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SECTOR IN-DEPTH
16 March 2017

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Municipal Water and Sewer Utilities - US

Medians - Sound Financial Metrics Signal Continued Stability

The financial performance of water and sewer utility systems remains stable, largely driven by systems' autonomous rate-setting authority and willingness to raise rates to support operations and debt service. These credit strengths are demonstrated in our fiscal 2015 medians data and are set to continue. The continuing trends are reflected in our stable outlook for the sector.

» **Median debt service coverage remains stable at two times.** Coverage across the sector remained sound at 2.0 times in fiscal 2015, demonstrating capacity to absorb unexpected fluctuations in revenues or expenses. Stable coverage trends reflect systems' ability and willingness to adjust rates to meet operating and debt service needs.

» **Continued improvement in liquidity highlights strong financial flexibility.** Higher-rated entities have historically maintained robust cash positions due to well-developed capital plans supported by rate increases. Maintenance of strong liquidity is a key credit strength for lower-rated entities, given their limited ability to raise rates quickly to address contingencies or possible service disruptions.

» **Debt to operating revenues is manageable and trending downward for most rating categories, due to rate increases to support debt.** Systems with low debt burdens have increased capacity to support capital needs with additional debt issuances, while highly leveraged systems face higher fixed costs, reducing operating flexibility.

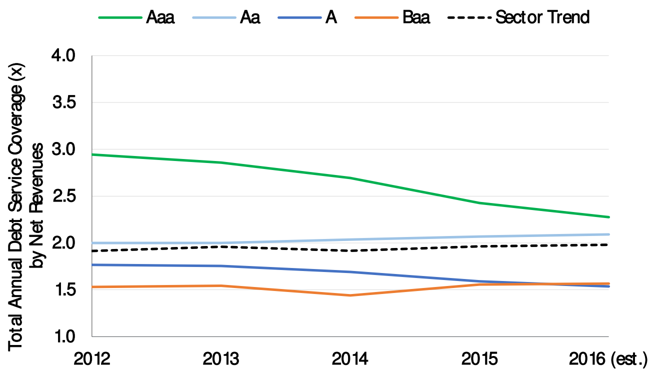
» **Larger systems generally have a broader and more diverse customer base, and enjoy increased operating flexibility provided by economies of scale.** Larger, highly rated entities have the means to mitigate unexpected capital needs or the impact of losing major customers, while lower-rated systems have higher operating risks, such as significant customer concentration and/or a single supply of water or treatment plant.

» **Higher-rated entities operate in areas with stronger socioeconomic indicators.** More affluent service areas have greater flexibility to absorb rate increases, while lower wealth levels can limit a system's ability to raise rates annually, contributing to weaker financial metrics.

THIS REPORT WAS REPUBLISHED ON 4 APRIL 2017 TO INCLUDE THE MEDIAN RATING IN EXHIBITS 7-11.

- **Remaining useful life is trending downward, signaling underinvestment in infrastructure.** Asset condition reflects systems' continued deferral of capital projects or failure to fund depreciation of existing capital assets.

Exhibit 1
Debt Service Coverage Remains Sound



Source: Moody's Investors Service

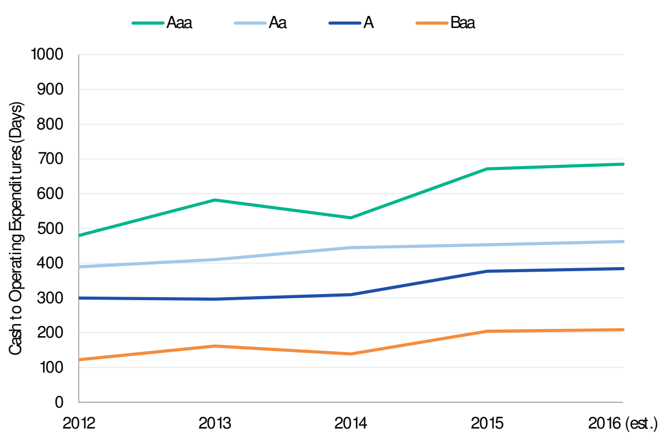
Median debt service coverage of two times remains stable

» Systems' willingness and ability to adjust rates for operations and debt service continued to drive coverage of 2.0 times in fiscal 2015. Median coverage will likely remain in that range due to autonomous rate-setting authority.

» The decrease in coverage for Aaa credits was due to more debt issuance. Median coverage in the Aaa category of 2.4 times still affords sufficient cushion above rate covenants (generally 1.0-1.5 times annual debt service).

» For example, Cary, NC Water and Sewer Enterprise (Aaa) issued new debt to fund its well-developed and technologically advanced capital plans in fiscal years 2013 and 2015, resulting in a decrease in coverage to a still healthy 1.9 times in fiscal 2015 compared with 2.9 times in fiscal 2012.

