MOODY'S
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CREDIT OPINION
6 October 2017

Update

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RATINGS

Thames Water Utilities Ltd.

Domicile	United Kingdom
Long Term Rating	Baa1
Type	LT Corporate Family Ratings - Dom Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Thames Water Utilities Ltd.

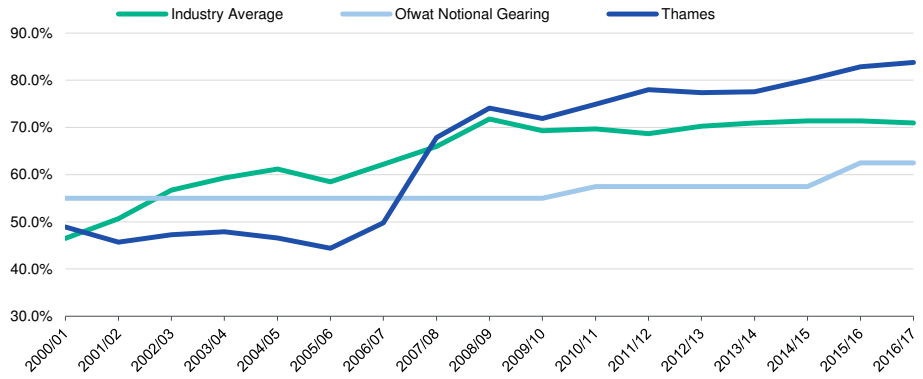
Regular update following FY 2016/17 reporting

Summary

The credit quality of Thames Water Utilities Limited (Thames Water, corporate family rating: Baa1 stable) is supported by (1) the company's low business risk profile as the monopoly provider of essential water and sewerage services; (2) its relatively stable and predictable cash flow generation under a well-established and transparent regulatory framework; and (3) creditor protections incorporated within the company's financing structure. These strengths, however, are somewhat offset by the high level of gearing with the ratio of net debt to regulatory capital value (RCV) around 80%.

Exhibit 1

Following the implementation of the highly-covenanted financing structure in 2007, Thames Water's leverage increased to ca. 80%, well above sector average and regulatory notional gearing levels



Note: Average gearing as reported by companies to Ofwat, and not reflective of Moody's standard adjustments.
Source: Companies performance reports, Ofwat, Moody's

Thames Water's credit quality is broadly in line with that of Anglian Water Services Limited (CFR: Baa1 stable), but slightly stronger than that of Southern Water Services Limited (CFR: Baa2 negative) and Yorkshire Water Services Limited (CFR: Baa2 stable), both of which face risks linked to their sizeable inflation-linked swaps portfolios (please refer to the relevant credit opinions for further detail). Like its peers, Thames Water's credit quality is constrained by (1) the expectation that the company will maintain a highly leveraged capital structure; and (2) its exposure to refinancing risk, i.e., its dependence upon continued market access to fund ongoing capital expenditure or refinancing its debt at reasonable terms. In that context, we also take into account that while the company is exposed to the risks associated with lower returns from 2020, its cost of debt, particularly for its long-dated inflation-linked

debt, is – at around 1.5% - well below the sector average of 2.0% for index-linked debt, as at March 2017, somewhat reducing the risk compared with industry peers.

Credit Strengths

» Stable cash flows generated from the provision of monopoly water and wastewater services.

» Well established, transparent and predictable regulatory regime.

» Debt structural features, including distribution lock-up covenants, dedicated liquidity, intercreditor and security arrangements provide additional creditor protection for event risk, and enhance recovery prospects in an event of default.

Credit Challenges

» Sizeable capital investment programme, but risks related to construction of the Thames Tideway Tunnel significantly limited through the appointment, in August 2015, of an independent company, to construct and operate the tunnel.

» High financial leverage constrains financial flexibility and poses risks in the event of low returns from 2020.

» Changes to regulation, aimed at increasing competition to certain parts of the value chain, may reduce cash flow stability and create financial pressure for the sector.

