Discussion of ‘How do regulators influence mortgage risk? Evidence from an Emerging Market’ by John Y. Campbell and Tarun Ramadorai

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The question: How do regulators influence mortage risk?

1. Impact of regulation:-
   1. Across time
   2. Across loan attributes
2. Learning in a heavily regulated environment?

The literature

1. Borrowing for refinancing purposes, loan-to-value ratio, term to maturity, payment-to-borrower income etc. [Herzong, Earley (1970)]
2. House price appreciation [Doms, Furlong and Krainer (2007)]
3. Borrower income, type of loan, general health of the economy [Brent et al. (2011)]
4. India: Tighter regulation by RBI led to shifting of business activity from banks to housing finance companies (HFCs). [Patnaik and Shah (2011)]

Regulatory influence: difficult question

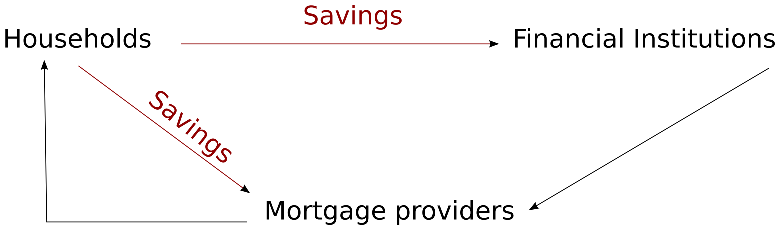
- Government involvement in mortgage markets vary
- Usually one of those “unobserved characteristics”
- Difficult to trace influence when changes are gradual
- Data availability in a rapidly changing environment rare

Levers of regulation

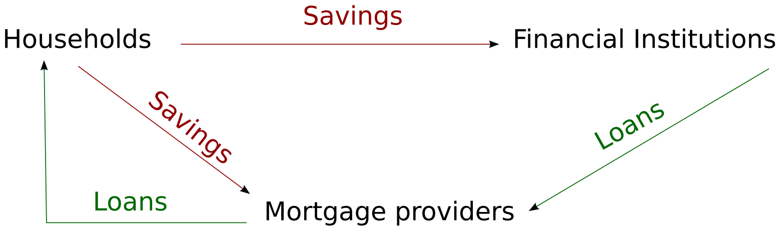
Households

Financial Institutions

Levers of regulation



Levers of regulation



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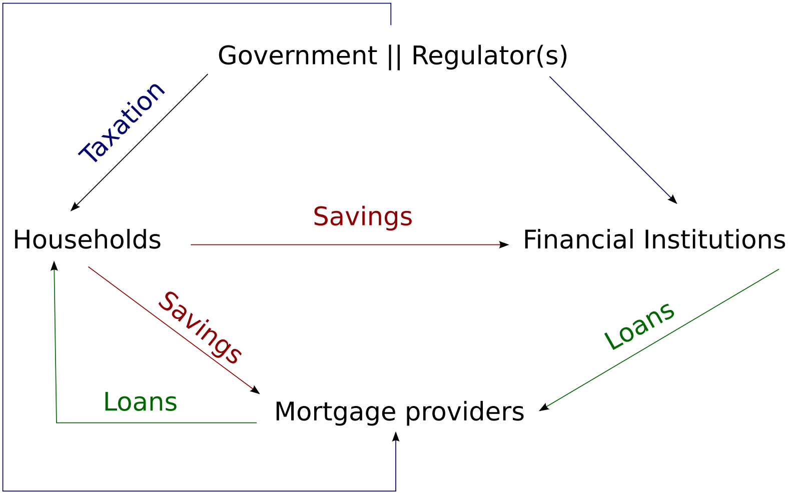

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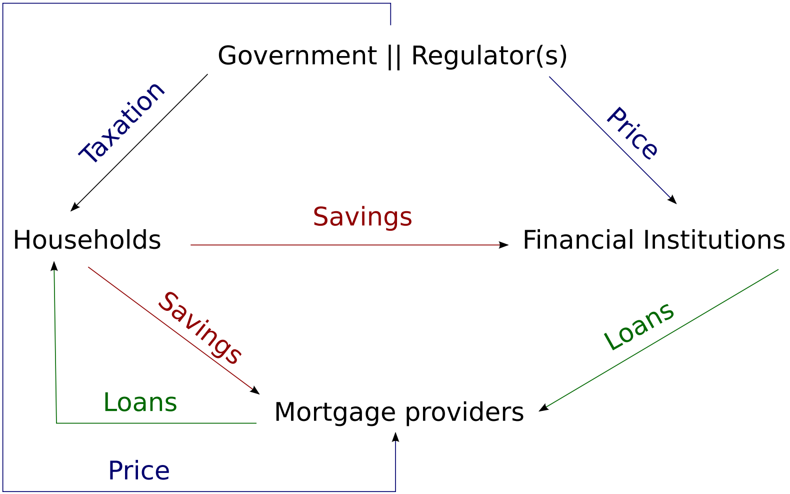

