When is a debt sustainable?

by

Dr. Martin Guzman

Columbia University Graduate School of Business
and Department of Economics,
University of Buenos Aires, Argentina

The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.
Assessing Public Debt Sustainability

11th UNCTAD Debt Management Conference, Geneva

Martin Guzman (Columbia University-UBA)

November 14, 2017
Any Debt Sustainability Analysis (DSA) must be able to respond the following two questions:

1. Is debt sustainable with high probability?
2. If it is not, what’s the size of relief that would make debt sustainable with high probability?
The ultimate goal of a sovereign restructuring is the restoration of debt sustainability

But there may be more relevant constraints than just the government’s transversality condition for defining debt sustainability.
The UN Principles for Sovereign Debt Restructuring

- UN GA Resolution 69/319 (Sept 2015) adopted nine principles that should guide sovereign debt restructuring practice:
  1. Sovereignty
  2. Good faith
  3. Transparency
  4. Impartiality
  5. Equitable treatment of creditors
  6. Sovereign immunity
  7. Legitimacy
  8. Sustainability
  9. (Super-)Majority restructuring

- Goal of principles: to ensure correct functioning of sovereign lending markets
Principles-based approach for assessing debt sustainability

The development of such an approach is especially relevant in the short term due to two reasons
Reason 1: The “too little” syndrome

Evidence shows that sovereign debt restructuring processes are being ineffective at restoring sustainability

| Fraction: denotes fraction of restructuring with private creditors (bondholders and bank loans) followed by another restructuring or default with the same group within $t$ years |

<table>
<thead>
<tr>
<th>$t$</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraction</td>
<td>0.497</td>
<td>0.525</td>
<td>0.553</td>
<td>0.575</td>
<td>0.6</td>
</tr>
</tbody>
</table>
Reason 1: The “too little” syndrome

- Evidence shows that sovereign debt restructuring processes are being ineffective at restoring sustainability

<table>
<thead>
<tr>
<th>T</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Income</td>
<td>0.619</td>
<td>0.650</td>
<td>0.700</td>
<td>0.700</td>
<td>0.700</td>
</tr>
<tr>
<td>Upper Middle Income</td>
<td>0.500</td>
<td>0.548</td>
<td>0.578</td>
<td>0.590</td>
<td>0.622</td>
</tr>
<tr>
<td>Lower Middle Income</td>
<td>0.467</td>
<td>0.477</td>
<td>0.500</td>
<td>0.523</td>
<td>0.548</td>
</tr>
<tr>
<td>Low Income</td>
<td>0.455</td>
<td>0.455</td>
<td>0.469</td>
<td>0.531</td>
<td>0.548</td>
</tr>
<tr>
<td>Total</td>
<td>0.497</td>
<td>0.525</td>
<td>0.553</td>
<td>0.575</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Fraction: denotes fraction of restructuring with private creditors (bondholders and bank loans) followed by another restructuring or default with the same group within t years
Reason 1: The “too little” syndrome

- Evidence is very suggestive of a too little syndrome
Reason 2: Recent literature is taking a dangerous road

- Flawed approach: Inter-country comparison of market haircuts
  - 180 restructuring episodes with private creditors from 1970 to 2010

Actual haircuts vs. Predicted haircuts

\[ H_t = 1 - \frac{PV_{\text{new bond}}(r_{t+\epsilon})}{PV_{\text{old bond}}(r_{t+\epsilon})} \]

- If actual haircut $\gg$ ($\ll$) predicted haircut $\implies$ too much (too little) haircut

Martin Guzman (Columbia University-UBA)  Assessing Public Debt Sustainability
The relief is appropriate if it restores sustainability with high probability
A methodology for assessing the appropriate size of relief in sovereign debt restructuring
A criterion for assessing the appropriate size of debt relief

Step I

Define the relevant constraints:

- The Government’s Intertemporal Budget Constraint
- The principles-based constraints

Describe the model that represents the economy under analysis, including the assumptions about the relevant parameters and shocks

- That accounts for the endogenous feedback effects associated with macroeconomic policies
Define the relevant constraints:

- The Government’s Intertemporal Budget Constraint
- The principles-based constraints

Describe the model that represents the economy under analysis, including the assumptions about the relevant parameters and shocks

- That accounts for the endogenous feedback effects associated with macroeconomic policies
A criterion for assessing the appropriate size of debt relief

Step I

Define the relevant constraints:
- The Government’s Intertemporal Budget Constraint
- The principles-based constraints

Describe the model that represents the economy under analysis, including the assumptions about the relevant parameters and shocks
- That accounts for the endogenous feedback effects associated with macroeconomic policies
For each possible economic scenario, find the trajectories of consistent fiscal policies that satisfy the government’s Intertemporal Budget Constraint
A criterion for assessing the appropriate size of debt relief

Step III

- Check if each trajectory of consistent fiscal policies respects the constraints imposed by the principles (political feasibility)

  Trajectories of consistent fiscal policies that satisfy the government's Intertemporal Budget Constraint and the constraints imposed by the principles are feasible
Step III

- Check if each trajectory of consistent fiscal policies respects the constraints imposed by the principles (political feasibility)

- Trajectories of consistent fiscal policies that satisfy the government’s Intertemporal Budget Constraint and the constraints imposed by the principles are feasible
A criterion for assessing the appropriate size of debt relief

Step IV

- If there is a “sufficiently large” mass of feasible trajectories of consistent fiscal policies, then the debt position satisfies sustainability with high probability.

- Otherwise, there is need for a debt write off large enough as to achieve a “sufficiently large” mass of feasible trajectories of consistent fiscal policies.
Computing the appropriate non-contingent relief requires knowledge on the distribution of fiscal multipliers.

Framework is complementary of IMF Fan Charts Approach (Abiad-Ostry 2005; Celasun-Debrun-Ostry 2006)

But Fan Charts approach that projects variables that matter for sustainability assessments matching past moments of those variables is likely to fail in times of deep debt distress.
IMF forecasts and reality: Greece

Greece: Actual GDP and IMF’s WEO Forecasts
(in billions of euros)

- Actual GDP
- Oct-08
- Oct-09
- Oct-10
- Sep-11
- Oct-12
- Oct-13
- Oct-14
- Apr-15

Martin Guzman (Columbia University-UBA)  Assessing Public Debt Sustainability
IMF forecasts and reality: Italy

**Italy: Actual GDP and IMF’s WEO Forecasts**

(in billions of euros)

- **Actual GDP**
- **Oct-08**
- **Oct-09**
- **Oct-10**
- **Sep-11**
- **Oct-12**
- **Oct-13**
- **Oct-14**
- **Apr-15**

Martin Guzman (Columbia University-UBA)  Assessing Public Debt Sustainability
IMF forecasts and reality: Spain

Spain: Actual GDP and IMF’s WEO Forecasts
(in billions of euros)

Martin Guzman (Columbia University-UBA) - Assessing Public Debt Sustainability
Policy Consequences

- Makes debt restructuring come “Too Late”
- Makes debt restructuring come “Too Little”
- It creates inter-creditor inequities
Conclusions

- Need for clarifying what’s a sensible framework for assessing the appropriateness of a debt write-down

- Evidence that suggests presence of *too little* syndrome in sovereign debt restructuring

- We advocate for principles-based sustainability approach

- Framework could be the basis for the codification of the UN sustainability principle