

# Assessing The Causes and Consequences of the Foreclosure Crisis: Implications for Effective Policy Responses

Presented in a panel on “The Mortgage Crisis”

UC Center Sacramento Public Speaker Series  
Sacramento, CA

February 6, 2009

Kerry D. Vandell  
Professor of Finance and Director  
Center for Real Estate  
Merage School of Business  
University of California – Irvine

# My purpose:

- To step back from the “trees” to get a sense of the “forest”: the history and context of the current foreclosure crisis
- To look closely at the “market micro-structure” of the fundamental drivers of mortgage default and foreclosure vs. other alternative outcomes
- To use the above to derive a list of criteria to be used to develop an “optimal” foreclosure policy

When all the layers of the onion have been peeled back, what is the fundamental event that has occurred that has wreaked all this havoc?

❖ Massive systemic asset devaluation

# What caused this systemic devaluation?

- A “Perfect Storm” of events and policy interventions, many of them intended (though the full scope of the consequences were not)
  - Too much capital availability chasing too few opportunities
  - Excessively low pricing of risk and potential illiquidity
  - Broad belief that capital markets had tamed risk
  - Overly-optimistic expectations of future productivity increases and resulting economic growth
  - (Cynically): A desire by some to create a speculative environment to profit later from the “bubble”
  - NONE OF THE ABOVE WAS SUSTAINABLE

# So who caused this ... who are the “villains”?

## Primary:

- The Fed: the “Greenspan put”
- The ratings agencies: Moral hazard
- The SEC: Asleep at the switch
- OFHEO: Opened the playing field for the private ABS issuers
- Past Administrations’ pro-homeownership policy bias

## Secondary (only playing out their economic roles):

- Freddie and Fannie
- Mortgage brokers/ bankers/ other lenders
- The investment banks/ the conduits
- The hedge funds and counter-parties such as AIG
- Real estate brokers and appraisers
- Borrowers
- You and me

# Dispelling some common myths about “The Cause”:

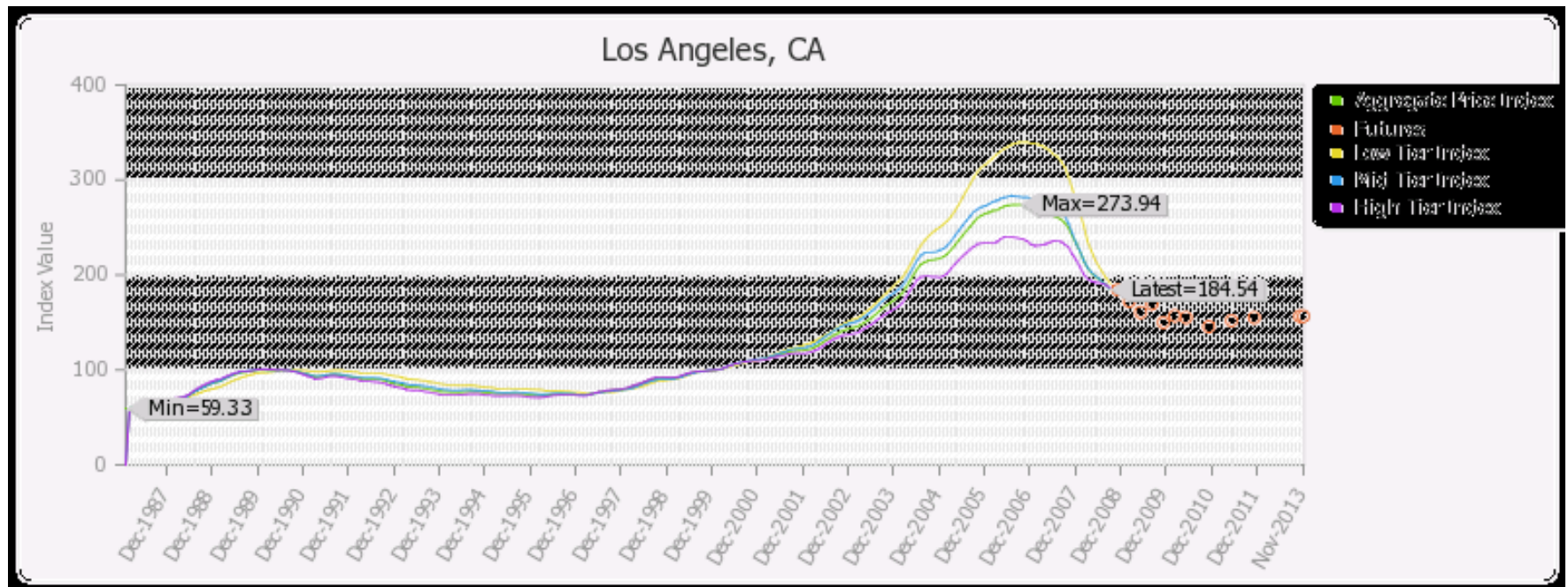
- Not simply caused by subprime loans, or the CRA, or Freddie and Fannie, or the housing market, or even real estate as a sector.
- Problems were pervasive throughout credit and investment markets.
- Subprime and the housing “bubble” burst were only “the canaries in the coal mine”.
- (Remember, real estate prices plunged first prior to the 1929 stock market crash)