Rating Outlook

The stable outlook on Thames Water's ratings reflects our expectation that the company's financing structure should be relatively resilient to downside scenarios due to the cash-trapping triggers designed to ensure that cash is retained in the company if certain ratio thresholds are breached. Such cash could then be used to absorb the effect of possible downsides. We also believe that key uncertainties resulting in incremental risks that the company is exposed to in relation to the TTT project are adequately mitigated through a specific mechanism for an interim price review in certain circumstances outside of management's control.

Factors that Could Lead to an Upgrade

Given (1) the company's funding structure; (2) Moody's expectation that Thames Water will likely maintain a highly-leveraged financial profile; (3) the risk of reduced financial flexibility with a likely reduction in allowed returns from 2020; and (4) continuing exposure to certain interface works with the Thames Tideway Tunnel (TTT) project, there is limited potential for any rating upgrade. Upward rating pressure would require a material and permanent improvement in debt protection measures.

Factors that Could Lead to a Downgrade

Negative rating pressure could derive from (1) a cut in future allowed returns to levels that Thames Water appears unable to accommodate at current rating levels; (2) more generally a deterioration in financial metrics with leverage materially in excess of 80% and/or an Adjusted Interest Cover Ratio below 1.3x, on a persistent basis; or (3) a significant increase in business risk for the sector as a result of legal and/or regulatory changes leading to a reduction in the stability and predictability of regulatory earnings, which is not offset by other credit-strengthening measures.

Key Indicators

Exhibit 2
Highly-leveraged but stable financial profile

	3/31/2017	3/31/2016	3/31/2015
Adjusted Interest Coverage Ratio	1.5x	1.7x	1.8x
Net Debt / Regulated Asset Base	83.1%	81.7%	82.8%
FFO / Net Debt	7.1%	8.2%	9.1%
RCF / Net Debt	5.9%	7.7%	7.7%

Note: All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. For definitions of Moody's most common ratio terms please see the accompanying User's Guide.
Source: Moody's Financial Metrics TM

Corporate Profile

Thames Water Utilities Limited is the largest of the ten water and sewerage companies in England and Wales by both RCV and number of customers served. Thames Water provides drinking water to around 9 million customers and sewerage services to around 15 million customers in London and the Thames Valley.

Thames Water is the major subsidiary of Thames Water Limited which was acquired by Kemble Water Limited, a consortium led by Macquarie's European Infrastructure Funds, in 2006. In May 2017, Macquarie sold its 26.3% stake in the group to Borealis Infrastructure Corp., part of Canada's OMERS pension fund, and Wren House, the infrastructure investing arm of the Kuwait Investment Authority.

Detailed Credit Considerations

Transparent regulatory regime with certainty around cash flows through March 2020 but additional challenges thereafter

The UK water sector benefits from a transparent, stable and predictable regulatory regime, which is based on clearly defined risk allocation principles and their consistent application in setting water tariffs by an independent regulatory body, the Water Services Regulation Authority (Ofwat).

Ofwat published the price determination for the current regulatory period in December 2014. Along with its peers, Thames Water's final determination includes (1) an allowed return of 3.6% per annum on the wholesale RCV; (2) a net retail margin of 1% for household retail activities; and (3) a net retail margin of 2.5% for non-household retail activities. The overall allowed return, which for a notional company is around 3.74% per annum (vanilla, real), is significantly lower than the 5.1% p.a. return allowed in the previous period, reflecting a low interest-rate environment. Thames Water also received a separate price control for the TTT project and a specific uncertainty mechanism to mitigate additional risks that the company is facing in relation to the TTT project.

Exhibit 3

Evolution of the allowed regulatory return

All figures expressed in real terms

	Ofwat PR04	Ofwat PR09	Ofwat PR14
Notional gearing	**55.0%**	**57.5%**	**62.5%**
Existing debt			2.65%
New debt			2.00%
Existing: new debt ratio			3
Explicit debt issuance cost			0.1%
Cost of debt (pre-tax)	**4.3%**	**3.6%**	**2.59%**
Risk-free rate	2.5-3.0%	2.0%	1.25%
Equity risk premium	4.0-5.0%	5.4%	5.50%
Total market return	6.5-8.0%	7.4%	6.75%
Asset beta			0.3
Debt beta			
Equity beta	1.00	0.90	0.80
Cost of equity (post-tax)	**7.7%**	**7.1%**	**5.65%**
Vanilla WACC*	**5.8%**	**5.1%**	**3.74%**
Retail Margin	n/a	n/a	0.14%
Wholesale WACC	**n/a**	**n/a**	**3.60%**

