



Water Enterprise Credit Ratings and Risks

**Association of Metropolitan Water Agencies
2014 Water Policy Conference**

Washington, DC

Overview

- 1. Moody's Water Enterprise Ratings Overview**
- 2. Water Enterprise Rating Methodology**
- 3. Recent Water Enterprise Credit Developments**

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Moody's Water Enterprise Ratings Overview

Moody's Ratings Indicate Relative Credit Risk

Global Long-Term Rating Scale	
Aaa	Obligations rated Aaa are judged to be of the highest quality, subject to the lowest level of credit risk.
Aa	Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.
A	Obligations rated A are judged to be upper-medium grade and are subject to low credit risk.
Baa	Obligations rated Baa are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics.
Ba	Obligations rated Ba are judged to be speculative and are subject to substantial credit risk.
B	Obligations rated B are considered speculative and are subject to high credit risk.
Caa	Obligations rated Caa are judged to be speculative of poor standing and are subject to very high credit risk.
Ca	Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.
C	Obligations rated C are the lowest rated and are typically in default, with little prospect for recovery of principal or interest.

Source: Moody's Rating Symbols and Definitions, Sept. 2013

Municipal Default Rates Have Been Extremely Low

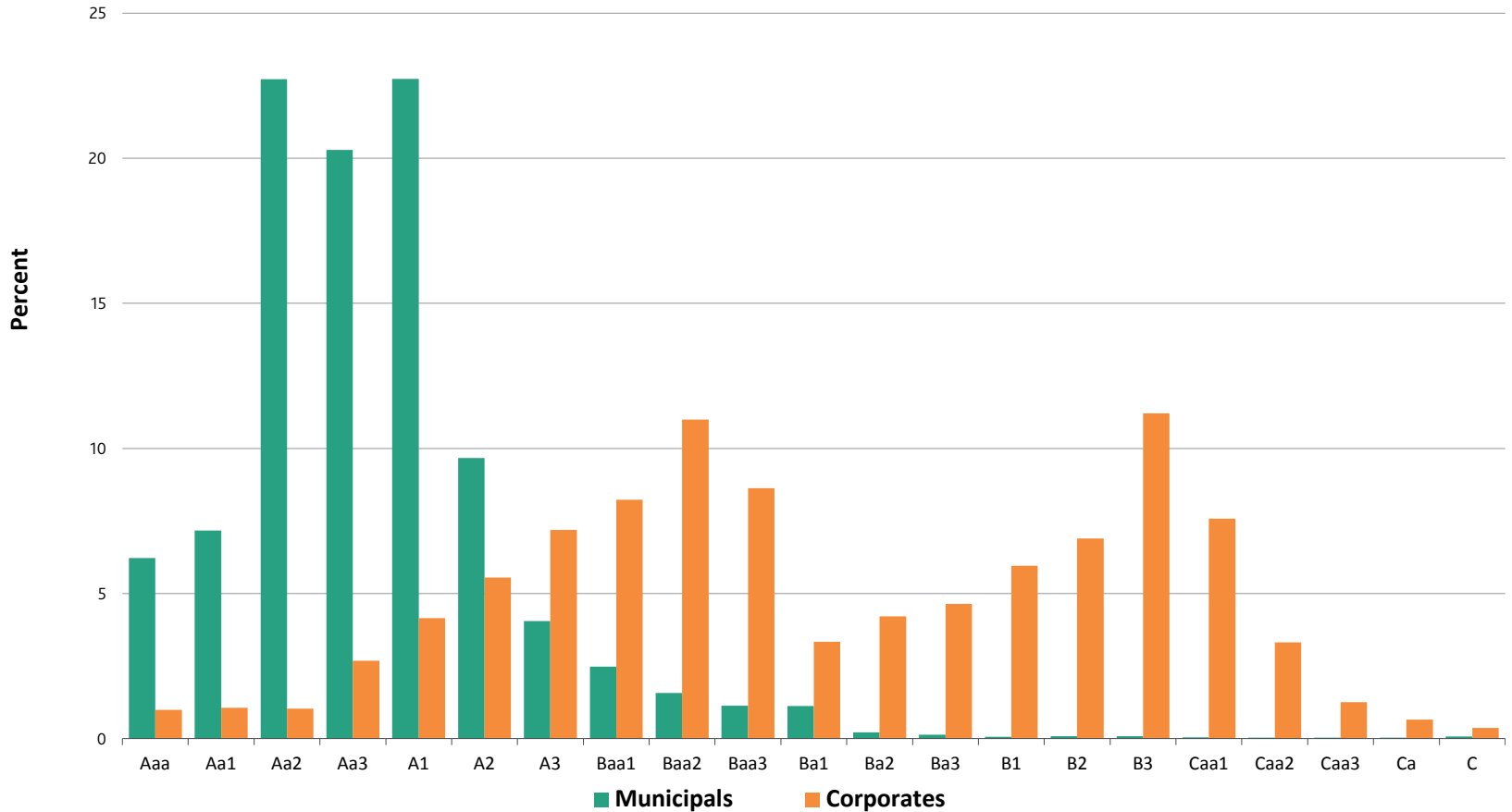
Cumulative Default Rates, Average over the Period 1970-2012