# So what was the sequence of events that drove defaults and foreclosures to record levels?

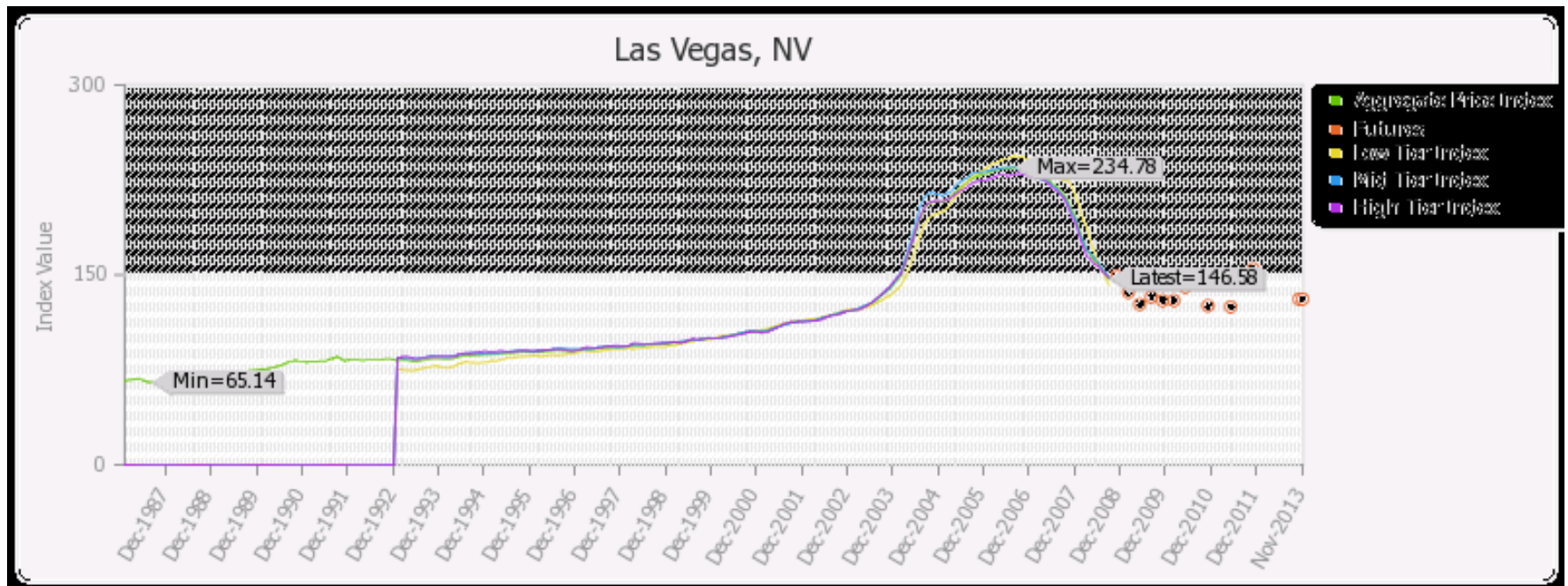
1. Prior to late 2003: house prices and mortgage availability/pricing reflected underlying economic fundamentals
2. Late 2003: Freddie and Fannie forced out of market
3. 2004-late 2006: domination by private MBS issuers (subprime, Alt-A, option-ARM, etc.)
4. Underwriting deteriorated, evidence of fraud, credit quality deterioration not priced
5. By 2006: clear and growing evidence of higher-than-expected defaults, resulting pullback of private MBS issuers, return of GSE's, lower mortgage credit availability and stricter terms
6. Negative feedback on house prices, which in turn reinforced defaults, creating a vicious cycle with broader “contagion” repercussions