Note: * Figures presented for the 'appointee' WACC, equivalent to the PR09 WACC. The wholesale WACC is the appointee WACC minus the retail margin.
Source: Ofwat' Moody's

As part of the last price review, Ofwat changed the way it sets tariffs for the water companies in England and Wales. For the five-year period that commenced on 1 April 2015 (AMP6), tariffs were set to reflect (1) separate price controls for retail and wholesale activities; (2) increased customer involvement in companies' business planning and focus on long-term outcomes rather than short-term outputs; (3) more tailored outcome delivery incentives; and (4) a total expenditure (totex) cost assessment. The introduction of separate price controls for retail and wholesale services is in part to facilitate retail competition for non-household (NHH) customers.

In July 2016, Thames Water announced the disposal of its NHH retail activities to Castle Water Limited, an independent licensed provider of water and wastewater services to business customers in Scotland, which took effect on market opening on 1 April 2017 (please see Moody's Issuer Comment "Thames Water Utilities Limited: Non-household retail exit a marginal credit positive", published in July 2016).

We view the changes introduced for AMP6 as being largely neutral for the UK water sector as a whole. However, Ofwat continues to develop its regulatory approach for the water sector, and as part of the so-called 'Water2020' programme, further changes will be introduced at the next price review in 2019. These include (1) separate price controls for bio-resources (comprising the treatment and disposal of sewage sludge) and water resource management; and (2) a change in indexing revenues and regulated assets, moving to a measure of consumer prices index (CPI) from retail prices index (RPI) inflation.

In its draft methodology consultation for the 2019 price review, published in July 2017, Ofwat also indicated a significant cut in allowed returns under an assumption that the current low interest-rate environment continues to persist, albeit partially offset by the switch in indexation measures. Furthermore, efficiency challenges will increase, particularly for average performers, which could put a further strain on cash flows.

We continue to view the overall developments as credit negative for the sector, with increased risk of cash flow volatility likely from 2020 (please see 'UK Water Sector: Ofwat signals challenging price review', July 2017).

Sizeable investment programme, but majority of Thames Tideway Tunnel risk removed

Thames Water has an extensive capital programme and must manage the associated financing and refinancing requirements. For AMP6, Ofwat allowed around £7.5 billion total wholesale expenditure, including around £405 million for investment in and preparation for the Tideway project. Responsibility for delivery of the tunnel itself passed, in August 2015, to the newly licensed infrastructure provider, Bazalgette Tunnel Limited (CFR: Baa1 stable). Construction work has started and tunnelling is expected to commence towards the end of 2017.

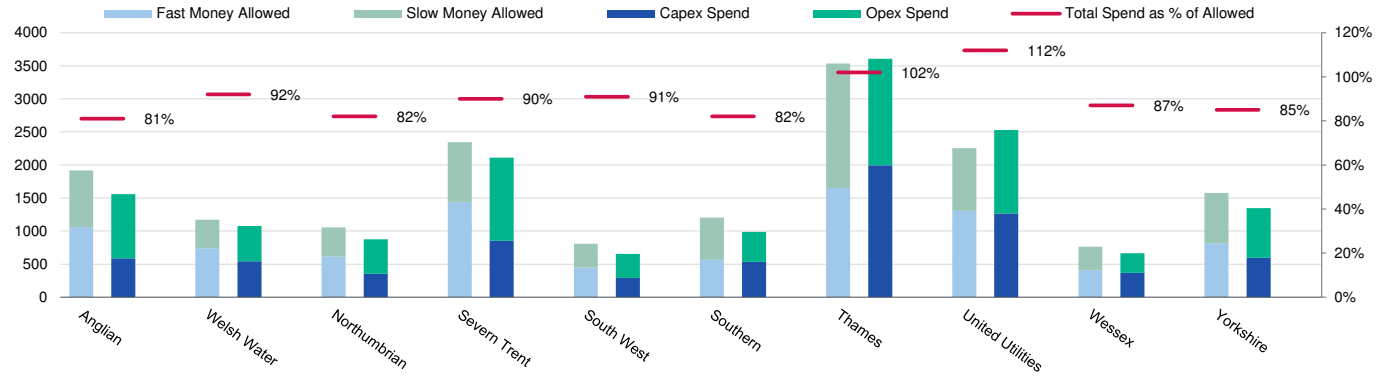
While the removal of tunneling construction risk is credit positive for Thames Water, we believe that the company's ongoing involvement in the TTT project poses an element of incremental risk to its overall credit quality. Through its connection with the project, Thames Water may face reputational and political pressures, which will not apply to any of its peers in the sector. Thames Water will remain responsible for implementing tariff increases necessary to cover the cost of the TTT project, increasing the risk of the company's reputation and customer relationships being damaged by any negative reaction to tariff increases or other developments related to the tunneling works (e.g., the project suffering major delays, cost overruns, or technical failures). We believe that management's approach to maintain additional headroom within its financial structure, coupled with measures to improve bad debt collection rates, provide adequate mitigation against financial risk implications of the TTT project, albeit reputational exposure remains.

