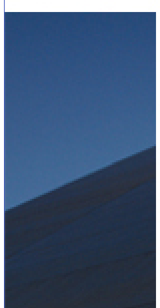
The U.S. Subprime Struggles

Implications for Investors and the Economy

March 21, 2007



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A Passion to Perform.

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Basics of subprime mortgages*

- Who uses them?
  - Borrowers with weak credit (low FICO score) and/or
  - High debt-to-income ratios and/or
  - High loan-to-value ratios and/or
  - Borrowers who cannot or choose not to document their income

- What are they?
  - Almost always first lien mortgages on residential property
  - Sometimes combined with second lien mortgages on the same property
  - Typically Hybrid Adjustable Rate Mortgages (2/28 and 3/27)
  - Sometimes interest-only for an initial period

* A.k.a. “home equity loans,” though that term is a misnomer

Basics of subprime mortgages (cont'd)

- Where are they?
  - Subprime loans exist across the United States
  - California, being the largest state and a costly state, represents 30-35% of the market

- Why was this product created?
  - Rapidly rising home prices created a need for more aggressive lending ("affordability products")
  - Rapidly rising home prices made this product successful for many years

- When will things settle down?
  - Some of the most aggressive subprime products will probably be discontinued
  - Subprime lending will remain a viable market, albeit reformed
  - The eventual performance of existing subprime MBS will take a long time to play out

How do subprime mortgages enter the capital markets?

Most of them are pooled and securitized into
Residential Mortgage Backed Securities (RMBS),

which are then tranched into rated
securities, mostly AAA but down to BB,

which are purchased
directly by investors

or, pooled into CDOs

or, referenced in
synthetic markets
(Credit Default Swaps,
the ABX index, etc.)

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Representative subprime MBS* deal structure

Subprime Mortgage Loan Pool	
Number of loans	5,000
Average loan size	$200,000
Weighted Average Combined Loan to Value Ratio (CLTV)	85%
Percentage of Loans in California	35%
Weighted Average Credit Score (FICO)	620

Subprime Mortgage Backed Security Capital Structure (200X-Y)

Rating Tranche **	Thickness of Tranche	Loss Support
AAA	80%	20%
AA	5%	15%
A	6%	9%
BBB+	2%	7%
BBB	**1%**	**6%**
BBB-	**1%**	**5%**
BB	1%	4%
Overcollateralization (Equity)	4%	0%

* Also called RMBS, ABS and Home Equity ABS

** Tranches are rated by two and even three rating agencies; one rating is shown here for simplicity

Representative ABS CDO deal structure

ABS CDO* Collateral Pool	
Rated subordinated tranches of subprime RMBS (mostly BBB or BBB-, but 5-10% BB)	Tranches diversified across ≈ 100 different MBS, e.g. ≈ 500,000 mortgage loans

ABS CDO Capital Structure		
**Rating Tranche ** **	**Thickness of Tranche**	**Loss Support**
AAA	80%	20%
AA	10%	10%
BBB	5%	5%
Overcollateralization (Equity)	5%	0%

* There are many different kinds of CDOs; only a portion are backed partly or entirely by subprime

** Tranches are rated by two and even three rating agencies; one rating is shown here for simplicity

What is occurring today?

The subprime mortgage underwriting cycle

is overlapping

The housing cycle

- Above market returns in subprime lending drew in new entrants
- Tremendous growth primarily in unregulated specialty finance companies
- Fueled further by ability to securitize and sell the risk
- Lending becomes undisciplined

- Historically and globally, stagnation follows booms
- Housing *recessions,* though, do not occur without job losses
- A "soft landing" overall, with pockets of underperformance due to job losses in
  - autos
  - residential real estate and mortgages

Natural slowdown in home price appreciation exposes undisciplined lending in subprime

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Housing markets usually have "soft landings"; any reason we may not this time?

