



#### **Professor Chris Mayer**

Paul Milstein Professor of Real Estate; Visiting Scholar, Federal Reserve Board & NY Fed

# The Rise in Mortgage Defaults: Facts and Myths

http://www.gsb.columbia.edu/faculty/cmayer/



#### **Sources**

- Christopher Mayer, Karen Pence, and Shane Sherlund, "The Rise in Mortgage Defaults: Facts and Myths"
- Christopher Mayer, Tomasz Piskorski, and Alexei Tchistyi, "The Inefficiency of Refinancing: Why Prepayment Penalties Are Good for Risky Borrowers"
- Shane Sherlund, "The Outlook for Subprime Mortgages"
- Christopher Mayer and Karen Pence, "Subprime Mortgages: What, Where, and to Whom?"



### **Takeaways**

- Myths: Defaults appear *unrelated* to mortgage market innovations, including
  - Prepayment penalties
  - Rate resets on short-term ARMs (2/28 mortgages)
  - Interest-only or "option-ARMs"
- Evidence: Unprecedented rise in defaults and foreclosures primarily due to
  - Stagnation in house prices (driven by subprime collapse?)
  - Slackened underwriting
  - Poor economic conditions in some locations



### **Prepayment Penalties**

- Refinancing penalties are increasingly used in the mortgage market, especially for the risky borrowers
- Prepayment penalties have generated controversy and criticism (even though they are common in most industrialized countries)
- Proposals in Congress and draft Federal Reserve Board rules curtail prepayment penalties

"I would eliminate the prepayment penalties that lead to such high rates of default".

Senator Hillary Clinton, March 24, 2008.



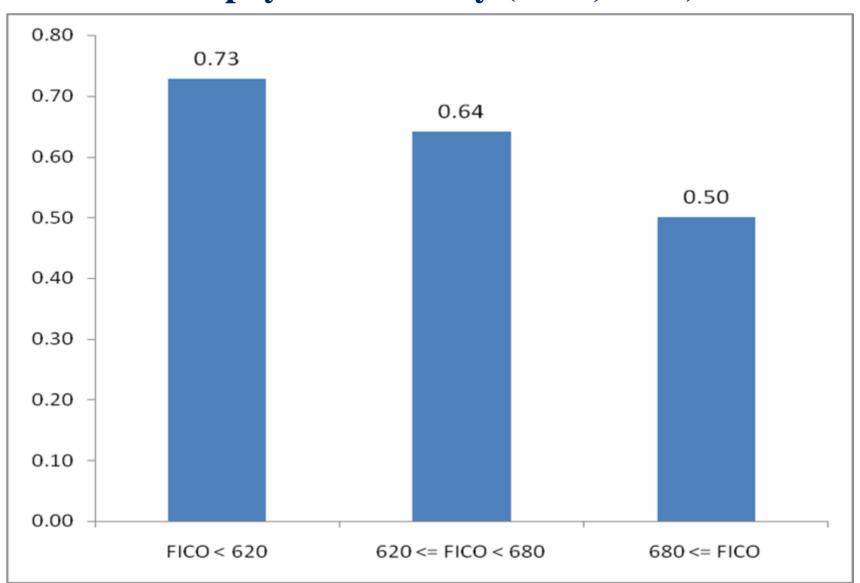
# Prepayment penalties can help risky borrowers

- Lenders must charge a high mortgage rate in order to lend to risky borrowers
- Problem: Good risks leave the pool quickly
- Subprime borrowers face two possibilities:
  - Good outcome and refinance the mortgage (house prices rise, get finances under control,...)
  - Bad luck and remain in the pool with a high likelihood of default (house prices fall, get unemployed,...)