In addition, Thames Water is the only water and sewerage company that received regulatory total expenditure allowances in excess of its business plan submission for both water and wastewater services, which provides larger opportunity for cost outperformance. This, together with a capital structure that (1) shows limited risks in relation to adverse derivative contracts; and (2) exhibits an average lower cost of debt (see Exhibit 6 further below), when compared with its highly-leveraged peers, such as Anglian Water, Yorkshire Water or Southern Water, put Thames Water in a stronger financial position, which we consider sufficient to offset the incremental risks related to the TTT project.

Over the first two years of the current regulatory period, Thames Water has spent roughly in line with allowances, but plans to accelerate spending in some key areas to improve performance, including in relation to leakage reduction and improving overall customer service.

Exhibit 4

In first two years of AMP6, Thames Water spent totex broadly in line with allowance, where most companies saw a delay in their investment programme



Source: Companies' performance reports, Ofwat, Moody's

During 2015/16 and 2016/17, Thames Water accumulated penalties of around £28 million in aggregate for underperforming targets agreed with its customers. We understand that the new management team will put an increased focus on service levels and customer engagement to improve operational performance and avoid future penalties.

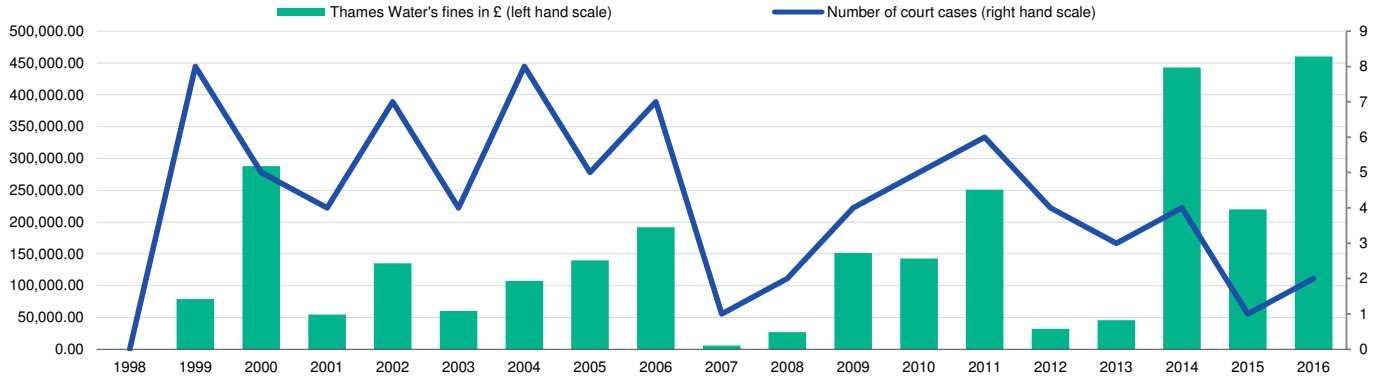
Recent fine for environmental breaches reflects operational weaknesses

In March 2017, Thames Water received one of the largest fines for environmental breaches by the sector to date. The penalty amounts to ca. £20.4 million (including fines and costs) for a series of six separate, significant pollution incidents on the River Thames during 2012-14, caused by negligence.

