previously adjusted its approach to setting the cost of debt to take into account higher cost, but efficiently incurred, debt. For example, as part of RIIO-ED1 Ofgem decided to adopt a cost of debt index with a longer trailing average in order to "provide a reasonable estimate of the [actual] cost of debt" (para 5.17).<sup>32</sup>

The CAA has also made adjustments for NATS' portfolio of embedded debt, much of which was raised shortly after its re-financing after bankruptcy (the Composite Solution). For example, at CP2, in 2005, the CAA stated "in assessing NERL's cost of debt, the CAA has focused on the payments that the business will make to lenders by virtue of the financing arrangements that NATS entered into at the time of the Composite Solution".<sup>33</sup>

Ofwat itself has history of making company-specific embedded debt adjustments: at PR99 Ofwat "included a premium to reflect companies' embedded fixed rate debt which cannot be efficiently refinanced in the short term. The premium is specific to each company and reflects the industry average cost of embedded debt and the actual proportion of fixed rate debt in the company's latest balance sheet".<sup>34</sup>

<sup>27</sup> See [https://assets.publishing.service.gov.uk/media/535a5768ed915d0fdb000003/NIE\\_Final\\_determination.pdf](https://assets.publishing.service.gov.uk/media/535a5768ed915d0fdb000003/NIE_Final_determination.pdf) paragraph 13.58.

<sup>28</sup> See [https://assets.publishing.service.gov.uk/media/535a5768ed915d0fdb000003/NIE\\_Final\\_determination.pdf](https://assets.publishing.service.gov.uk/media/535a5768ed915d0fdb000003/NIE_Final_determination.pdf) paragraph 13.67.

<sup>29</sup> See [https://assets.publishing.service.gov.uk/media/55194c70e5274a142b0003bc/558\\_final\\_report.pdf](https://assets.publishing.service.gov.uk/media/55194c70e5274a142b0003bc/558_final_report.pdf)

<sup>30</sup> See [https://assets.publishing.service.gov.uk/media/55194c7240f0b614040003d2/558\\_appendices.pdf](https://assets.publishing.service.gov.uk/media/55194c7240f0b614040003d2/558_appendices.pdf), para 45.

<sup>31</sup> See [http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/rep\\_pub/reports/2000/fulltext/445c8.pdf](http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/rep_pub/reports/2000/fulltext/445c8.pdf) para 8.49 and following.

<sup>32</sup> See [https://www.ofgem.gov.uk/sites/default/files/docs/2014/11/riio-ed1\\_final\\_determination\\_overview\\_-\\_updated\\_front\\_cover\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2014/11/riio-ed1_final_determination_overview_-_updated_front_cover_0.pdf) see p41ff. Specifically, Ofgem decided that the allowed cost of debt in each year of the price review period would be based on a trailing average of bond yields, where the period over which the trailing average was calculated would grow from 10 years in the first year of the period to 18 years by the last year of the period.

<sup>33</sup> See

[http://webarchive.nationalarchives.gov.uk/20140713054907/http://www.caa.co.uk/docs/5/ergdocs/erg\\_ercp\\_natsfirm\\_proposals.pdf](http://webarchive.nationalarchives.gov.uk/20140713054907/http://www.caa.co.uk/docs/5/ergdocs/erg_ercp_natsfirm_proposals.pdf) pp60-61.

<sup>34</sup> See

[http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/pr99/det\\_pr\\_fd99.pdf](http://webarchive.nationalarchives.gov.uk/20150624091829/https://www.ofwat.gov.uk/pricereview/pr99/det_pr_fd99.pdf) p151.





## The options available for addressing the issue

A range of options is available to Ofwat to assist companies address the funding gap between the industry-wide benchmark cost of debt and more expensive, but efficiently incurred, debt.

### *Traditional approaches*

Traditional approaches, such as those adopted by Ofwat and other economic regulators in the past, have focused on an uplift – or premium – on the cost of debt. There are different ways in which the premium could be set.

At one end of the range Ofwat could set the allowed cost of debt for SES Water to incorporate the index-linked bond i.e. the cost of existing debt could be set equal to the cost of the index-linked bond of 3.8% in real, RPI-stripped, terms.

