

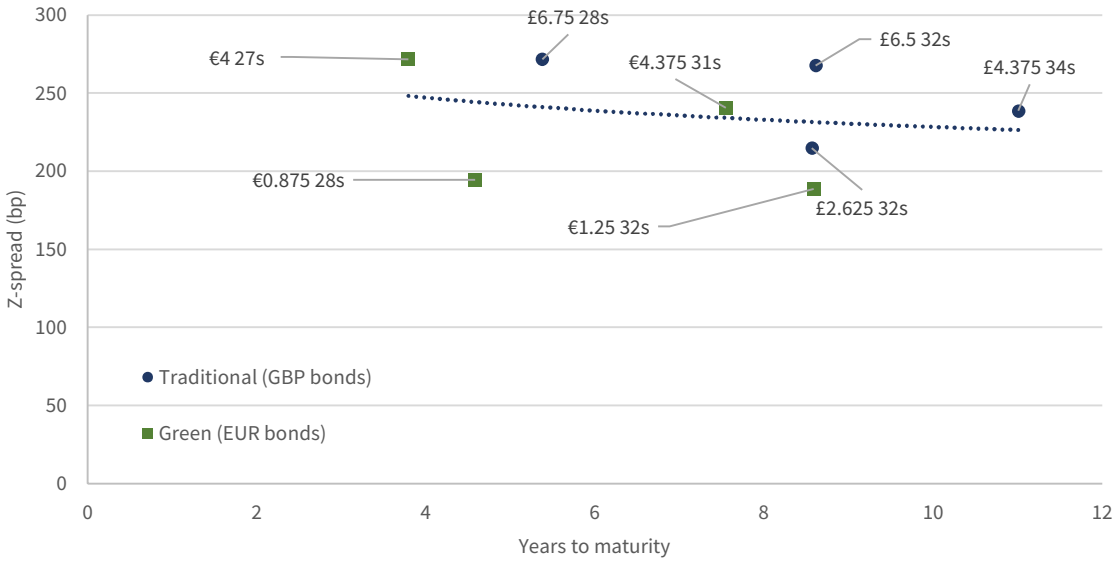
Thames Water green bonds: all in the same puddle

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Thames Water, a UK water company privatised in 1989, is running into financial difficulties.[1] It is reported that under-investment in aged infrastructure, combined with surging inflation, has left the heavily indebted utility in a precarious position.

Thames Water has £2.8bn green bonds outstanding, issued between 2018 and 2023. We analyse the current situation for those investors, and provide the following takeaways:

- Thames Water's bonds have traded poorly since news broke of its financial difficulties. **The green bonds are part of a Whole Business Securitisation, where debt is secured on income from an operating subsidiary.** Positively, this has reduced the spread widening compared to unsecured bonds.
- **Green bond proceeds were generally used to refinance infrastructure investments.**[2] This should have improved the sustainability of the company but appear to have been insufficient to resolve historic under-investment.
- **Green bond investors do not have a senior claim on green assets. They are generally pari-passu with vanilla debt in a default, and so exposed to the full operations of the issuer**. Figure 1 shows current bond pricing; it is hard to identify differences between green and traditional debt given currency and coupon differences. **Due diligence should look beyond the green bond investment objectives and consider the sufficiency of the sustainability performance of the whole entity.**



[1] "Why Thames Water is under growing strain", FT, 29 Jun 2023.
[2] "2020/2021 Green Bond Impact Report", Thames Water, accessed 4 Jul 2023.

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Background on Thames Water as a borrower

Thames Water is the largest water supplier and wastewater treater in the UK. Having been established in 1974 as a public body, it was privatised in 1989.

A stated objective of privatisation was to allow UK water companies to access capital markets to borrow as needed to invest in capital projects.[3] They have been regular debt issuers since.

Table 1 shows debt outstanding. Thames Water has issued in a variety of currencies, including GBP, EUR, USD, CAD & JPY. In Mar 2018 it issued its first two-tranche green bond,[4] which was used to refinance four major projects designed to reduce leakage, reduce emissions, increase water efficiency and increase water quality.[5] Since then, it has issued another six green bonds, with no vanilla equivalent debt since Oct 2020.[6] As Table 1 shows, only Anglian Water has also issued green bonds, but several other water companies have issued sustainability bonds (where proceeds are ring-fenced for sustainability projects).

Table 1. Total debt outstanding for UK water companies. Source: Bloomberg, accessed 4 Jul 2023.

