

# Assessing Public Debt Sustainability

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Martin Guzman (Columbia University-UBA)

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- 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*

- 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

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

$t$	3	4	5	6	7
<b>Fraction</b>	0.497	0.525	0.553	0.575	0.6

- 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

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

$t$	3	4	5	6	7
<b>High Income</b>	0.619	0.650	0.700	0.700	0.700
<b>Upper Middle Income</b>	0.500	0.548	0.578	0.590	0.622
<b>Lower Middle Income</b>	0.467	0.477	0.500	0.523	0.548
<b>Low Income</b>	0.455	0.455	0.469	0.531	0.548
<b>Total</b>	0.497	0.525	0.553	0.575	0.6

- 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

- Evidence is very suggestive of a too little syndrome

- 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  $>>$  ( $<<$ ) predicted haircut  $\implies$  too much (too little) haircut

The relief is appropriate if it restores sustainability  
*with high probability*

# A methodology for assessing the appropriate size of relief in sovereign debt restructuring

- 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

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- For each possible economic scenario, find the trajectories of consistent fiscal policies that satisfy the government's Intertemporal Budget Constraint

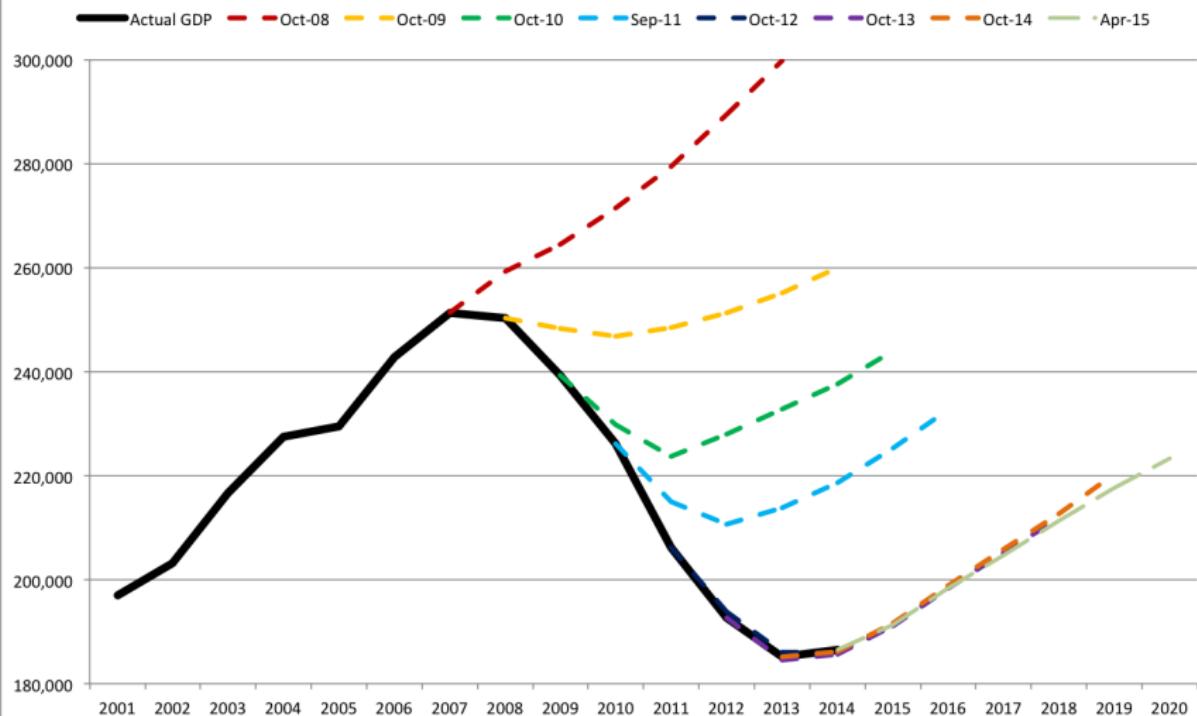
- Check if each trajectory of consistent fiscal policies respects the constraints imposed by the principles (political feasibility)
  - Trajectories of consistent fiscal policies that satisfy the government's Intertemporal Budget Constraint and the constraints imposed by the principles are *feasible*