Thames Water has a history of environmental enforcement actions and the latest fine takes into account this negative track record by requiring a settlement amount well in excess of historical levels (see Exhibit 5 for fines received 1998-2016).

Exhibit 5

Thames Water has a long track record of environmental enforcement actions, with penalties per incident increasing in the recent past



Note: The chart summarises enforcement actions until the end of 2016, and excludes the latest fine in March 2017.
Source: Environment Agency

The amount of the fine also reflects sentencing guidelines for environmental offences that came into force in 2014 (see 'UK Water Sector: Environmental damage likely to attract more material fines'), which make larger fines for offences, particularly serious or repeat offences, by large companies much more likely. The UK water industry received aggregate fines of £3.4 million during 2016 (equal to approximately 29% of all fines received by sewerage companies in England and Wales since 1998).

While significantly higher than previous penalties, in the context of annual revenues of approximately £2.0 billion, a £20 million fine will not significantly impact Thames Water's financial profile.

However, given that Thames Water continued to have these incidents well into 2014, there is a risk that ongoing underperformance in this area could have a more meaningful credit impact in future, either through growing penalties or more stringent regulatory requirements on operational performance.

High leverage constrains credit quality

Thames Water's Baa1 CFR is constrained by the relatively high leverage adopted by the company. The terms and conditions of the MTN Programme allow Thames Water to increase its indebtedness (on the basis of Net Debt/RCV) up to 85% before distribution lock-ups come into effect. Failure to maintain a level of Adjusted Interest Cover of at least 1.2x would also trigger the dividend lock-up mechanism. We note, however, that Moody's calculation of both ratios may differ slightly from the definition of the financial covenants in the financing documents due to Moody's specific adjustments.

The current rating assumes that the company will maintain Net Debt/RCV gearing well below the dividend lock-up levels at or below 80% and Adjusted Interest Cover around 1.3x or more.

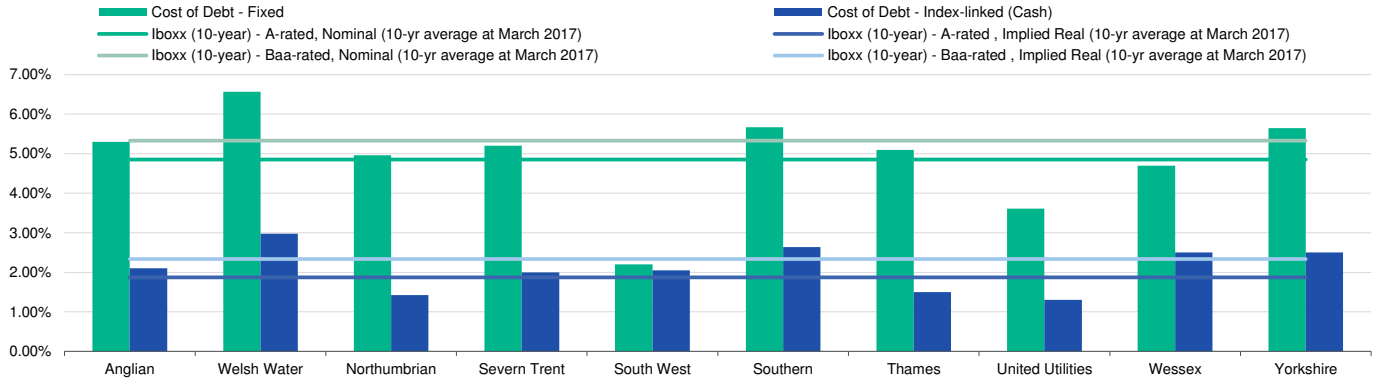
Lower returns from 2020 could create additional pressure

A significant reduction in allowed returns for the UK water sector from 2020 poses particular risks for companies with more expensive and longer-term debt relative to regulatory assumptions.