Exhibit 2
Continued High Cash Reserves Signal Sound Financial Management



Source: Moody's Investors Service

Stronger liquidity leads to flexibility and low leverage

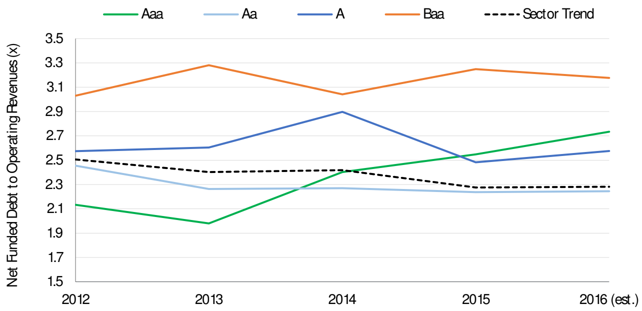
» Liquidity improved across all rating categories in fiscal 2015, giving systems financial flexibility to address capital needs and helping maintain low leverage.

» With sound management, higher-rated entities continued to demonstrate a robust cash position due to well-developed capital plans that include a mix of pay-as-you-go (through regular rate increases) and debt.

» For example, the City of Boulder, CO Combined Water and Sewer Enterprise (Aa1) has a strong rate-setting record, providing healthy cash reserves helping fund a five-year capital improvement plan with pay-as-you-go and debt.

» A strong cash position is key for lower-rated entities with high debt profiles that lack the ability to quickly raise rates to cover unforeseen costs.

Exhibit 3
Highest-Rated Systems Maintain Low Leverage; Baa-Rated Credits Face Elevated Leverage Due to Limited Rate Increases

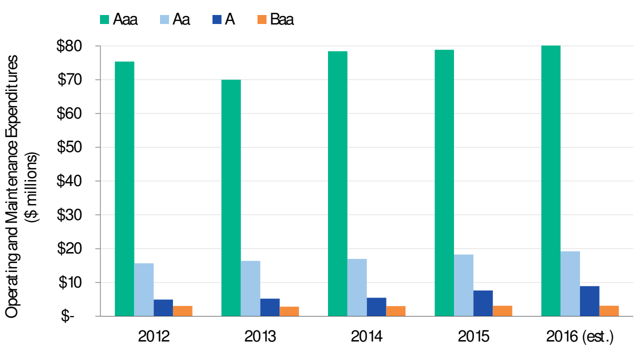


Source: Moody's Investors Service

Leverage remains manageable, except for many Baa-rated systems

- Median leverage across all rating categories was moderate at 2.3 times operating revenues in fiscal 2015, though significantly higher for lower-rated credits. Relatively low leverage affords systems the ability to issue additional debt to fund capital needs.
- The recent bump in leverage of Aaa systems was primarily driven by more sophisticated and aggressive capital planning, leading to new debt issuances.
- Many Baa-rated systems struggle to implement sufficient rate increases to offset growth in debt outstanding.
- Leverage will likely increase given higher debt issuance in 2016 and low interest rates.

Exhibit 4
Larger Systems Are Higher Rated Given Ability to Absorb Unforeseen Shocks



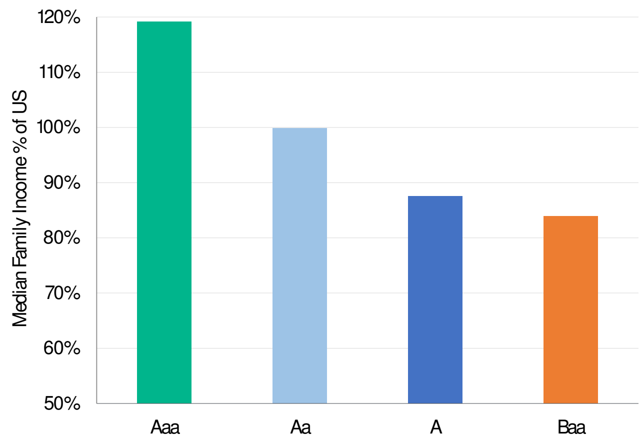
Source: Moody's Investors Service

Larger systems benefit from greater operating flexibility

- Larger utilities maintain the financial means to mitigate unexpected capital needs or the impact associated with the loss of customers. Higher-rated systems also benefit from more diverse customer bases and water sources.
- For example, the City of Columbia, SC Water and Sewer Enterprise (Aa1 stable) experienced substantial damage from rainfall in 2015. Despite sizeable capital needs, the system was able to absorb the immediate expense, and its diverse customer base will be able to support rate increases to fund the capital improvement plan.
- Lower-rated entities have higher operating risks, such as significant customer concentration and/or a single supply of water or a single treatment plant.

Exhibit 5

Credit Strength and Wealth Indicators Are Positively Correlated



Source: Moody's Investors Service

Utilities in wealthier areas have greater rate-raising flexibility

» Higher-rated utilities generally operate in wealthier service areas, where the customer base can support rate increases to cover expenses and capital needs.