All Municipals

Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
A	0.00%	0.01%	0.01%	0.02%	0.02%	0.03%	0.03%	0.04%	0.05%	0.05%
Baa	0.01%	0.03%	0.06%	0.09%	0.12%	0.15%	0.19%	0.22%	0.26%	0.30%
Ba	0.18%	0.55%	0.92%	1.30%	1.63%	1.95%	2.28%	2.53%	2.72%	2.85%
B	2.21%	4.24%	6.14%	8.07%	10.02%	11.32%	12.07%	12.61%	13.13%	13.88%
Caa-C	5.77%	8.15%	9.67%	10.34%	10.74%	11.18%	11.67%	12.21%	12.66%	12.66%

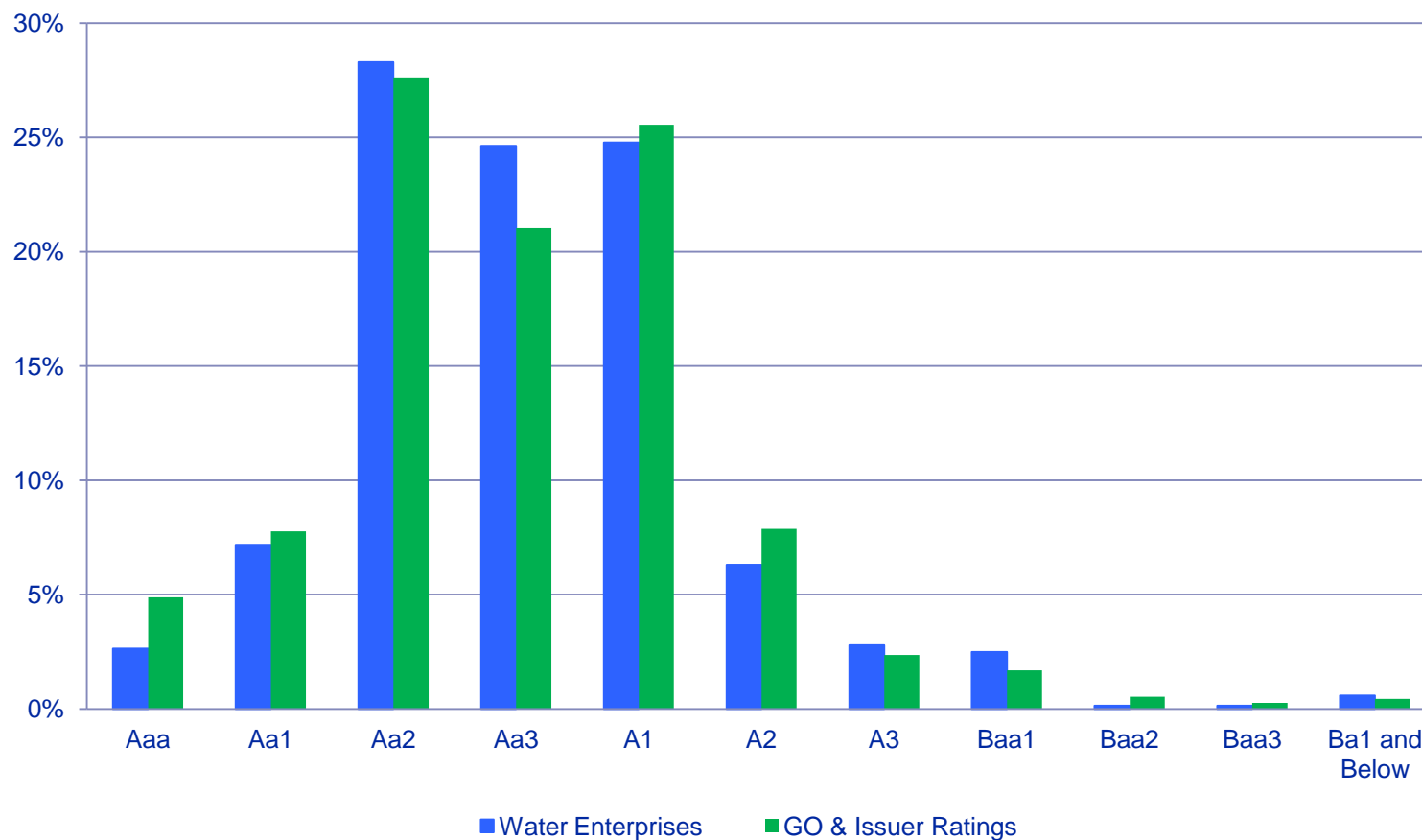
Moody's US Municipal Bond Defaults and Recoveries, 1970-2012 - Excel data, May 7, 2013