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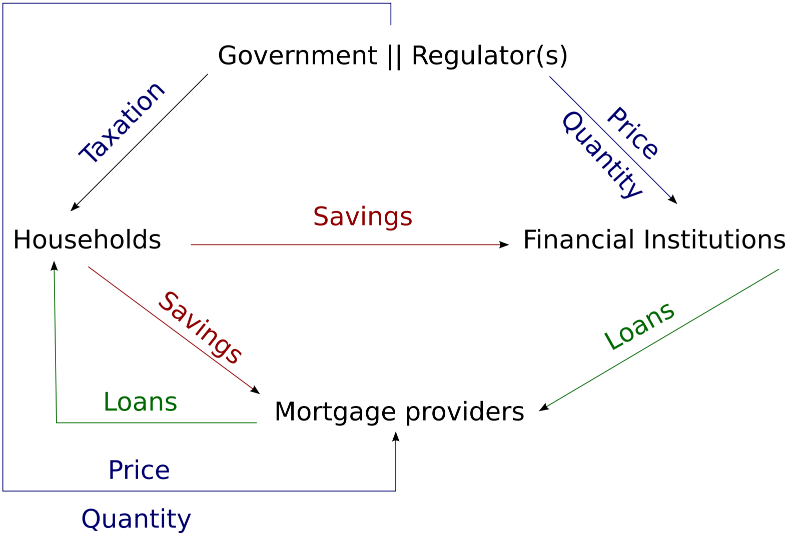

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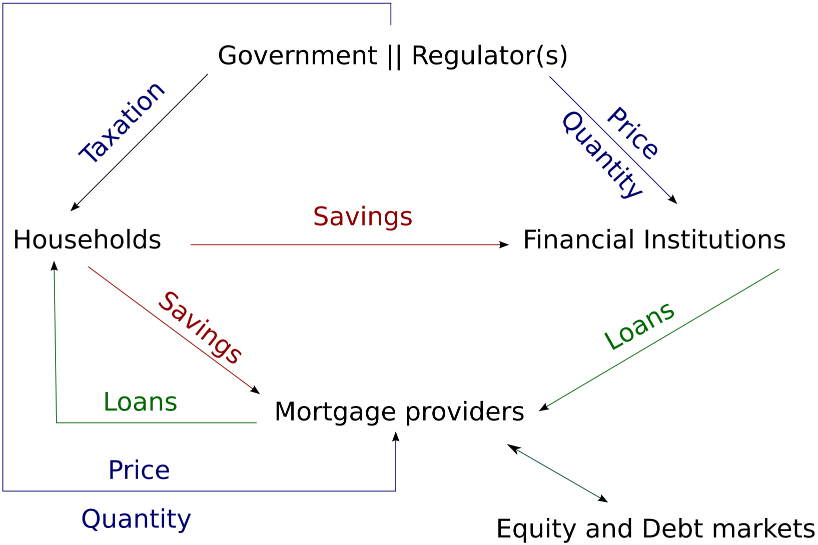

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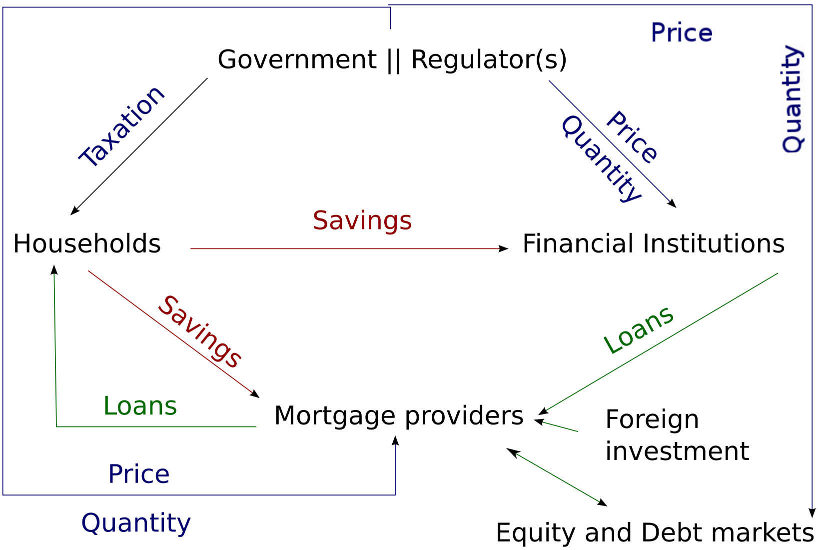


