Mortgage Finance and Mortgage Performance

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Great Recession Teacher Workshop

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Four Facts about Housing Finance

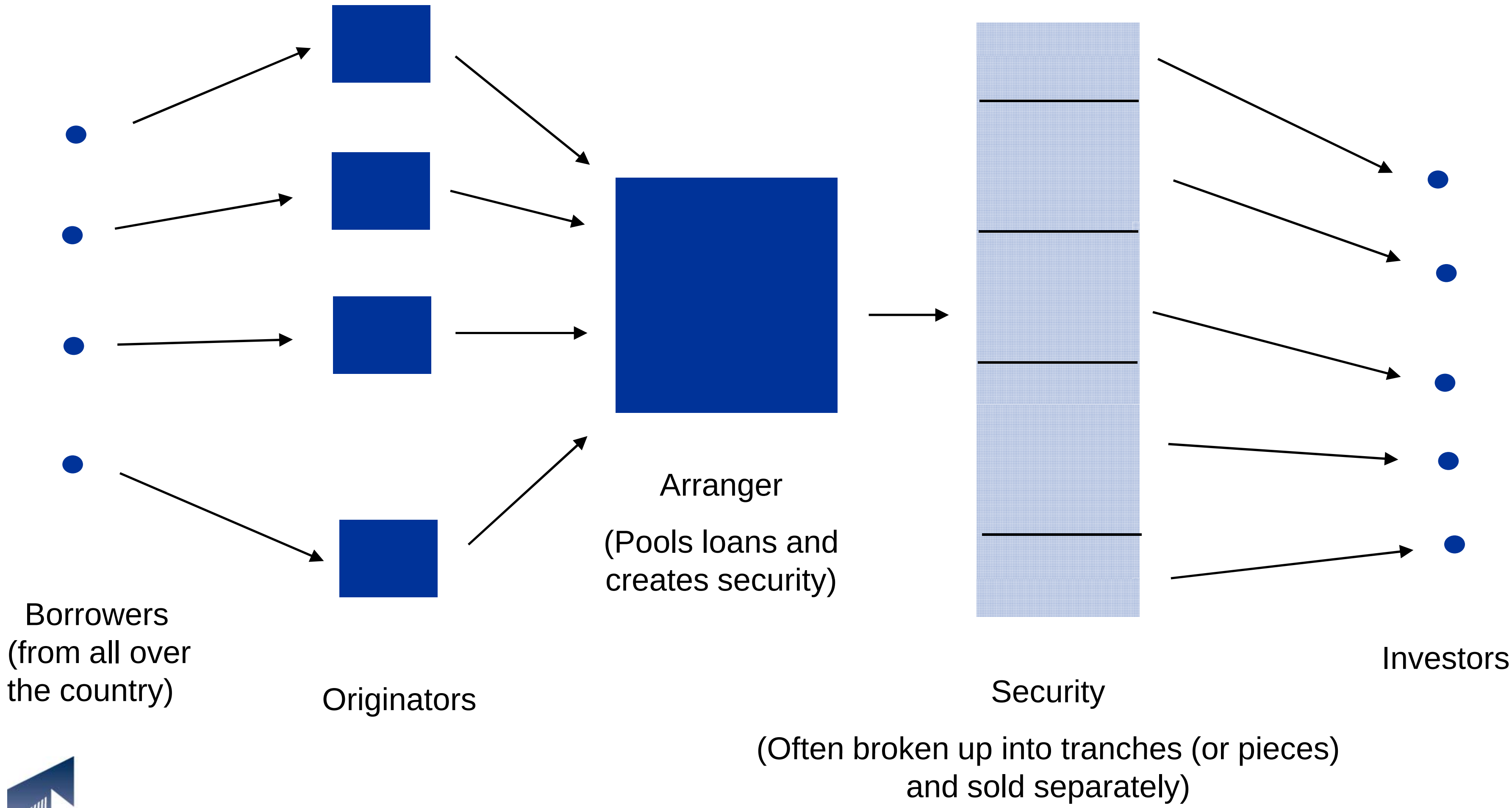
- Housing is a big asset
  - 21.4 trillion (2008 Q3) – Value of household real estate
- Housing debt is a big liability
  - 10.5 trillion (2008 Q3) – Face value of mortgage debt
- Government Plays a **BIG** role
  - Guarantees over half of first-lien mortgage debt
- Increased access to mortgage credit over last decade
  - Growth of subprime lending
  - Increases in home ownership rates (particularly by young)

Source: Flow of Funds

How are Mortgages Made?

- Traditional Model (roughly pre-80s)
  - Firm that originates (makes) loan holds it
    - Banks/thrifts
      - Problems with this model
        - When banks small – lack of geographic diversification
        - Maturity mismatch - borrow short (deposits), lend long (mortgages)
- Recent Model (roughly post-80s)
  - Securitization – Firm that originates loan, sells it
    - Capital Markets (insurance co, pension funds, hedge funds, etc.)
      - Problem with this model
        - Originator doesn't care about long-term performance

Securitization



Role of Government

- Indirectly makes mortgages through Government Sponsored Entities (GSEs)
  - Fannie Mae, Freddie Mac
- Directly makes mortgages through
  - Federal Housing Authority
  - Veteran's Administration
- Federal Home Loan Banks
  - Lend against mortgages as collateral

Fannie Mae and Freddie Mac

- Biggest players in mortgage market: Two activities
  - Guarantee credit risk on securities consisting of conforming loans (3.5 trillion)
  - Also, have an investment portfolio of around 1.5 trillion
    - This activity financed primarily with debt
    - Also concentrated in housing
- Both firms highly leveraged (lots of debt, very little capital)
  - Makes net worth very sensitive to losses
- Were able to issue lots of debt because their debt was viewed as backed by the government
  - Special charter, exempt from state and local taxes, legal rights, line of credit with Treasury
- Now under government conservatorship

