

# DCP Consumer Research Symposium September 2012

## Discussion, Mortgages Panel

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\*Disclaimer: The opinions expressed here are my own and do not necessarily reflect the views of the FDIC

Discussion of:

**Second Liens and the Holdup Problem in  
First-Lien Mortgage Renegotiation**

(by Agarwal, Amromin, Ben-David, Chomsisengphet, and Zhang)

# Context

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- Important policy question
- 2<sup>nd</sup> liens are important part of overall mortgage market (from Been et al 2012, citing various sources):
  - Roughly 25% of outstanding first liens have 2<sup>nd</sup> liens attached
  - 2<sup>nd</sup> liens constitute roughly 8.5% of total outstanding mortgage balances
  - Over 90% of second lien balances are held on portfolio by banks/credit unions, with the four largest banks holding 42%
- Large banks also dominate mortgage servicing
  - Top 4 banks: 54% (Goodman 2011)
- Many 2nds are held by banks who also have servicing rights on the first lien (but do not own the first)

# Context

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- Potential conflict of interest (Mayer et al 2009; Goodman 2011)
- Servicer has an incentive to maximize the value of the 2<sup>nd</sup> lien, perhaps to the detriment of the 1<sup>st</sup> lien holders
- For example:
  - Servicer may try to delay/avoid FC on the first lien to preserve the (recognized) value of the 2<sup>nd</sup>
  - Servicer may try to delay a modification (or short-sale/DIL) to try to recover some price above the true value of the 2<sup>nd</sup> lien

# Overview

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- Authors focus on a subset of loans that are securitized (either PLS or GSE), have second liens, and that went seriously delinquent (60+)
- Identify two distinct groups
  - Servicer of first lien holds the second: “Holdup”
  - Servicer of first does not hold second: “Non-Holdup”
- How does Holdup impact the servicer’s choice of action on the first lien?
- Authors also look at performance of 1<sup>st</sup>/2<sup>nd</sup> liens

# Overview

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- How *should* Holdup impact the servicer's action on the first lien?

From the paper (p9):

1. Higher probability of delay (i.e. “no-action”)
2. Lower probability of liquidation
3. Higher probability of modification (and more concessionary modifications)

- The authors estimate separate models to test #1, 2, 3 above
- Note that these are not independent outcomes. If #3 is positive and large in magnitude, #1 *could* be negative
- Isn't the Holdup effect on modification ambiguous?
  - (+) Mod  $\rightarrow$  borrower cash-flow  $\uparrow$ , improves performance of 2nd
  - (-) a Mod might require the bank to recognize a loss on the 2<sup>nd</sup>
  - (-) bank might delay/avoid Mod in order to negotiate some recovery of \$\$ above the 2<sup>nd</sup>'s true value

# Key Results: Liquidation/FC

- Hypothesis: Less liquidation among Holdup group b/c 2<sup>nd</sup> lien holder will get very little (if any) of proceeds
- Probability of liquidation for Holdup group is:
  - 7-10% lower in PLS sample
  - 8% lower for GSE sample
- Consistent with theory, and large effect!



# Key Results: Concessionary Mods

- Hypothesis: conditional on Modification, Holdup group should be more concessionary
- Authors examine incidence of specific Mod types (e.g. principal deferral, interest rate reduction, term extension)
  - Generally find Holdup has little to no effect
- Suggestion: use “change in monthly payment amount” as the outcome measure (if possible)
  - A nice “summary statistic” of the generosity of the Mod
  - A direct measure of the cash-flow effect on the borrower, which should (in theory) impact performance of the 2nd

# Key Results: No Action

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- No action is more likely in holdup sample
  - +(7% - 10%) for PLS
  - +2% for GSE
- Effect is smaller for GSE sample. Why?
  - Because modifications are relatively more prevalent?
  - What about self-cure/prepayments?
  - Better control/enforcement of servicer's fiduciary responsibility to investors?