# House prices and price futures in Los Angeles: 1987-2013

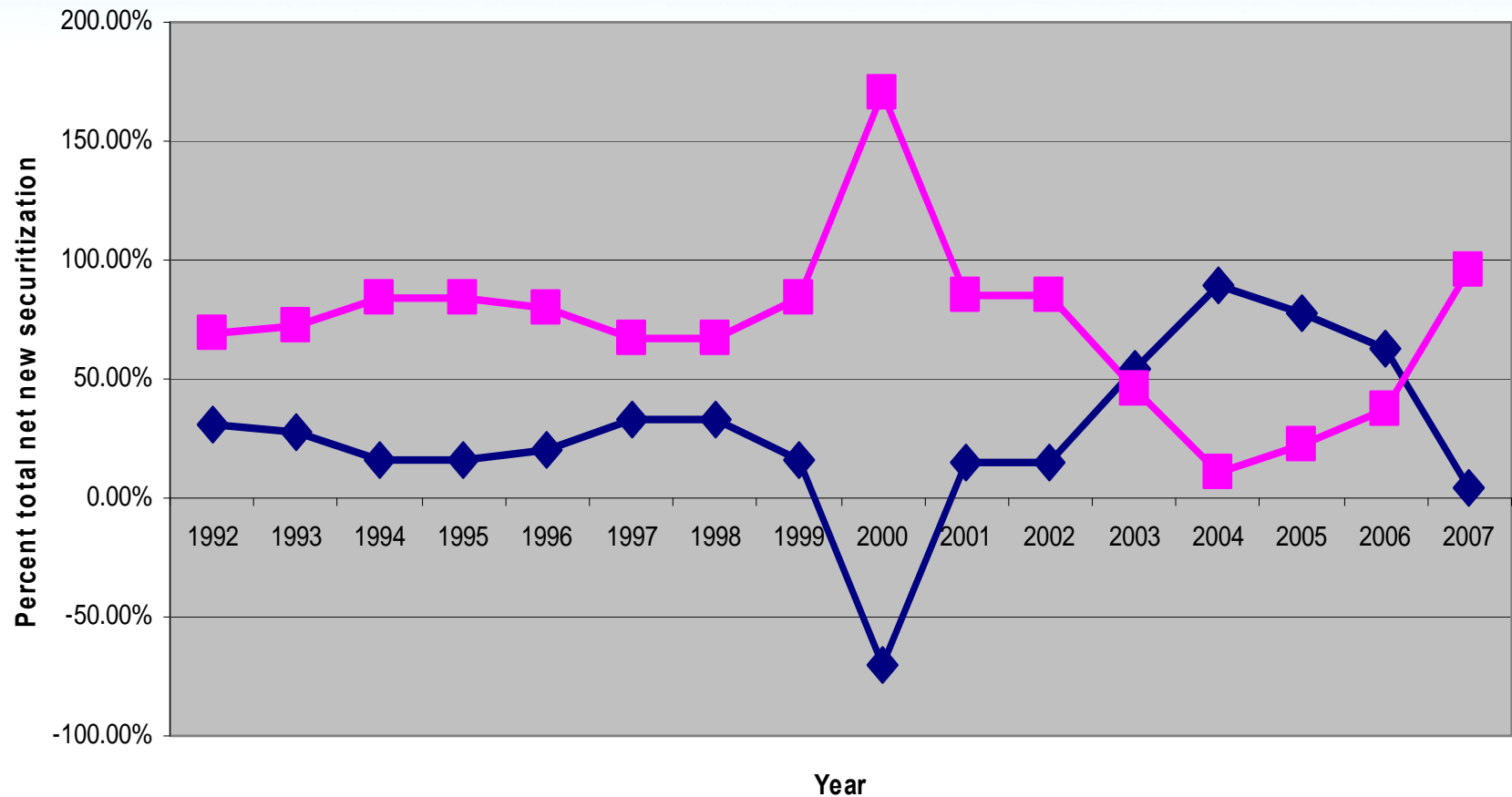
(note late-2003 surge and late-2006 peak)



