Portfolio Choice and Partial Default in Emerging Markets: A Quantitative Analysis

Kieran Walsh (U Virginia, Darden School of Business)

Discussant: Michael Curran (TCD)

MGI Workshop, March 7, 2015
Trinity College Dublin
Main contribution: New quantitative portfolio choice model for emerging market international finance: improved ability of quantitative theory to match data.

Main innovations: Multiple assets: gross more important than net capital flows – equity and different bond maturities for both domestic and international bonds; partial default (Dubey, Geanakoplos & Shubik ’05); utility cost of default rather than exclusion (Shubik & Wilson ’77).

Some main results:

• Takes on board four important empirical facts and matches many others.
• Especially good at matching some moments that are untargeted – far superior performance against Eaton-Gersovitz model types.
• Exact solution and rapid convergence – builds on Toda (JET 2015) – due mainly to reduction of necessary states and knowing the shape of the value function, so interpolation methods are unnecessary.
Contribution to Literature

Elements explaining portfolio structure and gross flows:
Chatterjee & Eyungunor ’12 = Eaton-Gersovitz ’81 (‘exclusion’) + long-term bonds
+ quadratic, asymmetric output cost of default

Bianchi, Hatchondo & Martinez ’13 = Chatterjee & Eyungunor ’12 + risk-free bonds

Walsh = Bianchi, Hatchondo & Martinez ’13 + equity
+ international price and interest rate shocks + partial default
+ maturity structure of debt

Quantitative international finance with more than two assets:
Toda ’13 = Samuelson ’69 + many assets + Markov shocks + solution algorithm

Walsh = Toda ’13 + default + risk spreads

Incomplete markets GE model of international portfolios:
Closest to Pavlova & Rigobon (2012) since Walsh computes exact solution of equilibrium spreads, haircuts and portfolios. Extra: small open emerging market model (international state prices are exogenous); endogenous partial default, haircuts and risk spreads.
Discussion

- Public and private actors.
- Model matches data well but what about other samples than the top 7 Latin American countries by GDP? Local currency versus foreign currency denominated debt.
- Extensions suggested in paper – possible link with work on volatility and debt – also richer set of assets such as in EWN (PEQ, FDI, PD, OD, RES).
- Less structural, more tractable.
- Political economy affecting decisions to repay and / or default.
- High risk aversion (20), low subjective discount factor (.86).
- Utility cost of defaulting $D_t \geq 0$ at $t$: $\lambda (\omega_t)^{-\sigma} D_t$ versus market exclusion (Eaton-Gersovitz) – little empirical evidence of market exclusion (charge for ‘bad faith’), e.g. Tomz (2007).
Bad Faith? Market Exclusion Hypothesis...
Evidence On External Debt Surrounding Default Events

Long-Term Private External Debt Surrounding Default Events

Long-Term Public External Debt Surrounding Default Events

Private Non-Guaranteed External Debt Surrounding Default Events

Public and Publicly Guaranteed External Debt Around Defaults

Conclusion


- New quantitative, theoretical model from which policymakers can ask normative questions and run counterfactual experiments.