While Thames Water benefits from comparably low cost of debt, it has a relatively long-dated maturity profile, which could increase risk exposure in future should a lower interest rate environment persist beyond the next regulatory period.

Exhibit 6

Thames Water's cost of debt is the lowest among its highly-leveraged peers



Source: Companies annual performance reports, Moody's

UK economic regulators base their allowed return calculations by reference to a notional company, that is to say a hypothetical entity with a defined capital structure. For example, in the water sector the notional company is geared 62.5% (close to but below the sector average), and has around 33% of index-linked debt within its capital structure. Ofwat also assumes a split between embedded and new debt, when setting the cost of debt allowance. Historically, Ofwat has been guided by historical average rates over a ten-year horizon when setting the cost of embedded debt. Continuing with this approach during an extended period of low interest rates, allowances for future cost of debt as well as cost of equity (driven by reducing risk-free rates) will inevitably decline. Current gilt curves could, for example, support, an overall reduction in the allowed wholesale return from 3.6% in the current period by at least 100 basis points from April 2020. This assumes returns are being set with respect to RPI inflation, which has been the case in the past. For the 2019 price review, Ofwat is proposing to inflate companies' revenues with the consumer prices index including owner occupiers' housing costs (CPIH, the national statistical office's headline measure for inflation since March 2017). Similarly, the regulatory capital value (RCV), on which the allowed return is calculated, will be indexed (1) 50% of the RCV at 31 March 2020 by RPI; and (2) 50% of the RCV at 31 March 2020 and all new additions to the RCV from 1 April 2020 by CPIH. Assuming a differential between RPI and CPIH of around 100bps and an initial 50:50 split of the return on RCV, could suggest a blended RPI-CPIH return of around 2.8-3.1%, taking into account the cost of equity assumptions, mentioned in Ofwat's July draft methodology consultation.

Companies will benefit from the low interest rate environment over time as they raise new debt. However, companies, such as Thames Water, with debt tenors beyond that assumed by the regulator may be exposed as allowed returns will converge to market rates, unless historical funding costs have been below average. The latter has been the case for Thames Water, so the immediate risk is reduced. Nevertheless, a significant cut in future allowed returns will pressure interest cover ratios and Thames Water may need to reduce gearing if it is to maintain credit quality.

Moody's further notes that the low yield environment may have eroded equity buffers. Taking into account the fair value of existing borrowings and the derivatives, Thames Water had gearing (as calculated by Moody's) around 110% as at March 2016, and closer to 120% for March 2017. A visible erosion of the equity value could weaken incentives for shareholders to provide further funding.

Liquidity Analysis

Thames Water's solid liquidity profile will be sufficient to support the company's operating and capital expenditure over at least the next 12-18 months. It is underpinned by (1) the stable and predictable cash flows generated by its regulated activity; (2) cash balances and short-term investments of around £53 million as at 31 March 2017; and (3) around £1.45 billion of committed revolving facilities (including £500m liquidity facilities to act as debt service reserve), with a group of fourteen relationship banks, with around £908 million of the £950 million revolving credit line undrawn as at 31 March 2017.

Following refinancing of £550 million Class B notes at their call date in July 2017, the remaining debt maturities in the current period to March 2020 will require approximately £400 million to be raised each year to the end of the period.

Structural Considerations

The Baa1 CFR is assigned to Thames Water as if it had a single class of debt and was a single consolidated legal entity. It reflects an opinion on the expected loss associated with the financial obligations within the Thames Water group, and consolidates the legal and financial obligations of Thames Water, its financing subsidiaries Thames Water Utilities Finance Limited (TWUFL) and Thames Water Utilities Cayman Finance Limited (TWUCFL), and the intermediate holding company within the group, Thames Water Utilities Holdings Limited. The Baa1 CFR also factors in the credit enhancements of the financing structure.

Debt structural features provide rating uplift for additional creditor protection

Thames Water's Baa1 CFR also takes into account the covenant and security package agreed by the company, which is designed to insulate the company's creditworthiness from that of its ultimate shareholders and improve creditors' protection in a default scenario. The overall covenant and security package is similar to those seen for comparable highly-leveraged financing transactions, and results in a rating uplift of around one rating notch for credit-enhancing features, embedded in the Baa1 CFR.