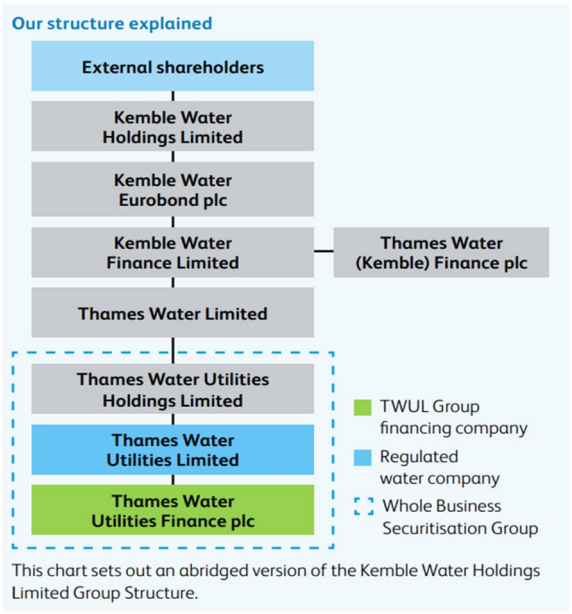
Name	Ticker	Total debt outstanding (£bn)	Total green debt outstanding (£bn)	Total sustainability debt outstanding (£bn)
Thames Water	THAMES	10.2	2.7	0.0
United Utilities (North West Water)	UU	5.8	0.0	1.0
Anglian Water	AWLN	5.2	2.0	0.0
Severn Trent Water	SVTLN	4.9	0.0	1.5
Yorkshire Water	KEL	3.8	0.0	1.6
Wessex Water	YTLPMK	3.1	0.0	0.3
Southern Water	SWSFIN	2.7	0.0	1.1
Northumbrian Water	NWGLN	2.5	0.0	0.0
South West Water	PNNLN	0.4	0.0	0.0

[3] "Water privatisation in England and Wales", Wikipedia, accessed 3 Jul 2023.
[4] "Thames Water green bond framework", Thames Water, accessed 3 Jul 2023.
[5] "Green bond impact report 17/18", Thames Water, accessed 3 Jul 2023.
[6] This excludes a single bond from Thames Water Kemble Finance PLC, which is the parent holding company, and not the form that green bond issuance takes.

Whole Business Securitisations

The majority of Thames Water bonds are issued from Thames Water Utilities Finance PLC, part of a Whole Business Securitisation (WBS) (see Figure 2).[7] This is a structure used to isolate operating assets to repay borrowing. Rather than being secured on assets, the bonds are secured on regular and dependable cash-flows - here, customer payments for water services. The bonds have a claim on any income from the operating company, and only excess cashflows are sent upstream to the parent company.

Figure 2. Thames Water corporate structure. Source: Thames Water Oct 2022.



Thames green bonds are issued by the same entity, and hence have identical claims over cashflows as traditional debt.

Some bonds are issued by Thames Water Kemble Finance PLC (also identified in Figure 2) which represent non-secured financing. These are rated B, compared to BBB for the WBS debt, reflecting the increased credit risk of not having a secured claim over the operating income.

Thames Water green bond framework

Thames Water first issued its green bond framework in Mar 2018.[4] In 2021 this was updated into a Sustainable Financing Framework,[8] reported as offering greater flexibility for example to finance sustainable drainage systems or biodiversity enhancement.[9]

The original green bond framework named three categories of eligible green projects; water and wastewater treatment works, water and wastewater treatment networks and renewable energy. The first green bond, £705.1mn private placement issued in Mar 2018, was used to refinance four eligible projects including the Thames Tideway Tunnel connecting works, and Deephams sewage treatment works upgrades.[5]

Much of Thames Water's reporting and internal commentary of its green bond programme is explicit that bonds are refinancing existing projects.

It is also hard to see how the proposed investments differ from general good management and capital investment at a water company. The Second Party Opinion (provided by DNV) summarises that "the projects are designed to reduce water leakage, encourage customers to use water efficiently, reduce pollutions into rivers and increase their wastewater treatment capacity".[10]

These investments should improve the sustainability of Thames Water. The key question is whether it has been enough to support its full operations.

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[7] For more details on WBS see "Money Stuff: Put Your Business in a Box", Bloomberg, 29 Aug 2019.
[8] "Sustainable Financing Framework 2021", Thames Water, accessed 3 Jul 2023.
[9] "Our finances explained", Thames Water, Oct 2022.
[10] "Thames Water Green Bond Second Party Opinion", DNV, accessed 3 Jul 2023.

Causes of financial situation

Thames Water appears to be struggling with its debt pile, and is asking shareholders for an equity injection to strengthen its balance sheet,[11] to avoid a potential nationalisation. For a company controlling a regional monopoly of water services, it may seem hard to understand how such a poor financial situation has developed.