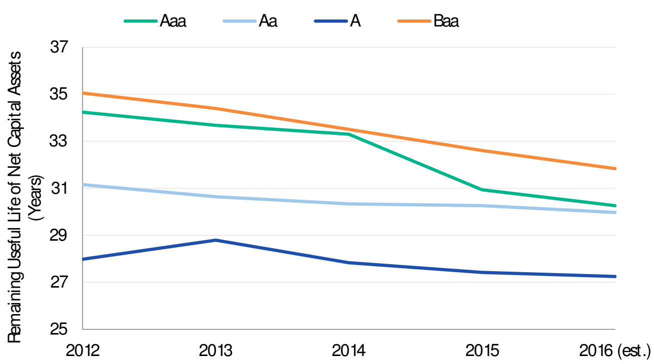
» In fiscal 2015, Aaa-rated systems continued to operate in areas with a median family income well above the US level.

» Customers with lower income levels limit a utility's ability to raise rates annually to keep in pace with expenses and other obligations.

» Utilities in over 40 states enjoy unlimited rate-setting authority, providing operating flexibility.

Exhibit 6

Ongoing Underinvestment Drives Aging Capital Assets



Source: Moody's Investors Service

Remaining useful life declines for all rating categories

» Underinvestment increases the risk of operating challenges. Despite the downward trend, the fiscal 2015 median asset condition of 29 years affords systems time to develop and implement capital plans before widespread events of serious system failure occur.

» Counterintuitively, the median for the Baa category is higher than that for the Aaa category, likely because the lower-rated systems reinvest at a slower pace. This results in a decrease in depreciation expense over time, while net fixed assets decrease at a slower rate due to level non-depreciable assets, artificially inflating our estimate for asset condition.

» Despite capacity for new debt, remaining useful life medians are unlikely to change significantly over the next year due to multiyear capital planning.

Exhibit 7

Medians for All US Water, Sewer, Stormwater, and Combined Utilities

Selected Indicators	2012	2013	2014	2015
Moody's Median Senior Revenue Rating				Aa2
Median Family Income (% of US Median)	97%	96%	96%	96%
Asset Condition: (Remaining Useful Life)	30	30	29	29
Debt to Operating Revenues	2.5	2.4	2.4	2.3
Annual Debt Service Coverage	1.9	2.0	1.9	2.0
Days Cash on Hand	357	371	387	420
System Size: (O&M in 000s)	10,233	10,737	11,065	11,427
Debt Service ($000s)	N/A	3,042	3,092	3,382
Net Revenues ($000)	N/A	7,900	8,022	9,164
Net Funded Debt ($000s)	N/A	41,828	41,402	41,961
Total Revenues ($000)	18,076	18,421	19,384	20,983

Exhibit 8

Medians for US Water Utilities

Selected Indicators	2012	2013	2014	2015
Moody's Median Senior Revenue Rating				Aa2
Median Family Income (% of US Median)	100%	99%	100%	100%
Asset Condition: (Remaining Useful Life)	33	32	32	32
Debt to Operating Revenues	2.3	2.2	2.2	2.2
Annual Debt Service Coverage	2.0	2.0	2.0	1.9
Days Cash on Hand	297	329	345	391
System Size: (O&M in 000s)	6,795	7,156	7,374	7,838
Debt Service ($000s)	N/A	2,282	2,423	2,598
Net Revenues ($000)	N/A	6,260	6,121	7,092
Net Funded Debt ($000s)	N/A	28,205	27,060	31,586
Total Revenues ($000)	13,307	13,566	14,320	15,428

Exhibit 9

Medians for US Sewer Utilities

Selected Indicators	2012	2013	2014	2015
Moody's Median Senior Revenue Rating				Aa2
Median Family Income (% of US Median)	98%	98%	97%	97%
Asset Condition: (Remaining Useful Life)	32	31	31	31
Debt to Operating Revenues	2.9	2.9	2.8	2.8
Annual Debt Service Coverage	1.9	2.0	1.9	2.0
Days Cash on Hand	498	549	549	577
System Size: (O&M in 000s)	8,714	9,151	9,107	9,428
Debt Service ($000s)	N/A	3,268	3,388	3,457
Net Revenues ($000)	N/A	7,687	8,593	10,116
Net Funded Debt ($000s)	N/A	40,485	38,311	41,948
Total Revenues ($000)	16,379	17,656	18,299	20,244

Exhibit 10
Medians for US Combined Water and Sewer Utilities

Selected Indicators	2012	2013	2014	2015
Moody's Median Senior Revenue Rating				Aa2
Median Family Income (% of US Median)	93%	92%	92%	92%
Asset Condition: (Remaining Useful Life)	28	29	27	27
Debt to Operating Revenues	2.5	2.3	2.4	2.3
Annual Debt Service Coverage	1.9	1.9	1.9	2.0
Days Cash on Hand	345	357	349	380
System Size: (O&M in 000s)	13,487	13,834	14,280	15,219
Debt Service ($000s)	N/A	3,701	3,696	3,889
Net Revenues ($000)	N/A	10,356	10,838	11,082
Net Funded Debt ($000s)	N/A	53,146	51,733	50,016
Total Revenues ($000)	23,619	23,661	24,904	26,113

