Measuring Creditworthiness of Water Utilities

Session 10
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• Process used by Rating Agencies to Assess Creditworthiness of Water Utilities
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Learning Objectives
Learning Objectives

• Understand the key factors that impact water utility creditworthiness
• Understand how credit ratings for water utilities can facilitate access to finance
Definition of Creditworthiness
Defining Creditworthiness

**What is Creditworthiness?** The assessment of the current and future capacity of the utility to service debt—that is, to pay interest and repay principle on loans when due.

If a utility is creditworthy, it will be able to raise commercial finance.
Creditworthy Utilities are High in the Ladder of Financial Sustainability

**Levels of Financial Sustainability**

- **Fully Creditworthy**: Financially Sustainable + Country Conditions and Developed Financial Markets
- **Becoming Creditworthy**: Financial Sustainable + Credit History
- **Financially Sustainable**: Revenue + Other Reliable Resources Covers Full Cost of Service Providing and Sustaining Service
- **Operating Cost Recovery**: Profitable in Any Given Year But Not Sustainable in Long-Term
- **Pay-As-You-Go Recovery of Cash Outlays**: Capital subsidies Essential to Keep Utility Afloat
- **Unviable Loss Making Utilities**: Capital & Operational Subsidies to Keep Utility Afloat
Measuring Creditworthiness
Why and How to Measure Creditworthiness?

**Why**

Creditworthiness of water utilities and projects is opaque to borrowers and lenders. Objective measures can help creditworthy utilities access finance.

Measures of creditworthiness can allow utilities to identify areas for improvement and to exchange good practices.

**How**

Assessing the current and future capacity to generate cash flows to cover debt commitments.

Credit Ratings are a way to measure creditworthiness.
Measuring Creditworthiness

Measures of creditworthiness are based on financial profile of the utility:

- Capital structure
- Profitability
- Cash flow analysis
The use of ratios for measuring creditworthiness

North Carolina Water and Wastewater Rates Dashboard
Capital Structure
Measuring Creditworthiness: Capital Structure

Capital structure: how the utility finances its operations

– WSS utilities are capital-intensive
– Common to find high leverage ratios compared to other sectors
– Off-balance sheet financing (leases) should be taken into account
– BOT schemes should be taken into account.
## Analyzing the Capital Structure

**Should analyze liquidity and solvency:** ability to meet short-term and long-term liabilities

<table>
<thead>
<tr>
<th>Liquidity</th>
<th>Solvency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Ratio</strong></td>
<td><strong>Debt Service Coverage Ratio</strong></td>
</tr>
<tr>
<td>( \text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} )</td>
<td>( \text{Debt Service Coverage Ratio} = \frac{\text{EBITDA}}{\text{(interest expenses + principal repayments + realized exchange rate losses)}} )</td>
</tr>
<tr>
<td>A rough indication of a firm's ability to service its current obligations.</td>
<td>Shows capacity of utility to service debt from its operating cash flows</td>
</tr>
<tr>
<td>Should be above 1 (one) for a well managed utility.</td>
<td>Considerations:</td>
</tr>
<tr>
<td>Considerations:</td>
<td>- May not be relevant if utility does not have to service debt on a regular basis</td>
</tr>
<tr>
<td>- Must adjust assets and liabilities accordingly to ensure that are only measuring current accounts (e.g., interest payable to government is not expected to be paid in the current year so will not be a cash flow requirement)</td>
<td></td>
</tr>
</tbody>
</table>

**Grant dependency**

\( \text{Grant dependency} = \frac{\text{OPEX}}{\text{Income from grants}} \)

| Considerations: | |
| - The proportion of OPEX financed by income from Grants | |

**Debt to Equity**

\( \text{Debt to Equity} = \frac{\text{Book value of debt}}{\text{Book value of equity}} \)

| Considerations: | |
| - Both will be affected by how different book value may be from market value | |
Profitability
Measuring Creditworthiness: Profitability

