



EUROPEAN CENTRAL BANK

EUROSYSTEM

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**Discussion of ‘Traditional  
and matter-of-fact frictions  
in a DSGE model for Brazil:  
the role of macroprudential  
instruments and monetary  
policy**

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# Introduction

- DSGE model in which traditional financial frictions (Kiyotaki-Moore, Iacoviello, BGG) coexist with Brazil-specific frictions
  - Very rich model
- Bayesian estimation on Brazilian data
- Counterfactual simulations

# General Comments

- Interesting model
  - Learned a lot about the Brazilian economy from it
- ... but not an easy read
  - Emphasis on realism rather than simplicity and intuition
- Contains many different frictions and constraints
- ... but lacks a motivation for macro-prudential policy
  - Bank defaults/Risk-taking not modelled
  - Optimal regulatory capital ratios should be zero?
- Also some missing key frictions
  - Foreign currency borrowing?

# The Structure of the Model: Saver Households

- Patient Saver Households
- Habits in consumption, non-separable utility between consumption and housing
- Saving deposits and Demand deposits both in the utility function
- Also can invest in retail money funds
- Sell labour via monopolistically competitive labour unions

# The Structure of the Model: Borrower Households

- Impatient Borrower Households
- Habits in consumption, non-separable utility between consumption and housing
- This household only likes Demand deposits
- Sell labour via monopolistically competitive labour unions
- Borrow for consumption and for real estate purchase
  - Housing loans have seniority over consumption loans
  - Both are at fixed interest rates
- Default when 'pledgeable labour income' falls below the value of debt
  - The defaulting borrower keeps his or her house?
  - Only loses part of labour income
  - Deadweight cost of default

## The Structure of the Model: Borrower Households (cont'd)

- Exogenous LTV ratio (motivated by reality)
- Exogenous interest rates on loans
  - Dominant Federal Mortgage Bank in the housing loan market
  - Other banks forced to participate by regulation

# The Structure of the Model: Entrepreneurs

- Modeled similar to Christiano, Motto and Rostagno (2010)
- Stochastic OLG structure, hold the capital stock
- Exogenous LTV ratio
- Default when the value of the firm's assets falls below the value of debt
  - Deadweight cost of default

# The Structure of the Model: Banks

- Deposit branches
  - Demand deposits due to liquidity (MIU) benefits
  - Savings deposits: exogenous interest rate set by the government
  - Time deposits: buy shares in the retail money fund
  - Reserve requirements
- Corporate loan branches
  - Imperfect competition
  - Calvo-style nominal interest rate rigidities
- Mortgage loan branches: completely passive
  - Administered interest rates
  - Fraction of deposits must be given to housing loans
- Capital regulation
  - Equity through retained earnings only
  - Bank pays a cost when risk-adjusted capital deviates from the amount specified by the regulation



# Counterfactual policy

- Reserve requirement
  - Large effect on the economy when raised
- Capital requirements
  - Immediate reaction from anticipated changes
  - Impact on credit smaller when changes are pre-announced

# Comments

- Large model, very detailed set of frictions, a lot of attention to institutional detail
  - Useful for assessing the impact on the real economy
  - Can we use it to think about optimal regulatory policy?
- What is the purpose of capital and liquidity regulation in the model?
  - Is there a region of the parameter space for which welfare of agents in the economy actually increases as we increase capital and liquidity requirements?

# Comments

- The emphasis on the public banks seems very interesting and worth exploring further
- How does their presence and non-profit objectives affect the rest of the banking system?
  - Guess: depress bank charter values and increase risk-taking by private banks. (see work by Martinez-Miera and Suarez (2012) and by Corbae and D'Erasmus (2012))
- Can the public banks amplify housing price fluctuations?
  - Guess: to promote house purchases
  - But how do they do it: low interest rates, high LTVs?
  - What happens when housing prices rise? Do public banks relax loan terms even further in order to maintain quantity objectives?
- How large is the balance sheet of the public banks?
  - Can they create a European-style sovereign-banking 'diabolic loop'?

# Comments

- **The shadow banking sector in Brazil**
  - Idea: these regulations are costly so banks will try to circumvent them?  
Does the circumvention lead to unintended consequences?
  - Is there a large non-bank financial intermediary sector which funds itself on the wholesale market?
- **Foreign currency borrowing**
  - Importance of open economy issue acknowledged by the authors
  - Foreign currency borrowing seems particularly important

# Summary

- Nice paper
  - Models the specific features of the Brazilian financial system
  - Estimation
- Main suggestion
  - Focus on the ‘matter-of-fact’ frictions which really matter for systemic risk
  - More attention to how financial instability can occur in Brazil