DISCUSSION OF:

LOAN-TO-VALUE POLICY AND HOUSING LOANS: EFFECTS ON CONSTRAINED BORROWERS

Araujo, Barroso and Gonzalez (2016)

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Overview

- Look at the impact of LTV on delinquencies and contract terms
  - Compare target and non-target segments, before and after the introduction of the LTV regulation
  - Great data: credit registry (1.3 million loans) + employment data

- Treated borrowers buy more affordable homes, default less and obtain higher interest rates
  - Use observables to predict who will be treatment and control households

- Comments:
  - Interpretation: What changed?
  - Pool of borrowers before and after the regulation
  - Market-wide effects of the contraction in credit

Institutional details

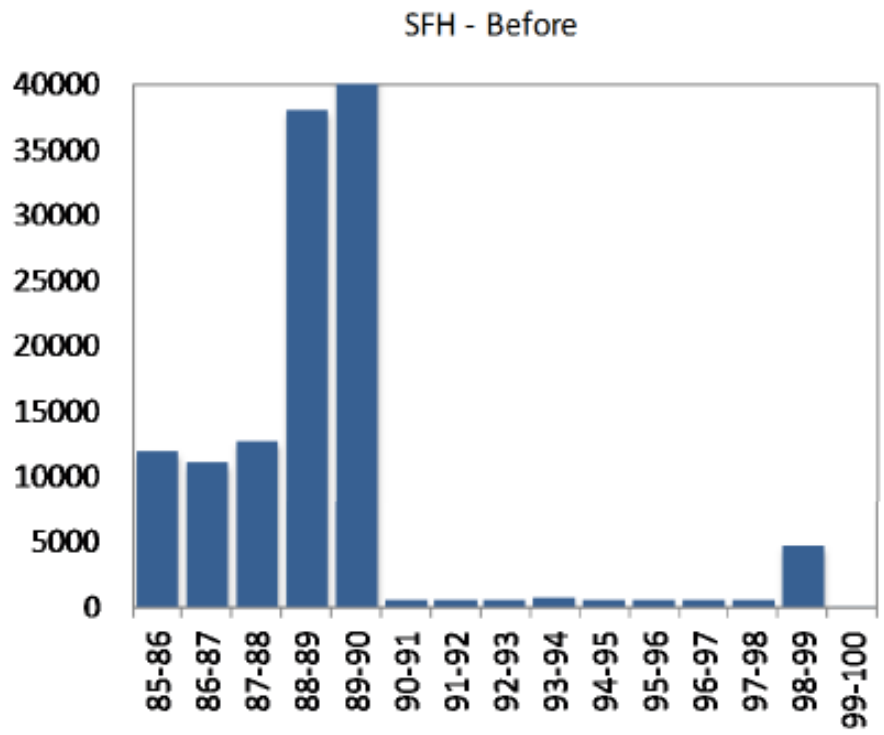
- Segments:
  - SFH: Subsidized rates. Limits on house price and leverage (like “conforming” in the US)
  - FGTS: Even more subsidized, but limit on household income
  - SFI: Private market, higher rates. Akin to jumbo market in the US.
  - Caixa Economica Federal has ~70% market share
- 9/2013 resolution forces SFH loans to have a maximum LTV of 90% for most loans, also affects FGTS segment
- Comment: Would be helpful to provide more detail on the functioning of the Brazilian mortgage market (Section 2)
- What is happening with SFI loans during this time period?

