Foreclosures and the Housing Market: Lessons For Policy
Lecture at Woodrow Wilson School

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The Housing Crisis Was a Foreclosure Crisis

- 2006-13: 8% of owner-occupied homes foreclosed upon.
- As much as 70% of sales in hardest-hit cities.
Foreclosures Are Still a Problem

- Foreclosures have subsided but still elevated.

Source: BlackKnight Mortgage Monitor

1. Slow to liquidate backlog, particularly in judicial states.
   - In 6 months, 23% of houses “in foreclosure” sold, and 7% cure.
2. Prices still below peak. Owners who bought near peak owe more than house is worth.
3. Prices have not risen substantially everywhere.
Geographic Concentration of Delinquency

*Figures as of May Month-End

Source: BlackKnight Mortgage Monitor
What Happened and What Can We Do About It?

• Big, complicated topic. We could talk for days. I will only scratch the surface.

1. What happened?
2. Who defaulted and why?
3. What effect did this have on the housing market as a whole?
4. What can policy do?
Massive Housing Bubble

• Massive housing bubble.
  • Since 1970s, nation-wide house price indices had not fallen. First nation-wide boom-bust.
  • Strongest in “sand states”: CA, AZ, NV, FL.
  • Big debate on what caused: Influx of cheap credit or bad expectations about prices.

• Financial innovation in mortgages:
  • Pool, tranche, and securitize.
  • Expansion of “subprime,” “exotic mortgages.” Subprime is 50% of defaults 2006-8, but 13% of mortgages.

• Large amounts of refinancing.
  • At first, refinancing into lower interest rates.
  • But then “cash out” refis, including second liens and home equity lines of credit (HELOCs).
  • Massive liquidation of new home equity.
  • Results in high loan-to-value ratios for many households.
The Bubble Pops

- Tens of millions of households are “underwater,” owing more than their home is worth.
- Millions default, losing their home and ruining their credit.
  - Banks sell at discount prices.

Source: BlackKnight Mortgage Monitor
Why Did The Banks Foreclose on Delinquent Homeowners?

- In many cases, mortgage servicers had fiduciary duty / incentives to do so due to securitization:
  - “Once a loan is delinquent, there is no extraordinary reward that would justify exceptional efforts to return the loan to current status or achieve a lower-than-anticipated loss.” (Theologides, 2010)
  - Servicer not paid until loan is liquidated.

- Banks are swamped with defaults, did not know how to handle. Foreclosure by “default.”
  - Especially big lenders that are short staffed, not used to handling default.
  - See surge in “short sales” where owner sells and bank accepts less than house is worth, starting in 2011.
Negative Equity and Default

- Negative equity is a necessary condition for default.
  - Default entails costs (hurts credit score, ethical, forced out of home). Want to avoid if possible.
  - If owe less than house is worth, can sell house, pay off bank, and have money left over.

- In practice, almost all defaulters have negative equity.
  - Often substantially so.
  - Few households with negative equity default.
    - Foote et al. (2008) show that < 10% of those with negative equity in MA in 1990s defaulted.

- Causes of negative equity prerequisites for default:
  - High loan to value ratios (LTVs).
  - Falling prices.
Strategic Default or “Double Trigger”?

• Still, this leaves two possibilities for who may default, with very different implications:

  1. Strategic Default: Defaulters are people who are rationally stepping away from their loan. All about incentives.
  2. “Double Trigger” Default: Defaulters are people with negative equity who have some negative shock to their cash flow (lose job, health, etc.), with size of shock triggering default depending on wealth / cash flow / access to credit. All about circumstances.

• My Read of Research: Double trigger is dominant.

  • Strategic default is at most 15-20% of all defaulters.
Evidence Against Strategic Default

- Few default on mortgage while paying other debts.
- Few go from current to 90 days + without trying to make a payment.
- Gerardi et al. (2013): Only 14% of defaulters have enough liquid assets to make one mortgage payment.
- Bhutta et al. (2010): Median non-prime borrower does not default strategically until equity is -67%.
  - Even in sample of non-prime borrowers who purchased homes in worst places with no money down at peak, 80 percent of whom default in 3 years, < 20% strategic default.
- Many more negative shocks in recession to interact with negative equity as “double trigger.”
Evidence Against Strategic Default

Source: Keys, Piskorski, Seru, and Vig (2013)
What Caused Deep Negative Equity?

- Even if most default is “double trigger,” still raises question of what caused negative equity.
- My view lines up with a paper by Palmer (2015), who looks at why 2006-7 loans defaulted so much more than 2003-4.
  - Observable borrower quality: 10%.
  - Characteristics of mortgages (e.g. low down payment, exotic mortgage), borrower unobservables: 30%.
  - Declining house prices: 60%.
- To tell house prices apart from characteristics, creative IV strategy to isolate house prices.
Default and Prepayment by Cohort

Source: Palmer (2015)
Cumulative LTV By Cohort

Source: Palmer (2015)
These Vintages are Still Problematic Today

Source: BlackKnight Mortgage Monitor
Another Source of Problems: Second Liens and HELOCs

- Many increased their LTV with a second lien or HELOC.
- Liquidating home equity, often in conjunction with “prime” conforming mortgage.
What is the Effect of Foreclosures on the Housing Market?

- Guren and McQuade (2015): Big.
  - In recent crisis exacerbate aggregate price declines by 62% and non-foreclosure price declines by 28%.