Prepayment penalties allow risk sharing between these two groups, lowering initial mortgage rates

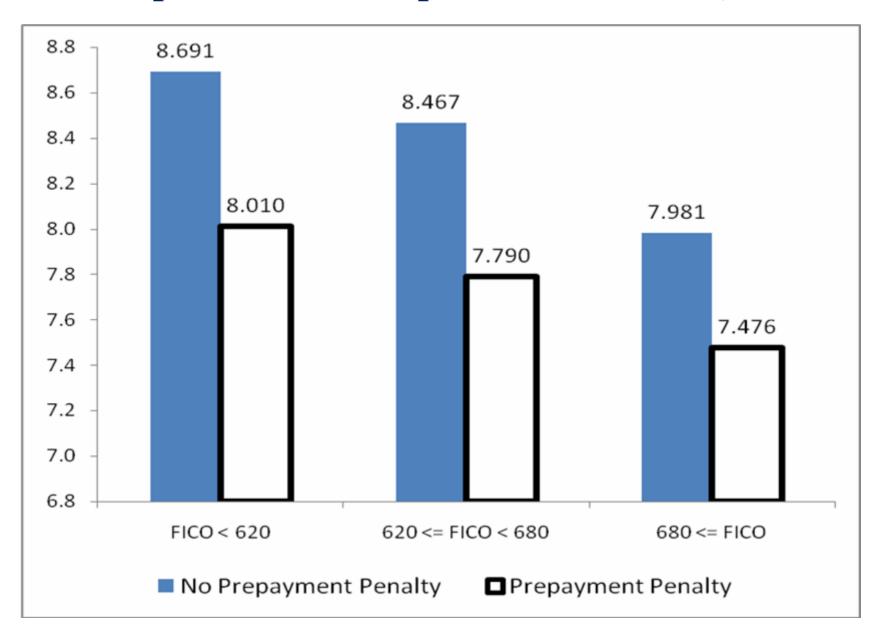


## Fraction of Subprime FRMs with a Prepayment Penalty (June, 2003)



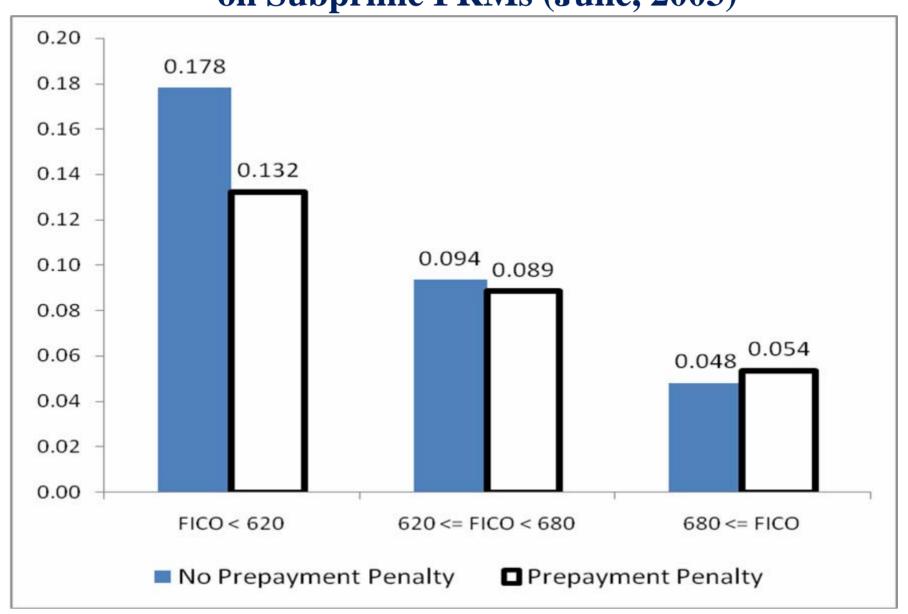


#### Coupon Rate on Subprime FRMs (June, 2003)





### 51 Month Default Rate on Subprime FRMs (June, 2003)





### Rate resets are not a big problem

- Only 7 percent of 2/28s or 3/27s had prepayment penalties (PPPs) that extended beyond the reset date
- To date, most defaults have occurred *before* the mortgage reset date (Sherlund, 2008)
- Lack of a refinancing market could seriously impact this process, but...

