David Backus <david.backus@gmail.com>

debt dynamics

A. Craig Burnside <craig.burnside@duke.edu> Tue, Jan 1, 2013 at 11:31 AM
To: David Backus <dbackus@stern.nyu.edu>

Hi Dave:

Happy New Year!

I'm glad you like the book--should I coin a new phrase "no good book goes unpunished?" ;-)

There's a number of things that I suppose could be responsible for these measurement issues. In my experience, which hasn't been updated that much in the past 8 years, because I've done little work in the area, the debt stock measures never align perfectly with the flows, even when there are no issues of currency revaluation (as I am guessing there aren't in Italy's case).

My book highlights a couple of issues, in the section on measuring debt, which are going to show up any time there is debt longer than 1 year in maturity. I believe its section 3.6, and I can send you the pre-publication version of the chapter if you don't have it handy. Basically what the section says is this:

Suppose I start from some measure of the net financing requirement, which is what I call "net issuance of debt" in the chapter. This is the gross proceeds from any debt you issue in the period minus any amortization payments (debt being retired). Suppose you measure the change in the debt stock with

1. the change in the book value (I define the book value in the text)
2. the change in the market value (I define the market value in the text)

Then, I ask what does the measure of interest payments have to be to make Delta B (change in stock) = net financing (flow). It turns out the measure of interest payments has to be quite subtle to make the the identity work no matter which measure of debt you use. I doubt that the official measures of interest payments are that subtle, even if the statistics on debt stocks conform to either of my two definitions.

I'm guessing (and this is purely a guess) that the IMF data measure book values, but that the interest payments series don't correspond to what they need to in order to make the identity work. You might be able to use the two period example in my book to figure out why the discrepancy seems to be systematically negative for 4 years in your Italy example. It might mean something about interest rates in the 2009 to 2012 period relative to the period in which the debt was issued.

Not that it is particularly relevant to IMF data, I'm pretty sure there's a discussion of these measurement issues in the context of the US in a paper by George Hall and Tom Sargent. Here is the link to their paper

http://www.aeaweb.org/articles.php?doi=10.1257/mac.3.3.192

I know that they basically had to construct an entire data set of their own rather than relying on the published Treasury statistics. They got all the debt issuance data and computed their own interest payments series, as far as I recall, in order to reconcile stocks to flows.

I don't know if this answers your question or if you had something more specific in mind. If so, feel free to continue the conversation.

Cheers,

Craig

Craig,

I have a question about debt and deficit data I thought you might know about, but if not just hit delete and carry on. I've been trying to reconcile data on government deficits with data on government debt, and they don't line up. The WEO data is an example, but the same is true of all the sources I've tried. If you know why, could you let me know? If not, carry on with whatever you were doing when I interrupted.

Happy New Year anyway, hope to see you in San Diego. NYU reception Friday if you're free.

Best,
Dave

Here's the issue: http://forums.imf.org/showthread.php?t=86866&highlight=debt
See esp comment 5, replicated here: http://pages.stern.nyu.edu/~dbackus/Global_Economy/Data/Fiscal/WEO_forum_example_Dec_12.xlsx

PS: I love your book, it's the reason I inflicted this on you.

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