- Mechanisms:
  1. Foreclosed-upon individuals are locked out of buying with ruined credit, while house is put back on market ⇒ Contraction in demand relative to supply.
  2. “Choosey Buyer Effect” Next house buyers find that they like is likely to be foreclosure at deep discount ⇒ non-distressed sellers lose bargaining power and must accept lower prices.
  3. Both contribute to price-foreclosure spirals.
Price-Foreclosure Spirals

- Negative equity $\Rightarrow$ foreclosures, and foreclosures $\Rightarrow$ price declines $\Rightarrow$ more negative equity.
  - Leads to quantitatively important price-default spiral.

- In data, cities with combination of large boom and many people with low equity have disproportionately large bust.

- Also real effects of housing market:
  - Price declines depend recession due to housing wealth effects on consumption and bad loans on bank balance sheets reducing credit for households and firms.
  - Increase in unemployment and other economic shocks by double trigger cause more foreclosures.
What Can Policy Do?

- By now I hope I have convinced you that foreclosures had negative externalities on the housing market and the economy as a whole, and that most defaulters were not malicious.
  - This suggests a substantial role for policy.
- Government did some in the crisis, but many think anti-foreclosure policy was lacking:
  - Very expensive to experiment given large sums of money involved. Not a $500 tax credit but instead thousands of dollars per homeowner.
  - Very hard to target right homeowners, concerns about strategic behavior ⇒ increases costs even more.
  - Lack of research to guide good policy.
Home Affordable Modification Program

- Announced in 2008, targets 3-4 million modifications by 2012.
- Complicated program, but two main parts:
  1. Cost sharing arrangement to reduce payments and principal.
  2. Financial incentives for loan servicers to modify.
- Reached only 1/3 of 3-4 million target.
Why Was HAMP Unsuccessful?

• Mayer et al. (2014): When modifications announced, borrowers become more delinquent.

• Agarwal et al. (2012) compare borrowers just above and below HAMP eligibility cutoffs.
  • Find that while there is increase in renegotiations, reduces renegotiations outside of program.
  • Lack of success due in large part to muted response of a few very large servicers that do not modify many qualifying loans.
    • Argue that reflects organizational capacities: These banks had smaller, less trained, overloaded servicing staff.

• But positive effects where it was taken up.

• Overall lesson: Very difficult for government to force modifications of these private contracts.
  • Especially with securitization.
Home Affordable Refinance Program

- Helps homeowners who are current but have negative equity refinance by extending government guarantee.
  - Many of these people stuck at high interest rates and unable to refinance into low interest rates.
  - Only prime GSE loans.
- Much more successful than HAMP (Agarwal et al., 2015):
  - 3 million borrowers with prime fixed rate mortgages refinance, on average to 1.4% lower rate resulting in $3,500 annual savings and higher expenditures.
  - However could have been more successful: Lack of competition (incentivized to stay with current lender) means take up falls and interest rate savings could have been .16-.33% larger.

What Would Ideal Policy Look Like?

- Reduce principal?
  - Idea here is that people default more with higher negative equity, so reduce negative equity directly.
  - Also argument that consume out of housing wealth, so giving housing wealth increases consumption.

- Or reduce monthly payments?
  - Rather than increasing value of asset households may not be able to tap into, alleviate financial constraints borrowers face today if they are liquidity constrained.
  - Need a bigger shock to make monthly payment unaffordable, the double trigger for default (Campbell and Cocco, 2015).

- My view: Reducing payments is likely the better route, but more research is needed.
  - Some preliminary HAMP evidence suggests that payment reductions mattered much more than principal reductions.
  - But other pre-HAMP evidence suggests opposite.
Reducing Monthly Payments Reduces Default

Source: Fuster and Willen
Reducing Monthly Payments Boosts Consumption

- Also pay down other debt.

Source: Di Maggio, Kermani, and Ramcharan
Slowing Down Foreclosures

- Simple policy lever is to slow down foreclosures.
  - Make every state look like a judicial state.
- Judicial states had smaller bust.
  - But also may have had smaller shocks. Hard to tell.
- Bust in judicial states has lasted much longer.
  - Forward looking households should expect this, causing bigger price declines initially.
- Hard to say whether slowing down foreclosures would help, but clearly a depth of bust vs. length of bust trade-off for policy makers interested in slowing down foreclosures.
Changing Bank Incentives to Foreclose

- Long-term solution should involve changing incentives of banks to foreclose.
  - Right now, this is the default option.
  - Especially at big servicers who usually do not handle defaults. Don’t know how to modify or have the staff to do so.
  - Securitization gives servicers incentive to foreclose first.
- How can we change contracts so servicers have less incentive to foreclose?
  - If HAMP has taught us anything, this is hard, has a lot of important details, and can have unintended consequences.
  - Important question, particularly for lawyers.
Mortgage (Re)Design

- Also in long run, question of to change design of mortgages to reduce foreclosures and housing market volatility.
  - Something I am working on.

- Proposals:
  - Fixed rate mortgages with option to convert to adjustable-rate.
  - Mortgages where lender gets some of appreciation but also bares some of cost in bust.
  - Easier to refinance when under water (Denmark).
  - Etc.

- But how will lenders respond to new mortgage designs?
  - Will they extend less credit or increase interest rates?
  - Lots of feedbacks to think about, and very difficult (but important) problem.