Interest rates have fallen to the point that most resets today will take place with less than a 1% rate increase



# Interest-only and "option ARMs" have not defaulted at higher rates

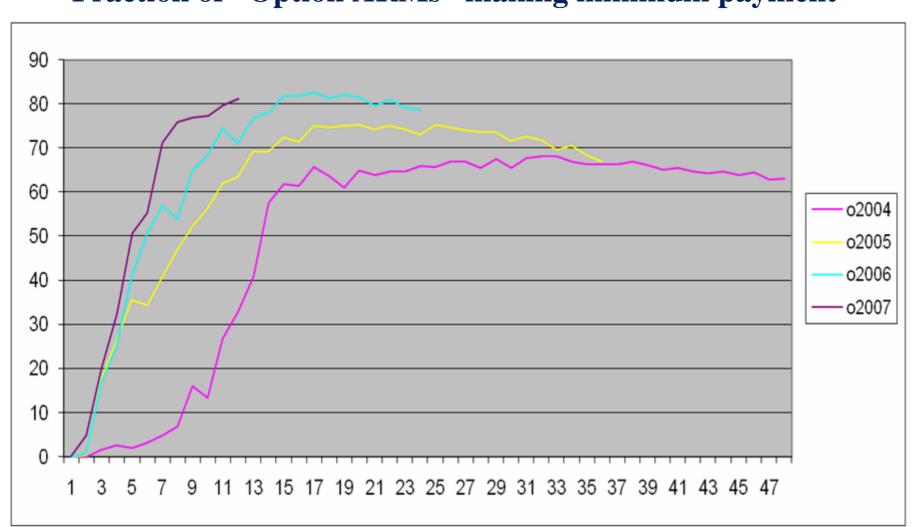
- Most "option ARMs" were Alt-A mortgages, that have defaulted at much lower rates (borrowers had higher FICO scores)
- During period of low mortgage payments, defaults on subprime loans are lower than for fully amortizing mortgages

Problems may come in the future: Many "option ARMs" allow negative amortization up to 125% LTV



# "Option ARMs" are misnamed; (almost) everyone takes the option

Fraction of "Option ARMs" making minimum payment

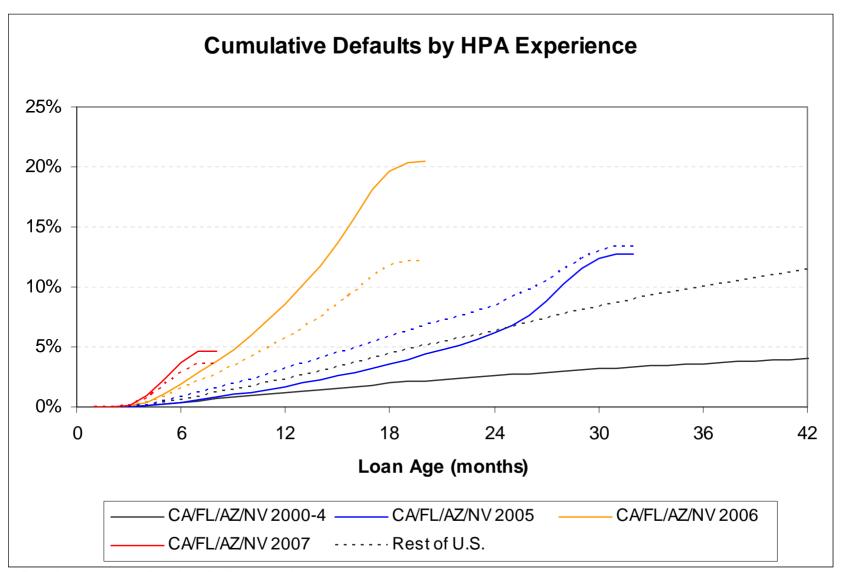




So what happened?



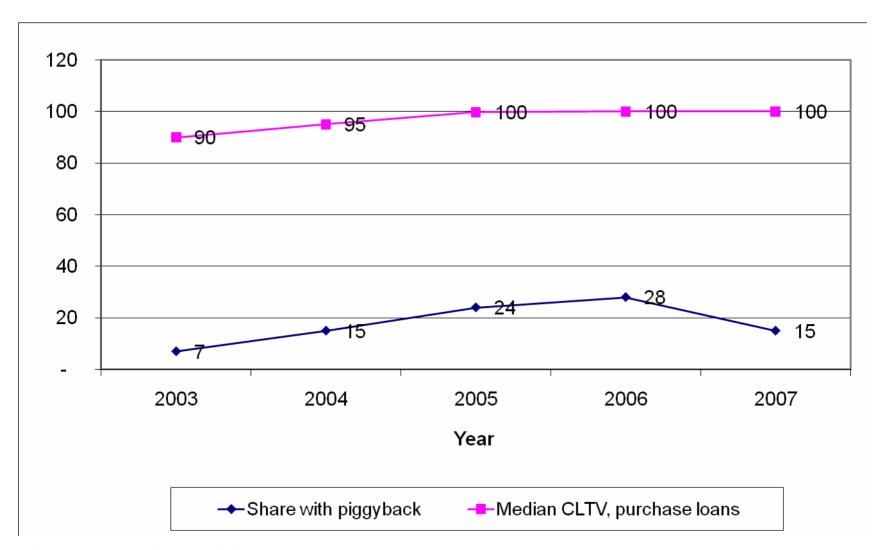
# Defaults increase largely in markets where house prices have fallen rapidly