Capex has been reducing in the sector since privatisation, down around 15% on average.[12] (Thames Water was an exception and did increase investment, but not enough to slow down leaks). Over the same time the sector raised £53bn of debt, with £72bn paid in dividends rather than on replacing worn infrastructure. This leaves significant ongoing costs both of debt servicing, but also of maintaining aged assets.

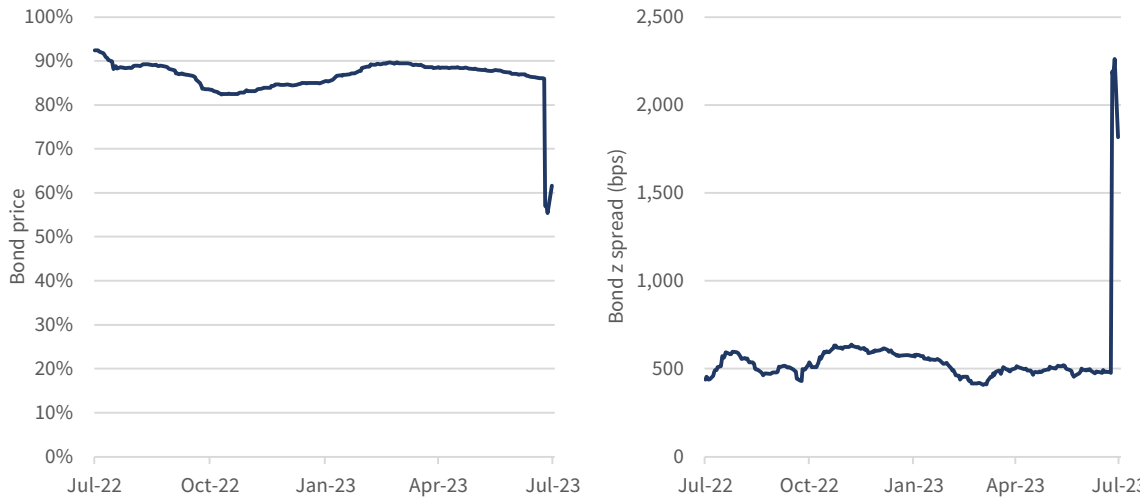
In Thames Water's situation, it was subject to a leveraged buyout in 2006 by Macquarie, an Australian bank. This helped raise Thames Water's debt to equity ratio to the highest across the UK water sector.[13]

Thames Water also seems to have a problem with inflation. 56% of its debt is linked to Retail Prices Index (RPI) inflation,[13,1] which is at a historically wide premium to Consumer Prices Index (CPI) on which the majority of its bills are priced. This has caused a growth in interest payments which is not offset by income from customers.

What has happened to bond investors?

In response to this news, Thames Water bonds have traded poorly. Thames Water Kemble 26s (ISIN XS2258560361) moved from a spread of 500bp to around 2,250bp, implying an expected loss of nearly 40% on the bonds (see Figure 3).

Figure 3. Thames Water Kemble £4.625% 26s price and z-spreads. Source: Bloomberg, accessed 4 Jul 2023.



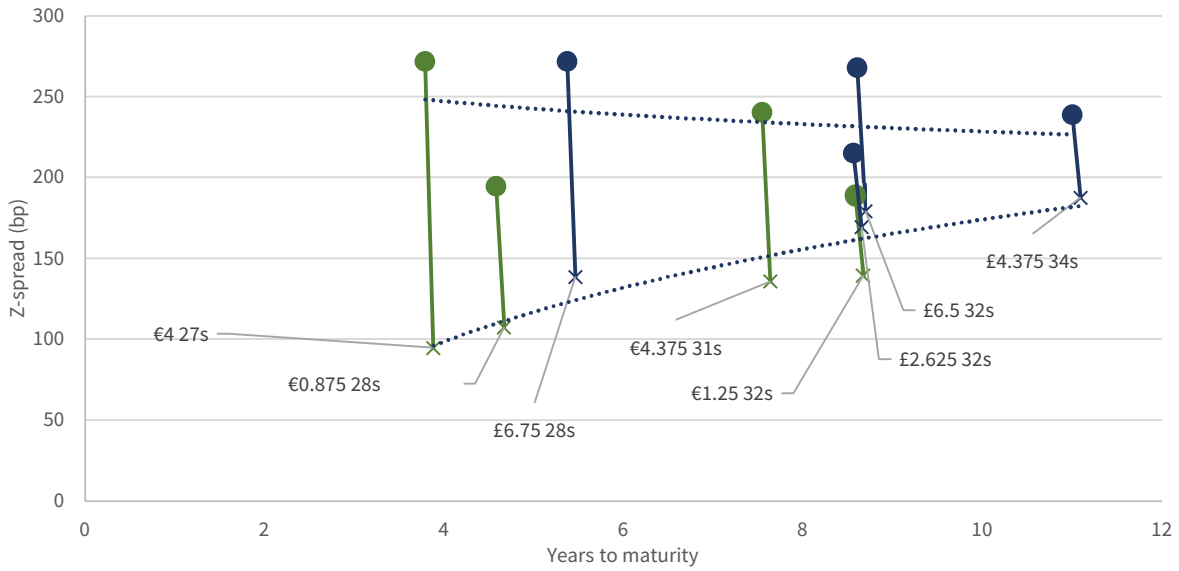
[11] University Superannuation Scheme, one of the largest investors in Thames Water, has given its support for the equity injection as reported in "Thames Water's turnaround plan backed by investor USS", Reuters, 30 Jun 2023.

