Securitization and the Fixed-Rate Mortgage

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Why prepayable FRMs?

- Standard residential mortgage in the U.S.:
  - Amortizing **fixed-rate mortgage** (FRM)
  - Usually **30-year** maturity
  - **Prepayable** at the option of the borrower.
- Very different to other countries. Implications?
- Why are FRMs dominant? Demand vs supply?
- **This paper**: Is the U.S. mortgage finance system, especially *securitization*, an important driver of high FRM mkt. share?

Answer: Yes. (To come: how, and how much)

Securitization as risk diversification

- FRMs are risky for lenders in two ways (*relative* to hybrids, ARMs)
  - **Interest rate risk**: Maturity mismatch.
  - **Prepayment risk:** Fluctuations in prepayment rates.
- Securitization is key channel for diversifying these risks (e.g. to insurers, pension funds, international investors).

<u>Research questions</u>:

- Is the FRM share lower if loans cannot be easily securitizated?
- Does the *form* of securitization (private vs govt. backed) matter? Do Fannie Mae and Freddie Mac (F&F) play a special role?

Disentangling demand and supply

<u>Thought experiment</u>:

- Variation in funding type, *holding mortgage demand fixed*.
- Imagine three identical borrowers:

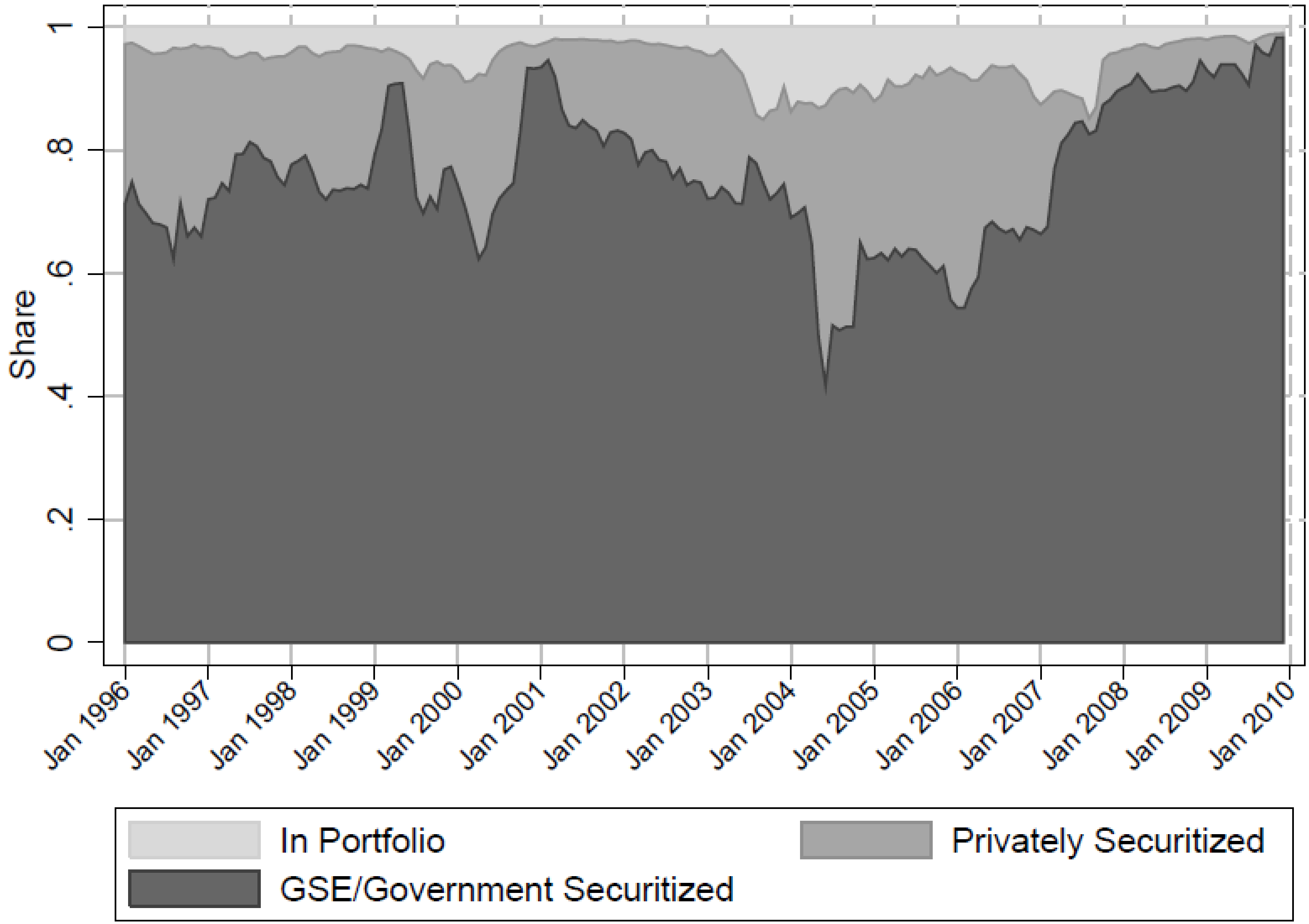
loan **retained** by originator	Securitized via **agency MBS mkt** (Fannie and Freddie)	Securitized via **non-agency MBS mkt** (issuer is private firm)