# Las Vegas: ditto ... note run-up in 2004!

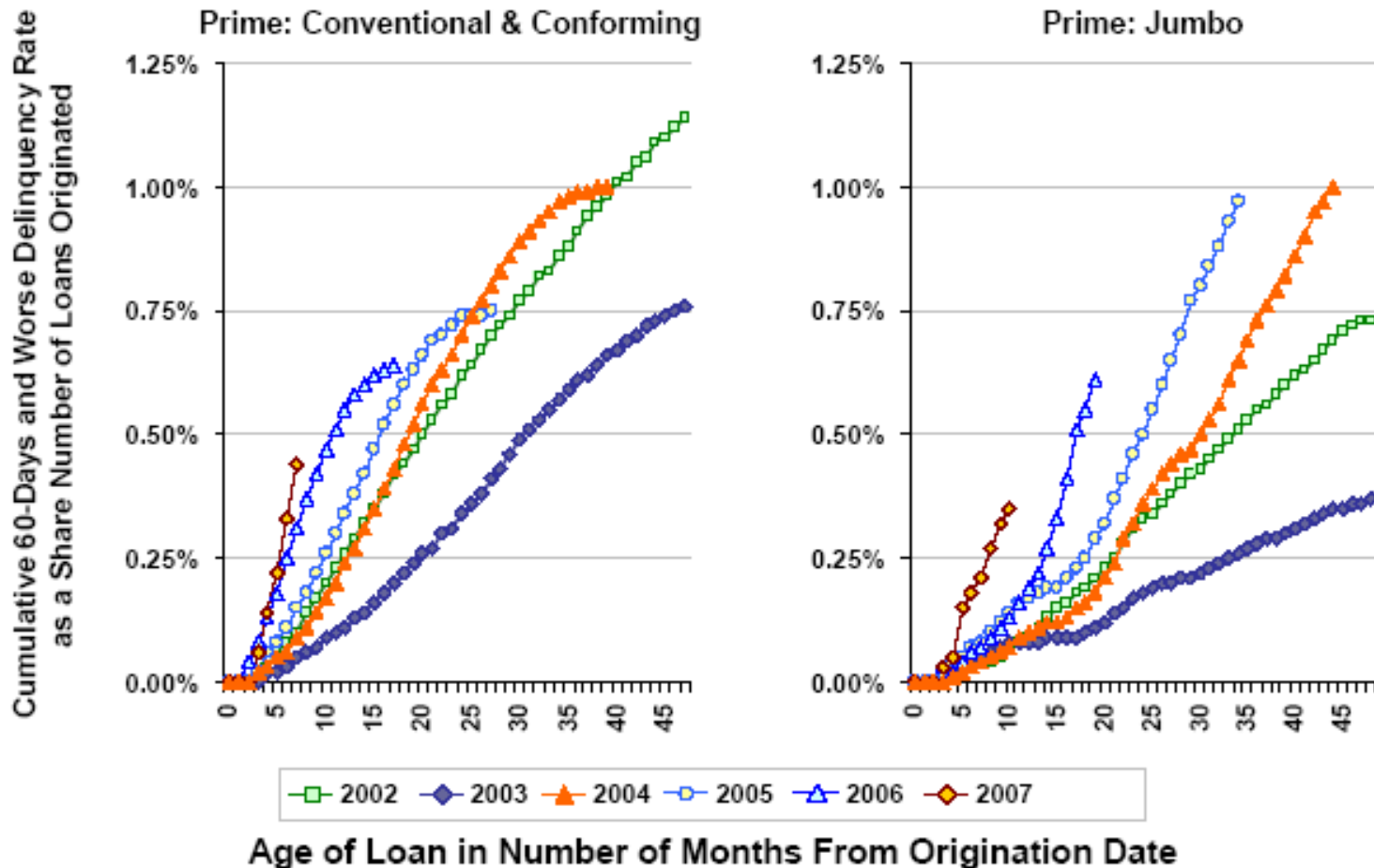


# The ups and downs of “private-issue” (including subprime) RMBS



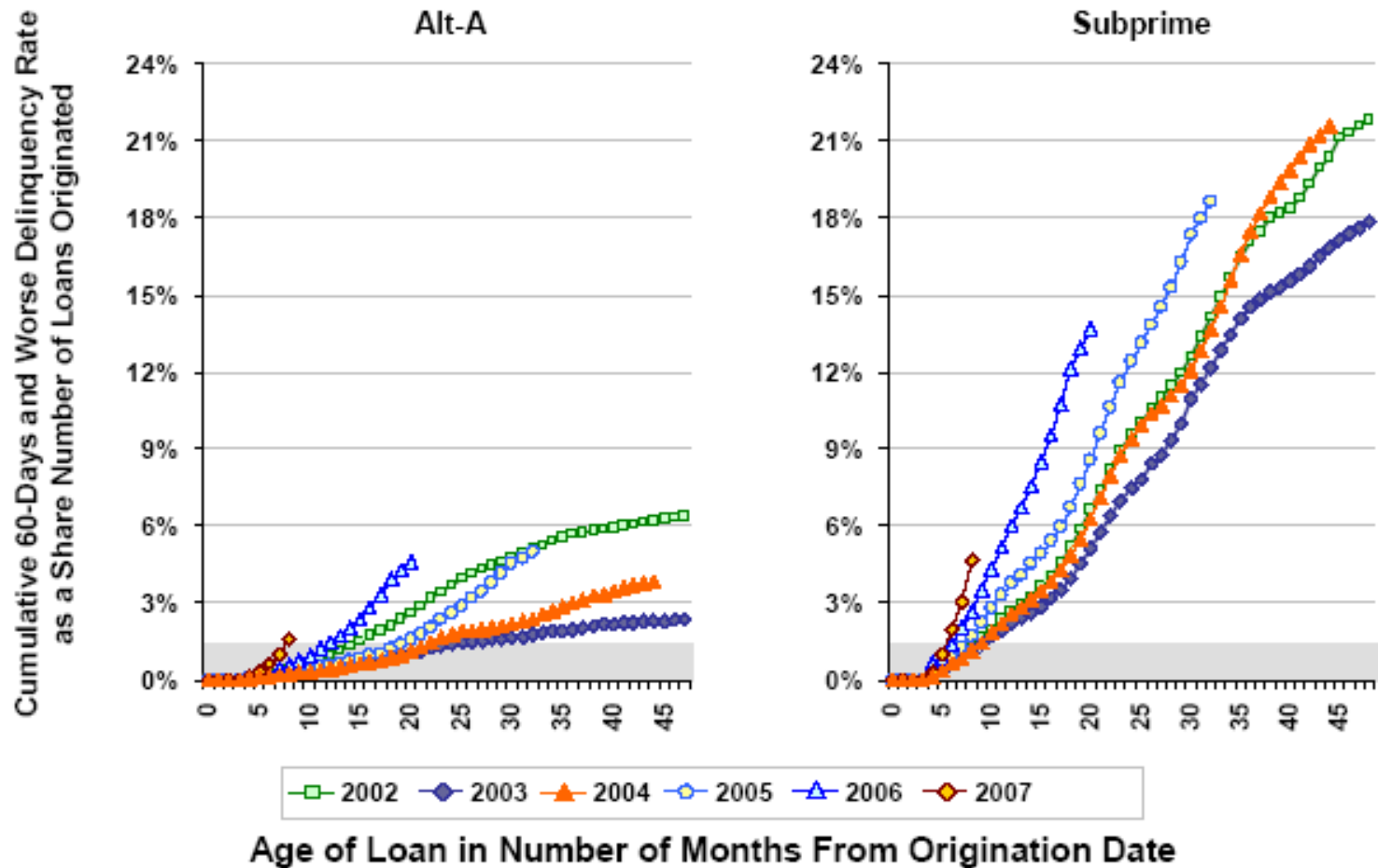
◆ Net new private-issue RMBS    ■ Net new Agency-issue RMBS

# Cumulative incidence of 60-days and worse delinquency among prime first-lien mortgage loans by origination year



Source: Author's estimations based on First American LoanPerformance True Standings Prime Servicing and MBS Securities Databases.

# Cumulative incidence of 60-days and worse delinquency among non-prime first-lien mortgage loans by origination year



Source: Author's estimations based on First American LoanPerformance ABS Securities Database. Shaded area represents the range of default rates for Prime Loans as shown in Figure 3A.

# Now let's step back and look at the “market micro-structure” of default and foreclosure: What exactly is mortgage “default”?

- Formally (legally), any violation of the mortgage/deed of trust agreement that could trigger a “call” by the lender
- In common practice, used to describe termination due to cessation of payments by borrower. Often used interchangeably with “foreclosure,” but not the same
- Must distinguish several “stages” in default process:
  - Delinquent (30-, 60-, 90-day)
  - In foreclosure
  - Foreclosed

# What are the causes of default?

1. Negative equity in the home
