Mitigating the Risk Associated with Contingent Liabilities

by

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD
Government Guarantee – Risk Measurement

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Outline

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   - Background
   - Guarantee Schemes
   - Guarantee Programs

2. Fundamental Risk Analysis
   - Internal Credit Rating (ICR), Why?
   - ICR Functions

3. DMFAS Utilization and Way Forward

4. DMFAS
Key Characteristics

Background:

- Encourage private sector involvement in infrastructure development programs
- Attracting investors/creditors (credit worthiness)
- Sharing risks between government and investor/creditor
  - Decreasing cost
  - Decreasing tariff
Key Characteristics

Guarantee Schemes:

Credit Guarantee

- SOE / Local SOE
- Creditors
- Govt
- Recourse Agreement
- Loan Agreement
- Guarantee Letter
- Scope of guarantee: Default risk

Investment Guarantee

- Sponsor
- Sponsor
- Sponsor
- SPV
- Creditors
- Line Ministry/ Municipality/SOE/ Local SOE
- Govt
- Recourse Agreement *
- Guarantee Agreement
- Cooperation Agreement / PPA
- Scope of guarantee:
  a. Default risk
  b. Termination risk caused by political risk

*) Exception recourse Agreement to Line Ministry
### Key Characteristics (Current Government Guarantee Programs)

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fast Track Program Phase 1 (FTP 1)</strong></td>
<td>Full credit guarantee – Government will directly pay to creditor(s) of PLN when PLN fails to service its financial obligation</td>
<td>Power</td>
</tr>
<tr>
<td><strong>Clean Water Availability Program</strong></td>
<td>Guarantees 70% of repayment of PDAM to creditor(s)</td>
<td>Water</td>
</tr>
<tr>
<td><strong>SOE Direct Lending</strong></td>
<td>Full credit guarantee – Government will directly pay to creditor(s) of SOE when SOE fails to service its financial obligation</td>
<td>All</td>
</tr>
<tr>
<td><strong>Fast Track Program Phase 2 (FTP 2)</strong></td>
<td>Business Viability Guarantee – Guarantee on the viability of PLN to fulfill its obligation in Purchase Contract of Electricity with Private Developer and guarantee against political risk</td>
<td>Power</td>
</tr>
<tr>
<td><strong>Public and Private Partnership (PPP)</strong></td>
<td>Guarantees the obligation of Ministry/Agency, Local Government, SOEs/Local SOEs to an entity in accordance to the Agreement</td>
<td>Power, Water, Toll Roads, Railways, Bridges, Ports, and Others</td>
</tr>
</tbody>
</table>

**DGBFRM – Ministry of Finance of the Republic of Indonesia**
Internal Credit Rating (ICR), Why?

- Not all guaranteed parties have been rated by credit rating agency
- Setting threshold for acceptable risk level in providing guarantees
- Strong capability of credit analysis is necessary for ongoing credit monitoring and credit risk mitigation

- Different sectors have different characteristics
  - Regulated electricity
  - Regulated water
  - Project financing
  - The next projects (?)

- Different kinds of guaranteed parties:
  - Line Ministry
  - Municipality
  - SOEs
  - Local SOEs
Fundamental Risk Analysis

Functions of ICR:

- Assessing level of credit risk to which government would be exposed;
- Analyzing credit risks factors: regulatory risks, business risks, operational risks, financial risks.
- Monitoring and setting up risk mitigation plan
- Used to determine:
  - Probability of default
  - Expected loss
  - Guarantee fee
  - State budget allocation
DMFAS Utilization and Way Forward

- **DMFAS utilization**
  - Based on its features, DMFAS can only support for recording credit guarantees (such as FTP 1, Clean Water Availability Program, SOE Direct Lending).
  - Currently, DGBFRM is recording and validating credit guarantee transaction into DMFAS.