<u>In practice</u>: use "natural experiments" to isolate shifts in funding type.

- **Conforming loan limit** (CLL)**:** F&F can't securitize > limit ($417k*)
- **Liquidity shocks:** e.g. nonagency MBS freezes in Aug 07

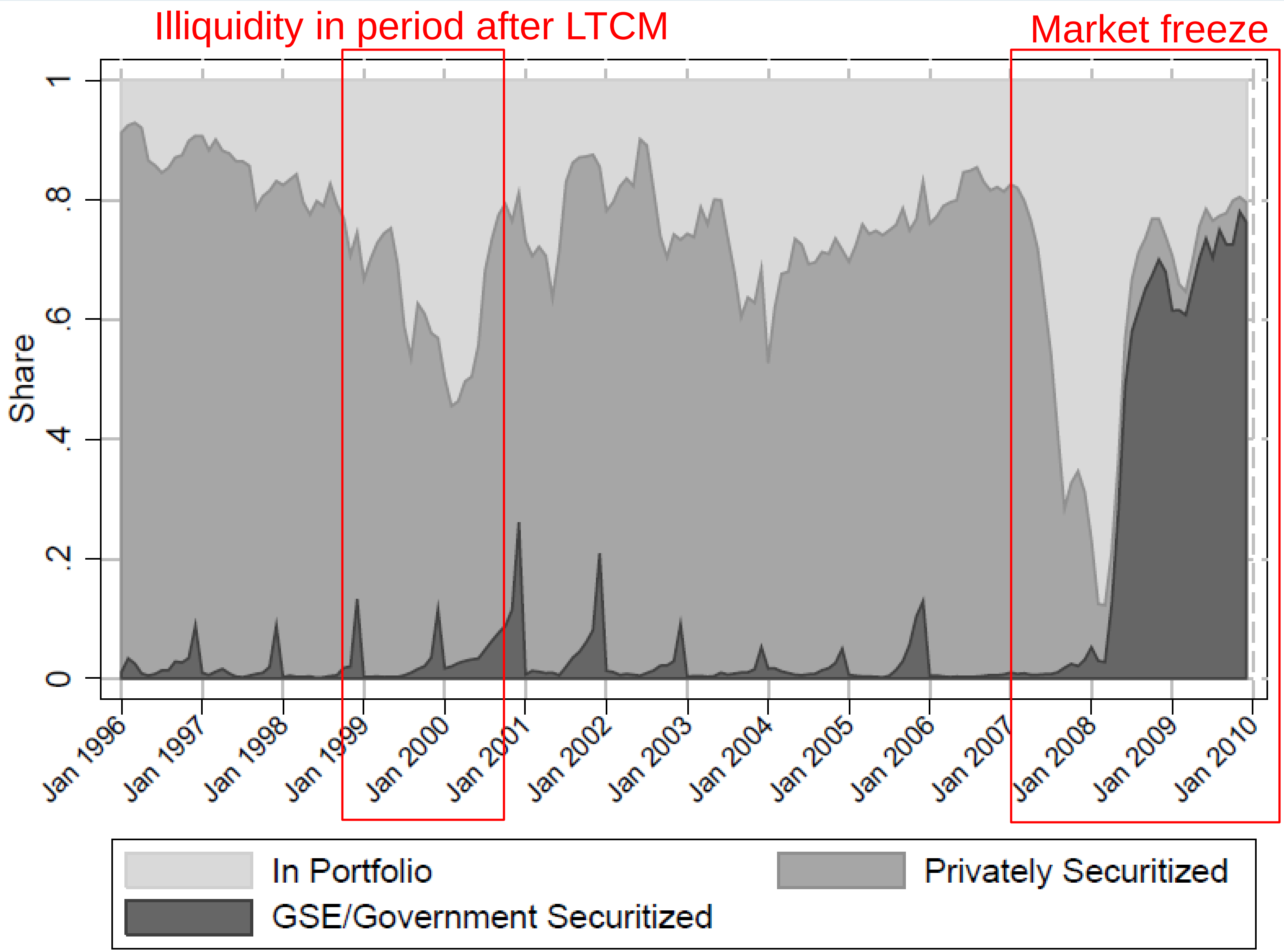
* Conforming limit varies over time and across regions. Current national limit = $417,000.

