

“Deception, Self Deception, and Sovereign Debt Statistics”: Discussion

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Personal Views

*Comments by/conversations with Ali Abbas, Phil Stokoe and Eriko Togo are gratefully acknowledged (without implication)

A useful (and fun) paper

though not always an easy read ... particularly toward the end

1. A summary of the pitfalls of expressing indebtedness in just one number
 - Particularly in the context of fiscal rules/debt limits creating incentives to manipulate.
2. A useful summary and critique of accounting conventions
 - External Debt Statistics Manual; International Public Sector Accounting Standard
3. Recommendations on how to do better, with illustrations:
 - Some relying on previous work (DRW 2013 on welfare effects of debt relief; DRW JIE, 2014 on measuring debt stocks)
 - Some new (mainly on dealing with FX debt and CPI indexation)

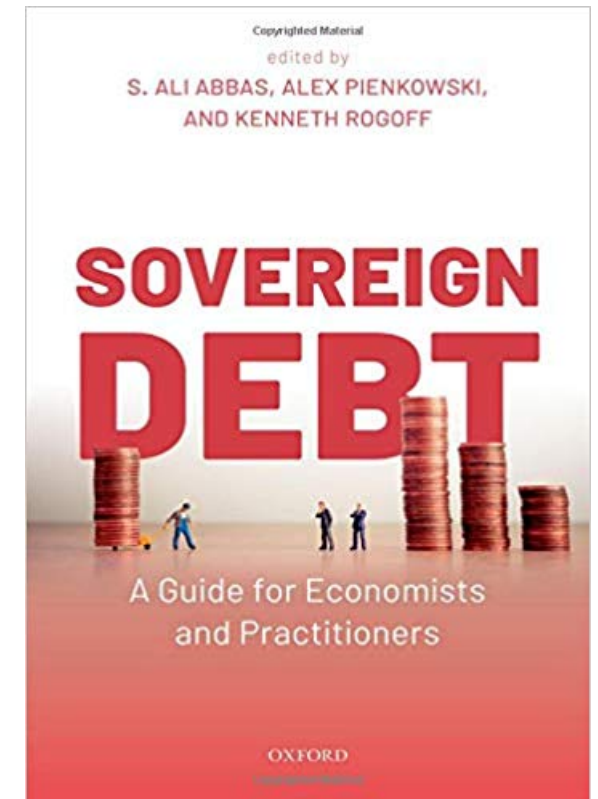
General message:

- State contingency of debt widespread; not adequately dealt with by accounting conventions
- Valuation of debt should depend on perspective: Foreign investor, local investor, representative agent in debtor country.

Reactions

1. Agree with the general message
2. Not sure that state contingency problem is quite as first-order as authors claim. Two bigger problems:
 - Valuation based on perspective/choice of discount rates (discussed)
 - Debt coverage: central vs. general government, treatment of central bank, contingent liabilities ... (not discussed).

Plug: For a discussion of measurement problems including debt coverage, see Arslanalp, Bergthaler, Stokoe and Tiemann, “Concepts, Definition and Composition”. Chapter 2, *Sovereign Debt: A Guide for economists and practitioners* (OUP 2019).



Remainder of discussion: focus on valuation problem

1. One aspect of valuation problem that paper misses/does not emphasize enough
 - In the presence of sovereign risk, “nominal debt value” (per EDS manual or IPSAS) can seriously understate the debt burden.
2. One (related) sense in which paper’s answer to the valuation problem may fall short
 - CCAPM-based debt burden could be a good measure of the welfare costs of repayment, but not a good measure of the debt burden for the purpose of assessing capacity to repay.

Nominal debt value can seriously understate debt burden

- Nominal debt value: NPV of debt *using yield at issue as discount rate*.
 - At time of issue, equals the market value. After that, can diverge.
- If debt is issued at a discount, higher sovereign risk implies lower nominal value (for equal payment terms).
 - Not an issue for debt issued at par, since higher sovereign risk would be reflected in higher coupons.
- Ceteris paribus, this makes the debt burden look smaller:
 - the higher sovereign risk
 - the greater the proportion of debt issued at a discount.
- Extreme example: Greece's "new" (post-PSI) bonds
 - High sovereign risk: issued at "exit yield" of about 15%
 - All issued at a discount (traded at 47-63 cents on the euro on day of issuance)

The Accountant Online, 15 January 2016

JAPONICA'S KAZARIAN STRIKES BACK ON GREECE'S DEBT MIRE

Japonica Partners, the private equity firm led by former Goldman Sachs banker Paul Kazarian, has published another top senior job advert relating to the Greek sovereign debt conundrum.

Kazarian is reputed to be the largest holder of Greek government bonds.

According to Japonica's calculation using IPSAS, Greece's net debt as a percentage of GDP is 18% versus Portugal's 70% or even Germany's 80%.

Those calculations contrast with Greece's 175-180% of GDP that the Maastricht Treaty's face value definition of debt shows

Measuring the debt burden: the perspective matters (even more than argued in the paper)

- Proposed CCAPM based measure (paper):
$$W_0 = \sum_{t=0}^{\infty} E_0 \left[\beta^t \frac{u'(c_t)}{u'(c_0)} \frac{P_0^*}{Q_t P_t^*} Y_t \right]$$
- Tends to give debt burdens that are even lower than market valuation (Intuition: debt must be paid in future, when $u'(c_t)$ is lower than today and exchange rate is more appreciated, so utility sacrifice relatively small)
- Counterintuitive implication: a bad shock *lowers* debt burden (because $u'(c_0)$ high relative to $u'(c_t)$, and most payments are in the future)
- Good as measure of the (time-0) *welfare costs of debt repayment*.
- Not appropriate to assess the solvency of debtor country/government

Measuring the debt burden for the purposes of assessing solvency (capacity to repay)

- Definition of solvency: *conditional on “normal” borrowing conditions*, country can repay.
- To compute debt burden for the purposes of assessing solvency, should discount using borrowing rate “in normal times”, not a crisis rate
 - using a crisis rate could lead to the absurd implication that the solvency of the country improves the deeper the crisis gets.

Implication (1): in a crisis,

- debt burden (in the sense of PV of repayment obligations) $>$ market value of debt \approx debt burden (in the sense of welfare costs of repayment, i.e. W_0)

Implication (2):

- assessment of debt relief will depend on whether you mean “solvency effect” of debt relief (typically, lower than investor haircut, because of lower discount rate) or welfare effect (could be higher than investor haircut if use CCAPM approach)

Take-aways (based on paper and this discussion)

1. To assess indebtedness, try to look a more than just one number.

Note: this is, of course, what we do in our debt sustainability analyses: we look at expected *paths* of D/Y and financing needs. We also look at second moments.

2. If you must look at just one number, use a net present value (scaled by GDP).

3. Which discount rate you should use in this NPV depends on your perspective:

- If you are the creditor, use a market rate that incorporates sovereign risk (at the time when you compute the NPV).
- If you want the measure the debt burden for the purposes of measuring solvency risk (across time or across countries), use a market rate in normal times.
- If you want to measure the welfare costs of repayment, use CCAPM based measure.