Municipal Ratings Overall are Relatively High Compared to Corporate Ratings



Moody's US Municipal Bond Defaults and Recoveries, 1970-2012 [Excel data]

Moody's Water Enterprise Ratings Are Relatively High



No Moody's-Rated Water Enterprise Defaults for Over 40 Years

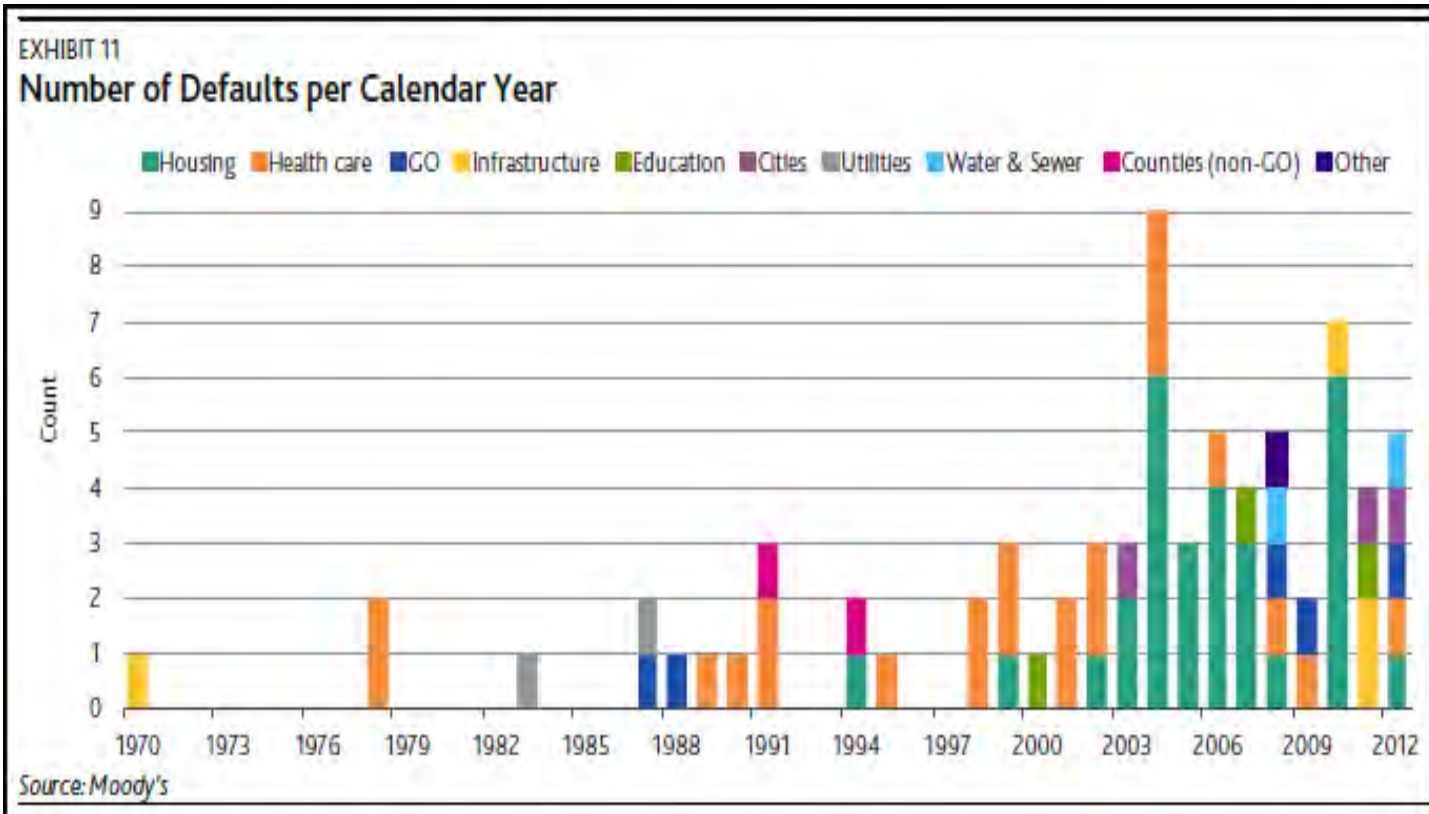
EXHIBIT 9
Default by Sector, 1970-2012

Purpose	Number of Defaults	Percentage	One-Year Default Rate
Housing	29	39.7%	0.062%
Hospitals & Health Service Providers	22	30.1%	0.091%
Infrastructure	4	5.5%	0.031%
Education	3	4.1%	0.007%
Cities	3	4.1%	0.011%
Utilities	2	2.7%	0.005%
Water & Sewer ^[1]	2	2.7%	0.004%
Counties	2	2.7%	0.016%
Special Districts	0	0.0%	0.000%
State Governments	0	0.0%	0.000%
Pool Financings	0	0.0%	0.000%
Other	1	1.4%	0.037%
NON GENERAL OBLIGATION	68	93.2%	0.026%
GENERAL OBLIGATION	5	6.8%	0.001%
TOTAL	73	100%	0.012%