Exhibit 11
Medians for US Stormwater Utilities

Selected Indicators	2012	2013	2014	2015
Moody's Median Senior Revenue Rating				Aa2
Median Family Income (% of US Median)	94%	92%	90%	90%
Asset Condition: (Remaining Useful Life)	57	53	49	50
Debt to Operating Revenues	2.4	2.3	2.0	1.9
Annual Debt Service Coverage	2.4	2.2	1.9	2.9
Days Cash on Hand	757	618	557	822
System Size: (O&M in 000s)	2,960	3,004	2,852	3,284
Debt Service ($000s)	N/A	1,075	1,045	1,118
Net Revenues ($000)	N/A	2,767	3,536	3,973
Net Funded Debt ($000s)	N/A	11,435	8,707	12,166
Total Revenues ($000)	5,391	6,812	7,475	7,351

Exhibit 12
Medians for Aaa-Rated US Water and Sewer Utilities

Selected Indicators	2012	2013	2014	2015
Median Family Income (% of US Median)	127%	125%	124%	124%
Asset Condition: (Remaining Useful Life)	33	30	29	28
Debt to Operating Revenues	1.9	1.9	1.8	1.8
Annual Debt Service Coverage	4.1	2.9	3.3	3.4
Days Cash on Hand	614	625	674	700
System Size: (O&M in 000s)	85,116	81,351	84,240	87,702
Debt Service ($000s)	N/A	16,576	17,291	17,478
Net Revenues ($000)	N/A	74,786	70,650	72,224
Net Funded Debt ($000s)	N/A	226,617	257,415	287,399
Total Revenues ($000)	140,836	148,618	149,803	146,159

Exhibit 13

Medians for Aa-Rated US Water and Sewer Utilities

Selected Indicators	2012	2013	2014	2015
Median Family Income (% of US Median)	96%	97%	97%	97%
Asset Condition: (Remaining Useful Life)	28	29	28	28
Debt to Operating Revenues	2.5	2.3	2.3	2.2
Annual Debt Service Coverage	2.0	2.0	2.0	2.1
Days Cash on Hand	390	408	427	448
System Size: (O&M in 000s)	17,639	18,781	19,224	20,845
Debt Service ($000s)	N/A	5,874	5,925	6,150
Net Revenues ($000)	N/A	14,310	14,555	16,389
Net Funded Debt ($000s)	N/A	73,775	72,859	72,808
Total Revenues ($000)	30,919	32,200	33,385	35,579

Exhibit 14

Medians for A-Rated US Water and Sewer Utilities

Selected Indicators	2012	2013	2014	2015
Median Family Income (% of US Median)	85%	83%	84%	84%
Asset Condition: (Remaining Useful Life)	27	27	26	25
Debt to Operating Revenues	2.6	2.5	2.4	2.3
Annual Debt Service Coverage	1.8	1.7	1.6	1.7
Days Cash on Hand	228	243	249	276
System Size: (O&M in 000s)	5,959	6,105	6,432	6,877
Debt Service ($000s)	N/A	1,527	1,810	1,797
Net Revenues ($000)	N/A	4,005	4,006	4,429
Net Funded Debt ($000s)	N/A	23,708	24,587	23,694
Total Revenues ($000)	10,385	10,558	11,197	11,738

Exhibit 15

Medians for Baa-Rated US Water and Sewer Utilities

Selected Indicators	2012	2013	2014	2015
Median Family Income (% of US Median)	95%	83%	84%	84%
Asset Condition: (Remaining Useful Life)	34	35	24	21
Debt to Operating Revenues	1.9	3.1	2.9	2.3
Annual Debt Service Coverage	1.7	1.7	1.8	1.7
Days Cash on Hand	111	124	115	140
System Size: (O&M in 000s)	3,302	3,105	3,108	3,593
Debt Service ($000s)	N/A	431	756	750
Net Revenues ($000)	N/A	850	1,804	1,839
Net Funded Debt ($000s)	N/A	13,362	9,858	11,304
Total Revenues ($000)	4,202	4,634	4,864	5,646

Basis for Medians

The medians report conforms to our US Municipal Utility Revenue Debt rating methodology published in December 2014. As such, the medians presented here are based on the key metrics outlined in the methodology and the associated scorecard. The appendix of this report provides additional metrics broken out by sector and rating category.

We use data from a variety of sources to calculate the medians, some of which have differing reporting schedules. Whenever possible, we calculated these medians using available data for fiscal year 2015. However, there are some exceptions, such as median family income, which was derived from the 2012 American Community Survey.

