

DISCUSSION OF:
ARELLANO, BAI, MIHALACHE (2018)
“INFLATION TARGET WITH SOVEREIGN DEFAULT RISK”

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MOTIVATION

- Many simplifying assumptions in traditional models of sovereign default.
- This paper: how does endogenous government default risk interact with inflation-targeting monetary policy?
- Monetary frictions of Gali and Monacelli (2005) embedded in the world of Arellano (2008).

KEY EQUILIBRIUM CONDITION

Optimal borrowing determined by:

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$$= \beta \mathbb{E} \left(e' u_c^{g'} \right)$$

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$$e u_c^g q + e u_c^g \frac{\partial q(s, B')}{\partial B'} B'$$
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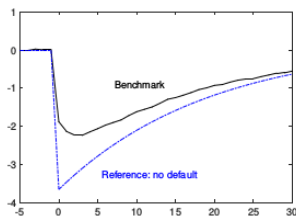
$$\begin{aligned} e u_c^g q + e u_c^g \frac{\partial q(s, B')}{\partial B'} B' - \left[\frac{\mu}{M(s, B')} \frac{\partial M(s, B')}{\partial B'} + \frac{\gamma}{u_c Y} \frac{\partial F(s, B')}{\partial B'} \right] \\ = \beta \mathbb{E} \left(e' u_c^{g'} + \Phi(\nu^*(s', B')) \nu_{B'}^*(s', B') \right) \end{aligned}$$

where:

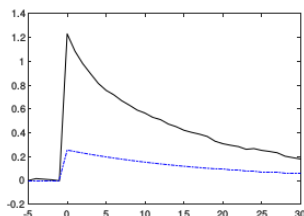
$$M(s, B') = \mathbb{E} \left(\frac{u_c(s', B')}{\pi(s', B')} \right)$$

$$F(s, B') = \frac{\beta}{\eta - 1} \mathbb{E} \left[Y(s', B') u_c(s', B') \varphi(\pi(s', B') - \bar{\pi}) \pi(s', B') \right]$$

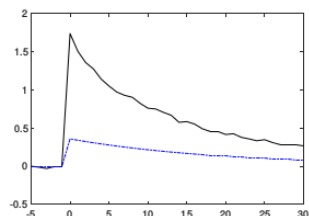
RESULTS: RESPONSE TO NEGATIVE TFP



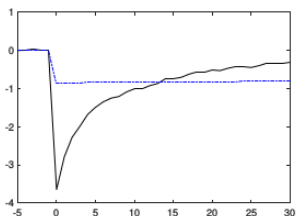
(b) Output



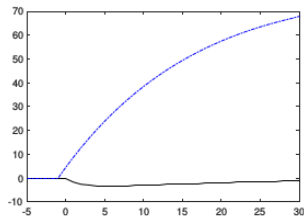
(e) Inflation



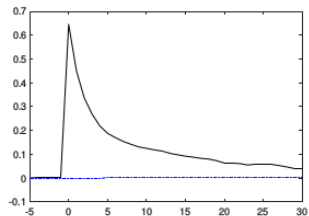
(f) Nominal Interest Rate



(d) C^f



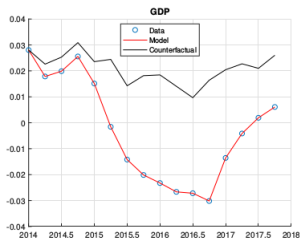
(h) Debt



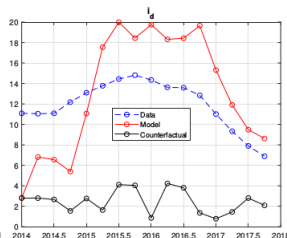
(i) Spread

Source: Arellano, Bai, Mihalache (2018)