[12] As reported in "Sewage spills highlight decades of underinvestment at England's water companies", FT, 28 Dec 2021.

[13] "Thames Water Is Drowning in Debt. What Went Wrong?", Bloomberg, 29 Jun 2023.

WBS bonds have fared better. Figure 4 shows bond moves for EUR (green bonds) and GBP (vanilla bonds) in the last month. On average spreads have widened 100-150bp, with the curve inverting. This new pricing roughly aligns as between BB and B when looking at Bloomberg composite indications.[14]

Figure 4. Thames Water WBS EUR and GBP bond z-spreads from 1 Jun 2023 (crosses) to 4 Jul 2023 (circles). Source: Bloomberg, accessed 3 Jul 2023.



As bonds trade towards more distressed levels, we would expect their cash prices to converge, as this is the claim that can be made in a default. This means, bonds with high coupons, and higher cash prices, can underperform, as the cash prices move towards those with lower coupons. We can observe this effect, that bonds with lower coupons, eg €0.875 28s, €1.25 32s and £2.625 32s, have tightened less than the corresponding higher coupon bonds.

What about green bond investors?

As detailed above, green bond investors are exactly pari-passu to vanilla bond investors in the WBS waterfall and will be equal in ranking in a default.[15]

Figure 4 shows the spread/price moves, and we see that there does not seem to be a discernible pricing difference between green and vanilla debt. Smaller coupon bonds have performed the best, irrespective of green or traditional debt.

This underscores the exposure green bond investors have to the full operations of an issuer. Even though proceeds may be ring-fenced for eligible investments, risk is to the entire entity, whose business model may not be fully aligned and sustainable.[16]

[14] 5y B EUR yield is 8.0% and BB is 5.5% from Bloomberg composite yield indices, accessed 3 Jul 2023.
[15] We note Spanish renewables firm Abengoa managed to avoid insolvency in 2016 by restructuring debt (including green bonds) into new zero coupon bonds and equity. In 2021 they did file for insolvency. All bondholders will be treated identifically, as from the 2016 restructuring they own the same single instrument. Please see "Spanish Renewable Energy Firm Files for Insolvency", Bloomberg, 23 Feb 2021.
[16] For a high-profile example please see our work on Public Investment Fund of Saudi Arabia in "No green ePIFany", AFII, 29 Sep 2022 and "PIF: big on Aramco, big on green bonds", AFII, 18 Apr 2023.

In this example, green bond proceeds appear to have been designated for important and impactful improvements to assets. Unfortunately, this was not alongside a full regeneration of infrastructure, and so ongoing support costs, combined with increasing debt costs, have put Thames Water into a poor financial situation.

Conclusions

UK water companies, as a result of high leverage and underinvestment, are in poor financial health. The largest and most leveraged is Thames Water. **Just under 25% of its outstanding bonds are green bonds, where investors provided capital for sustainable investments.**

Bonds have traded poorly in the recent month. Most issuance is part of a Whole Business Securitisation, where senior claims are given to operating income**. This has reduced spread widening for green bond investors, compared to unsecured bonds.**

Analysis of the use-of-proceeds shows both that capital was used to refinance existing investments, and thus likely offered no additionality for green bond investors. Refinancing is a legitimate use for capital, according to the ICMA green bond principles,[17] **but investors should conduct due diligence in advance to make sure this aligns with their sustainability objectives.**

Inadequate capital investment is one potential contributing factor to Thames Water's current financial distress, which has resulted in bond widening. Green bond investors are again reminded that they are pari-passu to traditional debt, in this case with identical claims over a WBS of the water operating company. **Despite green bond capital being used for sustainable investment, green bond investors are exposed to the whole operations, and so must be comfortable with the overall sustainability objectives of an issuer.**

[17] "Green bond principles", ICMA, accessed 4 Jul 2023.

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