- **For the next step:**
  - DGBFRM will be utilizing DMFAS for:
    - Monitoring tools
    - Reporting tools
    - Verification of guarantee claims and payment.
  - DGBFRM is developing methodologies for measuring guarantee obligations that are suitable for Indonesia, such as:
    - Determining probability default
    - Calculating expected losses
List most of loan guarantee recorded in DMFAS

Example of loan guarantee General information

Example of loan guarantee Amortization Table
Thank You

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Extra Slides
Fundamental Risk Analysis  
(example: regulated electricity)

<table>
<thead>
<tr>
<th>Internal Credit Rating for Company XYZ</th>
<th>Weight</th>
<th>Sub Score</th>
<th>Final Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Framework</td>
<td>20.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Legislative and Judicial Underpinnings of the Regulatory Framework</td>
<td>10.0%</td>
<td>4</td>
<td>0.70</td>
</tr>
<tr>
<td>b. Consistency and Predictability of Regulation</td>
<td>10.0%</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ability to Recover Cost and Earn Return</td>
<td>20.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Timeliness of Recovery of Operating and Capital Costs</td>
<td>10.0%</td>
<td>12</td>
<td>2.60</td>
</tr>
<tr>
<td>b. Sufficiency of Rates and Return</td>
<td>10.0%</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Diversification</td>
<td>10.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Market Position</td>
<td>5.0%</td>
<td>12</td>
<td>1.30</td>
</tr>
<tr>
<td>b. Generation and Fuel Diversity</td>
<td>5.0%</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>10.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Strategic Positioning</td>
<td>3.3%</td>
<td>15</td>
<td>1.40</td>
</tr>
<tr>
<td>b. Operational Effectiveness</td>
<td>3.3%</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>c. Governance (BoD)</td>
<td>3.3%</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Key Credit Metrics</td>
<td>40.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. (CFO pre WC + Interest)/(Interest+Principal)</td>
<td>15.0%</td>
<td>12</td>
<td>5.10</td>
</tr>
<tr>
<td>b. CFO pre WC/Debt</td>
<td>15.0%</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>c. Debt/Total Asset</td>
<td>5.0%</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>d. Rasio utang-Valas-IDR</td>
<td>5.0%</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

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Base Rating | 11.10

<table>
<thead>
<tr>
<th>Modifiers</th>
<th>Factors</th>
<th>Base</th>
<th>Notch</th>
<th>Adjusted Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Rating</td>
<td>11.10</td>
<td>0</td>
<td>11.10</td>
<td></td>
</tr>
<tr>
<td>Liquidity</td>
<td>3</td>
<td>0</td>
<td>11.10</td>
<td></td>
</tr>
<tr>
<td>Financial Policy</td>
<td>2</td>
<td>0</td>
<td>11.10</td>
<td></td>
</tr>
</tbody>
</table>