**Profitability**: ability of a company to use its resources to generate revenues in excess of its expenses

**EBITDA Margin**
- \[ \text{EBITDA Margin} = \frac{\text{EBITDA}}{\text{Operating Revenues}} \]
- Margin left from revenues after covering operating costs
- **Considerations**:
  - Useful for measuring performance across business units that do not have full balance sheets
  - May be more relevant than debt service coverage ratio for utilities that are not directly responsible for servicing their own debt

**Return on Equity (ROE)**
- \[ \text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Total Equity}} \]
- Reveals how much profit a company generates with the money shareholders have invested
- **Considerations**:
  - Not suitable for comparing utilities in different countries. Tax and accounting standards can affect importantly the net income
Cash Flow
Measuring Creditworthiness: Cash Flow Analysis

Cash flow analysis: does the utility generate enough cash to cover its operating, investing, and financing activities?

- Debt service is served using cash, not earnings!

Cash flow from operations

= **Cash flow from operations (on cash flow statement)**

- Demonstrates whether utility is generating positive cash flows from operations
- Positive cash flows from operations are essential to a utility’s sound financial position

Cash flow coverage ratio

= **Cash flow from operations (on cash flow statement) / Total Debt**

- Demonstrates the ability of a company to pay its debt from the cash it generates from its operations
Process Used by Rating Agencies to Assess Creditworthiness of Water Utilities
Measuring Creditworthiness Using Credit Ratings

- **What are credit ratings?**
  - An independent and objective evaluation of water providers' creditworthiness to banks, financial institutions, and other lenders

- **Why to use credit ratings?**
  - Proven to be an accurate predictor of the risk of default

- **How do credit ratings help utilities to access private finance?**
  - Allow potential lenders to compare different providers with each other and assess their relative creditworthiness
  - Assists investors in pricing risk correctly, helping financial institutions decide whether to lend to the entity and calculate the cost (interest rate spread) for the borrower
  - Can improve the negotiating position of the provider with its lenders, especially with regard to financing costs
  - Allows the rated entity to identify and focus on areas that reduce its creditworthiness and launch actions to address these issues
Creditworthiness Ranking Systems Used by Rating Agencies

• Ratings are assigned by credit rating agencies, the largest of which are Standard & Poor's, Moody's and Fitch Ratings.
• They use letter designations such as A, B, C.
• Higher grades are intended to represent a lower probability of default.
• Credit ratings are either:
  – Investment grade
  – Speculative grade: While such obligations will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposures to adverse conditions
• There are long-term credit ratings or short-term credit ratings
# Measures of Credit Ratings

<table>
<thead>
<tr>
<th>Moody's</th>
<th>S&amp;P</th>
<th>Fitch</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaa</td>
<td>AAA</td>
<td>AAA</td>
<td>Prime</td>
</tr>
<tr>
<td>Aa1</td>
<td>AA+</td>
<td>AA+</td>
<td></td>
</tr>
<tr>
<td>Aa2</td>
<td>AA</td>
<td>AA</td>
<td>High Grade</td>
</tr>
<tr>
<td>Aa3</td>
<td>AA-</td>
<td>AA-</td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>A+</td>
<td>A+</td>
<td>Upper Medium Grade</td>
</tr>
<tr>
<td>A2</td>
<td>A</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>A-</td>
<td>A-</td>
<td></td>
</tr>
<tr>
<td>Baa1</td>
<td>BBB+</td>
<td>BBB+</td>
<td>Lower Medium Grade</td>
</tr>
<tr>
<td>Baa2</td>
<td>BBB</td>
<td>BBB</td>
<td></td>
</tr>
<tr>
<td>Baa3</td>
<td>BBB-</td>
<td>BBB-</td>
<td></td>
</tr>
<tr>
<td>Ba1</td>
<td>BB+</td>
<td>BB+</td>
<td>Non Investment Grade Speculative</td>
</tr>
<tr>
<td>Ba2</td>
<td>BB</td>
<td>BB</td>
<td></td>
</tr>
<tr>
<td>Ba3</td>
<td>BB-</td>
<td>BB-</td>
<td>Highly Speculative</td>
</tr>
<tr>
<td>B1</td>
<td>B+</td>
<td>B+</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>B</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>B-</td>
<td>B-</td>
<td>Substantial Risks</td>
</tr>
<tr>
<td>Caa1</td>
<td>CCC+</td>
<td>CCC+</td>
<td>Extremely Speculative</td>
</tr>
<tr>
<td>Caa2</td>
<td>CCC</td>
<td>CCC</td>
<td></td>
</tr>
<tr>
<td>Caa3</td>
<td>CCC-</td>
<td>CCC-</td>
<td>In Default w/ Little Prospect for Recovery</td>
</tr>
<tr>
<td>Ca</td>
<td>CC</td>
<td>CC+</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>C</td>
<td>CC</td>
<td>In Default</td>
</tr>
<tr>
<td>D</td>
<td>D</td>
<td>DDDD</td>
<td>In Default</td>
</tr>
</tbody>
</table>