1. This was a not a boom, but a megaboom, far bigger and longer
   - not just in nominal prices but relative to incomes, rents, etc.
   - in a low inflation environment

2. Mortgage credit risk has changed
   - subprime borrowing, investor activity, first time buyers at all-time highs
   - mortgage products have riskier terms

3. Downside risk
   - the marginal buyer of housing is now the marginal seller, dragging down HPA
   - some fear that HPA may then fall so far as to reduce consumer spending and lead to recession

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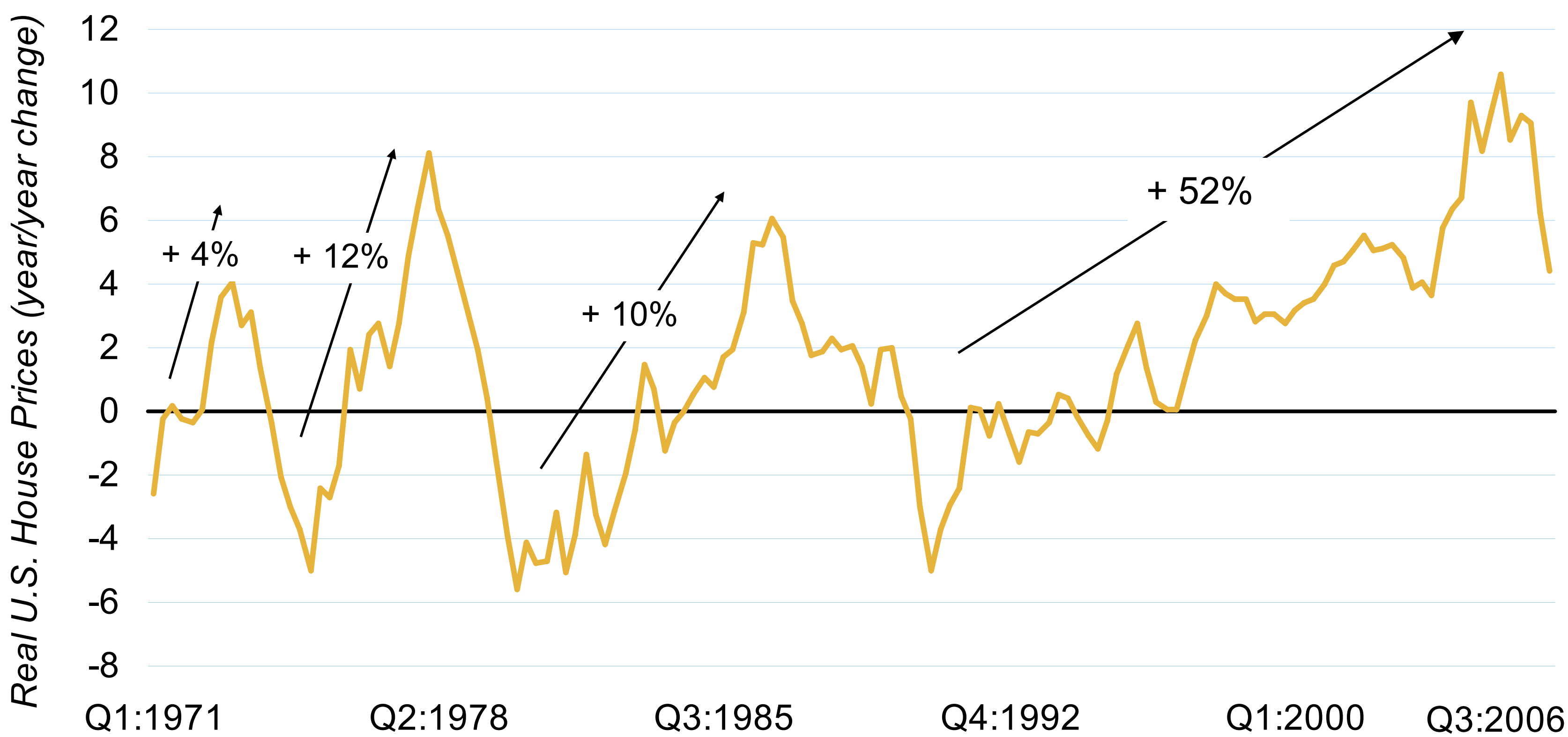
The most recent U.S. housing boom *was* different – it was a "megaboom"