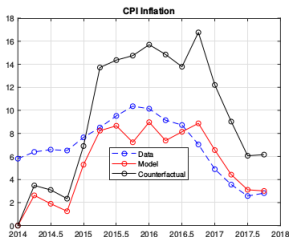
RESULTS: BRAZILIAN EVENT STUDY



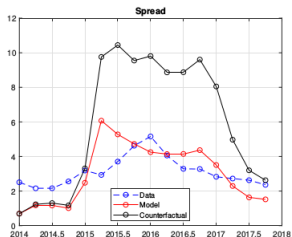
(a) Output



(b) Nominal Interest Rate



(c) Inflation



(d) Sovereign spread

Source: Arellano, Bai, Mihalache (2018)

DISCUSSION OVERVIEW

- Very interesting paper:
 - ▶ Stems from robust empirical observations on comovement of variables
 - ▶ Clean new mechanism
 - ▶ Neat counterfactual experiment
- 3 points:
 1. Validation of the model
 2. Data issues
 3. Placing the model in broader context

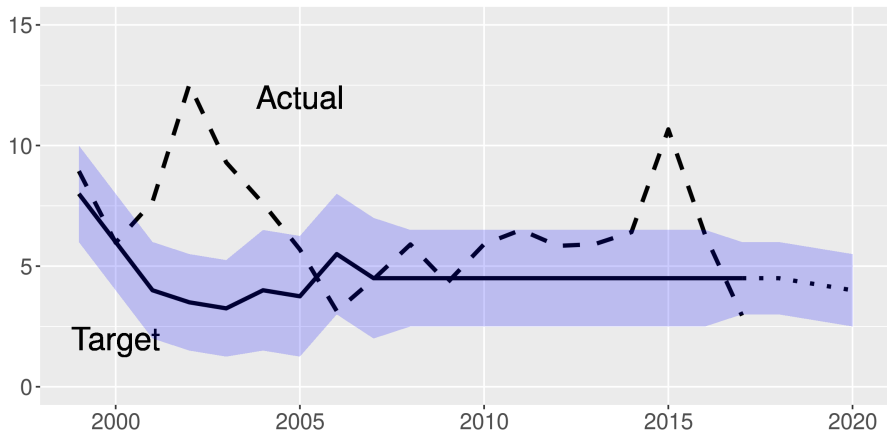
VALIDATION OF THE MODEL

- Would like to see model predictions tested against external info
 - ▶ Currently, many moments targeted
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 - ▶ **Details of inflation targeting policy year-by-year easily available.**

BRAZIL'S INFLATION TARGETING REGIME

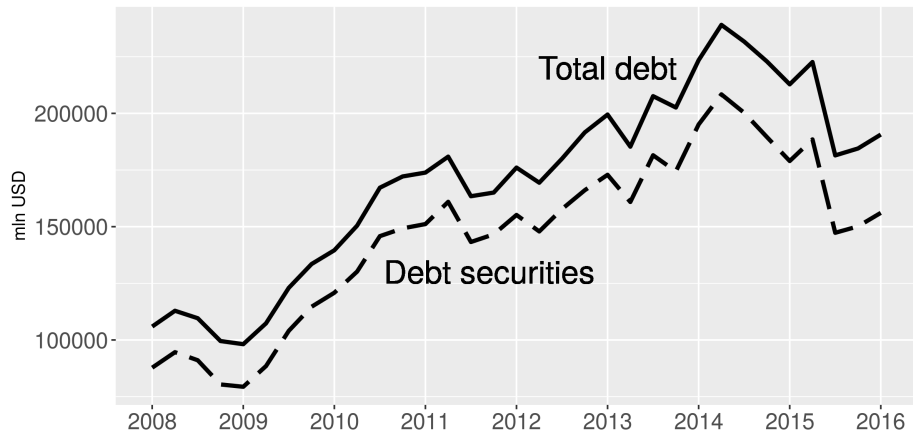


Source: Banco Central do Brasil

VALIDATION OF THE MODEL

- Would like to see model predictions tested against external info
 - ▶ Currently, many moments targeted
 - ▶ 3 shocks with vague interpretation
 - ▶ Difficult to evaluate performance of the endogenous outcomes
- Suggestions:
 - ▶ Details of inflation targeting policy year-by-year easily available.
 - ▶ **Important role of government's debt choices in the model.**