# Key Results: 1<sup>st</sup> Lien Borrower Outcomes

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- If Mod occurs: Positive effect (but not signif) for PLS  
Zero effect for GSE sample
- If no-Mod: Zero effect for PLS sample  
5% better performance for GSE sample
- Why condition on whether a Mod occurred?
  - This is one of the key mechanisms through which Holdup should affect outcomes
- Conditional on no-action, holdup/non-holdup **SHOULD NOT MATTER**
  - Troubling that Holdup group performs better (within GSE sample). Suggests there is some unobserved heterogeneity...

# General Comments: Specification

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- When the loan goes delinquent, in practice the servicer can choose from a range of alternative actions (do nothing; modify; FC)
- Borrower also plays a role
  - Self-cure/prepayment is initiated by borrower
  - May refuse or choose not to initiate modification
  - May or not pursue voluntary liquidation (short sale/DIL)
- Seems more appropriate to use MNL (or other joint model)

## Potential outcomes

1. Remains delinquent (i.e. No action)
  2. Self-cure
  3. Prepayment
  4. Loan Modification
  5. Voluntary Liquidation (Short Sale/DIL)
  6. FC/Involuntary Liquidation
- Another issue: no controls for local economic conditions, or servicer FE?

# General Comments: Endogeneity

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- Loans are not randomly allocated to “holdup” and “non-holdup” groups
- Authors show loans are similar along many observable dimensions
  - but not all – piggybacks? What about refi/cash-out refi?
- What about unobservable factors?
  - Underwriting quality/diligence of originating entity
  - Borrower preferences/characteristics
    - Borrower cooperation more likely in holdup group? “Loyal borrowers”
    - Ability to qualify for a mod (or interest in pursuing a mod)

# General Comments: Endogeneity

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- Authors recognize the issue, have begun working on alternative identification strategy
  - Restrict the Holdup sample to loans on which holdup occurs “accidentally”, due to servicer consolidation (Wachovia / Wells; Countrywide/B of A)
- Clever idea, worth pursuing. This approach addresses at least some of the endogeneity issues (e.g. borrower cooperation)
- However...

# General Comments: Endogeneity

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- Concerns with new identification strategy:
  - Seems likely that the first liens in the new holdup sample are “bad” along unobservable dimensions. After all these banks ran into trouble in part b/c of poor lending standards.
  - Has mortgage servicing been effectively consolidated within Wells/Wachovia or Countrywide/BofA? Need coordination of IT/servicing systems to even recognize they hold 2<sup>nd</sup> lien associated with the first they are servicing...
- It would also be worthwhile to do a battery of robustness/specification checks
  - Authors already split sample by PLS/GSE, this is useful
  - What are holdup effects within other homogeneous subsamples? (e.g. stratify by type of 2<sup>nd</sup> lien)

# Other Notes

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- Motivation: worth noting/recognizing other incentives at play
  - Banks may be motivated more by wanting to avoid recognizing the (inevitable) losses on 2<sup>nd</sup>, rather than preserving the actual value of 2<sup>nd</sup>
  - Banks may also be weighing potential income from fees associated with servicing loans that default, this may affect timing of servicer actions
- Sample selection
  - Sample limited to loans that are current in first month of sample period (May 2008), and THEN go 60+ days DQ
  - This effectively excludes a large number of loans that went DQ at onset of crisis (2007-2008Q2)
    - Maybe provide brief discussion of how the analysis sample compares to a broader set of (delinquent) loans? Implications?
  - Some loans may have had loss mitigation actions (or self-cured) occur prior to beginning of sample period, and thus appear “current” as of May 2008. Presumably these loans are be treated differently by servicers
    - Exclude from sample if possible
- Role of HAMP
  - Participation in HAMP lower among servicers of PLS loans?