Who cares?

- Regulation could shape the scope of the mortgage market
- Regulation could affect extent of market efficiency
- Intended versus unintended consequence of regulation

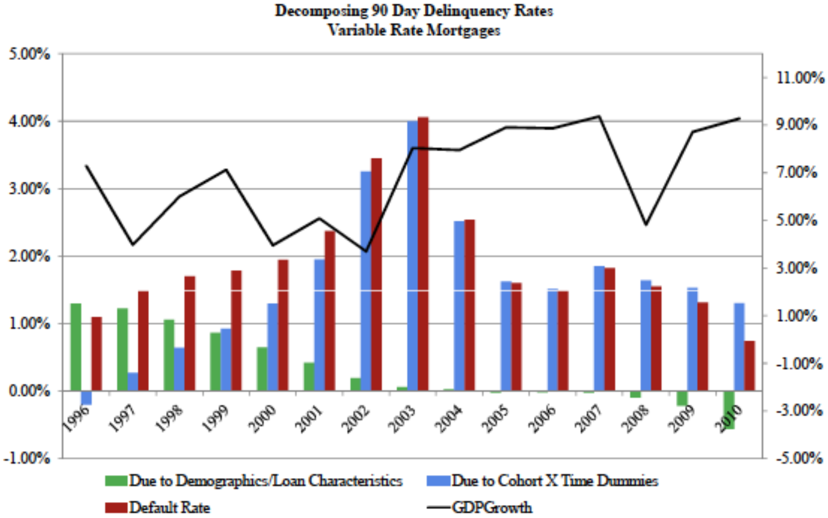
Research design

A hazard model:

$$\delta_{i,c,b,t} = \text{FE}(\text{Branch, Cohort} \times \text{Time}) \\ + f(\text{Dem., Loan Chars}) \\ + \gamma r_{i,c,b} + e^{\delta}_{i,c,b,t}$$

- Cohorts defined by loan origination date
- Controls for several demographic variables, loan characteristics, branch-level house-price appreciation and initial interest rate.

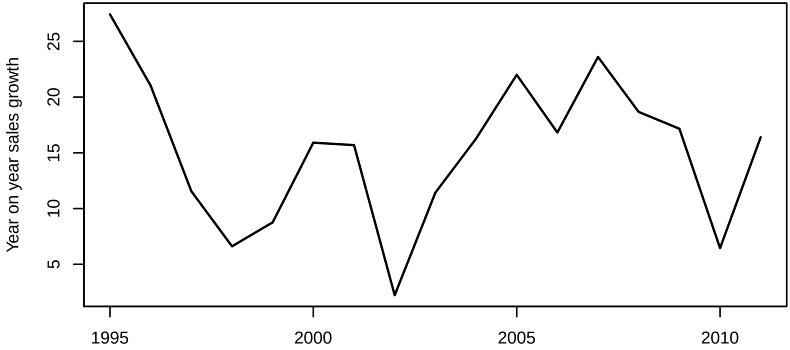
1. Macroeconomic environment and cohort default rates