Additional event risk protection provided by the bond covenant and security package, include, inter alia, restrictions on acquisitions and disposals (subject to limited defined exceptions), a dividend lock-up coming into effect if gearing increases above 85% of RCV, and limitation on non-core activities. In addition, we consider creditor step-in rights if certain trigger events occur.

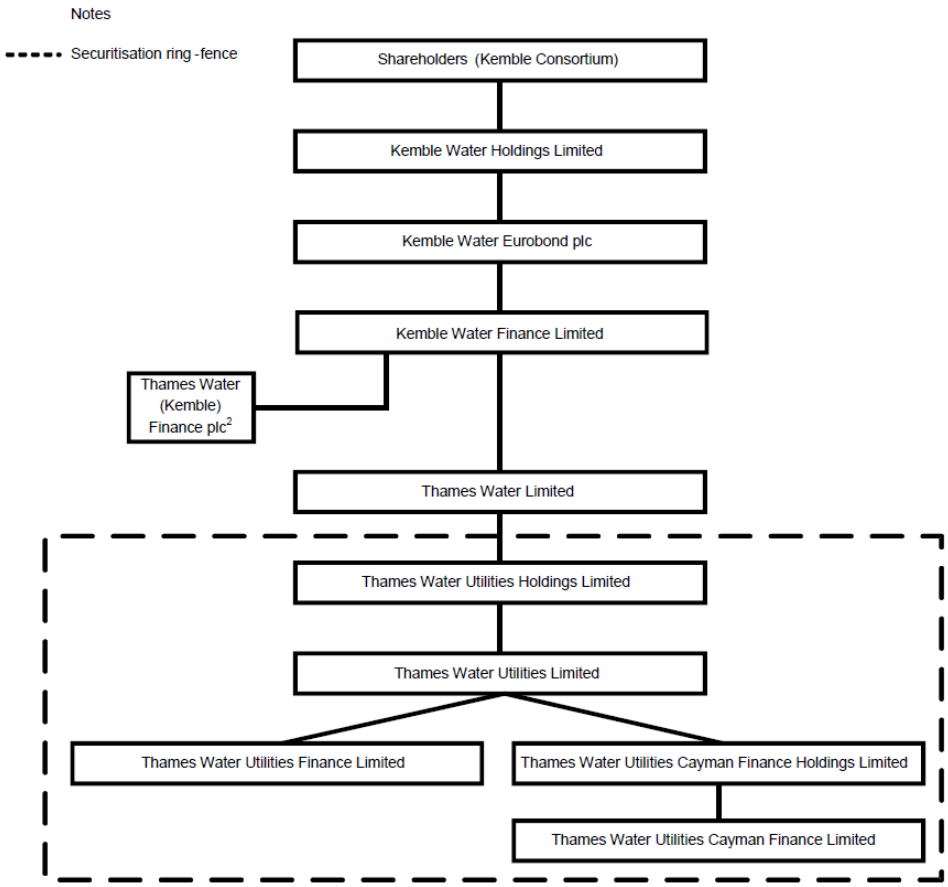
In 2015, most of the highly-leveraged UK water companies, including Thames Water, introduced a supplementary interest cover covenant, which is designed to reflect regulatory changes in the revenue building block approach for tariff setting purposes. The definition of Thames Water's supplementary covenant, which replaces the previous regulatory capital charges (infrastructure renewals charge and current cost depreciation) with the new RCV depreciation under Ofwat's totex approach, will provide some flexibility to create additional financial headroom for highly-leveraged companies, before a distribution lock-up is triggered. However, an additional information covenant provides disclosure to allow investors to assess the company's underlying performance against regulatory targets, and whether headroom against the covenant stems from outperformance or accelerated revenues. As has been the case in the past, Moody's calculation of the Adjusted Interest Cover Ratio (Adjusted ICR) will differ from the covenant definition, reflecting additional disclosure from the information covenant. Overall, we expect Thames Water to continue to exhibit an Adjusted ICR, based on Moody's calculation, in line with the minimum guidance for its current ratings.