2. Cash insolvency (but not by itself)
3. Adverse “credit events”, e.g.
  - Loss of job
  - Sickness in family
  - Gambling losses
4. Low or no “costs” to default
5. “Economic irrationality”, e.g.
  - “Get even” in divorce
  - Lack of regard for credit obligations
6. Most frequently, an interaction among several of the above, especially with Negative Equity

# The equity/cash solvency relationship and default

		<b>Current Payment to Comparable Affordable Rent Ratio (<math>Q_t/R_t</math>)</b>	
		<b><math>\leq 1.0</math></b>	<b><math>&gt; 1.0</math></b>
<b>Current Loan to Value Ratio (<math>L_t/V_t</math>)</b>	<b><math>\leq 1.0</math></b>	<b>Continued payment</b>	<b>Delinquency, restructuring</b>
	<b><math>&gt; 1.0</math></b>	<b>Continued payment, eventual default</b>	<b>Default</b>

# Typically borrowers do not default immediately when $L_t/V_t > 1.0$

- Possible costs to default (e.g., credit rating, psychological)
- Liquid asset cushion
- Expect quick recovery of market
- Expect to go further “in the money” (increased option value to default in volatile market)
- Rental alternative more expensive
- Some are “Woodheads”

# Other conditions causing default:

- “Balloon” risk
- Refinancing risk
- Payment reset risk
- Negative amortization
- Prepayment prohibitions or penalties
- Lack of close regulatory oversight
- Out-and-out fraud: “kited” appraisal, misstating of income, assets, credit history, etc.