At the other end of the range, Ofwat could completely ignore SES Water's more expensive, but efficiently incurred, debt and allow no uplift to the cost of debt. This approach would essentially treat the funding gap as a financeability problem that Ofwat expects the affected companies to resolve through adjustments to Pay As You Go (PAYG) ratios or RCV run-off rates, or by reductions to dividend payments, deferral of capex programmes or raising additional equity. If these other measures were not available or not effective, this would essentially leave companies relying on the Substantial Adverse Effects (SAE) clause to protect against the impact of unfunded debt costs.<sup>35</sup> However, the SAE clause only applies once a substantial negative impact has occurred and the Competition Commission's assessment of a SAE claim by SES Water in 2009 was interpreted by some investors in the sector as introducing a degree of discretion around the way it is applied that was not previously thought to exist.<sup>36</sup>

There are, of course, options in between these two ends of the spectrum. For example, Ofwat could allow an uplift to the cost of debt to reflect:


- the difference between the cost at which a WaSC and SES Water would typically raise debt at. This approach is similar to the one Ofwat adopted at PR14, except it does not include the customer benefits test Ofwat applied (and which SES Water was one of two companies to pass).<sup>37</sup> This approach takes no account of the different pattern of bond issuances that SES Water has to the industry at large i.e. instead of issuing a series of bonds spread out over many years, SES Water has issued one single bond at a particular moment in time; or
- the higher benchmark cost of debt at the time that SES Water's bond was issued. This would be like setting SES Water's cost of debt equal to the average benchmark interest rate over (say) the year of 2001, rather than using a 10 – 15 year trailing average of benchmark interest rates like Ofwat has done for setting the industry cost of debt in the past.

The first of these options immediately above would not fully take into account when SES Water issued its bond. Simply adding a premium, equal to the difference between the cost at which a WaSC and SES Water could typically raise debt, to the industry cost of debt implicitly assumes that SES Water could have issued debt in regular smaller tranches to enable it to match the industry benchmark cost of debt (which assumes that efficiently financed water companies issue debt annually in the same proportions as the industry raises debt) except for its higher cost of raising debt. However, because of its relatively small size, SES Water may not have been able to issue debt in such a pattern. Consideration should be given to whether

<sup>35</sup> We assume the Interim Determination of K (IDoK) clause is unlikely to apply to financing costs as these costs do not appear to be a Notified Item or a Relevant Change of Circumstances.

<sup>36</sup> See [http://www.indepen.uk.com/docs/indepen\\_investor\\_survey\\_ofwat-dd\\_24-sept-2009.pdf](http://www.indepen.uk.com/docs/indepen_investor_survey_ofwat-dd_24-sept-2009.pdf), p15.

<sup>37</sup> See Accent (2014) "Sutton and East Surrey Water – Small Company Premium", June, p8, for evidence that SES Water's customers were "happy to pay [the small company premium] in order to maintain the size/status of their water supplier".



the assumptions underlying particular approaches to setting a cost of debt premium for companies like SES Water reasonably reflect the circumstances of those companies.

#### *Alternative approaches*

Some alternative options might also exist, which do not necessarily require an adjustment to the cost of debt. For example:

- if it is recognised by Ofwat that some companies will be disadvantaged by a funding gap, then the Return on Regulatory Equity (RoRE) analysis, which Ofwat proposes to undertake at PR19, should automatically imply a lower rate of return for equity investors in companies affected by a funding gap. The unfunded cost of more expensive, but efficiently incurred, embedded debt will translate directly through to a negative contribution to RoRE, all else equal. Consequently, an alternative approach to rectifying the funding gap may be to allow companies with funding gaps to calibrate the level of service the company commits to deliver, ODIs, totex targets and totex incentives in a way that offsets the expected cost of debt underperformance, restoring the forecast RoRE range to one that is similar to the RoRE ranges of companies without a funding gap.
- Ofwat could assess SES Water and other affected companies on the basis of a notional capital structure that takes into account the time at which embedded debt was issued. Ofwat's definition of the notional capital structure at PR14 implicitly assumed that all companies had issued bonds in a way that mimicked a trailing average of a benchmark bond index. That approach disadvantaged (or advantaged) companies which issued bonds in a different pattern over time, or with different maturities and coupons.
- noting that Ofwat is likely to adopt a notional capital structure at PR19 that includes a proportion of existing debt – consistent with its approach in the past - the efficient cost of actual debt could be applied to the proportion of existing debt within Ofwat's assumed notional capital structure for PR19.

Other alternative options may also be available for addressing the funding gap.