Medians for some rating levels, namely Aaa and Baa-rated issuers, are based on relatively small sample sizes. These medians may therefore be subject to potentially substantial year-over-year variation.

Our ratings reflect our forward-looking opinion derived partly from forecasts of financial performance and qualitative factors, as opposed to strictly historical quantitative data used for the medians. Our expectation of future performance, combined with the relative importance of certain metrics on individual local government ratings, account for the range of values that can be found within each rating category.

Key Ratios

» Debt service coverage: annual net revenues (including connection or impact fees) divided by annual debt service.

» Liquidity: unrestricted cash and liquid investments multiplied by 365 and divided by operating and maintenance expenses (net of depreciation), expressed in days.

» Debt to operating revenues: net long-term debt less debt service reserve funds divided by most recent year's operating revenues.

» Asset condition: net fixed assets divided by depreciation expense, expressed in years.

Moody's Related Research

Methodology:

US Municipal Utility Revenue Debt, December 15, 2014

Outlook:

Revenue Raising Flexibility Supports Sound Financial Metrics, December 7, 2016

Sector-In-Depth:

Medians - Solid Operating Performance Exemplifies Stable Sector, March 17, 2016

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

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OUTLOOK

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Water and sewer utilities - US

2018 outlook stable as strong rate management and liquidity support sector

Our stable outlook indicates our expectations for the fundamental credit conditions driving the water and sewer utility sector over the next 12-18 months.

Strong rate management and healthy liquidity support our stable outlook for the water and sewer utilities sector. Annual debt service coverage in 2018 will remain in the range of 1.8-2.2 times debt service requirements. We expect 2018 coverage and liquidity levels to remain in line with fiscal 2016 medians, but the ability to manage the interplay between system investment, financial health and rate affordability will be key to maintaining sector stability.

» **Stable debt service coverage represents strong rate management as utilities continue to proactively adjust rates accordingly.** Coverage will remain in line with the 2016 median of 2.1 times for combined systems and 1.9 times for single service systems. Our range for a stable outlook is 1.7-2.2 times coverage.

» **Liquidity levels remain pivotal to the sector's stability.** Liquidity exceeding 365 days cash on hand indicates the necessary flexibility to absorb unanticipated revenue declines or spending increases. Strong liquidity also provides resources to fund capital projects with cash mitigating reliance on issuing debt. Sewer utilities generally hold more cash on hand due to higher capital requirements related to environmental consent decrees and stringent environmental regulations. However, liquidity levels are still insufficient to fund major capital requirements and, therefore, we expect continued reliance on debt issuance for non-routine capital spending.

» **Balancing capital investment with financial stability and rate affordability will be key to the sector's credit quality.** Utilities will need to continue sufficiently funding capital investment while still maintaining historically strong debt service coverage, liquidity and debt ratios. Identifying alternative, low cost financing sources — such as low interest state loans — to fund capital investment will be key to maintaining this balance.

» **What could change our outlook.** An increase in median coverage to more than 2.2 times debt service requirements coupled with strong liquidity and maintenance of the current asset condition could drive a positive outlook. Any of the following trends could lead to a negative outlook: median coverage levels falling less than 1.7 times, significant declines in liquidity, or deterioration in the median asset condition to below 25 years of useful life.

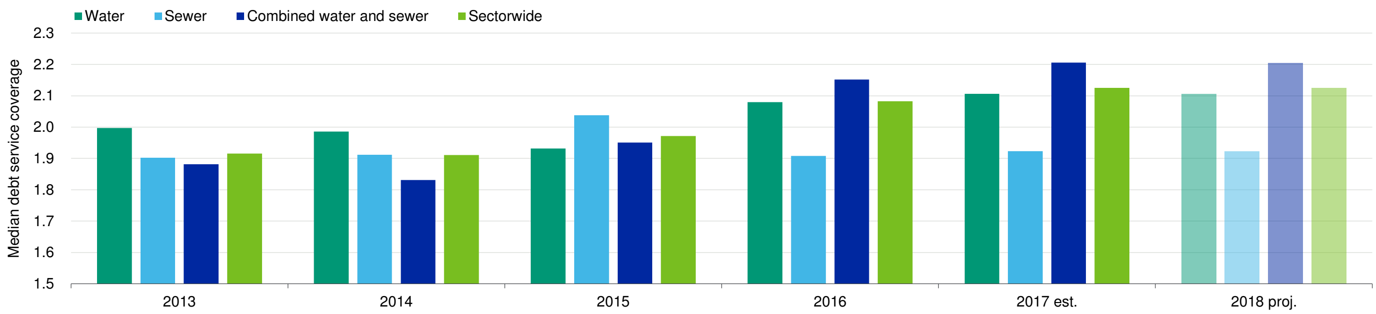
Stable debt service coverage represents strong rate management as utilities continue to proactively adjust rates accordingly

Annual debt service coverage will remain in the range of 1.8-2.2 times debt service requirements in 2018, which is in line with the 2016 median coverage of 1.9 times for single service systems and 2.1 times for combined systems (see Exhibit 1).[1] US water and sewer utilities have historically demonstrated a willingness to increase service rates to levels sufficient to support operations and debt service; a trend we expect to continue over our outlook period of the next 12-18 months.