**World Bank Group**
## Credit Ratings for African Utilities

<table>
<thead>
<tr>
<th>Name</th>
<th>Short Term Rating</th>
<th>Long Term Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athi Water Services Board</td>
<td>A2</td>
<td>BBB+</td>
</tr>
<tr>
<td>Nairobi City Water and Sewerage Company</td>
<td>A3</td>
<td>BBB</td>
</tr>
<tr>
<td>National Water and Sewerage Corporation</td>
<td>A2</td>
<td>A</td>
</tr>
<tr>
<td>Office National de L'eau et de L'assainissement (ONEA)</td>
<td>A2</td>
<td>BBB+</td>
</tr>
<tr>
<td>Sénégalaise des Eaux (SDE)</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Société Nationale des Eaux du Sénégal (SONES)</td>
<td>A1</td>
<td>A+</td>
</tr>
<tr>
<td>Société Nationale des Exploitation et Distribucion des Eaux (SONEDE)</td>
<td>A-1</td>
<td>A</td>
</tr>
</tbody>
</table>

**Source:** WSP “Using Credit Ratings to Improve Water Utility Access to Market Finance in Sub-Saharan Africa”
Example: Process Used by Standard and Poor’s to Rate Utilities

Three-step process:

- **Assessment of industry risk**
- **Country risk**
- **Competitive position**

**Business risk analysis:**
- Review of accounting practices
- Cash flow and leverage analysis

**Financial risk analysis:**
- Diversification
- Capital Structure
- Liquidity
- Financial policy
- Management and governance
- Comparable rating analysis

**Rating modifiers**

Consistent with definition of financial sustainability

Creditworthy in Tested Country Conditions
Using Blended Finance to Improve Creditworthiness
Example: Utility Projects Accessing Medium-Term Commercial Finance in Kenya

The IFC is currently appraising two water and sewerage projects, developed with support from WSP and PPIAF, for ten-year domestic currency loans at market interest rates:

- **Malindi Water (BBB-rated)** is seeking to raise US$4 million to undertake a service coverage expansion project targeting 103,000 residents. The IFC is supporting the project with a concessional loan of US$2 million.

- **Embu Water (BB-rated)** is seeking to raise US$3 million to finance a sewer network and treatment works to serve 40,000 people. In addition to project revenues, investment in Embu’s water supply financed by external partners will help the utility generate sufficient cash to repay the loan. The rating process helped identify management and operational weaknesses to be addressed as part of the proposed lending. The projects are critical in demonstrating the ability to leverage concessional finance to access commercial debt.
Exercise
Answers to Exercise: What is in a Credit Rating Report?

Use the credit rating report of Ruiru Juja Water to answer the following questions and the summary of the financial statements of AWSB in the last page of the report.

1. Is the utility **investment grade** rated?

2. **Capital Structure.** What is the expected debt to equity ratio for 2012, 2013 and 2014.

3. **Cash flow Analysis.** Is the utility able to pay its debt from the cash it generates from its operations?

4. **Profitability.** What are some reasons that explain the surplus results in 2011?
Thank you