Introducing the Sovereign Risk & Debt Sustainability Framework for Market Access Countries

Joint Vienna Institute
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## Background

<table>
<thead>
<tr>
<th>The IMF has two frameworks for debt sustainability analysis</th>
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<tr>
<td>• Debt Sustainability Framework for Low-Income-Countries (LIC-DSF, joint with the World Bank)</td>
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<td>• Debt Sustainability Framework for Market Access Countries (MAC DSA)</td>
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<th>The frameworks are regularly reviewed</th>
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<tr>
<td>• The LIC-DSF was last reviewed in 2017-18 and is currently in effect</td>
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<td>• A review of the MAC DSA in 2011-13 resulted in the framework that is currently in use</td>
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<th>A major reform has been approved to the framework for market access countries</th>
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<td>• In January 2021, the IMF’s Executive Board concluded a new review of the MAC DSA framework that called for significant improvements</td>
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<td>• The template and guidance note (instructions) are currently being developed for a successor framework that is expected to go live by 2022:Q1</td>
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The SRDSF introduces several key reforms

- **Horizon-based approach & long-horizon analysis**
  Greater focus on the timing of risks and more attention to longer-term issues provides for a richer and more nuanced assessment.

- **Emphasis on debt transparency**
  Improved debt disclosures and reporting aims to avoid debt surprises and support more evenhandedness in DSAs.

- **Improved techniques and predictive power**
  Strengthened methodologies support better overall capacity of the framework to detect sovereign debt risks.

- **Clearer bottom-line results**
  Clear communication supported by mechanical signals, three-way assessments at each horizon, and an overall judgment-based sovereign risk assessment.
One framework, two aims

To provide a framework that can be used to assess the risk of sovereign stress AND debt sustainability in market-access countries.

Sovereign Risk Assessment
Critical for IMF’s surveillance function: (“Early Warning System” for alerting sovereigns to the risk of falling into debt-related stress).

Debt Sustainability Assessment
Critical to support IMF lending decisions: Underpin the Fund’s judgments on whether debt is sustainable (or sustainable with high probability, in exceptional access cases).

Hence, new title: “Sovereign Risk and Debt Sustainability Framework for Market Access Countries” (MAC-SRDSF)
SRDSF overview

**Inputs:**
- Debt data & projections
- Realism tools
- Debt disclosures
- Debt profile charts

**Core framework:**
- Sovereign stress logit model
- Debt fanchart
- GFN finance-ability module

**Specialized analyses:**
- Triggered Stress Tests
- Long-Term Modules

**Overall Assessment of sovereign risk**
- Sustainable with high probability
- Sustainable but not with high probability
- Unsustainable

**Horizon-based assessments**
- Near-term (1-2 years ahead)
- Medium-term (up to 5 years ahead)
- Long-term (>5 years ahead)
Improved debt coverage and disclosure

Closer attention to risks stemming from narrow coverage

- General government is the default institutional coverage
- Broader coverage is possible when an economic case exists
- When coverage is narrow (central government only), a contingent liability stress will track risks
- Guidance will explain how to treat specific central bank liabilities (e.g. liquidity paper and FX swaps)
- Enhanced disclosure of coverage, instruments, and debtholders will support risk analysis and evenhandedness

Central government

State and local government

Non-financial public sector

Consolidated public sector

Central bank & financial state-owned enterprises

Non-financial state-owned enterprises

General Govt

Non-financial public sector

Central government

State and local government

Non-financial state-owned enterprises

Central bank & financial state-owned enterprises
The near-term assessment is based on a logit model

- A multivariate logit model to act as an Early Warning System featuring key stress drivers across a variety of categories:

  - This module is applicable only to countries not currently in stress (it is not run for non-precautionary program countries)

  - All inputs to the model are historical observations, eliminating optimism as a risk in this module

  - The key metric is the fitted probability from the logit model, which indicates probability of sovereign stress in the next 1-2 years