# Summary

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- Nice paper on an important topic
- Interesting results, generally consistent with expectations
- Still some room for improvement on empirical design
  - Try joint model
  - Address endogeneity concerns

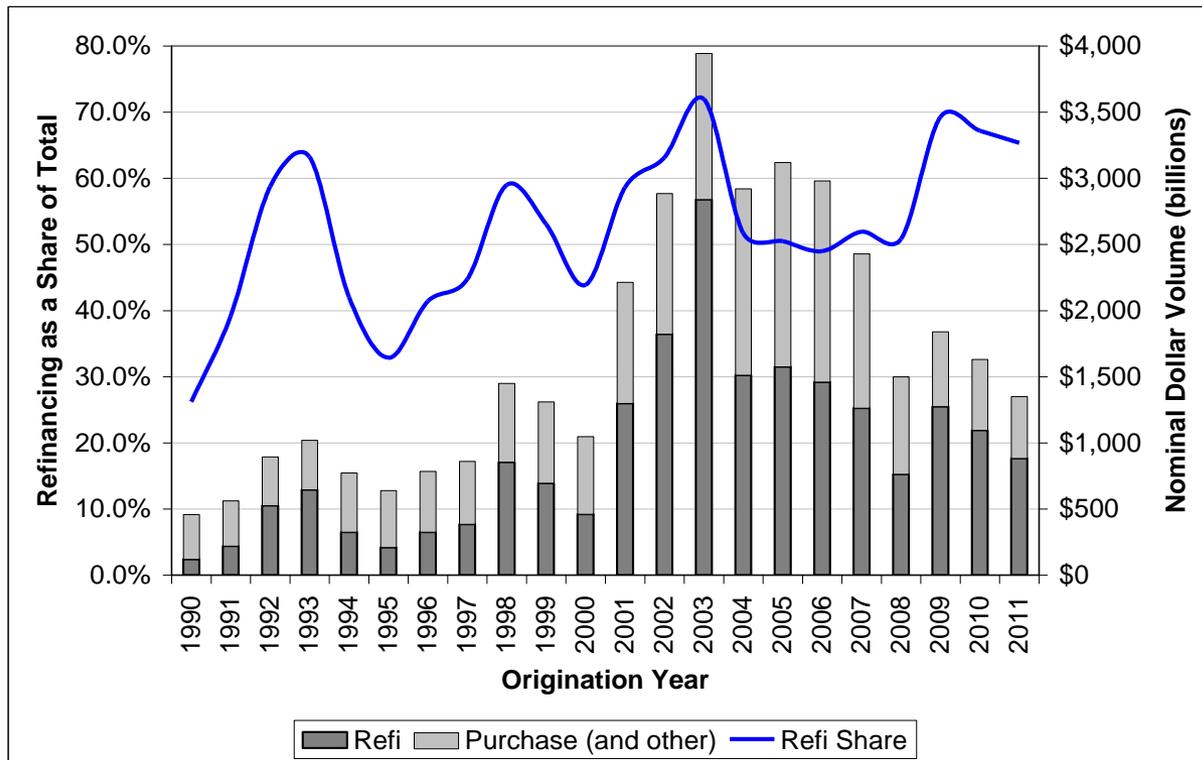
Discussion of:

# Determinants of Mortgage Refinancing

(by Ronel Elul)

# Context

- Refinance lending makes up a large share of the overall mortgage market



Source: Inside Mortgage Finance Statistical Annual 2012

# Context: Public Policy

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- Obama administration has introduced several programs to help facilitate refinance lending, particularly for high LTV/underwater homeowners
  - HARP (Spring 2009)
  - FHA Short Refinance (2010)
  - HARP 2.0 (Fall 2011)
  - “Broad Based Refinancing Plan” (Spring 2012)
  - Fee Reduction on FHA Streamline Refinancing (Spring 2012)
- Why? Refi → lower monthly payment → higher HH disposable income
- Hope is that this will help to stimulate the economy and/or address the current housing/FC crisis

# Overview

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- So understanding refinancing behavior is important
- Primary contribution of Elul's work thus far is to develop a dataset that is well suited to analyzing the homeowner's refinancing decision
- Innovations include:
  - Ability to distinguish between refinance and moves
  - Much more information on "current" borrower characteristics than existing datasets (e.g. current credit score, combined LTV, other debt obligations)

# Data Quality

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- First step should be to show that these data are reasonably representative of the U.S. mortgage market (and acknowledge any weaknesses)
- Are the data representative?
  - Does the matching process introduce bias?
    - Provide comparison of pre/post match sample means, distributions
  - Compare levels/trends with external datasets
    - E.g. compare originations by year (purchase/refi/total) w HMDA