Source: Freddie Mac, BLS, Deutsche Bank

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Impact on consumer credit

- A softer housing market will lead to higher losses across consumer credit, however
  - up from very low levels of losses
  - probably within expectations
- By definition, much more acute in subprime mortgages
  - where borrowers and lenders *depended* upon HPA*
  - most borrowers could not afford the loans after the reset, and instead refinanced
- This should be a *contained* crisis
  - unless it becomes a catalyst for broad and deep HPA declines

* Home Price Appreciation

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Beware of housing generalizations

The vast majority of borrowers…

- Have significant equity
  - Aggregate LTV ratio ≈ 38%
- Have fixed-rate, manageable mortgages
- Do not default simply because home prices decline

Yes, but in subprime …

- The weighted average combined LTV ratio is 86% *
- Have DTI ratios upwards of 50% and choose aggressive mortgage products
- Depend on appreciation for cashouts and refi-ing at resets

* For ’05 and ’06 originations

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The "contagion" question

- The subprime crisis is a small percentage of the market
- Fundamentally, we don't see subprime woes driving the economy
- Psychologically, markets have chosen to seize on this crisis

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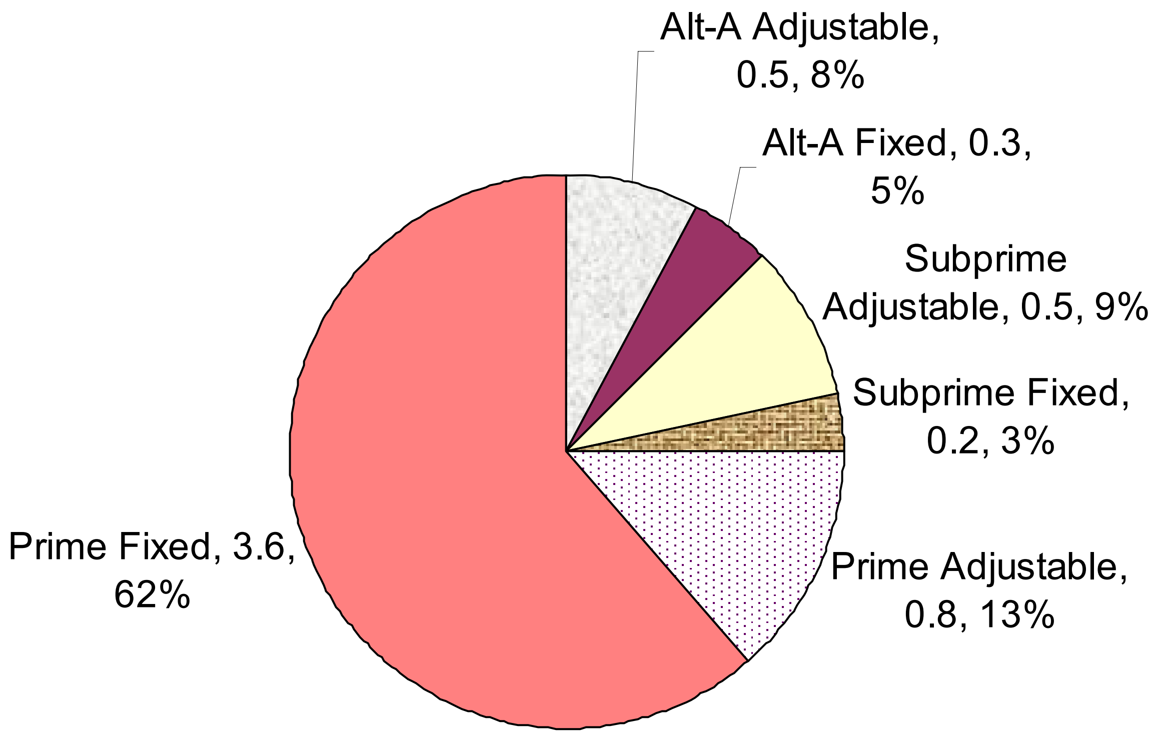
Breakdown of securitized mortgages

$5.9 Trillion Mortgage Securities Outstanding



Data as of December 2006

Source: Deutsche Bank, eMBS, Inside Mortgage Finance, Loan Performance, Federal Reserve and FDIC

