

RatingsDirect®

Credit Rating Model: Water/Sewer Credit Scoring

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Credit Rating Model:

Water/Sewer Credit Scoring

Standard & Poor's Ratings Services uses the results of its Water/Sewer Credit Scoring Model to perform standardized credit analysis for assigning water and sewer ratings based on its criteria methodology.

Purpose Of The Model

Standard & Poor's criteria, " U.S. Public Finance Waterworks, Sanitary Sewer, And Drainage Utility Systems: Rating Methodology And Assumptions", published Jan. 19, 2016, explains our methodology for assigning issue credit ratings, issuer credit ratings (ICRs), and ratings derived from stand-alone credit profiles (SACPs), based on waterworks, sanitary sewer, and drainage utility revenue pledges of local and regional governments (LRG) in the U.S. The Water/Sewer Credit Scoring Model applies the criteria methodology. By standardizing the calculations and inputs used in our analysis, the model provides for the consistent application of the referenced criteria.

The model is used to perform credit analysis for new issuance and surveillance of ratings assigned to waterworks, sanitary sewer, and drainage utility systems of a U.S. municipality or comparable political subdivision, and whose debt is secured by revenues derived chiefly from user charges for the ongoing operations of drinking and/or raw-water sales, sanitary sewer collection, and/or treatment, and/or storm drainage systems, or some combination thereof, directly to the end (retail) customer.

Use of the model is intended to enhance comparability across sectors and improve transparency and consistency in deriving ratings. The model is also used whenever analysis is needed to derive credit assessments or credit estimates.

Summary Description Of The Model

The model applies the criteria to develop indicative SACPs, ICRs and issue credit ratings to water and sewer systems within the U.S. using a framework that considers the enterprise risk and financial risk for waterworks, sanitary sewer, and drainage utility system.

More specifically, consistent with the criteria, the model uses the following factors and weightings in the assessment of the enterprise risk profile:

- Economic fundamentals (45%),
- Industry risk (20%),
- Market position (25%), and
- Operational management (10%)

Consistent with the criteria, the model uses the following factors and weightings in the assessment of the financial risk profile:

- All-in coverage (40%),

- Liquidity and reserves (40%),
- Debt and liabilities (10%), and
- Financial management (10%)

Assessments for each of the above factors (excluding financial policies) range from '1' (the strongest) to '6' (the weakest). The raw data used to make these assessments is sourced from management, financial statements, and economic data, and the model derives the above factor assessments based on sub-score ranges as detailed in the criteria. The initial assessments may be subject to further qualitative or quantitative adjustments by the model based on input from the analyst as detailed in the criteria to arrive at a final assessment for each factor.

The enterprise and financial risk scores are computed by combining and then rounding (to the nearest whole number) the weighted average of the individual factor scores. The initial indicative rating results from the combination of the enterprise and financial risk scores as shown in table 1 in the criteria. In cases when the matrix presents a range of ratings, the choice between the two ratings is based on our view of the future performance of the factors composing the enterprise and financial risk profiles.

The criteria also include various caps and overrides. The analyst applies these caps or overrides, or the inputs upon which they are based, and the model makes the necessary adjustment.

Assumptions Underlying The Model

The methodology applied to the model does not incorporate assumptions beyond the criteria.

Inputs To The Model

The model's inputs include data obtained from numerous publicly reported sources, information obtained through Standard & Poor's interaction with obligors, and analytical assessments of such information as defined in the published criteria.

The specific inputs may include qualitative information, quantitative information, analytical adjustments, other adjustments and overrides, selection of data periods used, and inputs from other published criteria.

Qualitative information may be used to inform inputs related to following areas of analysis: operational management; financial management; ability to adjust rates; and willingness to pay.

Quantitative information may include historical or projected service area economic and demographics, utility rates, debt service coverage; operating revenue trends; nonoperating revenue trends; liquidity levels, and debt and liability data points. Financial data is primarily derived from interim, audited, budgeted, or forecasted financial statements.