Source: Moody's

[1] Solely sewer enterprise defaults: Jefferson County, AL, and Oakdale, CA

Municipal Defaults Have Been Rising



Post-Default Recoveries Have Been Trending Lower?


Moody's Rated Local Government Defaults and Recoveries Since 1970				
Municipality	State	Security Class	Default Date	Ultimate Recovery
Belfield (City of)	ND	GO	4/1/1987	55% of principal
Vanceburg (City of)	KY	Revenue	12/1/1987	100%
Baldwin County	AL	GO	10/1/1988	100%
Polk County	IA	Lease Rental	12/1/1991	100%
Orange County	CA	Lease Rental	12/6/1994	100%
Cicero (Town of)	NY	Lease Rental	11/1/2003	10% of principal
Jefferson (County of) Sewer Enterprise	AL	Revenue	4/1/2008	Pending; Issuer's current plan provides 55-60% average across bondholders
Jefferson (County of)	AL	GO	9/15/2008	Pending; Issuer's current plan provides approximately 70-85%
Harrisburg (City of)	PA	GO / GO-guaranteed Resource Recovery	6/1/2009	Pending for GO / Pending; Issuer's current plan provides 60-70% for GO-Guaranteed Resource Recovery
Wenatchee (City of)	WA	GO	6/1/2012	100%
Stockton (City of)	CA	Lease Rental	6/28/2012	Pending; 17% initial offer on Pension Obligation Bonds
Oakdale (City of) Sewer Enterprise	CA	Revenue	8/31/2012	93.4%
Jefferson (County of)	AL	Lease Rental	1/1/2013	Pending; Issuer's current plan provides approximately 55-65%
Jefferson (County of)	AL	VRDB School Warrants	2/11/2013	Pending; Issuer's current plan provides 90-100%
Pontiac School District	MI	GO	5/1/2013	Pending
Detroit (City of)	MI	Certificates of Participation	6/14/2013	Pending - 10% initial offer

Source: Moody's Special Comment :Recent US Local Government Defaults Point to Lower Recovery Rates, Sept. 12, 2013

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Water Enterprise Rating Methodology

Rating Assignments are Guided By Moody's Water and Sewer System Rating Methodology



August 1999

Rating Methodology

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New York	
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RATING METHODOLOGY

Analytical Framework For Water And Sewer System Ratings

Overview

The indispensability of water and sewer systems to their municipalities helps support their A2-average rating. But because they are essential to public health, the environment, and the economy, they are subject to regulations that seek to control contaminants released into the environment or consumed in drinking water. These regulatory issues drive credit quality reflecting both the importance of protecting health and the environment and the risks of failing to do so.

Both the water and sewer sectors are mature and slow to innovate, often — but not always — relying on traditional designs that have been operationally risk free and that more easily win regulatory approval. For investors, this minimizes the construction risk inherent to all construction projects. Proper engineering, pilot studies, and regulatory reviews further minimize risk. When innovation does occur, it tends to be driven more by increasingly stringent regulatory requirements, water supply concerns or cost constraints and less by profit motive and competition.

The capital requirements for regulatory compliance are substantial. Without providing any additional capacity, the billions of dollars spent on regulatory compliance impose financial stress on many systems, particularly the smaller ones. A notable risk of these issuers is their ability to continue to meet the capital investment requirements of the systems as they age.

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continued on page 3

Analytical Framework For Water And Sewer System Ratings

Rating Methodology

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- **System size and assessment base.** Larger systems can achieve economies of scale. Smaller systems may have more trouble raising revenues to meet large fixed costs.
- **Local economy and customer base.** Moody's looks for a diverse customer base to protect against the loss of a large customer. We also analyze a system's ability to meet the needs of a growing economy and population.
- **Governance.** Operation by an independent board often counters the politicization that can impede efficiency.
- **Quality of management.** This is revealed in — among other things — adaptability to regulatory changes and financial constraints, track record of regulatory compliance, and sound staffing practices.
- **Strategic focus.** Moody's favorably considers multi-year capital improvement plans that include current and anticipated capital needs that cover asset maintenance, upgrades, and system expansions.
- **Rates, rate structure, and rate-making flexibility.** Moody's evaluates whether rates and revenues cover all financial commitments, with enough reserve for emergencies, and whether they are reasonable and affordable, which could affect asset maintenance and expansion of the user base.
- **Liquidity.** Moody's examines whether debt service coverage ratios include recurring and one-time charges. Systems with large, completed, and compliant capital improvement programs can afford narrower margins. Adequate excess revenues enable systems to cash-fund more of their capital needs.