# What is the “primary” cause of default? The result from surveys...

- Lenders respond...  
“Lack of regard for credit obligations”
- Borrowers respond...  
“Lack of solvency caused by family crisis” (loss of job, illness, death, debts, etc.)

Ironically, neither typically attributes to negative equity in home

# Reasons for default and the credit performance of modified loans

<b>Mortgage Hardship reason</b>	<b>Share of Delinquent loans Citing Reason<sup>1</sup></b>	<b>Fail Rate Among Modified Loans<sup>2</sup></b>
Loss of Income	41.8%	18.5%
<i>Unemployment</i>	17.4%	19.7%
<i>Curtailment of Income</i>	22.0%	17.9%
<i>Business Failure</i>	2.3%	15.6%
Death or Illness in the Family	23.2%	17.6%
Extreme Financial Stress Other Than Loss of Income	14.4%	14.4%
<i>Excessive Obligation</i>	11.5%	15.0%
<i>Extreme Hardship</i>	2.5%	12.7%
<i>Payment Adjustment</i>	0.4%	14.3%
Marital difficulties	7.6%	21.8%
Property Problem or Casualty Loss	1.9%	4.7%
Inability to Sell or Rent Property	1.3%	23.7%
Employment Transfer or Military Service	0.8%	21.1%
All Other Reasons <sup>3</sup>	9.0%	9.5%

Source: Author calculations on a sample of Freddie Mac loans that went delinquent between 2001 and 2006 and were evaluated using the Workout Prospector® system.

<sup>1</sup> Among loans in which the borrower is successfully contacted by the servicer and is underwritten for a workout.

<sup>2</sup> Among loans that were modified after being underwritten by Workout Prospector, the incidence of home loss through foreclosure sale, deed-in-lieu transfer or chargeoff.

<sup>3</sup> The category "all other reasons" includes property abandonment, environment/energy costs, incarceration, payment disputes, fraud, servicing problems, borrower non-contact, and simply "other" reasons.

# Why Foreclosure? Foreclosure can take time

(Freddie Mac analysis of expected optimal statutory timeline for foreclosure – shortest and longest timeline states)

State Foreclosure Type	Step	Description of Step <sup>2</sup>	Expected Optimal Statutory Timeline				Total Days from DDLPI to Finalized FCL Sale Including Post-sale Redemption Period <sup>2</sup>	Actual Average Time from DDLPI to Finalized FCL Sale / Possession <sup>2</sup>	
			Days In Step after FCL Referral	Total Days Since FCL Referral to Sale	Number of Days in Post-Sale				
					Redemption Period	Confirmation Period			
Maine Judicial	1	Foreclosure Referral - Attorney sends FDCPA letter with contact information	3						
	2	Title Work	5						
	3	Complaint is Filed	1						
	4	Sheriff is Appointed and completes Service of Process	30						
	5	Response/ Answer Period.	20						
	6	Judgment	30						
	7	Redemption (90 Days).	90						
	8	Publication of Sale, 3 consecutive weeks. 1 <sup>st</sup> Publication can't be less than 30 days before sale	30						
	9	Foreclosure Sale		209	none	none	359	598	
Tennessee Statutory	1	contact information	3						
	2	Title Work and Substitution of Trustee is filed	5						
	3	Publication of Sale, 3 times for a period covering at least	25						
	4	Foreclosure Sale		33	none	none	183	248	
All States Average <sup>3</sup>				120	103	27	292	355	

Sources: Freddie Mac; Authors' interpretation of state statutes. This is not intended to be exhaustive and the authors cannot guarantee the information is accurate or suitable for any particular purpose. Many states provide for both statutory and judicial foreclosure options; the most commonly used option is presented in this table. See also USFN (2007). Foreclosure timelines for all 50 states are shown in Appendix Table A2.

