

Comments on “Overborrowing Crises and The Role of Expectations” by M. Guzman

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Context (1/2)

- Literature on quantitative models of emerging markets (SOE-RBC) with sovereign default (Arellano, AER, 2008; Aguiar & Gopinath, JIE, 2006)
- Achievement of this literature: replicate stylized facts of business cycles of emerging markets (countercyclical current account and interest rates, consumption more volatile than output, frequency of sovereign defaults)
- More specifically, Aguiar & Gopinath (JIE, 2006) achieve this with shocks to the growth trend
- Those shocks were identified in Aguiar & Gopinath (JPE, 2007) to be empirically important

Context (2/2)

- Compared to transitory shocks, growth shocks generate more defaults
- Intuition: growth shocks affect more the value of financial integration, and therefore increase the volatility of the payoff differential between repayment versus defaulting
- García-Cicco, Pancrazi & Uribe (AER, 2010) show that Aguiar & Gopinath (JPE, 2007) have over-estimated the relative importance of trend shocks in emerging markets

Contributions of the paper

- 1 The good results of AG in terms of default probabilities no longer hold with the parameters of GCPU
- 2 In emerging markets, the FIRE hypothesis (full info / rational expectation) is strongly rejected by the data
- 3 Relaxing the FIRE hypothesis in a sovereign debt model leads to realistic default probabilities even with relatively small trend shocks
- 4 Among the learning processes studied, stochastic-gain learning (SGL) performs better than the Bayesian Kalman filter (for explaining both forecasting survey data and default probabilities)

Sovereign defaults or overborrowing crises?

- The paper aggregates sovereign debt crises and banking crises under the category of “overborrowing” crises
- The modelling tool is an Eaton & Gersovitz (1981) type of model, with a representative agent, foreign borrowers, strategic default, no bailout, no bankruptcy procedure, no recovery value \Rightarrow ill-suited for private defaults?
- Banking crises do not always involve foreigners, nor do they always involve losses for bond holders (“too big too fail” case)
- Note that the model predictions for Canada (no default) are closer to the pure sovereign case; also true for Argentina, but not for Mexico

Is default frequency the right target? (1/2)

- The paper focuses on the replication of high default frequencies
- But most sovereign debt papers achieve the right target (3%–6%) with various setups not involving trend shocks:
 - ▶ non-linear default cost (Arellano, 2008)
 - ▶ political uncertainty (Cuadra & Sapriza, 2008)
 - ▶ recovery for investors (Yue, 2010)
 - ▶ long-duration bonds (Hatchondo & Martinez, 2009)
- The challenge is rather in the debt levels: most papers report ridiculously low sustainable debt levels

Is default frequency the right target? (2/2)

- Usually tradeoff between debt and default:
 - ▶ either debt ratios too high and probability of default too low...
 - ▶ ...or the contrary
 - ▶ consequence of the default cost assumed
- Moving away from FIRE probably lowers debt levels?
- More generally, would be interesting to report business cycle moments

Resolution technique?

- No mention of the numerical resolution technique used in the paper
- Computing policy functions is challenging, maybe impossible: too many state variables
- Some sort of approximation with respect to expectations must have been used to compute the simulations, which one?
- Side note: solution methods matters (Hatchondo et al., RED, 2010), and sometimes critically! Aguiar & Gopinath (JIE, 2006) were wrong on the countercyclical interest rates.

Model calibration issues

- Parameters used for calibrating the growth process parameters are derived from estimation of other models (SOE-RBC)
- Ideally these parameters should be identified by purely statistic methods
- Moreover, the “AG” set of parameters is not homogeneous:
 - ▶ for Argentina: loose identification constraint on the HP-filtered process
 - ▶ for Mexico and Canada: identification through GMM on SOE-RBC model

Conclusion

- First paper (AFAIK) introducing learning in sovereign debt models
- Imperfect information and limited rationality have an important impact on outcomes
- Important contribution to the ongoing endeavour towards building more complete quantitative default models (with endogenous negotiation, long maturities, New Keynesian elements. . .)
- Next step could be to mix learning with other features (long maturities would be a good candidate)