Final Rating | Non Investment Grade | Ba1 | 11.10 |
## ICR Score Table

<table>
<thead>
<tr>
<th>Score</th>
<th>Rating</th>
<th>Rating Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1,5</td>
<td>Aaa</td>
<td>Very High Ability to Pay Debt</td>
</tr>
<tr>
<td>1,5 ≤ X &lt; 2,5</td>
<td>Aa1</td>
<td>High Ability to Pay Debt</td>
</tr>
<tr>
<td>2,5 ≤ X &lt; 3,5</td>
<td>Aa2</td>
<td>High Ability to Pay Debt</td>
</tr>
<tr>
<td>3,5 ≤ X &lt; 4,5</td>
<td>Aa3</td>
<td>High Ability to Pay Debt</td>
</tr>
<tr>
<td>4,5 ≤ X &lt; 5,5</td>
<td>A1</td>
<td>Medium Ability to Pay Debt</td>
</tr>
<tr>
<td>5,5 ≤ X &lt; 6,5</td>
<td>A2</td>
<td>Medium Ability to Pay Debt</td>
</tr>
<tr>
<td>6,5 ≤ X &lt; 7,5</td>
<td>A3</td>
<td>Medium Ability to Pay Debt</td>
</tr>
<tr>
<td>7,5 ≤ X &lt; 8,5</td>
<td>Baa1</td>
<td>Sufficient Ability to Pay Debt</td>
</tr>
<tr>
<td>8,5 ≤ X &lt; 9,5</td>
<td>Baa2</td>
<td>Sufficient Ability to Pay Debt</td>
</tr>
<tr>
<td>9,5 ≤ X &lt; 10,5</td>
<td>Baa3</td>
<td>Sufficient Ability to Pay Debt</td>
</tr>
<tr>
<td>10,5 ≤ X &lt; 11,5</td>
<td>Ba1</td>
<td>Non-Investment Grade</td>
</tr>
<tr>
<td>11,5 ≤ X &lt; 12,5</td>
<td>Ba2</td>
<td>Non-Investment Grade</td>
</tr>
<tr>
<td>12,5 ≤ X &lt; 13,5</td>
<td>Ba3</td>
<td>Non-Investment Grade</td>
</tr>
<tr>
<td>13,5 ≤ X &lt; 14,5</td>
<td>B1</td>
<td>Highly Speculative</td>
</tr>
<tr>
<td>14,5 ≤ X &lt; 15,5</td>
<td>B2</td>
<td>Highly Speculative</td>
</tr>
<tr>
<td>15,5 ≤ X &lt; 16,5</td>
<td>B3</td>
<td>Highly Speculative</td>
</tr>
<tr>
<td>16,5 ≤ X &lt; 17,5</td>
<td>Caa1</td>
<td>Substantial Risks</td>
</tr>
<tr>
<td>17,5 ≤ X &lt; 18,5</td>
<td>Caa2</td>
<td>Extremely Speculative</td>
</tr>
<tr>
<td>18,5 ≤</td>
<td>Caa3</td>
<td>Default imminent</td>
</tr>
</tbody>
</table>
Risk Quantification

Example: Expected Losses at COD period
ICR = Ba1 (Moody’s)

- The Expected Losses are calculated with the following formula:
  \[ EL = PD \times EAD \times LGD \]

- PD  = Refers to Probability of Default from default study of rating agency
- EAD = Exposure at Default is the annual credit exposure depending on disbursements and amortizations for credit guarantee OR realization of equity + debt for investment guarantee = USD 3,200,000,000
- LGD = Loss Given Default = 1 - recovery rate = 50%

\[ EL = 0,674\% \times 3,200,000,000 \times 50\% \]
\[ EL = \text{USD}10,784,000 \]
Application of Risk Measurement

Guarantee Fee:

- One time fee: arranging fee, front end fee, processing fee
- Recurring fee: guarantee fee

Fee calculated based on the yield spread between unguaranteed bonds of the guaranteed party with the yield of government bonds

\[
\text{Fee} = 50\% \times (\text{government bond yields} - \text{XYZ** bond yields})
\]

\[
\text{Fee} = 50\% \times 80 \text{ bps}
\]

\[
\text{Fee} = 40 \text{ bps}
\]

Example: Fee at COD period

\[
\text{Fee} = 40 \text{ bps} \times \text{exposure}
\]

\[
\text{Fee} = 40 \text{ bps} \times \text{USD 3.200.000.000}
\]

\[
= \text{USD 12.800.000}
\]

* Additional discount could be applied to the fee depending on impact to the tariff.

** XYZ is a State Owned Enterprise in electricity sector
Application of Risk Measurement

Budget Allocation and Reserve Account:

- **Budget allocation** = expected losses (with 100% LGD)
  
  \[ \text{Budget allocation} = \text{PD} \times \text{EAD} \times \text{LGD} \]
  
  \[ = 0.674\% \times 3.200.000.000 \times 100\% \]
  
  \[ = \text{USD 21.568.000} \]

- **Reserve account**
  
  - MoF established a Guarantee Fund Reserve Account
  
  - Only for guarantee payments / restricted cash
  
  - Unused budget allocation will be accumulated in the Reserve Account, until its balance reaches a certain amount

- **Purposes**:
  
  - To make sure Government has sufficient amount to pay guarantee claims in a timely manner
  
  - To avoid the need for allocating a huge amount of fund in the state budget