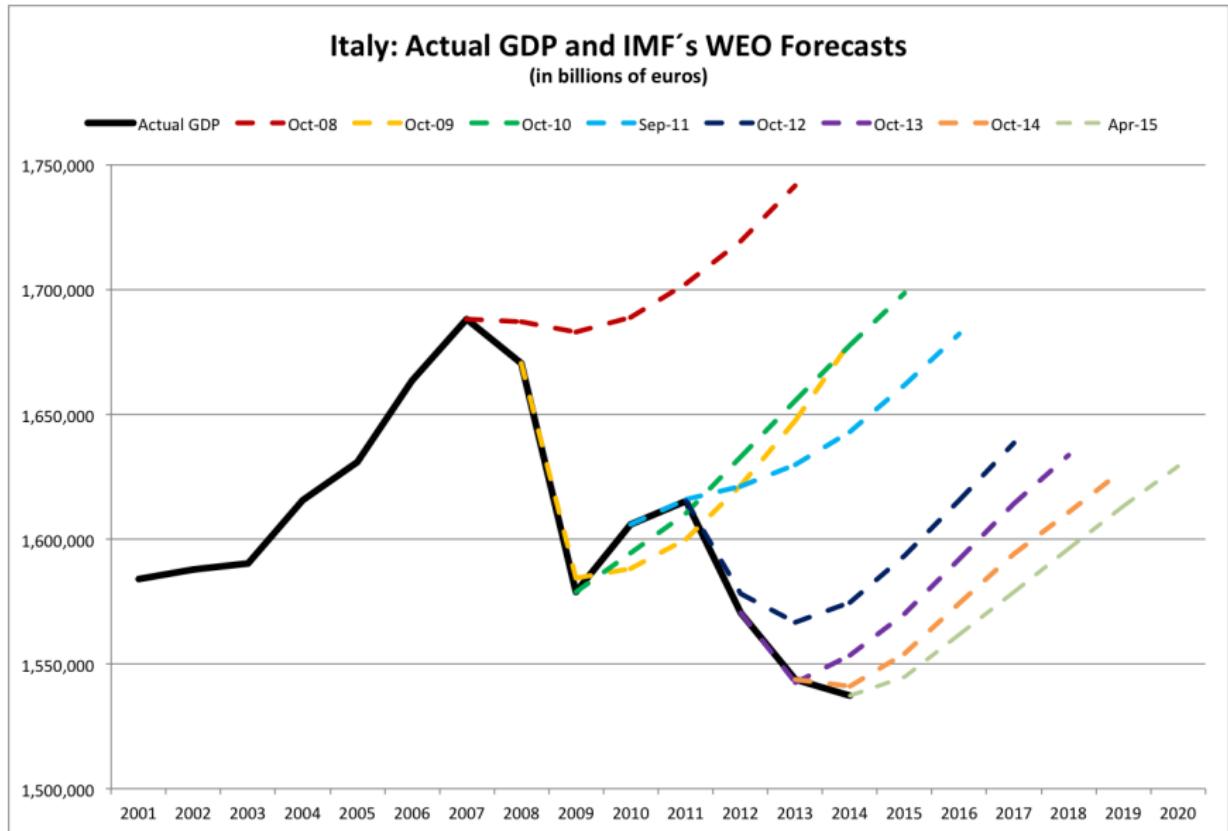
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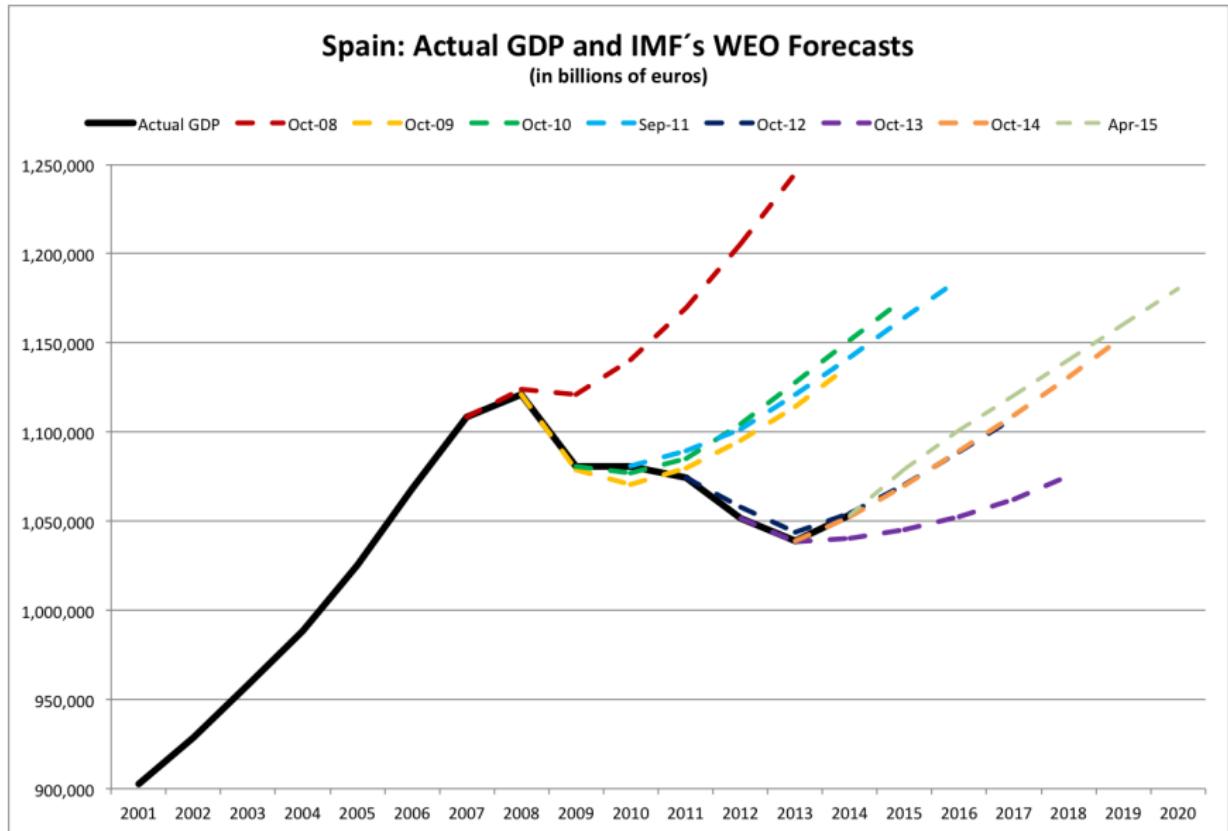
- If there is a “sufficiently large” mass of *feasible* trajectories of consistent fiscal policies, then the debt position satisfies sustainability with high probability
- Otherwise, there is need for a debt write off large enough as to achieve a “sufficiently large” mass of *feasible* trajectories of 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