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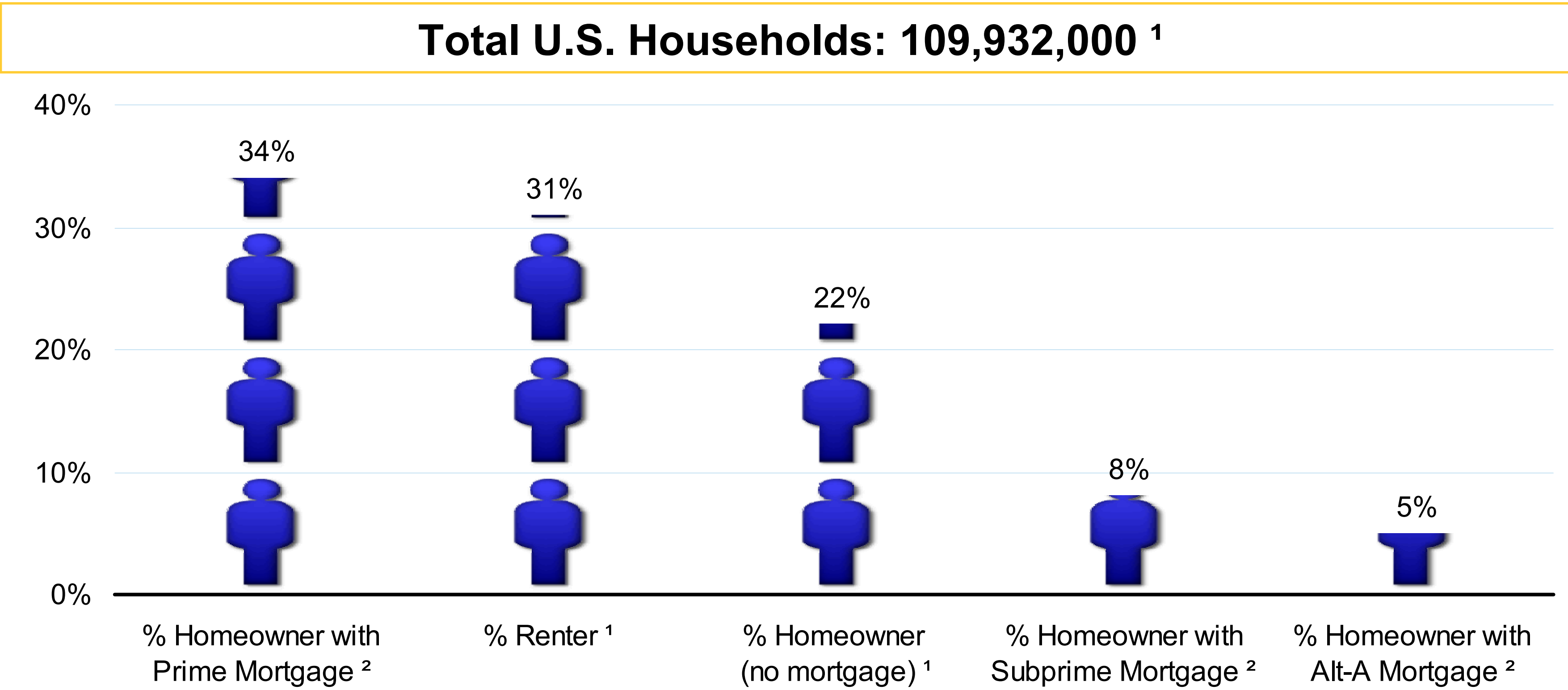
Breakdown of U.S. households by mortgage* debt



[1] Census Bureau data

[2] Estimation methodology: Using the number of loans outstanding in the Loan Performance and EMBS database, adjusting upward for the database capture rate (which is not 100%), and then also adjusting upward based upon reported estimates of securitization rates, by product type. The resulting estimate of the total number of loans extant by product category is then divided by the number of households.

* First liens only, to avoid double counting

Source: eMBS, Loan Performance, Deutsche Bank

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Appendix 1

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