Securitization status: Non-jumbo loans (< nat. $CLL)



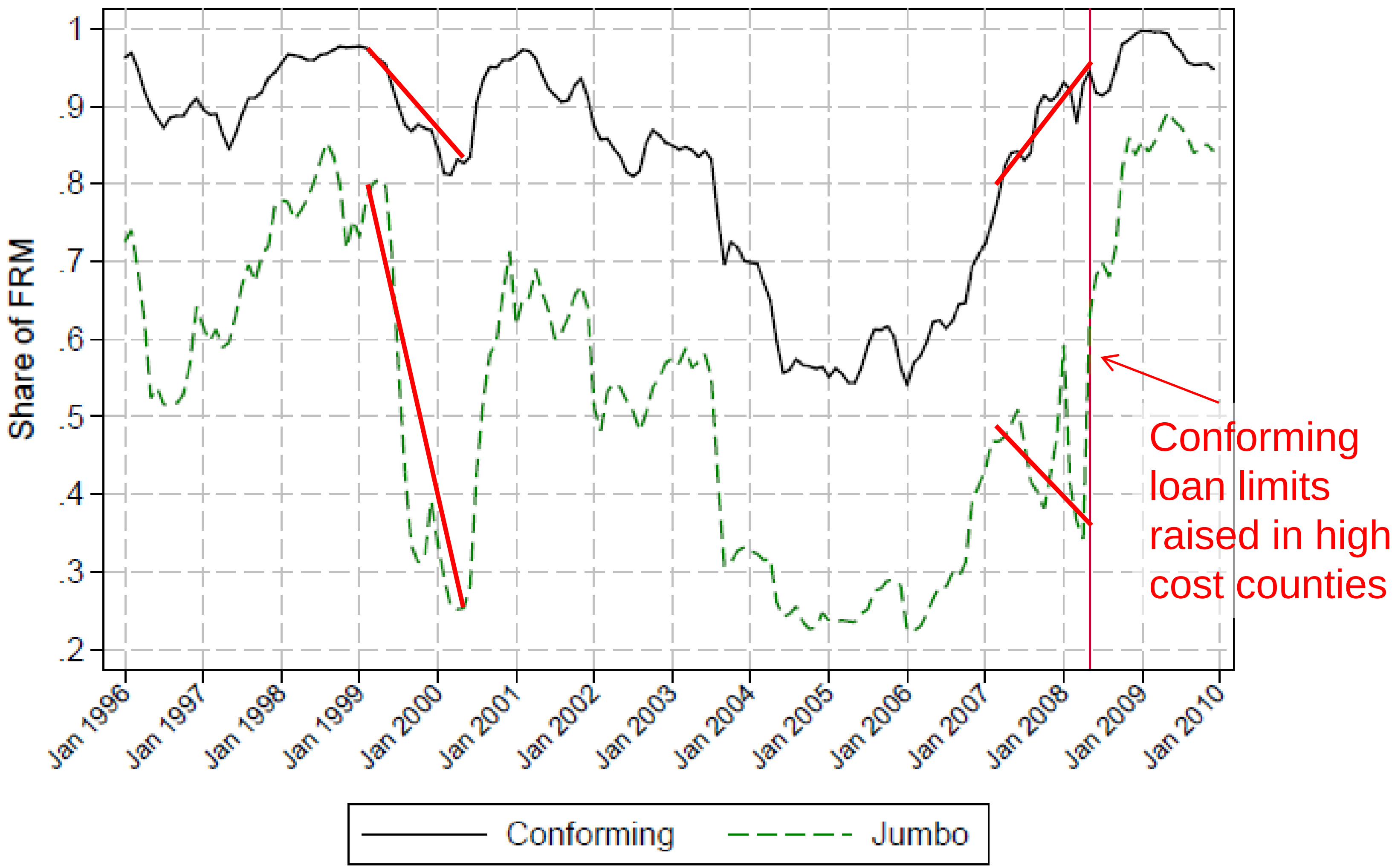
Source: LPS. Status six months after origination.