Sector Overview

Moody's maintains over 1,000 ratings on debt secured by revenues of water and/or sewer systems. The range of ratings in this sector is Aaa to Ba3, and the average is A2.

Water and sewer revenue bonds represent the largest sector, by far, in the United States' tax-exempt revenue bond market, and the last monopolistic utilities. Competition — if any — in these industries can come when public systems are, or proposed to be, privatized or restructured. Privatization or restructuring can come in different forms including transferred ownership of the facilities, contract operations, consolidation and regionalization of facilities. For municipal systems not subject to rate regulation, environmental regulations drive operating costs and capital spending.

Sector Overview

- Regulation driven
- Essential, capital intensive and non-competitive
- Mature and slow to innovate

Key Rating Factors

- Regulatory risk
- Construction risk
- System size and assessment base
- Local economy and customer base
- Governance and management quality
- Strategic focus
- System demand and capacity
- Maintenance of assets
- Regulatory compliance
- Rates, rate structures, and rate-making flexibility
- Liquidity

HEAVILY REGULATED SECTOR DRIVEN BY DEMANDS OF PUBLIC HEALTH AND ENVIRONMENT

Regulation is a defining element of water supply and wastewater systems. In the United States, wastewater industry regulation took shape under the 1972 federal Clean Water Act, which created uniform effluent standards that set limits on discharges from wastewater treatment plants. The Act, further amended in 1987, created a national system for monitoring, reporting and enforcing the standards through the National Pollutant Discharge Elimination System (NPDES) permit program.

The capital requirements for regulatory compliance have been substantial. While federal grant support accompanied the initial wastewater legislation, current financial subsidies are limited to low-interest loans through State Revolving Loan Funds (SRFs) created in the 1987 amendment.

In 1974, shortly after passage of the Clean Water Act, the federal Safe Drinking Water Act put in place uniform nationwide minimum standards for drinking water. Through subsequent amendments maximum contaminant levels for more than 80 contaminants posing risk to public health have been set. Again, compliance required substantial capital. The 1996 Safe Drinking Water Act Amendments — the most recent amendments — extended the SRF program to drinking water projects in an effort to provide some financial relief to these systems that didn't have the support of early grant programs. See *Moody's State Revolving Funds Sector Outlook, July 1998*.

All Rating Methodologies are Publicly Available on Moodys.com

The screenshot shows the Moody's website homepage in a Windows Internet Explorer browser. The address bar displays "https://www.moody's.com/". The page features a dark blue header with the Moody's logo and navigation links such as "About Moody's", "Regulatory Affairs", "Careers", "Contact Us", "Help", and "Terms of Use". Below the header is a search bar and a "Welcome Eric Hoffmann" message. The main content area is divided into several sections:

- Editor's Choice:** A featured article titled "Moody's Credit Outlook" dated March 17, 2014. The article discusses the "Credit implications of current events" and is published twice a week. A "NEW FORMAT" banner is visible in the top left corner of the article image. Below the main article are five smaller thumbnail images for "Credit Outlook", "Market Outlook", "2014 Outlooks", "Covered Bonds", and "Covenants".
- Ratings Highlights:** A list of recent rating changes, including:
 - Argentina's government bond rating downgraded to Caa1; outlook stable
 - Huntington Ingalls' rating outlook changed to positive; Ba2 CFR affirmed
 - Husky's proposed notes rated Baa2
 - The Netherlands' Aaa government bond rating outlook changed to stable from negative; rating affirmed
 - Belgium's Aa3 government bond rating outlook changed to stable from negative; affirms ratings
- Most Viewed Issuers:** A list of five issuers:
 1. Royal Bank of Scotland plc
 2. Royal Bank of Scotland Group plc
 3. Barclays Bank PLC
 4. Deutsche Bank AG
 5. BNP Paribas
- FEATURED EVENT:** A promotional box for a "Project Finance Power Briefing" on 8 APRIL 2014 in LAS VEGAS, with a "Register Now" button and an image of a power transmission tower.