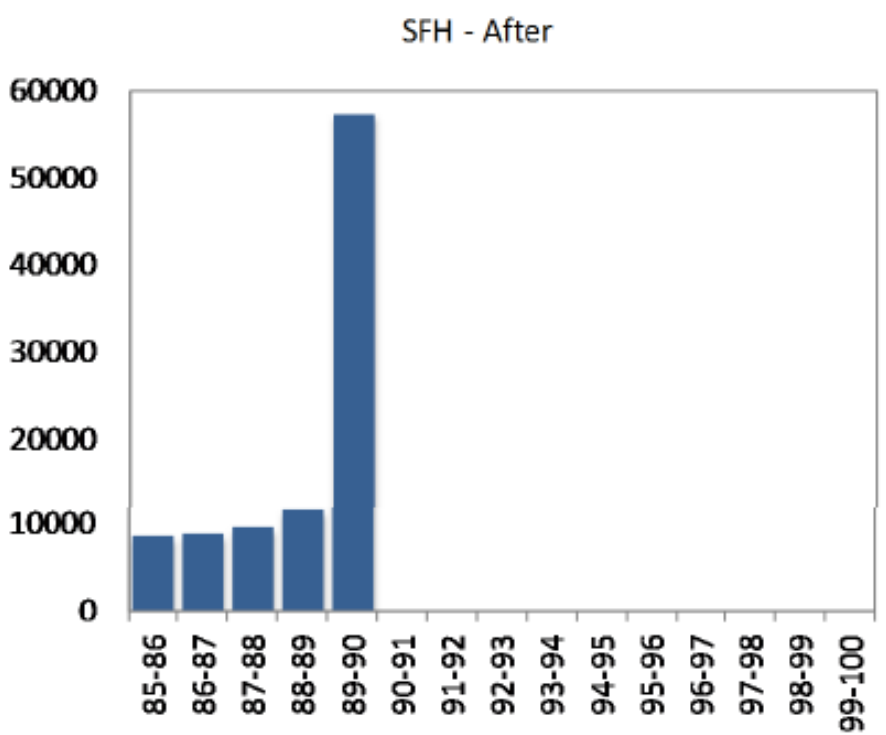
Summary statistics

	SFH	FGTS
Income	7k	2k
Loan	174k	88k
House Price	196k	99k
Interest Rate	9%	5.5%
Maturity	30yrs	25yrs

- SFH are larger loans, with higher interest rates and much higher income.

Experiment





- Paper assigns borrowers into treated and control groups based on income
  - Regulation also increases maximum price limit, but authors only use transactions below this limit.

Results

- Lower LTV (expected, mechanical)
- (Counter-intuitive?) credit effects:
  - Higher interest rate
  - Shorter maturity
- "Real" effect: smaller homes
  - Loans reduced by more than fall in house price
- Results in SFH and FGTS markets as broadly consistent, with some small differences (e.g., maturity)
- What happened to SFI segment?
  - Did banks respond as well?
  - Do some borrowers show up there? I.e. increase in the share o borrowers that could be in SFH segment before?

What changed?

- This is not simply affecting LTV, seems a broader shock
  - Central bank resolution Article 1 talks about risk evaluation, information verification (e.g., wrt appraisal, income), etc.
  - Interest rate effects may be driven by Caixa Federal decision to contract credit?
  - Authors acknowledge that regulation may be signal by the regulator
- If there is a more general shock to supervision / attitude towards risk, then the experiment becomes "contaminated"
  - Cannot really talk about just the causal effect of changing LTV constraints
- Put differently, this is a broader credit supply shock
  - In fact, the increase in rates and smaller maturity *are part* of the "shock"
  - Constrained households (low income) more likely to be affected

Pool of borrowers before and after the regulation

- Empirical approach uses income to assign borrowers to treatment and control groups, but is always conditional on obtaining a mortgage

- It is likely that some households drop out altogether (are not able to buy). This changes the composition of the pool of borrowers
  - This would bias against the result in the paper, because more constrained borrowers should drop out more, and this would mean lower rates, etc.
  - However, if characteristics of control group change at the same time almost anything could happen to predictions.
  - Discussion of the composition of the pool of borrowers and some tests for whether this happened would be useful.

Overall effects of regulatory intervention

- Paper currently looks at local treatment effects
  - Some seem mechanical, or contemporaneous changes on the part of lenders, rather than an effect of the change in LTV

- Would be very interesting to look at overall market effects
  - What happens to house prices? Can actually identify affected homes (LTV + price limits, as in Adelino, Schoar, and Severino, 2014)
  - Are some people not able to buy? Driven out entirely?

- And / or other non-housing outcomes
  - What happens to other borrowing (credit cards, etc) by the households?
  - Are households better off 6, 12, 36 months after the “experiment”? Comparing treated right around the change in the law?
    - House prices dropped a lot, so many households may be in trouble.
  - Any effects on employment? Consumption? Other outcomes?