- Institutional quality index
- Stress History

- Current account balance
- Change in REER (3-yr)
- Credit gap (if > 0)

- Δ public debt-to-GDP
- Public debt-to-revenue
- FX public debt-to-GDP
- Intl. reserves-to-GDP

- Change in VIX
- Option: share of currency union MACs in stress
Upgraded debt fancharts will receive greater emphasis

• The SRDSF’s debt fanchart includes important innovations:
  • Better integration with output
  • Protections against forecast optimism
  • Improved methodology
  • Clearer interpretation of results

• The overall result is summarized in the debt fanchart index:

• The fanchart supports:
  • Richer analysis of debt carrying capacity
  • Closer linkages to sustainability definition
  • More probabilistic DSA assessments
The GFN financeability module analyzes liquidity risks

- The GFN module analyzes liquidity risks along several dimensions:
  - The overall result is summarized in the GFN financeability index (GFI):
    - Average GFN-to-GDP in the baseline
    - Banks’ current exposures to government
    - Change in bank claims on the government in a stress scenario with macro-fiscal and debt holder shocks
  - Ability to analyze special subjects:
    - Unconventional monetary policies/QE
    - Government liquid asset buffers

- Size of GFNs remain a critical indicator of potential vulnerability.
- Domestic creditors: central bank, commercial banks, others
- External creditors: official and private
- Bank’s government exposures indicate space for financing
- Small financial systems limit room for maneuver
- Stress scenario with shocks based on country history
- Holder shock magnifies severity if creditor structure is risky
- Domestic financial institutions
- Observed volatility
**Tools for specialized analyses are being developed**

Stress tests for medium-term risks not fully captured by the core tools:

<table>
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<th>Description</th>
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<td>Banking Crisis</td>
<td>Financial sector bailout if signs of overheating</td>
</tr>
<tr>
<td>ER Shock</td>
<td>Devaluation if misalignment not eliminated in MT</td>
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<tr>
<td>Commodity Prices</td>
<td>Extra scrutiny for exporters (revenue) &amp; importers (subsidy)</td>
</tr>
<tr>
<td>Natural Disasters</td>
<td>Rebuilding costs when frequent events occur</td>
</tr>
<tr>
<td>Contingent Liabilities</td>
<td>Risks from narrow (less than GG) coverage</td>
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Long-term modules for risks beyond the standard 5-year horizon:

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<td>Population Aging</td>
<td>Debt impact of long-term pension and health costs</td>
</tr>
<tr>
<td>Large Amortizations</td>
<td>Financing risks from large LT debt repayments</td>
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<tr>
<td>Natural Resource Discovery/Depletion</td>
<td>Implications of the launch or winding up of extraction</td>
</tr>
<tr>
<td>Climate Change</td>
<td>Effects of mitigation &amp; adaptation investments on debt</td>
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Debt sustainability framework (mandatory only for programs): overall description

The risk tools are amenable for debt sustainability analysis with limited changes

- Focus on near and medium-term tools recalibrated to predict only unsustainable events.
- Aggregation rule combines information from the three mechanical tools to give a sustainability index.
- Index can be compared against thresholds for a mechanical three-way sustainability assessment.
- Staff judgment complements the mechanical results to yield the final bottom line on sustainability.

Sustainability Assessment:
- Sustainable With high probability
- Sustainable but not with high probability
- Unsustainable
The SRDSF will have clearer outputs

**The typical SRDSF would include these elements:**

- A summary table with the mechanical signals and final assessments of sovereign risk
- In program cases, staff’s bottomline assessment of debt sustainability (but not the mechanical signals)
- In surveillance cases, a bottomline debt sustainability assessment (excluding mechanical signals) is optional
- A table on debt disclosures and figures showing debt profile indicators
- Realism tools
- Debt and GFNs by key drivers
- A summary figure for the medium-term tools showing the fanchart, GFN metrics, and medium-term index of **sovereign risk**
- Figures with triggered stress tests and/or long-term modules
Q&A

Thank you