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The main content area is titled 'Rating Methodologies - U.S. Public Finance'. Below the title is a 'Research' tab and a search filter section with 'Select Dates From:' and 'To:' fields, both containing 'dd/mm/yyyy', and a 'GO >' button. Below the search filter, it says 'Results 1 - 30 Of 43' and 'Page 1 Of 2'. A table of results follows, with columns for 'Date', 'Document Type', 'Title', and 'Issuer/Entity'. The first row shows a date of '31 Jan 2014', document type of 'Rating Methodology', title of 'US Public Finance Special Tax Methodology', and an empty issuer/entity field. The second row shows '15 Jan 2014', 'Rating Methodology', 'US Local Government General Obligation Debt', and an empty issuer/entity field. The third row shows '17 Dec 2013', 'Rating Methodology', 'California Tax Allocation Bonds', and an empty issuer/entity field. The fourth row shows '10 Jul 2013', 'Rating Methodology', 'State Aid Intercept Programs and Financings: Pre and Post Default', and an empty issuer/entity field. The fifth row shows '24 May 2013', 'Rating Methodology', 'Variable Rate Instruments Supported by Conditional Liquidity Facilities', and an empty issuer/entity field. The sixth row shows '17 Apr 2013', 'Rating Methodology-Cross Sectr', 'Adjustments to US State and Local Government Reported Pension Data', and an empty issuer/entity field. The seventh row shows '17 Apr 2013', 'Rating Methodology', 'US States Rating Methodology', and an empty issuer/entity field. The eighth row shows '04 Apr 2013', 'Rating Methodology', 'Short Term Cash Flow Notes', and an empty issuer/entity field. The ninth row shows '29 Mar 2013', 'Rating Methodology', 'U.S. Municipal Pool Program Debt', and an empty issuer/entity field. The tenth row shows '20 Mar 2013', 'Rating Methodology', 'U.S. State Revolving Fund Debt', and an empty issuer/entity field. The eleventh row shows '15 Feb 2013', 'Rating Methodology', 'US Independent Schools Methodology', and an empty issuer/entity field. The twelfth row shows '06 Feb 2013', 'Rating Methodology', 'U.S. Housing Finance Agency Single Family Programs', and an empty issuer/entity field. The thirteenth row shows '13 Dec 2012', 'Rating Methodology', 'US Stand-Alone Housing Bond Programs Secured by Credit Enhanced Mortgages', and an empty issuer/entity field. The fourteenth row shows '10 Oct 2012', 'Rating Methodology', 'Municipal Rating Methodology', and an empty issuer/entity field.

On the left side of the page, there is a 'You Browsed By:' section. It includes 'RESEARCH TYPE' with 'Methodology (Remove)' and 'Rating Methodologies (Remove)'. It also includes 'MARKET SEGMENT' with 'U.S. Public Finance (Remove)'. Below this is a search box with 'Search within results' and a 'GO' button, and a link to 'Add alert for this criteria >'. Below that is a 'Refine by:' section with 'RESEARCH TYPE' showing 'Rating Methodology (41)' and 'MARKET SEGMENT' with various categories and counts: 'Environmental Utilities (12)', 'Healthcare Providers (9)', 'Higher Education & Not-for-Profit Organizations (16)', 'Housing (17)', 'Local Government (17)', 'Multi-Obligor Pools (Non-Housing) (9)', 'Municipal Supported Products (15)', 'Power & Gas Utilities (11)', 'State Government (14)', 'Tourism & Economic Development (9)', and 'Transportation Authorities (10)'. At the bottom of this section is 'REGION' with 'North America (31)', 'Latin America & Caribbean (21)', 'Europe, Middle East & Africa (1)', and 'Asia Pacific (1)'.

Moody's Most Recent Methodologies Have "Scorecards" and Explicit Rating Factor Weights

RATING FACTORS		SUB-FACTORS		Aaa	Aa	A	Baa	SG
1. TAXABLE BASE AND PLEDGE - 30%	Economic Strength	15%	Very strong and very well diversified economic base with solid growth OR PCI/MFI is 200% or greater of national median for primarily residential bases	Strong and well diversified economic base with solid growth OR PCI/MFI is 125% - 200% of national median for primarily residential bases	Developed and reasonably diversified economic base with average growth OR PCI/MFI is 75% - 125% of national median for primarily residential bases	Small to evolving economy with modest diversification and some concentration with slow to declining growth OR PCI/MFI is 50% to 75% of national median for primarily residential bases	Deteriorating economic base with very little diversification or significant concentration with declining growth OR PCI/MFI is 50% or below of national median for primarily residential bases	
	Nature of the Special Tax Pledge	15%	Very Broad (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees; Fixed Payments from the State depending on State's Rating)	Broad (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees; Fixed Payments from the State depending on State's Rating)	Average (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees)	Narrow (e.g. Hotel, Car Rental, Meals, Lottery, Liquor, and Cigarette Taxes)	Very Narrow (e.g. Document Stamp, Hotel, Car Rental, Meals, Lottery, Liquor, and Cigarette Taxes)	
2. LEGAL STRUCTURE - 30%	Additional Bonds Test (ABT)	20%	3.0x or higher OR a closed lien	1.76x to 2.99x	1.26x to 1.75x	1.0x to 1.25x	NO LIMIT	
	Debt Service Reserve Fund Requirement	10%	DSRF funded at level greater than 1-year of MADS	DSRF funded at 1-year of MADS	DSRF funded at lesser of standard 3-prong test	DSRF funded at level less than 3-prong test or a springing DSRF	NO DSRF (or DSRF funded with low rated to below investment grade surety provider)	
3. FINANCIAL METRICS - 40%	Maximum Annual Debt Service Coverage	20%	Over 4.5x	2.51x to 4.5x	1.51x to 2.5x	1.1x to 1.5x	Less than 1.1x	
	Revenue Trend	10%	Significantly improving with one to no historic declines	Generally improving with few historic declines	Stable with some historic declines	Declining	Rapidly Declining	
	Revenue Volatility	10%	Has never declined	Negative fluctuations generally within 0% to 5%	Negative fluctuations generally within 5% to 10%	Negative fluctuations generally within 10% to 15%	Negative fluctuations greater than 15%	