Exhibit 1

Debt service coverage to remain healthy

Median total annual debt service coverage



Source: Moody's Investors Service

Median debt service coverage of approximately 2.1 times across the sector indicates that utilities' net revenues are roughly 60% greater than needed to provide for debt service; a key sign of financial strength that contributes to a stable operating environment.[2] Utilities typically use the revenues above the required coverage levels to further build reserves or fund capital improvements. Healthy margins also allow utilities to maintain affordable rates despite major debt issuances or capital projects. Individual issuers' coverage may decline over the outlook period, but issuers are typically quick to increase rates when needed.

Strong coverage levels mean there is extra revenue that utilities can use to manage rate increases, grow liquidity or complete pay-go capital projects. By using cash on hand for capital projects, utilities reduce their reliance on debt issuance for more affordable small projects. Cash funding routine annual maintenance or small scale projects provides a buffer for utilities to issue debt to fund expensive projects without dramatically affecting coverage levels.

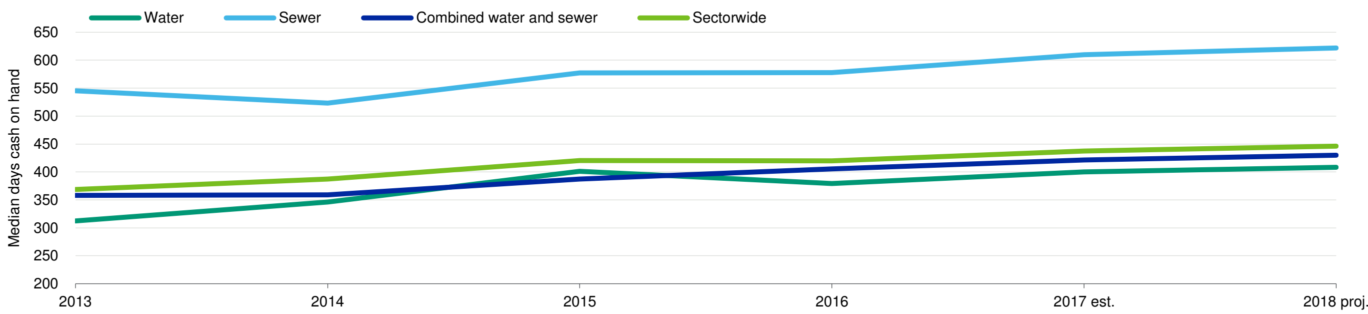
Because our outlooks represent our forward-looking view on credit conditions that factor into our ratings, a negative (positive) outlook suggests that negative (positive) rating actions are more likely on average. However, the outlook does not represent a sum of upgrades, downgrades or ratings under review, or an average of the rating outlooks of issuers in the country or sector, but rather our assessment of the main direction of credit fundamentals within the country, region or sector.

Our Macroeconomic Board forecasts US economic expansion of 2.0%-2.5% over the next 18-24 months with moderate inflation and a strong employment market. Broader employment and wage growth increases utilities' capacity for increased service charges, which we expect utilities to take advantage of. However, corresponding inflation will likely absorb these nominal rate increases resulting in little improvement in operating flexibility. In fact, inflation significantly exceeding the 2% target could actually threaten financial stability in the medium or long term if construction costs increase in tandem and greater rate increases become unpalatable to consumers. This threat is especially significant for sewer systems with large consent decrees, which require greater capital spending to comply with the decrees. Additionally, the Macroeconomic Board forecasts four federal funds rate increases through 2018, which will increase financing costs, but not sufficiently to alter our coverage expectations over the outlook period.

Liquidity is pivotal to the sector's stability

Liquidity will remain healthy as utilities accumulate reserves for future rate stabilization, unexpected system shocks and capital needs. We project median liquidity of 379 days cash on hand for water systems, 578 days for sewer systems and 406 days for combined systems to increase slightly though fiscal 2018 (see Exhibit 2).

Exhibit 2
Liquidity has steadily improved across the sector
Median unrestricted cash to operating expenses



Source: Moody's Investors Service

Sewer utilities hold more cash on hand than water utilities because sewer utilities have above average capital requirements related to the mechanical systems required to provide services, environmental consent decrees and more stringent environmental regulations. Consent decrees are enforceable long-term agreements typically issued for sanitary sewer overflows (SSOs) or combined sewer overflows (CSOs), both of which can require high dollar corrective projects to meet benchmarks of a consent decree. Deferred maintenance can be a direct correlation to the issuance of a consent decree because line breakage or improper operation and maintenance causes the system to violate environmental regulations. Consent decrees also somewhat limit operational flexibility because compliance requires the completion of projects within a specific period of time thereby diverting resources from other projects. While we project liquidity levels to continue to rise throughout fiscal 2018, levels are still insufficient to fund major capital requirements and therefore we expect continued reliance on debt issuance for projects outside the course of regular maintenance, including consent decrees.