Securitization status: Jumbo loans (> nat. $CLL)



Source: LPS. Status six months after origination.

Time series: FRM share for jumbo and non-jumbo loans



Conforming status defined relative to national conforming loan limit (currently $417k)

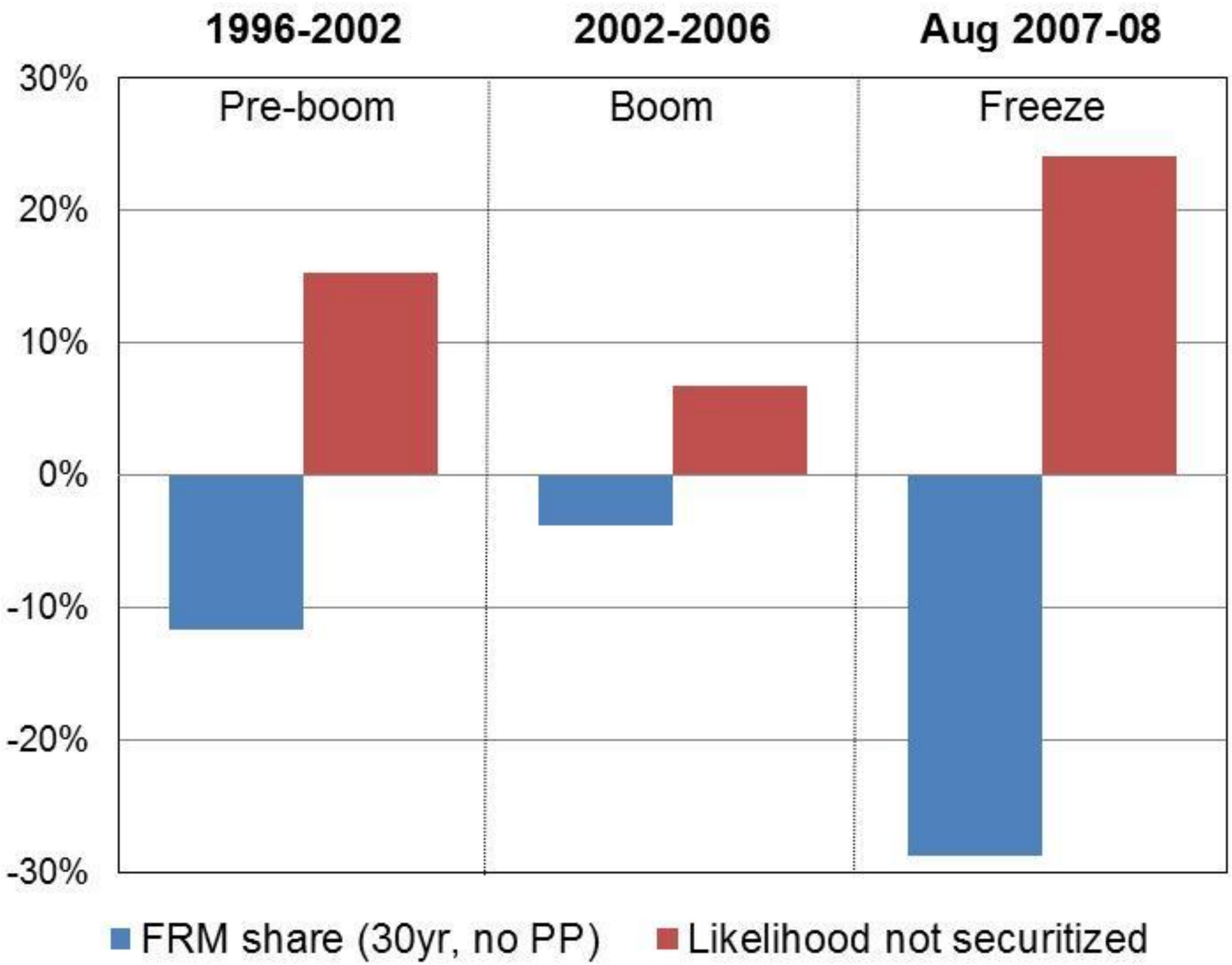
Empirical tests

- Summarizing: *difference* in FRM share b/w non-jumbo & jumbo:
  - *rises* when jumbo MBS market freezes,