Moody's Most Recent Methodologies Have “Scorecards” and Explicit Rating Factor Weights

JANUARY 15, 2014 U.S. PUBLIC FINANCE


Moody's
INVESTORS SERVICE

RATING METHODOLOGY **US Local Government General Obligation Debt**

EXHIBIT 1
Scorecard Factors and Weights
Local Governments

Broad Rating Factors	Factor Weighting	Rating Subfactors	Subfactor Weighting
Economy/Tax Base	30%	Tax Base Size (full value)	10%
		Full Value Per Capita	10%
		Wealth (median family income)	10%
Finances	30%	Fund Balance (% of revenues)	10%
		Fund Balance Trend (5-year change)	5%
		Cash Balance (% of revenues)	10%
		Cash Balance Trend (5-year change)	5%
Management	20%	Institutional Framework	10%
		Operating History	10%
Debt/Pensions	20%	Debt to Full Value	5%
		Debt to Revenue	5%
		Moody's-adjusted Net Pension Liability (3-year average) to Full Value	5%
		Moody's-adjusted Net Pension Liability (3-year average) to Revenue	5%

Older Methodologies are Driven By Key Rating Factors Without Specific Weights



Moody's Investors Service
Municipal Credit Research

August 1999

Rating Methodology

RATING METHODOLOGY

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HEAVILY REGULATED SECTOR DRIVEN BY DEMANDS OF PUBLIC HEALTH AND ENVIRONMENT

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Key Rating Factors

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- Local economy and customer base
- Governance and management quality
- Strategic focus
- System demand and capacity
- Maintenance of assets
- Regulatory compliance
- Rates, rate structures, and rate-making flexibility
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Older Methodologies are Driven By Key Rating Factors Without Specific Weights

Key Rating Factors

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Rating Outcomes are Significantly Influenced By “Medians” ...

National Medians for Water & Sewer Enterprises

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2
Operating ratio (%)	63.8	55.6	58.4	60.6	60.0	66.6	76.4	60.4	
Net Take-Down (%)	44.2	51.0	43.6	42.4	42.0	36.6	27.2	42.0	
Debt Service Safety Margin (%)	27.0	22.8	19.8	20.1	18.5	10.9	8.8	19.7	
Debt Ratio (%)	22.9	33.2	28.2	34.1	37.0	32.7	37.6	59.9	
Total Annual Senior Lien Debt Service Coverage (x)	4.33	2.36	2.67	2.25	2.56	2.77	1.62	2.13	
Total Annual Debt Service Coverage (x)	3.27	2.00	2.12	1.97	1.88	1.64	1.36	1.89	
Maximum Annual Debt Service Coverage(x)	3.81	1.93	2.14	1.77	1.82	1.34	1.29	1.54	
Unrestricted Reserves as a Percentage of O&M (%)	141.2	117.9	112.1	96.5	84.7	42.2	43.7	69.7	
Net Working Capital as a Percentage of O&M (%)	190.1	198.5	165.4	163.4	141.5	80.8	68.7	78.3	
Total Operating Revenues (\$000)	125,910	100,310	41,032	20,993	12,317	9,388	8,526	6,435	