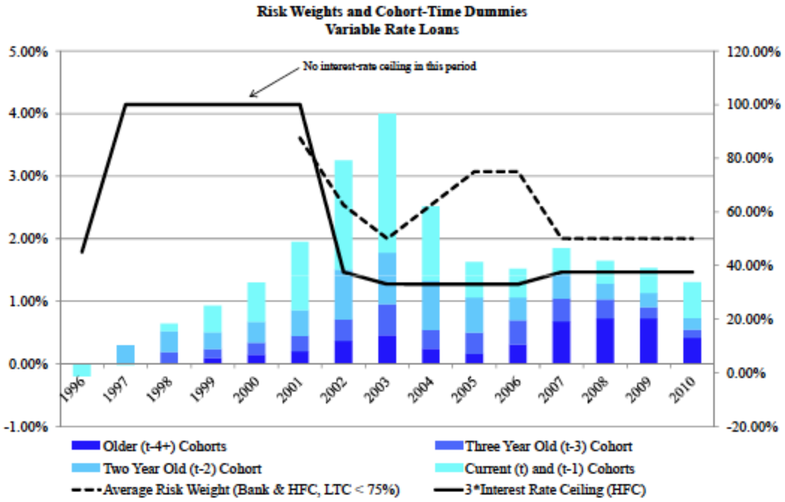
Comments

- Disconnect at least between gdp growth and increasing delinquency
- However:-
  1. GDP is not the best measure around for India
  2. Sales and profitability of firms
  3. Strengthens the argument

Sales growth for Indian firms



2. Regulatory influence over time



Comments

- Treatment in 1997 ought to have caused a significant response.
- Multiple targets and multiple goals
- What is the regulatory outcome for the mortgage market?
- It is not clear that the lever focused on is the one that caused the default rate.

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- Yes

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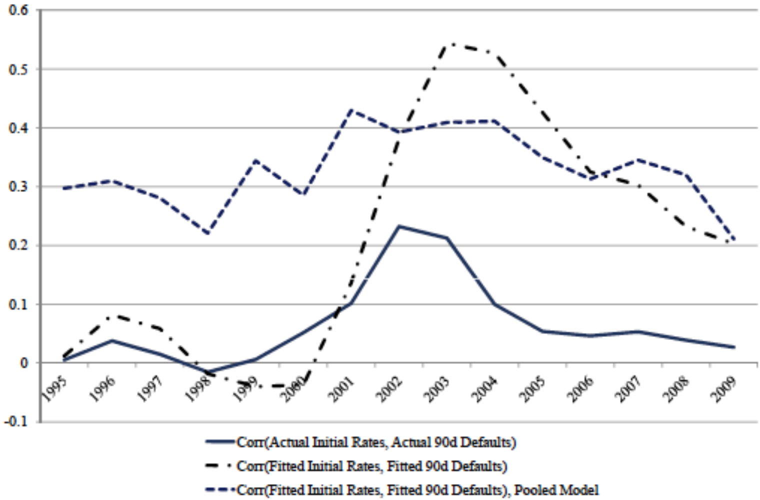

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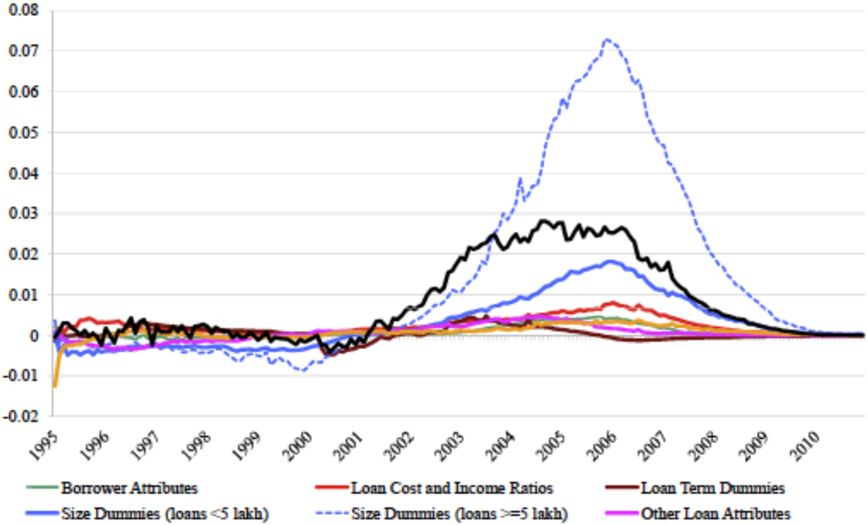

Comments

- To what extent is the learning stunted / enabled by regulatory influence?

Summary

- Exciting paper!
- Tell us more about the firm and the mortgage market
- Differential impact of direct and indirect regulatory influence?
- Systematic difference between fixed and variable rate loans. To what extent is this due to regulation?
- Formal study of correlation / causality with regulatory change anchored into a consolidated outcome measure
- NPA definition has changed in 2005 for HFCs and in 2004 for banks (from 180 days to 90 days). May be useful to revisit definition of delinquency rate and align it with the regulator.
- Learning by regulator?

Thank you.