Analytic data adjustments are adjustments made to data in order to better align the data with our view of an entity's recurring activity, and to improve the comparability of the financial results across entities.

Other adjustments, when applied, move initial factor scores up or down to determine the factor scores. Each adjustment defined in the criteria is assessed and indicated within the model whether it applies or not. Some of them

are directly based on quantitative metrics, while the rest are based on qualitative analytic judgment.

Similar to certain adjustments, some overriding factors are based on qualitative assessment of credit characteristics, while others are determined directly from a specific quantitative factor. Such overriding factors are also inputs to the model.

In most cases, the ratio calculations are based on the most recent audited financial information. Pro forma figures for up to three additional fiscal years may be used.

Other model inputs are derived from other published criteria including industry risk (see "General Criteria: Methodology: Industry Risk", published Nov. 19, 2013).

Data Used In Model Development And Calibration

The data used in the model development include all of the inputs listed in the "Inputs To The Model" section. The various data points were used to inform our development of the model and to support testing through the development process.

We calibrate our criteria based on our analysis of the history of defaults, our view of the industry's essentiality, and the credit strength of the sector compared with that of other sectors.

The Limits And Uncertainties Of The Model

The model provides an initial rating and a final rating in accordance with the criteria. The final rating could differ from the initial rating to the extent various caps apply. The model is only used for entities as defined in the criteria. It does not provide inputs to any other analyses. The model does not verify or audit the quality of the input data.

Consistent with the criteria, the initial rating can also be adjusted up or down by one notch based on peer comparisons.

In addition, for issue ratings, the committee will determine the specific issue rating based on ICR and an analysis of the bond payment and covenant provisions. These final steps are done outside of and separate from the model.

Related Criteria And Research

Related Criteria

- U.S. Public Finance Waterworks, Sanitary Sewer, And Drainage Utility Systems: Rating Methodology And Assumptions, Jan. 19, 2016
- Assigning Issue Credit Ratings Of Operating Entities, May 20, 2015
- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Methodology: Master Limited Partnerships and General Partnerships, Sept. 22, 2014
- Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Ratings Above The Sovereign: Corporate And Government Ratings—Methodology And Assumptions, Nov. 19, 2013

- Key Credit Factors for the Regulated Utilities Industry, Nov. 19, 2013
- Corporate Methodology, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Methodology: Timeliness of Payments: Grace Periods, Guarantees, and Use of 'D' and 'SD' Ratings, Oct. 24, 2013
- Local Government GO Ratings Methodology And Assumptions, Sept. 12, 2013
- Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings, Oct. 1, 2012
- Contingent Liquidity Risks, March 5, 2012
- Methodology: Definitions And Related Analytic Practices For Covenant And Payment Provisions In U.S. Public Finance Revenue Obligations, Nov. 29, 2011
- Methodology: Rating Approach To Obligations With Multiple Revenue Streams, Nov. 29, 2011
- Principles Of Credit Ratings, Feb. 16, 2011
- Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 1, 2010
- Use of CreditWatch And Outlooks, Sept. 14, 2009
- Rating Implications Of Exchange Offers And Similar Restructurings, May 12, 2009
- Appropriation-Backed Obligations, June 13, 2007
- Wholesale Utilities, May 24, 2005

Related Research

- 2014 Annual U.S. Public Finance Defaults And Rating Transitions, May 5, 2015
- U.S. Municipal Water And Sewer Utilities 2015 Sector Outlook: And The Winner Is..., Jan. 26, 2015
- The Broad And Diverse Economy Adjustment: 2014 Updated Scores For U.S. Metropolitan Statistical Areas Based On Local Government GO Criteria, Nov. 17, 2014
- Alternative Financing: Disclosure Is Critical To Credit Analysis In Public Finance, Feb. 18, 2014
- Credit FAQ: U.S. Public Finance Ratings And Criteria For Ratings Above The Sovereign, Dec. 19, 2013
- U.S. Public Finance Rating Characteristics, March 7, 2008

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