National Water Medians

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2
Operating ratio (%)	52.0	54.9	60.5	59.4	61.2	59.3	55.6	70.0	72.5
Net Take-Down (%)	50.1	47.5	43.9	44.7	42.4	46.0	44.5	31.5	30.8
Debt Service Safety Margin (%)	28.2	24.8	23.4	18.7	20.8	17.8	10.5	14.5	-1.3
Debt Ratio (%)	28.9	39.8	27.8	35.6	31.4	41.3	38.8	52.3	51.6
Total Annual Senior Lien Debt Service Coverage (x)	2.47	2.78	2.64	2.09	2.34	1.98	1.34	2.22	1.0
Total Annual Debt Service Coverage (x)	2.19	2.70	2.28	1.82	2.18	1.77	1.29	2.12	1.0
Maximum Annual Debt Service Coverage(x)	1.69	2.29	2.16	1.66	2.11	1.66	1.06	2.30	1.0
Unrestricted Reserves as a Percentage of O&M (%)	67.8	75.6	99.2	67.9	93.4	112.4	40.9	48.8	137.1
Net Working Capital as a Percentage of O&M (%)	189.7	127.2	148.7	131.1	118.1	137.8	105.4	115.1	134.3
Total Operating Revenues (\$000)	116,042	96,714	25,490	10,891	5,724	3,763	3,317	1,500	3,969

...and “Comparables”

MFRA[®] (MUNICIPAL FINANCIAL RATIO ANALYSIS)

Water and Sewer

MFRA > Water and Sewer > Customized Filter Query

Analyst Adjusted As Reported

Continue

Water Sewer Water & Sewer

Please note - Changing the sector after selecting entities will clear your selections.

Select Filter Characteristics:

Hold CTRL to multi-select.

Senior Most Rating

- All
- Aaa
- Aa1
- Aa2
- Aa3

State

- All
- ALABAMA
- ALASKA
- ARIZONA
- ARKANSAS

Total Operating Revenues (\$000)

Debt Ratio (%)

Total Annual Debt Service Coverage (x)

Continue

Municipal Financial Ratio Analysis

- States
- Local Governments
- **Water and Sewer**
- Airports
- Ports
- Public Power
- Toll Facilities
- Healthcare
- Higher Education
- Not-for-Profit Organizations
- Housing

▶ **Analytics**

- ▶ Pre-set Medians
- ▶ Issuer Summary
- ▶ Customized Entity Query
- ▶ Customized Filter Query
- ▶ Saved Reports

▶ **Ratio Definitions**

▶ **Frequently Asked Questions**

▶ **Rating Descriptions**

▶ **Key Analyst Contacts**

Comparables are Available to Moody's MFRA Subscribers

MFRA® (MUNICIPAL FINANCIAL RATIO ANALYSIS)

Water and Sewer

MFRA > Water and Sewer > Customized Filter Query

Water Customize Report View Median Report Save

Analyst Adjusted - Comp Report Export

▶ View Criteria

Report Format: Date Display: Years Displayed:

Selected Financials and other Datapoints	Medians	Beverly Hills (City Of) Water Enterprise, CA	Cincinnati (City of) Water Enterprise, OH	Cobb County & Marietta Water Authority, GA
	Most Recent Available	Most Recent Available (AA:6/30/2012)	Most Recent Available (AA:12/31/2012)	Most Recent Available (AA:12/31/2012)
General Entity Information				
Current Senior Most Rating*	Aaa	Aaa	Aaa	Aaa
Revenue Backed Rating Description	N/A	LT SR REV	LT SR REV	LT SR REV
State	N/A	CA	OH	GA
Financial Data : Balance Sheet Data				
Total Current Cash, Cash Equivalents and Investments(\$000)	34,126	13,904	15,147	8,470
Financial Data : Income Statement Data				
Total Operating Revenues (\$000)	116,042	31,125	135,384	72,733
Gross Revenues (\$000)	136,289	31,443	139,066	74,114
Financial Data : Key Financial Ratios				
Operating ratio (%)	52.0	65.9	56.0	32.5
Net Take-Down (%)	50.1	34.7	45.5	68.1
Debt Service Safety Margin (%)	28.2	18.8	13.7	57.0
Debt Ratio (%)	28.9	44.1	37.7	19.8
Total Annual Senior Lien Debt Service Coverage (x)	2.47	2.19	1.60	8.77
Total Annual Debt Service Coverage (x)	2.19	2.19	1.43	6.16
Maximum Annual Debt Service Coverage(x)	1.69	1.21	1.35	5.51
Net Working Capital as a Percentage of O&M (%)	189.7	107.4	393.2	504.6

3

Recent Water Enterprise Credit Developments

Key Risks and Recent Developments

➤ Distressed local government contagion risk

- Detroit
 - Plan of Adjustment would result in GO recoveries of about 20%, with water and sewer recoveries as high as 100%
- Jefferson County
 - GOLT recoveries (88%) were higher than sewer warrant recoveries (54%)
- Stockton
 - Water and sewer unimpaired through bankruptcy

➤ Continued regional droughts

- California--no rating or rating outlook changes to date
- Southwest--Colorado River storage “sufficient” through 2016

➤ Rate raising fatigue

➤ Efficiency gains fall behind rate of population and income growth

Moody's New Issuer Guide, Published Feb. 21, 2014



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