# Data: Identifying Moves/Refis

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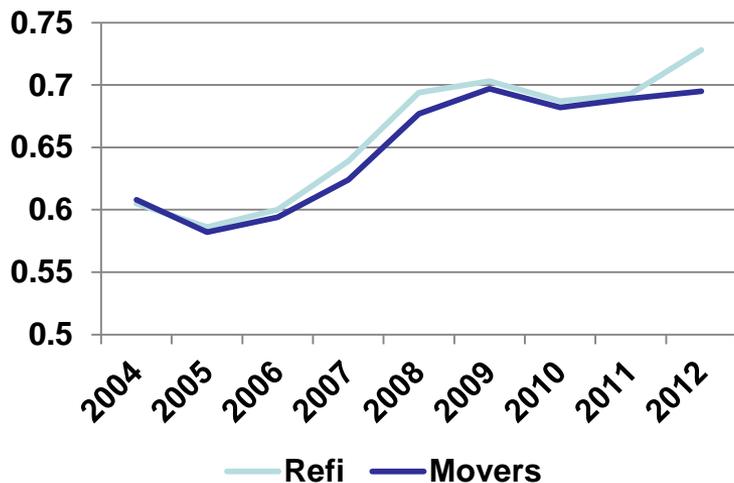
- How accurate is the algorithm?
  - “Refi” if good termination and address doesn’t change within 12 months of new mortgage
  - “1.6m terminations through Mar 2012, 35% of these are refi”
  - So ratio of Moves to Refis is ~ 2:1
- Back of the envelope check: in 2011...
  - 4.3m refinances (HMDA)
  - ~2.3m moves (Census: 4.7% homeowner mobility rate; 49.3m homeowners w/mortgage)
  - Ratio of Moves to Refis: ~ 1:2
- Earlier literature (based on servicer specific, localized data):
  - Pavlov (2001), ratio of Moves to Refis is ~ 1:6
  - Clapp et al (2001), ratio of Moves to Refis is ~ 1:1

# Trends

- LTV at Termination jumped among Refinance terminations in 2012, but not for Movers

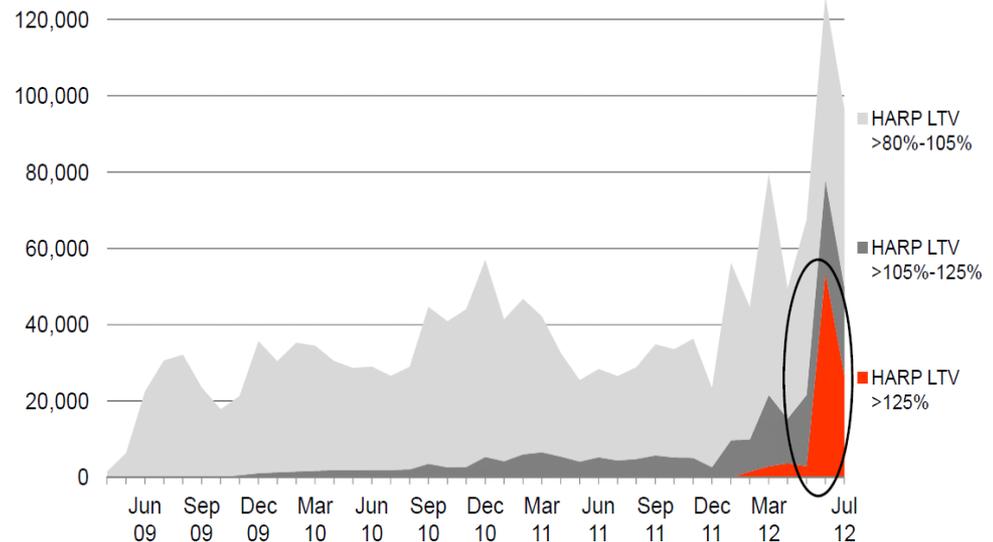
(from Elul, 2012)