  - *falls* when jumbos become liquid.
- Consistent with thesis that securitization supports FRM supply.

Heart of paper: statistical analysis using loan-level data from LPS

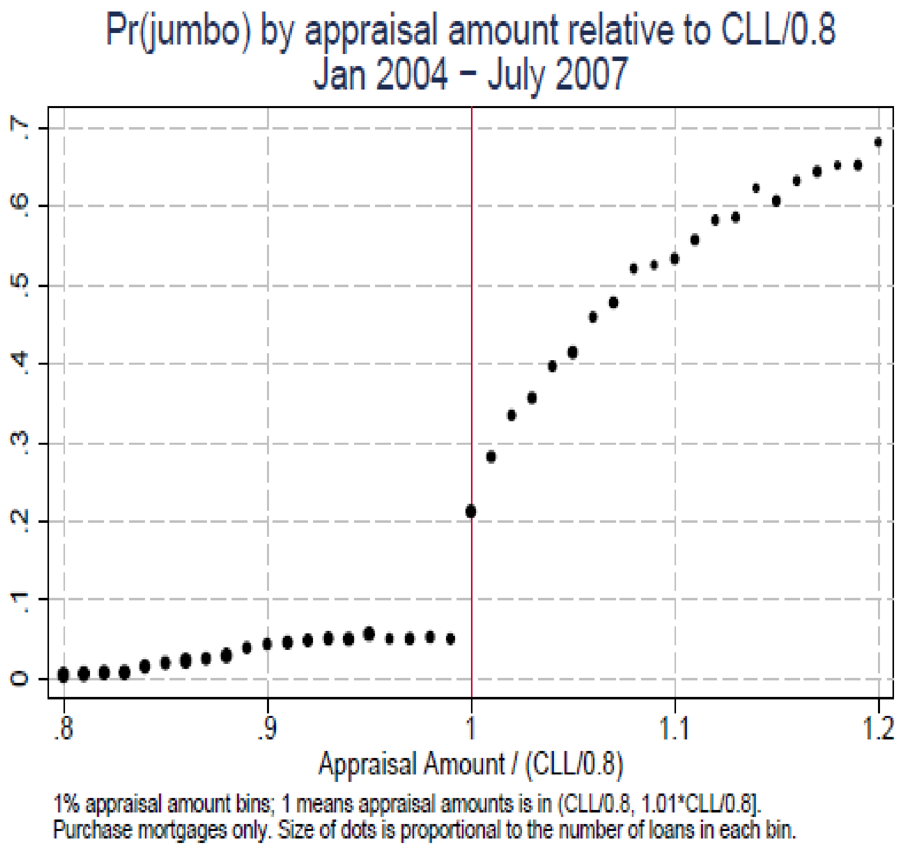
- Examine loans close to conforming limit, and changes in the limit.
  - Methods: "difference-in-differences", "regression discontinuity design".
- We use 80% of home value as an "instrument" for loan amount.