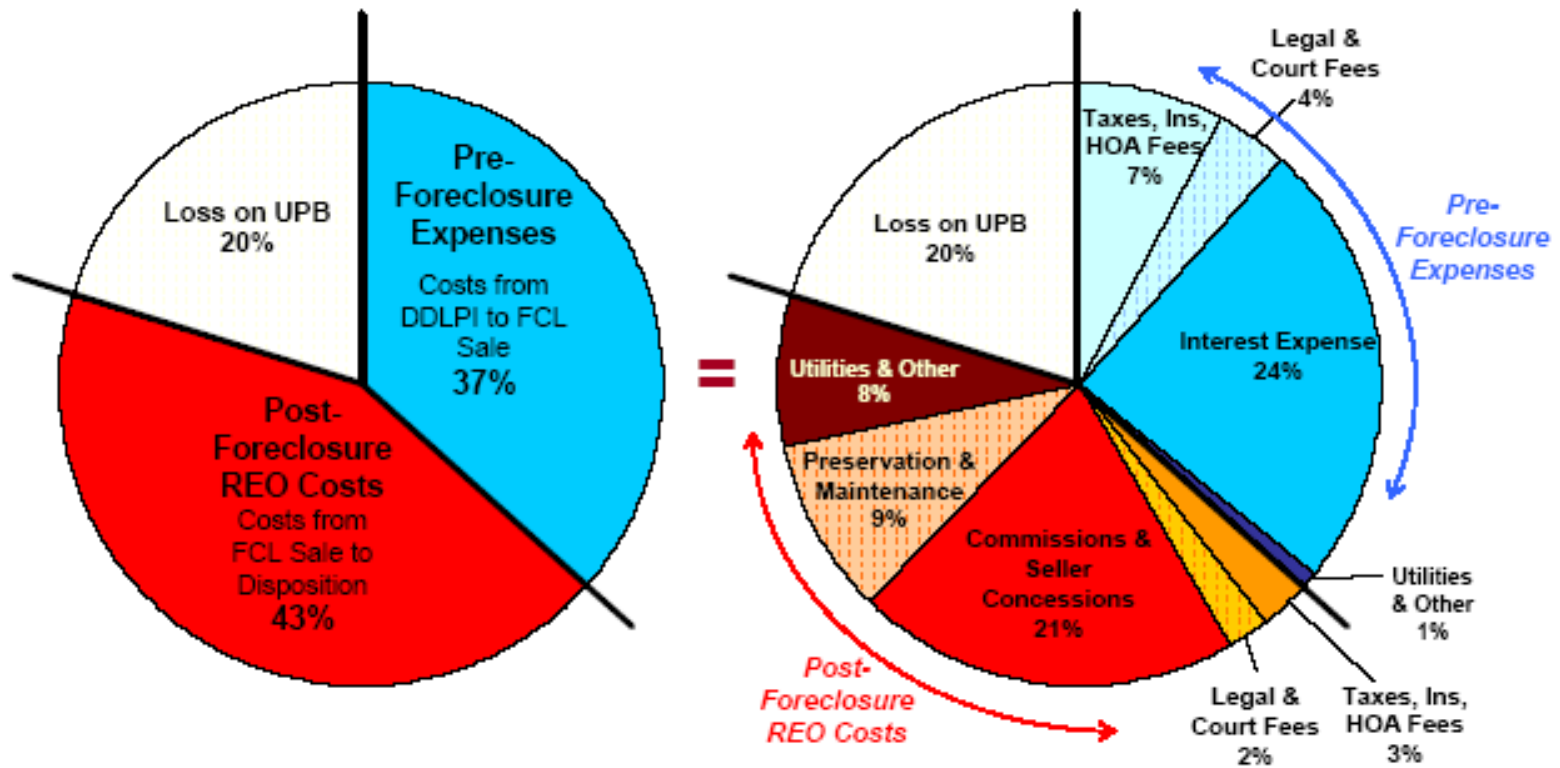
<sup>1</sup> First legal action against the borrower is highlighted; steps prior to first legal action are required, but there is no statutory limitation on the number of days these steps should take. We allow 8 days in nearly all states for legal processing prior to first legal action.

<sup>2</sup> Authors' estimations based on a sample of Freddie Mac REO property acquisitions in 2007.

<sup>3</sup> National average is calculated as simple average over number of states; redemption and confirmation periods are averages over states that have these provisions.

