Fiscal Risks Indicators for the EMU Countries

riccardo fiorito, University of Siena

Available at: https://works.bepress.com/riccardo_fiorito/24/
FISCAL RISK INDICATORS FOR THE EMU COUNTRIES
Riccardo Fiorito
University of Siena
May 2005
(Revised: August 2005)

A. Motivation

• Sustainability/Solvency: Linking short and long run
• Is there a forcing mechanism in the Stability and Growth Pact (SGP)?
• Is there a simple way to evaluate sustainability/solvency?

1. Empirical/common sense:
“Neither economic theory nor history offers much guide to what is a sustainable level of public debt. In the end it is the investors who decide, by demanding much higher interest on bonds” (The Economist, 01/22/01).

Problem: Can we make common sense endogenous?
2. Government budget constraint algebra

- The debt level must be matched by the expected PV of the future primary surpluses

**Problem:** any debt level can be sustained by an appropriate stream of future surpluses (promises on..)

- The debt-to-gdp ratio has a steady state if the cost of debt \( r \) is smaller than the growth rate \( \sigma \)

**Problems:**
- none of the relevant parameters \( (r, \pi, \sigma) \) is a credible constant.
- government spending \( (G) \) and revenues \( (T) \) are not controlled policy variables: \( T \) is strongly procyclical while most of \( G \) is income related [Fiorito, 1997]
- partial equilibrium analysis is misleading.
- time series testing is based on past data so that policy reversal cannot be considered.
  - Blanchard (1990): sustainable tax rate indicator

**Problems:** - again, partial equilibrium is misleading \( (\tau \rightarrow \sigma \downarrow, \text{etc.}) \)
  - tax smoothing is ignored.
**B. General Government Net Worth Indicators** (Buiter, 1985; Eisner-Pieper, 1984; Bohn, 1992)

Net worth (NW) = Assets (Real + Financial) – Liabilities (Financial),

since real liabilities = 0, by definition.

Assets (A) = Fixed Capital + Financial Assets (Shares etc.)

- Fixed Capital = Produced + Non-Produced (ESA95)
  - Produced = (Plant, equipment, housing, infrastructures)
  - Non-Produced = Natural Resources (Land, Mines,..)

Financial Liabilities (L) = General Government Debt (Gross Outstanding Debt).
C. Why addressing fiscal solvency in terms of the Gen. Gov.t Net Worth?
- Despite large debt-to-gdp (B/Y) differences in the EMU, yield spreads are small.
- Despite several new problems (weaker SGP, referendums on EU Constitution etc.), yield differences are still negligible: how can a 20 basis points spread match a 40% difference between Germany’s and Italy’s B/Y ratios? This is a big calibration issue!

Tentative answers:
1. Because of the EMU, the exchange rate risk eliminates most of the risks (Codogno-Favero-Missale, 2001). Further, the international liquidity abundance might weaken the positive relation between fiscal risk and government bond spread (Guzzo, 2004). Credit default swaps provide an insurance against and an information on the risk perception but are still too small.

2. The ECB is not credible: the spread is so small because financial markets – despite the ‘no bail out clause’ - believe that the ECB will help an EMU country in difficulty.
   • In practice, each country is a region of the same European Federal Union: hence, country differences are absorbed…

Problem: both statements amount to say that government debt does not matter.
Implication: to avoid the risk of a credibility loss, the ECB must be more conservative than the FED is (the US are, indeed, a federal country!).

3. Financial Markets are Ricardian:

Problems:
• Before the EMU, differences between the bond yields were large: even when exchange rate were relatively stable.
• Achieving convergence criteria helped the interest rate harmonization.
• In the EMU countries distortionary taxation is between 97%-99% of the total revenues.

4. My tentative answer:

- Financial markets are rational and look at all the relevant information (A, L, NW)

- Financial liabilities are not all the story…
Actual problems:

- Data problems are admittedly formidable
- Most of the data cannot be easily updated
- Most of the data cannot be easily compared, not belonging to the NIPA frame.