## LTV at Termination



(from FHFA Refinance Report, July 2012)

## Monthly HARP Volume by LTV

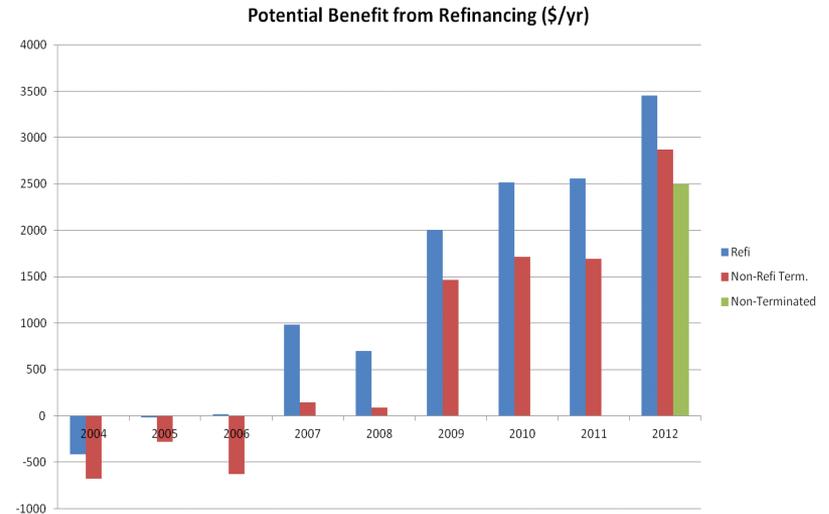
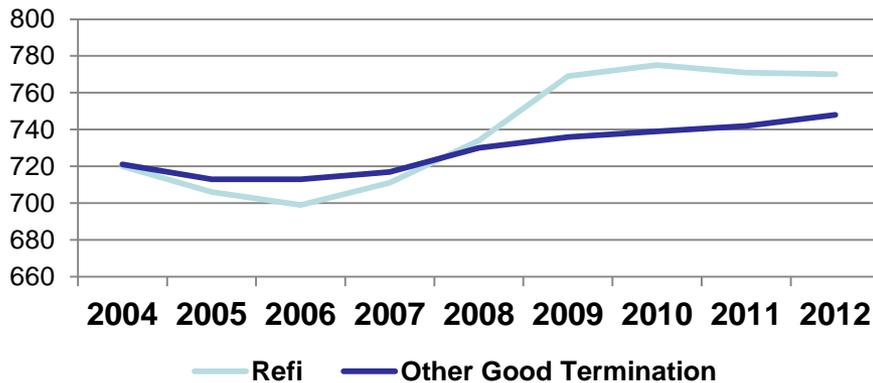


- Consistent with implementation of HARP 2.0, and growth of High LTV (125+) lending in particular
- How does this look within boom/bust states? (In July 2012, 57% of refis in NV, AZ, FL were HARP)

# Trends

- Refinance terminations between 2004-06 characterized by relatively low credit scores, low benefit to refinancing

## Riskscore at Termination



- These results are generally consistent with Goodstein (2012); likely attributable to growth of subprime, Cash-out Refi
- Is it feasible to merge in information from the new refinance loan (e.g. loan purpose = cash-out) to verify this?

# Empirical Results

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- Logit model of refinancing, *conditional on having a good termination*
- Estimates reflect the likelihood of a refinance *relative to* a move
- Not clear what to make of these results
  - Ex: higher LTV might limit homeowners' ability to refinance, as well as homeowners' ability to move. But *relative* odds may not change much across the LTV spectrum...
- Competing risks hazard (or dynamic MNL) more appropriate
  - Outcomes: no action; refi; move; default

# Summary

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- Promising start
- Need to provide more/better validation of data
- Innovative dataset should allow the author to better answer a number of important questions
  - Why are there are systematic differences in incidence of refinancing across groups?
  - Negative Equity effect on Household Mobility?
  - How does previous loan history/current credit characteristics affect choice of terms associated with new mortgage?
  - Others...

- the end -

**Thanks!**