Source: Subprime mortgages from LoanPerformance data



### Observable underwriting problems: Downpayment disappeared

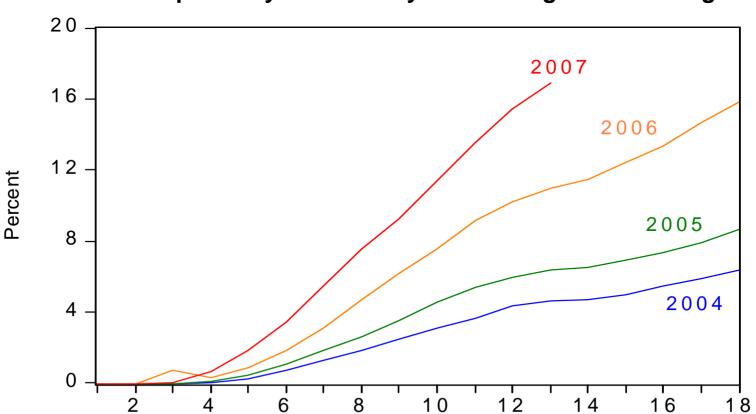


Source: Subprime mortgages from LoanPerformance data



# **Unobservable** underwriting problems: Early payment defaults grew rapidly

Delinquency Rates by Loan Age & Vintage\*



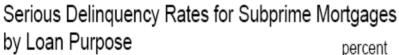
\*Includes loans 90 days or more past due or in foreclosure.

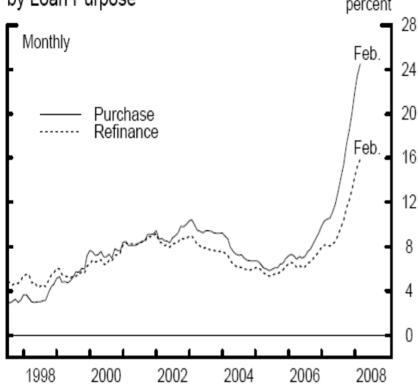
Note: Q1 originations only.

Source: First American Loan Performance.



#### **Are Alt-A loans next???**

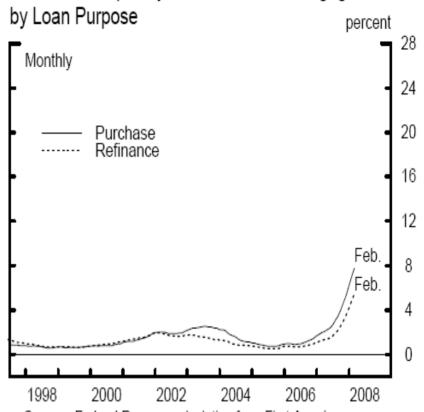




Source. Federal Reserve calculation from First American LoanPerformance Securities Database.

Note. Serious Delinquencies are loans 90 or more days overdue or in foreclosure.

#### Serious Delinquency Rates for Alt-A Mortgages



Source. Federal Reserve calculation from First American LoanPerformance Securities Database.

Note. Serious Delinquencies are loans 90 or more days overdue or in foreclosure.



### So where do we go from here?

- Encourage private sector to *responsibly* replace \$1 Trillion in lost mortgage originations
- Consumer protection regulation should be carefully constructed to ensure credit is available to risky borrowers who can afford it

FRM with (well-disclosed) prepayment penalty may be a good product for risky borrowers

• Legal changes that allow cramdowns or require "negotiations" will surely reduce new supply of credit, possibly extending house price declines