All these problems characterize too a recent, tentative, reconstruction of Italy’s public sector balance sheets (*Ministero dell’Economia e delle Finanze*, 2004) where references are also available for similar studies made in other countries.

**Desired properties:**

- a long time-series or indicator, easy to be updated and to be compared among periods and countries
- compliance with NIPA criteria (ESA95 in Europe): not only for comparing several countries but also because the SGP refers to the (NIPA) General Government deficit (accrual definition). Likewise, the relevant “public debt” variable refers also to the General Government definition (financial liabilities).

*Uses:* The NW risk indicator should be tested to see how it behaves relative to the other explanations of the EMU spread.
D. Tentative indicators: what should be included and why?

The basic idea for constructing a fiscal position indicator for the EMU area is trying to combine all the relevant assets and liabilities because these are ultimately the sources of the implied risks and solvency. The widest indicator could be:

\[
FRI = \frac{[aB_t + (1-a)P_t]}{[(1-c_1)NPK_t + (1-c_2)K_t]}
\]

where:

- \(B_t\) = Net Public Debt (General Government Net Financial Liabilities)
- \(P_t\) = Implicit pension liabilities
- \(K_t\) = General Government Fixed Capital Stock (produced)
- \(NPK_t\) = General Government non-produced fixed capital stock
- \(a\) = weight; \(c_1, c_2\) are weights reflecting how illiquid the fixed assets are.
**Updating**.. (especially, quarterly) **requires a smaller indicator:**

(2) \[ FR2 = \frac{[aB_t + (1-a)P_t]}{[(1-c)K_t]} \]

where the fixed, non-produced, capital stock is ignored, it being a variable non included in the NIPA and then subject to:

- huge measurement errors
- updating problems in each country
- problems in comparing data across countries.
**My preferred feasible indicator:**

Several reasons for **not** including pensions in B (Bohn, 1992; Franco, 1995):

- A moral promise is **not** a contractual obligation
- *Any* pension reform changes this type of promise
- *Any* discounting is arbitrary and, in a long working life period, has a huge impact on the size of pension liabilities (Van de Noord-Herd, 1994).

Thus, my preferred indicator is:

\[
FR = \frac{\left(1 - s_t\right) B_t}{(1 - c) K_t} 
\]

where the numerator includes the net financial liabilities only, possibly corrected for the observed private saving propensity \( (s_t) \).
Private savings enter the indicator (3) since they are the domestic source for borrowing (Sargent-Wallace, 1981). Of course, borrowing from abroad is fine but it can imply higher flow volatility affecting also short-run fiscal solvency. This is stressed in the sudden-stops literature (Calvo, 1998) which particularly fits emerging, small open, economies.

**E. Purposes and Uses**

- The purpose of the suggested indicator is providing an immediate view of the fiscal positions in the EMU area which, in a sense, parallels the effort of understanding how the monetary policy works in Europe or in the US.

- Basically, the indicator is a *leverage ratio* that applies to the general government NW and which is possibly corrected for private, domestic, saving propensity.
The indicator serves mostly two purposes:

- on one side, it points out solvency differences depending on the fact that real assets can/cannot potentially offset (reduce) government financial liabilities.

- on the other side, it warns against the fiscal illusion (Easterly, 1999) of selling (fixed) assets that reduce both the numerator and the denominator exactly in the same way: this happens because liquidating fixed capital reduces the debt but reduces also the real asset stock which is not considered in the Maastricht Treaty/SGP criteria.

In this respect, the suggested indicator should help to distinguish between credible and incredible adjustments: the latter typically occurring whenever privatizations are meant to provide immediate cash only, regardless of any efficiency and growth consideration.
References

Blanchard, O.J. (1990), *Suggestions for a New Set of Fiscal Indicators*, Oecd WP # 79.


