Mortgages and the Future of Housing Finance

Loan Renegotiation and Performance

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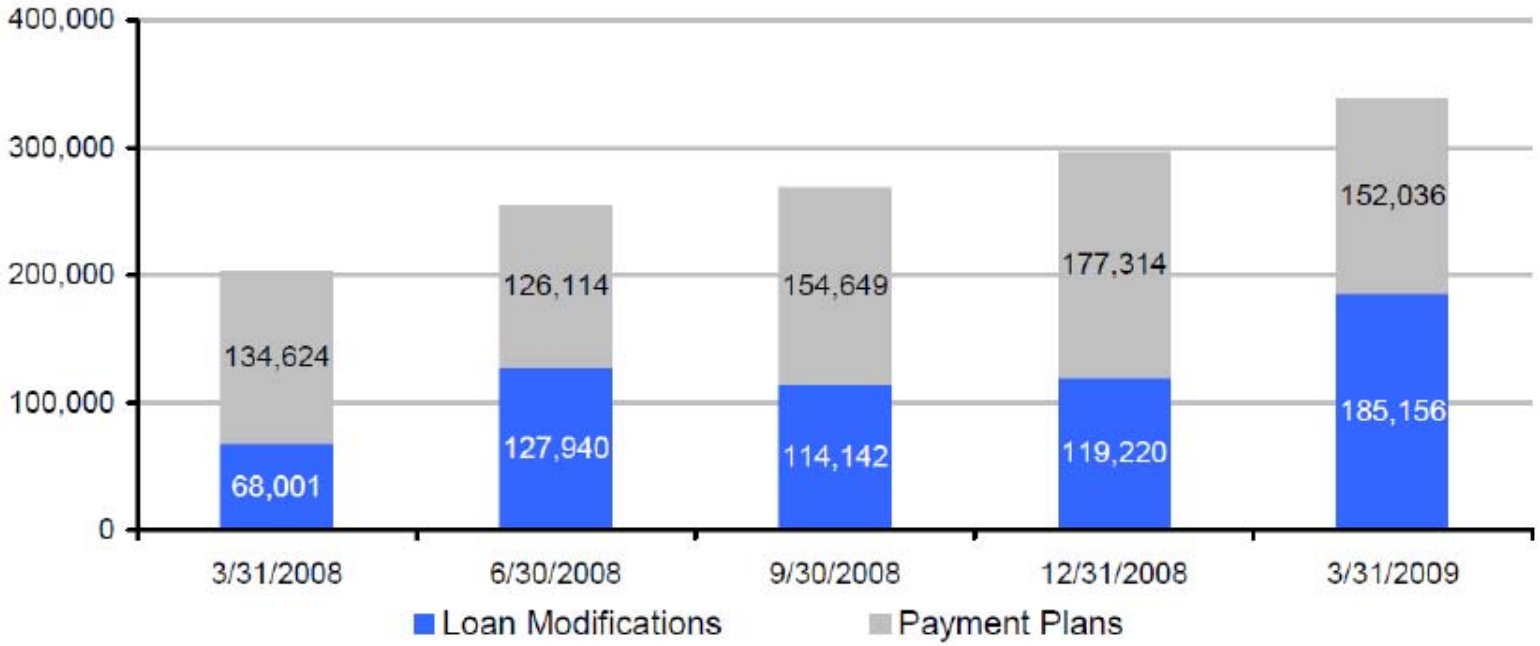
Overview

- Foreclosure crisis
  - 2.5 million homeowners have lost homes
  - Another 5.7 million at imminent risk of foreclosure
  - Projections of around 10-13 million foreclosed by end of crisis
- Renegotiation can create value for some “adverse shocks”
  - To borrowers and lenders
  - To society due to positive externalities of foreclosure prevention
- Not surprising then that “foreclosure prevention” one of the key goals of administration
  - Calls for lenders/servicers to modify mortgages
  - Subsidizing modification efforts ($75 billion HAMP)

