

It's the house prices

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Subprime Lending and Foreclosure Summit,
December 12, 2007

Disclaimer

- The views expressed today are mine.
- They do not necessarily reflect the views of
 - The Boston Fed



- or the Federal Reserve System



- When I say “we”, I mean members of the research department.

Caveat

- Everything I'm about to say could be wrong:
- “We are learning new things everyday.”

Research on Foreclosures at the Boston Fed

Three sources of loan-level data

- (1) LoanPerformance (LP)
 - All securitized, non-agency mortgages
- (2) Registry of Deeds (Warren)
 - Both directly and from The Warren Group
 - Every mortgage, purchase and sale deed, foreclosure petition, foreclosure deed in Massachusetts going back to 1987.
- (3) Home Mortgage Disclosure Act (HMDA)
 - Demographic information

Findings

- Focus on three key findings:
 - 1 Resets aren't the problem
 - 2 Subprime outcomes
 - 3 It's the house prices

Conventional wisdom

- Story goes something like this:
 - Borrower lured in by “below-market teaser”
 - Can afford the payments
 - Reset hits
 - Payment “explodes”
 - Delinquency
- Not accurate picture.

Rate adjustments not that big

- Whole country
- Subprime 2/28's, first lien.
- Source: LP (Prepared by the BOG)

	Initial rate	1-year prime arm	Margin	Fully Indexed Rate	
				at reset	at origination
2004	7.3	3.9	6.1	11.3	7.9
2005	7.5	4.5	5.9	10.7	9.7
2006	8.5	5.5	6.1	10.9	11.4
2007	8.6	5.7	6.1	10.8	10.8

- And even this overstates the total payment change because there's typically a second lien with
 - FIXED RATE
 - 10-year amortization
 - Much higher rate

Subprime Business Model

- Extract high fees
- High interest rates prior to reset
- Borrowers refinance (or defaults) prior to reset.
- NOT the same as credit cards.

Very few 2/28s ever reach the reset

- Vast majority of defaults on subprime mortgage occur *before the reset*
- Almost all defaulting borrowers are delinquent before the reset, even those that default after the reset.
- Cumulative terminations of Subprime 2/28's
- Source: LP (prepared by BOG)

	2001	2002	2003	2004	2005	2006
Still active	4.5	2.4	6.0	14.0	47.9	77.3
6 months or less	6.2	5.4	6.3	8.6	9.0	9.3
7 to 12 months	21.0	20.4	24.3	26.8	25.2	20.3
13 to 18 months	37.1	37.4	40.1	41.8	38.0	22.7
19 to 24 months	56.8	59.6	64.9	67.3	50.1	
25 to 30 months	69.8	73.5	80.6	81.6	52.1	
31 to 36 months	77.5	81.9	87.5	85.5		

Exotic Mortgages

- Exotic mortgages
 - Interest only and Neg-AM
 - Do have exploding payments
- Are NOT the problem right now.
- Source: McDash

	1 mo.	2 mo.	3+ mo.	Total	FICO
Option ARM	3.2%	1.2%	1.2%	5.7%	707
2/28	10.0%	5.2%	6.7%	21.9%	624
3/1	5.1%	2.1%	2.6%	9.9%	684
5/1	1.5%	0.5%	0.5%	2.5%	729
7/1	1.1%	0.3%	0.3%	1.7%	732
10/1	1.0%	0.3%	0.2%	1.5%	738
All IO ARMS	2.0%	0.8%	0.8%	3.6%	726
All Non-IO ARMs	4.1%	1.7%	2.1%	7.9%	696

Subprime outcomes

- Do subprime loans lead to problems?
- Standard approach: Look at delinquency rates on subprime loans.
- Deceptive for two reasons
 - 1 Most subprime loans are refinances – people are already in trouble when they get them. Causality goes the wrong way.
 - 2 Subprime purchase loans? Most end with refinance
- We look at whole *homeownership experience*
 - How often do borrowers who buy houses with subprime loans get into trouble?
- We estimate that between 13% and 18% of subprime purchase experiences end in foreclosure.
 - Very sensitive to price, macro outcomes.