How does jumbo loan status affect FRM share? (DiD)

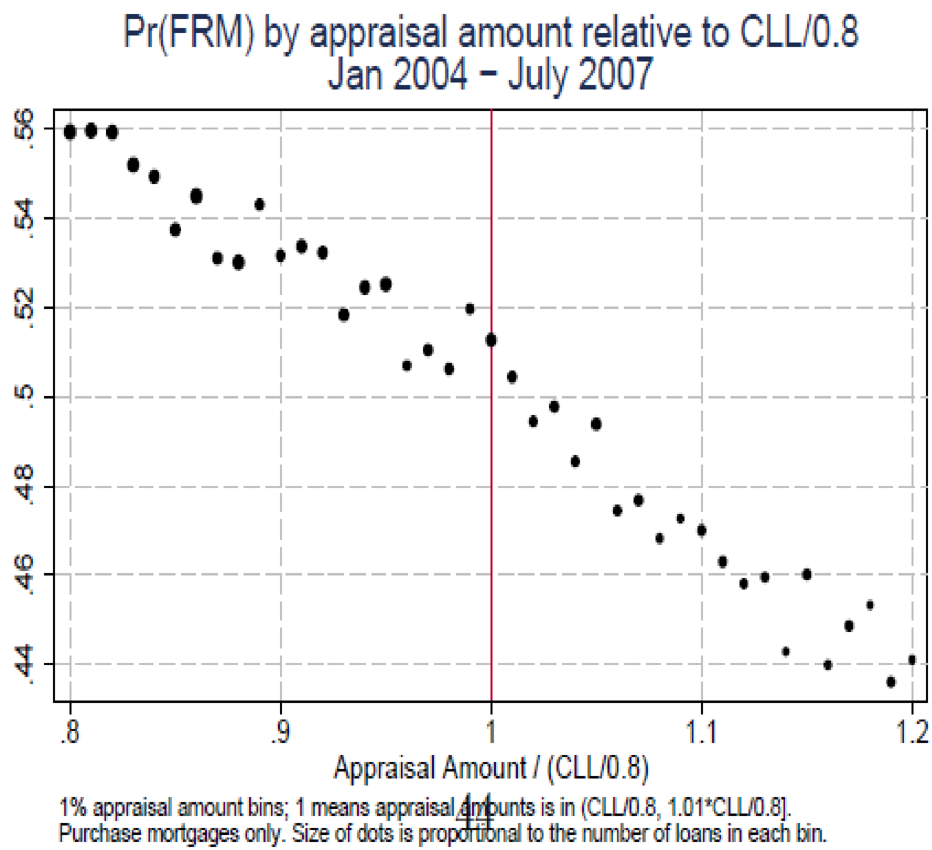


RDD results (approach valid for 2004-07 period only)

probability of jumbo loan
(ineligible for agency securitization)



share of FRMs



Running variable = (property value x 80%) / conforming loan limit

What can we learn for policy?

How might home buying change if the federal government shuts down the housing finance giants Fannie Mae and Freddie Mac? The 30-year fixed rate mortgage loan, the steady favorite of American borrowers since the 1950s, could become a luxury product, housing experts on both sides of the political aisle say. **- New York Times, 3/3/2011**

What light can our results shed here? First, two key caveats:

1. Our paper is not normative. We're not taking a view about whether FRMs are good or bad.

2. Our results might not generalize to large changes in the mortgage finance system. (Analysis is "partial equilibrium".)

Policy implications

Bearing these caveats in mind, some policy interpretations:

1. Private securitization can finance FRMs

- Reducing the footprint of F&F (& FHA) may only modestly affect FRM share, as long as private markets are liquid (e.g. 2004-07).
- Since private MBS market susceptible to freezes, FRM supply could be more volatile under purely private system.

2. Housing finance policy has implications for mortgage choice

- Policies that discourage securitization may reduce FRM share.

General question: What is "best" way to allocate interest rate & prepayment risk among banks, borrowers and investors?