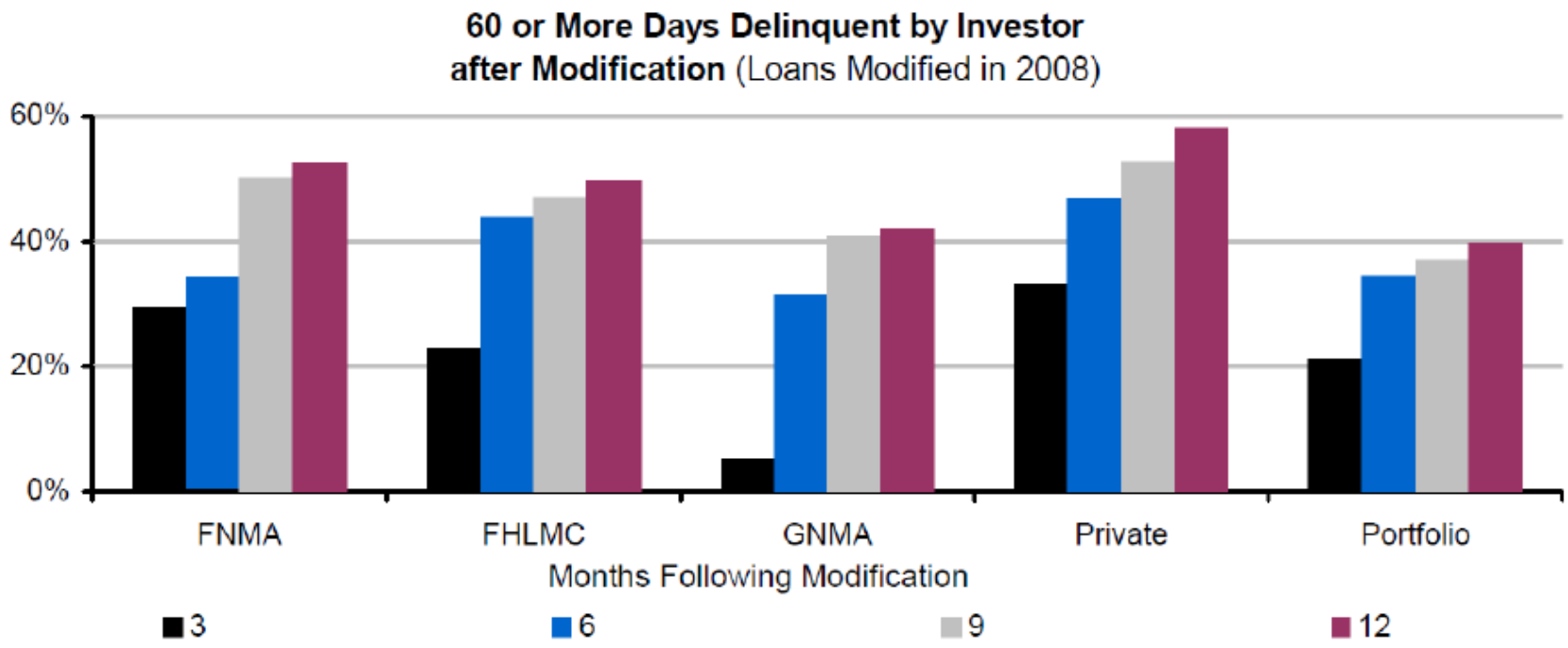
Overview



Source: OCC and OTS

- Renegotiations were not zero before the thrust….

Overview



Source: OCC and OTS

- …and effectiveness varied…

Overview

- But the questions were…
  - Are these enough?
  - What prevents them?
- Ultimate objective: Optimal renegotiation design
- One may think it is hard to design renegotiations or modifications that “work”
- Not really…it is very simple
  - Reduce principal balance by 100% → Zero default rate
- Solves foreclosure crisis
  - ...at a massive cost...

- Right Issue: Cost-Effective Renegotiations?
  - That is what the focus has been on

Overview

- One might think we should have a “sense” of this…
- Empirical: Corporate Restructurings
  - Tons of empirical work in 80s and early 90s
  - Well developed contract theoretic frameworks
- Theory: Optimal Renegotiation Design
  - Exante incentives versus expost inefficiency
    - Myerson-Satterthwaite theorem (1983)
  - Arm’s length debt (public debt, securitized debt)
  - Relationship debt (bank debt)
- A little more complicated in household setting
  - Two problems

A Tale of Two Problems

<u>Asymmetric and Imperfect Information</u>

- Difficult to identify which borrowers deserve renegotiation
  - Strategic motives, Redefaulting/Payment Types
- In case of corporate firms information assumed available (Why?)
  - Banks experience/ screen and monitor actively
  - Public information sources about corporate firms
  - Public debt renegotiations are very limited
- Becomes a complicated renegotiation design problem
  - Even in a simple setting a hard problem (Das and Meadow (2010))
- Solutions (very simple setting):
  - Screen at some cost (?)
  - Limit help (random rejects)
- Need more research to understand solutions and implementation
  - Ghent (2010) and Agarwal et al. (2010)
  - Time varying types (beliefs of borrowers affected by policies)

A Tale of Two Problems

<u>Institutional Frictions</u>

- Non agency securitized loans at the epicenter of the crisis
  - Servicers make a key decision what to do with delinquent loans
- Incentives can matter
  - Separation of ownership and control/ Servicer incentives
  - Legal constraints and uncertainty
  - Coordination failure among dispersed investors
- Debate whether exists…!!!!! It does !!!!!! (Agarwal et al. (2010))
  - Direct data on renegotiations
  - And large 70% difference (3% in absolute terms)
- Solutions:
  - Servicer incentives
  - Reducing other constraints
- Need more research to understand implementation
  - What works?
  - What does not?