Managing the relationship between system investment, financial stability and rate affordability will be key to the sector's credit quality

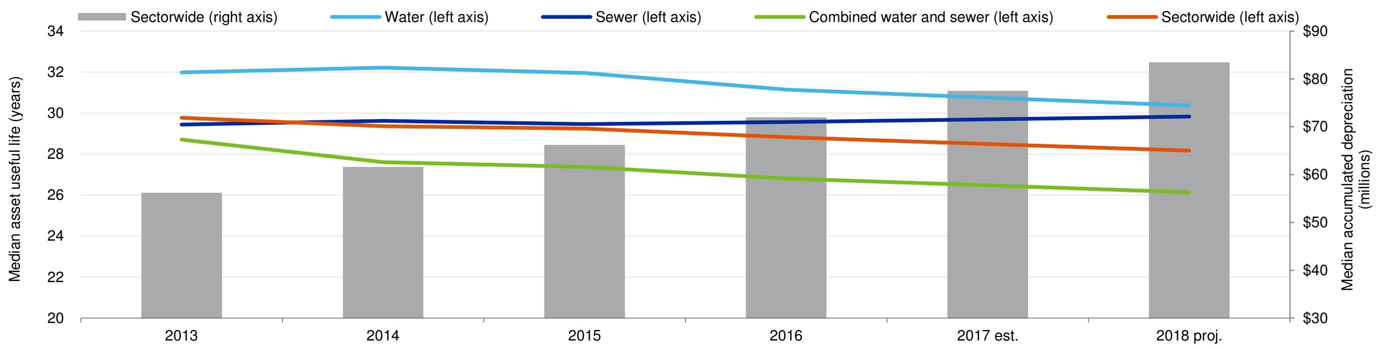
When deciding service charges, water and sewer utilities must consider three factors: providing adequate debt service coverage, maintaining healthy liquidity levels, and funding system operations and investment. Successfully balancing these three factors while keeping rates at a publicly acceptable level is vital to sector stability; if any one factor takes precedence or rate increases become unsustainable, the sector's credit quality could suffer. Positively, some systems are implementing fixed maintenance fees, which are not exposed to varying levels of usage, tied to weather conditions. We expect utilities to balance these factors throughout the outlook period provided stable operations continue.

While we do not expect asset condition — the relationship between net fixed assets and depreciation — to worsen dramatically during the next 12-18 months, sufficient funding of system investment is becoming an increasingly important trend within the sector. If routine maintenance and necessary development is not funded and does not take place, it could affect credit quality. Incremental investment continues to lag system depreciation, evidenced by a declining trend in the median useful life of all systems. Declining asset condition increases the risk of operating inefficiencies, as well as malfunctions that could lead to system interruptions and regulatory or compliance issues.

Utilities tend to make large scale investments to upgrade their systems cyclically and therefore limited useful life deterioration is to be expected in years when only regular maintenance occurs. The median remaining useful life of combined systems will decline to 26.1 years in 2018 if current trends persist, a 2.1 year decline since 2012 (see Exhibit 3). Sewer systems are expected to remain essentially flat relative to 2012 and water systems are on track to decline to 30.4 years, a 2.4 year decline since 2012. Sectorwide, the median useful life is on pace to fall to 28.2 years by 2018, a 2.0 year decline from 2012. However, these levels remain within a range consistent with our stable outlook.