# Foreclosure is also costly

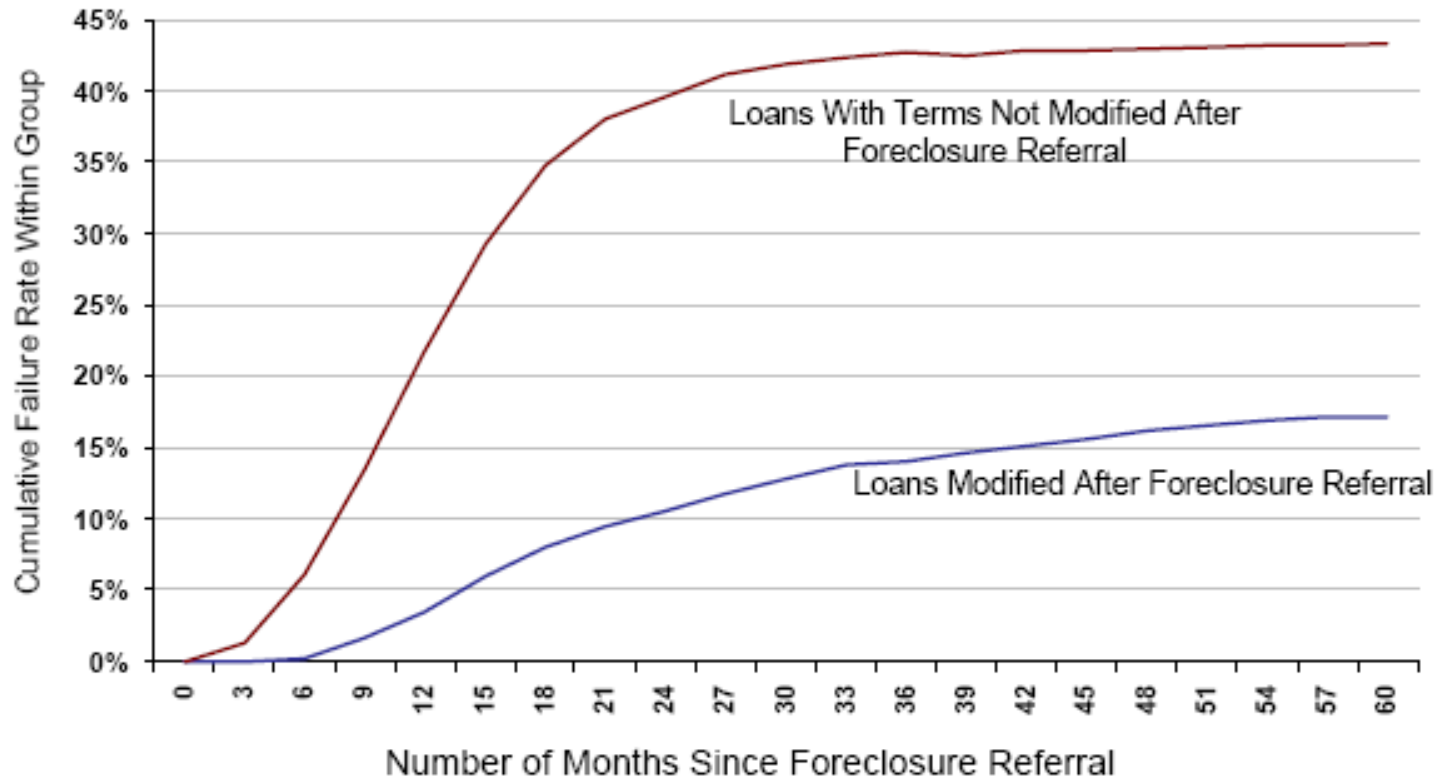
(Composition of average total costs to a mortgage investor, including loss on unpaid principal balance of REO properties among prime, conventional conforming loans)



Source: Authors' estimations based on a sample of recent Freddie Mac property dispositions. Costs incurred during post-sale redemption period are added to pre-foreclosure costs as they are incurred prior to investor possession. Percentages may not sum to 100% due to rounding.

# While loan modification (workouts) have a high success rate

(Average cumulative incidence of failure among loans in foreclosure by whether loan was modified after foreclosure referral)



Source: Author's estimations based on a sample of Freddie Mac loans referred to foreclosure in 2001-2006 and performance measured through June 2007. Failure means home loss through FCL sale, deed-in-lieu transfer, and short sale.

# OK ... so how do we get out of the current adverse state of affairs?

- There exist many possible types of intervention and most have been applied, or at least proposed (a *policy du jour* environment)
- All come down to the question of “who takes the hit?”
  - Borrowers? Lenders? Insurers? Servicers? Investors? The government?
- Must be judged on their cost, their efficiency (relative to their purpose), their equity, their feasibility, their transparency, their complexity

# Some alternative foreclosure intervention strategies:

- Normal foreclosure, then resolution through liquidation
- Encouraged or forced loan modifications, with or without Federal guarantees
- New “cramdown” rules in bankruptcy
- Loan purchases and restructuring by Feds
- Loan purchases and sales/auctions/securitizations
- Short sales
- Write-down and forgiveness and continued holding, with rental or rent-to-own
- Tax credits
- Increased tax deductions

# Unfortunately, which intervention strategy to select is not a simple problem:

- Each solution has different implications in terms of who takes the “hit”
- Each borrower, lender in a different situation: Who deserves to take the hit?
- Discerning who should take the hit is costly and time-consuming
- Some borrowers so far underwater, nothing except very deep subsidy will keep them as homeowners
- Borrowers and lenders will both hold back if there may be a “better deal” down the road
- Changing rules with respect to mortgages as financial contracts and foreclosure has implications for pricing of existing mortgages and MBS
- Applying modifications only to delinquent borrowers creates adverse incentives or horizontal inequities