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

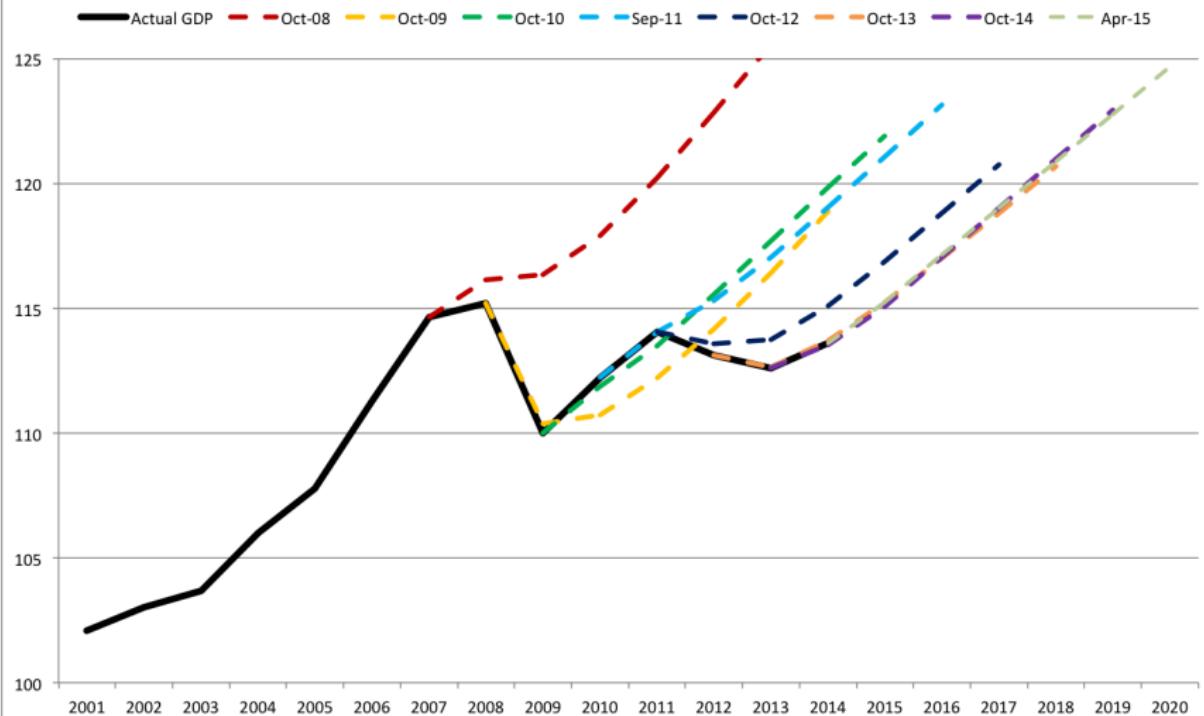






### Euro Area: Actual GDP and IMF's WEO Forecasts

Index 2000 = 100



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

- 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 the UN *sustainability principle*