Exhibit 3

Asset useful life declining; depreciation outpaces system investment

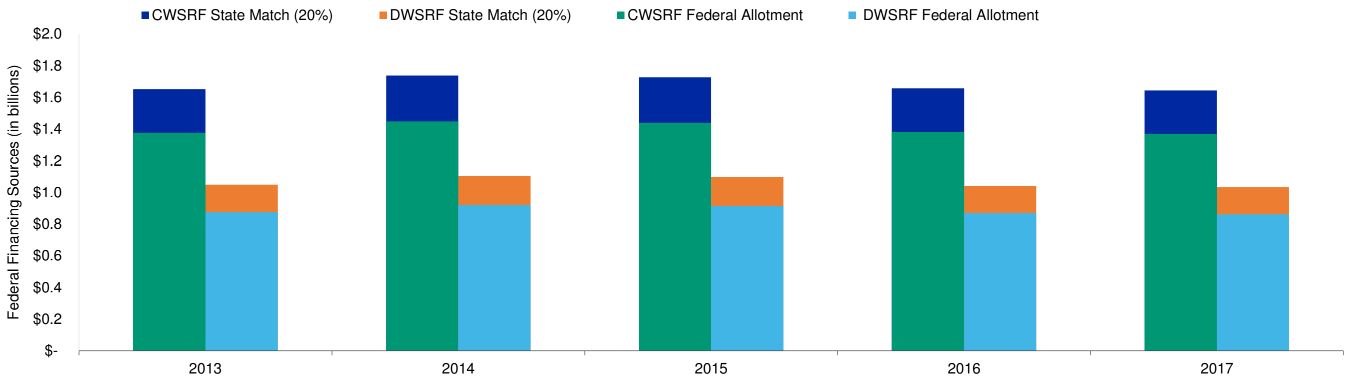


Source: Moody's Investors Service

Autonomous rate setting aids in maintaining coverage and liquidity, and systems will seek to balance rate affordability against system investment. Manageable debt burdens across the sector act as a mitigant so that systems can still integrate modest debt issuances and maintain current coverage levels. However, failure to charge rates sufficient to provide for operations and regular system maintenance could threaten the efficiency of the very service that supports the system and mounting inefficiencies and malfunctions could eat into the credit positive effects of strong rate management and liquidity growth.

In addition to financing projects with reserves or rate increases, access to below market rate loans will enable greater system investment, provided federal and state assistance keeps pace with demand. Through the Drinking Water State Revolving Fund (DWSRF) and the Clean Water State Revolving Fund (CWSRF), the federal government allots grants to all 50 states and Puerto Rico. The states are required to provide a 20% match, but are free to determine how to allocate the funding of the respective program; most states allocate financing through low interest state loans. Together, the federal and state governments have allocated $13.7 billion since 2013 (see Exhibit 4). We expect funding levels to remain consistent, but federal budget constraints could affect their availability. Additionally, funding levels have not grown significantly since 2013, and as plants and equipment age, there is likely to be increased competition throughout the sector for these resources.

Exhibit 4
Federal and state funding support capital investment
Funding level 2013-17



Sources: Moody's Investors Service; Environmental Protection Agency

Federal funding via emergency legislation such as the Water Infrastructure Improvements for the Nation Act of 2016, which provided $100 million through the EPA for infrastructure upgrades in Flint, MI, is unlikely to become commonplace because most utilities do not face the extraordinary situation experienced in Flint. Therefore, it is imperative that annual capital expenditures provide for regularly scheduled maintenance to ensure large scale bonded projects do not ballon as a result of deferred maintenance. Additionally, a pragmatic approach to pay-go capital investment will allow limited low cost alternative financing sources to meet the needs of more systems throughout the sector.

Responding to extreme weather events

Extreme weather events — such as hurricanes Harvey, Irma and Maria this year — will continue to pose operating and capital challenges to water and sewer systems. However, the availability of federal funds that provide resources for recovery efforts largely mitigate these challenges.

For example, The Nassau County Sewer and Storm Water Authority's Bay Park Sewage Treatment Plant was severely damaged during Superstorm Sandy in October 2012. The cost of storm-related repairs and mitigation measures, totaling $810.7 million, are fully funded by FEMA and New York State.

Federal disaster aid is crucial because many state and local governments do not have the liquidity or financial wherewithal to cope with a major disaster without a serious deterioration in credit quality. Congress has shown a willingness to appropriate emergency funds for the truly large-scale disasters that would otherwise have the potential to financially devastate local governments. We expect that political support to continue.

For more information on FEMA and the relationship to state and local governments please see our report "FAQ: Proposed FEMA cuts would have modest impact on state/local governments."

What could change our outlook

Coverage levels exceeding 2.2 times debt service requirements coupled with strong liquidity and maintenance of the current asset condition could drive a positive outlook.

Any of the following trends could lead to a negative outlook:

» Median coverage levels falling below 1.7 times

» Significant liquidity declines

» Deterioration in the median asset condition across the sector to below 25 years of useful life

Additionally, given the linkage between utility enterprises and local governments, an outlook change for the US Local Government sector could lead to a similar change in outlook for water and sewer systems.

Moody's related publications

Outlooks:

» Cross-Sector - Global: 2018 Outlook: Credit conditions improve as healthy economic growth moderates financial stability and political risks, November 2017

» Global Macroeconomic Update (2018-19): Broadening emerging market recovery and stable growth in advanced economies, November 2017

» Sovereigns – Global: 2018 outlook stable as healthy growth tempers high debt, geopolitical tensions, November 2017

» Local Government - US: 2018 outlook stable as tax revenue grows slowly; pressures intensify for some issuers, December 2017

Sector In-Depth:

» Municipal Water and Sewer Utilities - US: Medians - Sound Financial Metrics Signal Continued Stability, March 2017

Methodology:

» US Municipal Utility Revenue Debt, December 2014

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Endnotes

1 2016 is the most recent available because audit information for fiscal 2017 is not yet available.

2 The median rate covenant across the sector requires entities maintain coverage of at least 1.2 times debt service, measured at either maximum annual, current or average debt payments.

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