Challenges in Implementation

- Frictions of securitization
  - Design renegotiation that preserves incentives for solvent folks
  - For example
    - Servicer incentives
    - Legal uncertainty
  - Seems simpler of the two
- "Mixed" success of HAMP mortgage modification effort
- Complications
  - Capacity/ Operational problems
  - Cumbersome process
  - Beliefs (house prices, macro, bailouts…)
  - Second Liens
  - Information loss at origination

Challenges in Implementation

- Screening asymmetric information
  - Optimal mechanism variant of the following
    - Limited renegotiation
  - Keeping ex ante incentive effects out of picture (not as trivial)
  - Similar forces when corporate in distress
- Not obvious how to implement
  - Screening costs
- Why?
  - Lender skill and experience (corporate vs. households)
  - Lender “stigma”
  - Borrower sophistication and biases (corporate vs. households)
  - Borrower types time varying

Therefore, I would have liked to see

Ghent (2010): estimate without securitization

- Internal validity
  - Heterogeneity across borrowers and lenders and…
  - …across states (variation in “conflicts”?; political pressure?)
- Reason:
  - Get a sense of external validity

- Can we learn something about how lenders screened?
  - Who gets a modification?
  - Who does not?
  - Ex-ante characteristics of borrowers? Lenders?

Therefore, I would have liked to see

Agarwal et al. (2010): renegotiations on private and bank-held

- External validity

- Help understand how to deal with incentive issues
  - When is the modification offered?
  - What explains heterogeneity?
    - Servicers, borrowers, lenders etc.
  - Can lenders use this information ex ante at time of renegotiation?
- Help understand how to deal with institutional frictions
  - Where did HAMP help?
    - 1.3 million temporary mods & 450,000 permanent mods
  - Where did it not help?

Therefore, I would have liked to see

- Interestingly, Ghent vs. Agarwal et al. (and OCC/OTS)
  - Renegotiation % higher in recent time
- Why?...perhaps screening costs went down…
  - Borrower indices (FICO)
  - Cost of modifications/ Screening lower?
  - House price indices
- …and contract theory not developed…
- …but some important factors also changed
  - Conflicts in information collection and sharing
    - If many bank loans originated with “intent” to sell
  - Stigma (borrower and lender level)

Therefore, I would have liked to see

Das and Meadows (2010): Strategic Loan Mod

- Even in a simple world quite complicated to solve
  - Loss of NPV vs. Loss due to strategic defaults
  - Principal reductions may work if these are the only issues

- External Validity
  - More complicated
  - How do we think about screening with asymmetric information?
  - How do we think about institutional frictions?
  - Given magnitudes, how do we design the optimal contract?

Conclusion

- Want to understand how to successfully renegotiate mortgages
  - Incentives and Institutional frictions make it a complicated issue
  - The effects are “large”
    - For example, securitization leads to around 70% lower rate of renegotiation relative to bank held loans
- Need two things
  - Model
  - Empirical research

Conclusion

- A good theoretic model to guide us
  - “Distressed banks” renegotiating with distressed borrowers…and…
  - …under presence of institutional frictions…and…
  - …under information issues with borrowers…and…
  - …banks and borrowers worry about “stigma”…and…
  - …borrowers may have biases...and…
  - …servicers and lenders may strategically obfuscate….and…
  - …want to preserve ex-ante incentives to pay!!
  - easier said than done!

- Combines numerous areas
  - Contract theory, behavioral finance, corporate finance, asset pricing
  - Not sure if we have made enough progress

Conclusion

- More empirical research to guide the model
  - When do we do renegotiations?
    - Borrowers, lenders, servicers
  - Every crisis has been different
    - But can learn from every episode
  - We do not know all the answers
    - Just getting warmed up (unfortunately)
- Finally, the question to ask is what is the “optimal” number of modifications that make economic sense?
  - How many should we “expect” to occur?
  - Can we expand that expectation frontier given what we know…
    - Institutional frictions
    - Incentive issues
  - …but it quickly becomes a complicated issue under political constraints!