DYNAMICS OF EXTERNAL DEBT IN BRAZIL

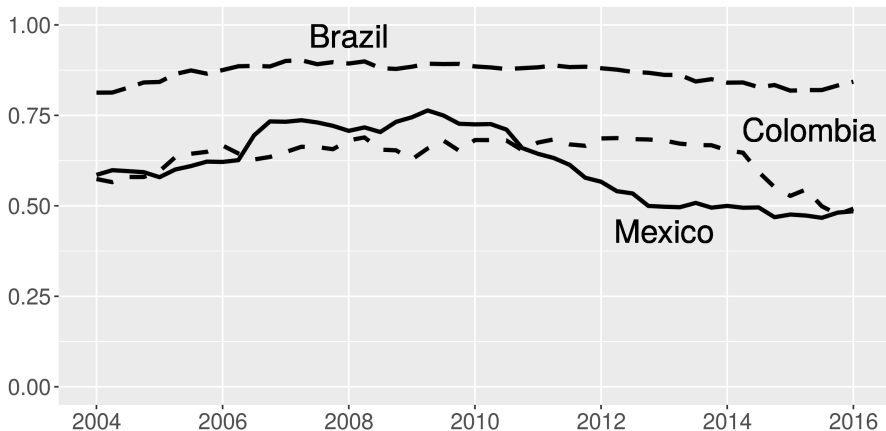


Source: IMF

DATA ISSUES

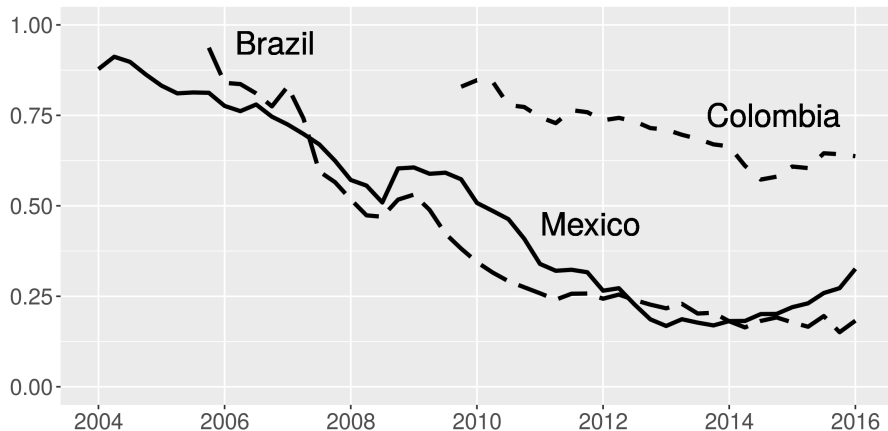
- The model focuses on foreign-denominated, externally-held debt.
- When debt is held domestically, default motives change substantially (D'Erasmus and Mendoza 2017).
- When debt is locally-denominated, inflation is an alternative way of reducing debt burden (Sunder-Plassmann 2017).
- Is this the best model to think about these countries?

SHARE OF LOCALLY-HELD GOVERNMENT DEBT



Source: IMF

SHARE OF FOREIGN-DENOMINATED EXTERNAL DEBT



Source: IMF

PLACING THE MODEL IN BROADER CONTEXT

- Paper seems to speak more to the New-Keynesian literature than sovereign default.
- Several non-standard features for a sovereign default model.
- Would be interesting to see more how the mechanism feeds back to endogenous default incentives...
 - ▶ Long-run default risk in monetary economy with different CB policies
- ... but maybe a topic for future work.