Rare Disasters, Financial Development, and Sovereign Debt

by Sergio Rebelo, Neng Wang, and Jinqiang Yang

Discussion by Gideon Bornstein

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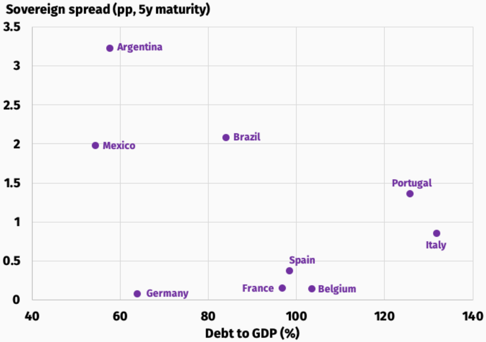
Debt intolerance



Q: Why spreads in EME higher despite lower debt-to-GDP ratios?

This paper: lack of insurance

- EME are less capable to insure against large negative shocks

Partial insurance vs. lower income volatility

- The impact of **lower income volatility**:
  - Less likely to jump into default region → <u>better</u> debt pricing schedule → **more debt**
  - Financial autarky less painful → <u>worse</u> debt pricing schedule → **less debt**

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- Comparative statics:

$$y_t = \rho y_{t-1} + \sigma \epsilon_t$$

	Arellano ('08)	$\sigma = 0.9 \times 0.025$	Insurance
Mean spread	5.33%	5.10%	4.60%
Debt-to-GDP	4.99%	4.98%	5.46%

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Remark: short-term debt models **should not** target debt-to-GDP ratios

Forms of country-level insurance

- Model assumes **only small shocks are insured**
- What are the counterpart insurance contracts in the data?
  - Foreign ownership of firms and foreign holdings of stocks
    - Why is risk sharing state dependent?
  - Local currency debt held by foreigners
    - Introduces correlation between repayment size and economic conditions
  - Rescue package
    - Applies primarily for disasters
  - Private sector access to hedging contracts
    - Bocola, Bornstein, and Dovis (2019): state variable is total **public** debt, *not* net external debt

Some interesting modeling tools

- **Epstein-Zin** preferences as a **beta antidote**
  - Standard calibration: impatient gov't → borrows when spreads are low
  - This paper: Low EIS (0.05) + rare disasters
  - Able to match counter-cyclical trade balance and high spread volatility?

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- **Non-stationary income process** → no incentive to default in good times
  - Allows for linear default costs → single state variable: debt-to-GDP
- **Continuous time**
  - Computational advantage (see also Bornstein, 2020)
  - Allows for some theoretical results at boundaries

Mechanism applicable to other forms of unsecured debt

- Household unsecured borrowing
  - Bornstein and Indarte (WP): **Medicaid expansion → rise in credit card debt**
  - Broader insurance coverage → increase in wealth inequality
- Corporate debt
  - Foreign exchange derivatives → improve credit access to firms with currency mismatch

Summary

- Very interesting paper and mechanism!
- **Lack of insurance → debt intolerance** (higher spreads, less debt)
- Suggestions:
  - **Discuss insurance contracts you have in mind**
    - Bonus - provide **evidence** on difference across countries
  - Quantitative analysis: **provide additional model moments**
    - Trade balance cyclicality and spread volatility