Recovery prospects in a default scenario can be improved by (1) a first-ranking fixed charge over the shares in the company, plus first-ranking fixed and floating charges over all the assets, rights and undertakings of Thames Water, and (2) the agreement by financial creditors to give up their individual rights to petition for insolvency proceedings. We recognise that the benefit of the security provided to bondholders is limited due to the regulated and essential nature of the services provided by Thames Water as governed by its licence and the Water Industry Act 1991.

We also rate the bonds issued by TWUFL and TWUCFL, Thames Water's finance subsidiaries under a £10 billion MTN programme (the Programme), guaranteed by Thames Water. The bonds are issued either as part of a senior tranche (Class A Debt) or a junior tranche (Class B Debt) and are currently rated A3 or Baa3, respectively.

Exhibit 7

Simplified group structure chart



Source: Company

The A3 rating of the Class A Bonds issued under the Programme reflects the strength of the debt protection measures for this class of bonds and other pari passu indebtedness (together, the Class A Debt), the senior position in the cash waterfall and post any enforcement of security. The rating also, however, factors in the subordinated Class B Debt (Class B Bonds and other pari passu debt) which, whilst it is contractually subordinated, serves to reduce the operator's financial flexibility. Downgrade or default of the Class B Debt could have an impact on the viability of the company's funding model as a whole since the inability to raise additional Class B Debt in the future could undermine the capital structure and affect the credit quality of the senior debt.

The Baa3 rating of the Class B Bonds reflects the same default probability as factored into the Baa1 CFR but also Moody's expectation of a heightened loss severity for the Class B Debt following any default, given its subordinated position.

Rating Methodology and Scorecard Factors

Thames Water's Baa1 CFR reflects our rating methodology for Regulated Water Utilities, published in December 2015. The methodology grid results in an indicative factor outcome of Baa1 on a forward-looking basis, which takes into account lower returns in the current regulatory period. This is in line with the assigned CFR.

Overall, we expect Thames Water to continue to maintain financial metrics in line with current ratings.

Exhibit 8

Rating Factor Grid - Thames Water Utilities Limited

Regulated Water Utilities Industry Grid [1][2]	Current FY 3/31/2017		Moody's 12-18 Month Forward View As of September 2017 [3]	
Factor 1 : Business Profile(50%)	**Measure**	**Score**	**Measure**	**Score**
a) Stability and Predictability of Regulatory Environment	Aaa	Aaa	Aaa	Aaa
b) Asset Ownership Model	Aa	Aa	Aa	Aa
c) Cost and Investment Recovery (Sufficiency & Timeliness)	A	A	A	A
d) Revenue Risk	A	A	A	A
e) Scale and Complexity of Capital Programme & Asset Condition Risk	Baa	Baa	Baa	Baa
Factor 2 : Financial Policy (10%)				
a) Financial Policy	Ba	Ba	Ba	Ba
Factor 3 : Leverage and Coverage (40%)				
a) Adjusted Interest Coverage Ratio (3 Year Avg)	1.6x	Baa	1.3x - 1.6x	Ba
b) Net Debt / Regulated Asset Base (3 Year Avg)	82.5%	Ba	78% - 82%	Ba
c) FFO / Net Debt (3 Year Avg)	8.1%	Ba	7% - 9%	Ba
d) RCF / Net Debt (3 Year Avg)	7.1%	Baa	5% - 7%	Baa
Rating:				
Indicated Rating from Grid Factors 1-3		Baa2		Baa2
Rating Lift		**1.5**		**1.5**
a) Indicated Rating from Grid		A3		Baa1
b) Actual Rating Assigned				Baa1

Note: (1) All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. (2) At at 03/31/2017. (3) This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate any significant acquisitions or divestitures.

Source: Moody's Financial Metrics TM

Ratings

Exhibit 9

Category	Moody's Rating
THAMES WATER UTILITIES LTD.	
Outlook	Stable
Corporate Family Rating -Dom Curr	Baa1
THAMES WATER UTILITIES CAYMAN FINANCE LIMITED	
Outlook	Stable
Bkd Senior Secured	A3
Bkd Subordinate -Dom Curr	Baa3

Source: Moody's Investors Service

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