#### **Recommendations and next steps**

Noting the discussion above, a range of options may be available to address the funding gap between SES Water's actual cost of embedded debt and a benchmark cost of debt for the water industry at large.

These issues and the solutions to them will need to be considered carefully as part of PR19. Companies which might face a material funding gap will need as much advance warning as possible in order to plan effectively. Ofwat should engage with companies as soon as practicable about the range of potential solutions to the funding gap – such as those outlined above – that it is considering for PR19.

## Appendix

**Table 4 – selected bonds issued by utilities in Britain between 1999 and 2003**

Issuer Name	Issue date	Amount	Index-linked	Coupon	Tenor (years)	Credit rating at time of issue
National Grid Electricity	02/02/1999	450,000,000	N	5.88%	25	Aa3 *-
Severn Trent Water	07/06/1999	300,000,000	N	6.25%	30	A1
Scottish Power	09/12/1999	25,000,000	N	5.75%	40	Aa3 *-
National Grid Gas	14/12/1999	503,255,000	N	4.19%	23	A3
National Grid Gas	14/12/1999	503,078,000	N	7.00%	25	A3
Thames Water	09/02/2000	200,000,000	N	6.50%	32	Aa3 *-
Yorkshire Water	17/04/2000	150,000,000	N	6.88%	31	A3
Scottish Power	13/10/2000	40,000,000	Y	3.49%	24	A1
<b>SES Water</b>	<b>21/03/2001</b>	<b>100,000,000</b>	<b>Y</b>	<b>2.87%</b>	<b>30<sup>1</sup></b>	<b>Aaa</b>
National Grid Electricity	27/07/2001	200,000,000	Y	3.81%	19	A1
National Grid Electricity	27/07/2001	360,000,000	N	6.50%	27	A1
National Grid Electricity	27/07/2001	40,000,000	Y	3.59%	29	A1
Southern Electric	19/12/2001	250,000,000	N	5.50%	30	Aa3
National Grid Gas	30/01/2002	250,000,000	N	6.00%	15	A2
Thames Water	21/02/2002	175,000,000	Y	3.38%	19	Aa3
London Power	07/06/2002	200,000,000	N	6.13%	25	A2
London Power	07/06/2002	150,000,000	Y	3.13%	30	A2
Artesian Finance	26/06/2002	66,500,000	Y	3.65%	30	Aaa
National Grid Electricity	08/07/2002	50,000,000	Y	2.82%	30	Aaa
National Grid Electricity	08/07/2002	300,000,000	Y	2.98%	16	Aaa
Anglian Water	30/07/2002	150,000,000	Y	4.13%	18	A3
Anglian Water	30/07/2002	250,000,000	N	5.84%	20	A3
Anglian Water	30/07/2002	246,000,000	N	6.29%	28	A1
Anglian Water	30/07/2002	75,000,000	Y	3.67%	22	A3
Anglian Water	30/07/2002	60,000,000	Y	3.07%	30	A3
Artesian Finance	22/08/2002	35,200,000	Y	3.65%	30	Aaa
United Utilities	04/12/2002	50,000,000	Y	3.38%	30	A2
Artesian Finance	06/12/2002	135,821,000	Y	3.65%	30	Aaa
United Utilities	20/12/2002	150,000,000	N	5.63%	25	A2
Yorkshire Water	21/02/2003	200,000,000	N	5.38%	20	A3
Yorkshire Water	21/02/2003	100,000,000	Y	3.05%	30	A3
Western Power	25/03/2003	200,000,000	N	5.88%	24	Baa1
Moyle Interconnector	14/04/2003	135,010,000	Y	2.94%	30 <sup>1</sup>	Aaa
Artesian Finance	07/05/2003	14,800,000	Y	3.65%	30	Aaa
Artesian Finance	07/05/2003	30,000,000	N	6.00%	30	Aaa
United Utilities	14/05/2003	150,000,000	N	5.38%	15	A2
South Eastern Power	05/06/2003	300,000,000	N	5.50%	23	A3
South Eastern Power	05/06/2003	50,000,000	Y	3.05%	20	A3
Wessex Water	15/10/2003	350,000,000	N	5.75%	30	Baa1

Source: Bloomberg, EY analysis. The bonds shown are all denominated in GBP, have fixed rate coupons and have bullet repayments or sinkable features. Bonds which are callable, denominated in other currencies or which have variable or step coupons have been excluded. Notes (1) sinkable; (\*) bond was on negative watch for a possible rating downgrade.

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