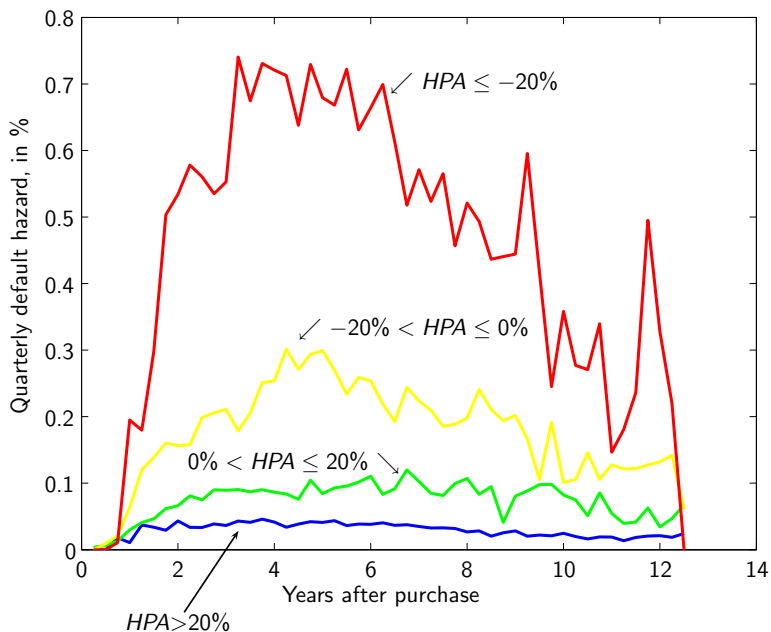
Why then?

- “Resets haven’t been the problem so far, but they will be the problem.”
- Foreclosure Puzzle of 2007
- “It’s the house prices.”

It's the house prices

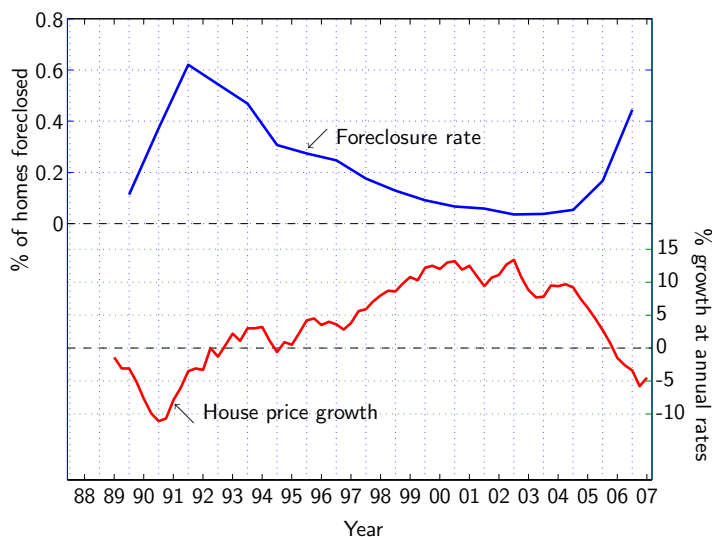
- Gerardi, Shapiro and Willen (2007)
- Analyze “homeownerships” (not individual loans)
- Our analysis shows that falling house prices are the driver of foreclosure activity.
- Theory says foreclosures driven by *combination* of:
 - Cash flow problems (job loss, illness, etc.)
 - Negative equity

Default Hazard



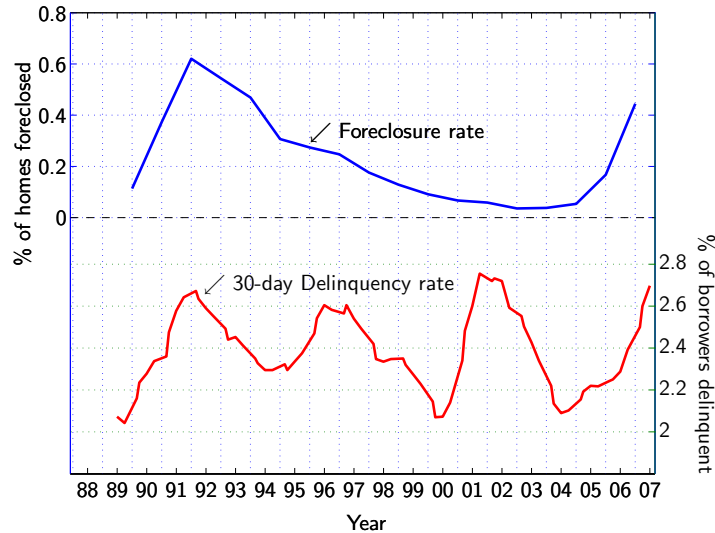
HPA and foreclosure

Figure: Foreclosures and house prices in Mass., 1989-present. Source: Boston Fed and The Warren Group.



Cash flow and foreclosure

Figure: Foreclosures and 30-day delinquency rates in Mass., 1989-present. Source: Boston Fed, the MBA and The Warren Group.



Our View

- A “House Price Crisis”, not a “Subprime Mortgage Crisis”.
- Disproportionately affects people with
 - High LTV – more likely to have negative equity
 - High DTI – cannot handle income shock
 - Low FICO – more likely to have liquidity problems
- In short, people with subprime mortgages.