Role of Private Lenders

- Banks/thrifts/credit unions
  - Still originate and hold mortgages
- Securitize loans that GSEs cannot securitize
  - Subprime/Alt-A/jumbo (non-conforming)
  - Subprime
    - Grows a LOT in last decade*
      - 800 thousand loans (2002) to 2 million loans (2005)
      - 7% of originations (2002) to 17% of originations (2005)

*Source: Mayer and Pence (2008)

Mortgage Market Numbers

• First lien mortgage debt	9.5 trillion
• Banks, thrifts, credit unions	2.2
• Securitization	
• GSEs guarantee (conforming loans)	4.7
• Private issuers (subprime/Alt-A/jumbo loans)	1.9 (declining)
• GSEs hold directly	0.4

Note: These are rough estimates from the Flow of Funds accounts, table L.218, for Q3 2008.

The Subprime Market: Where the Problem Begins

- Subprime mortgages
  - Low credit score mortgages
    - borrowers who used to not get mortgages, can get them

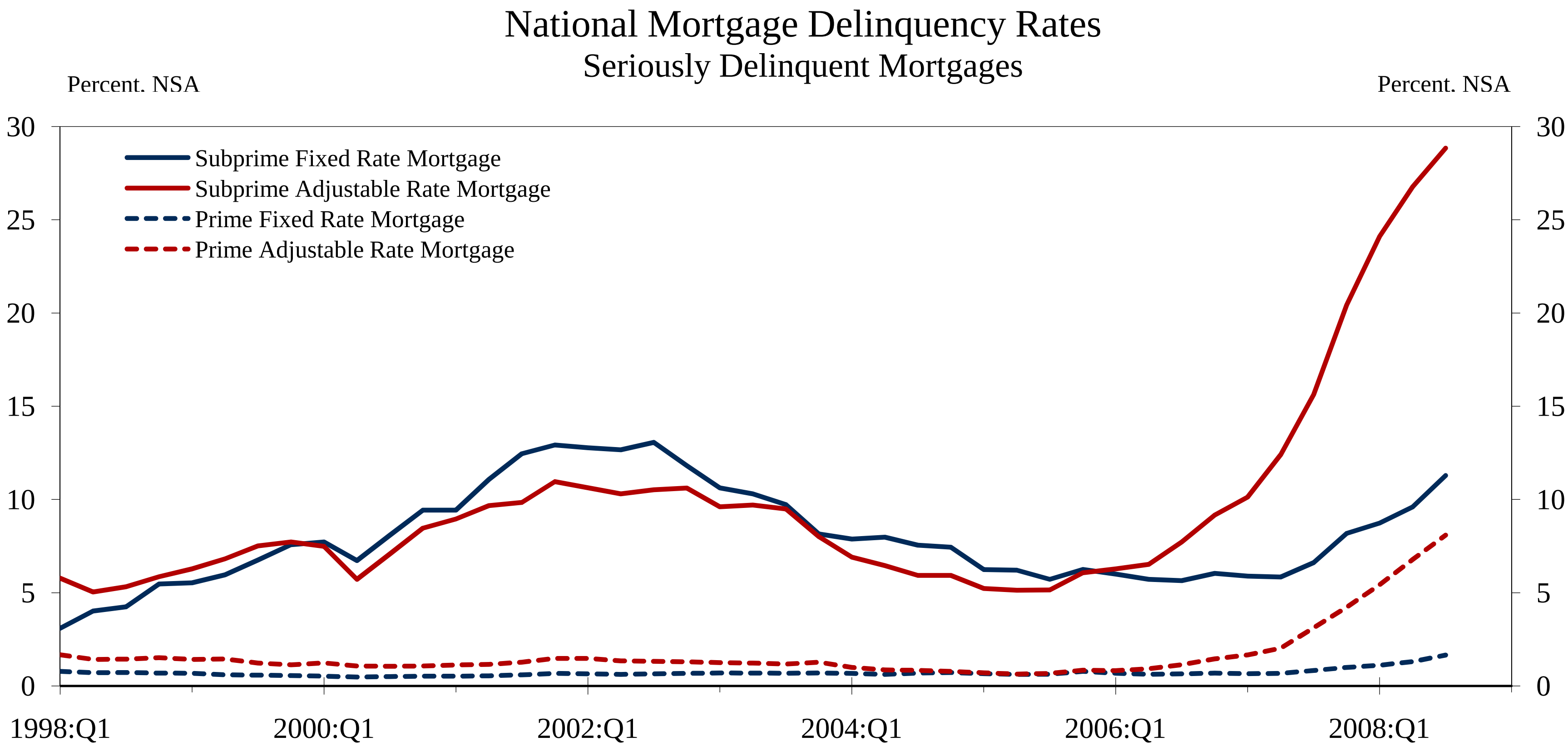
- Market grows a lot starting 2001* (rough estimates)
  - 800 thousand loans (2002) to 2 million loans (2005)
  - 7% of originations (2002) to 17% of originations (2005)

- **Today**: 6.7 million subprime mortgages^
  - 12% of all mortgages (58% of all mortgages in foreclosures)
  - 50 percent are ARMs (these have the highest foreclosure rate)

*Source: Mayer and Pence (2008)
^Source: Frame, Lehnert, and Prescott (2008)


LENDER FORECLOSURE
PUBLIC HOME
AUCTION
OPEN HOUSE: 5/24, 5/31, 6/1
1-888-301-REDC
USHomeAuction

Mortgage Performance



Source: Mortgage Bankers Association/Haver Analytics

Note: Serious delinquencies are loans 90+ days past due plus those in the process of foreclosure.

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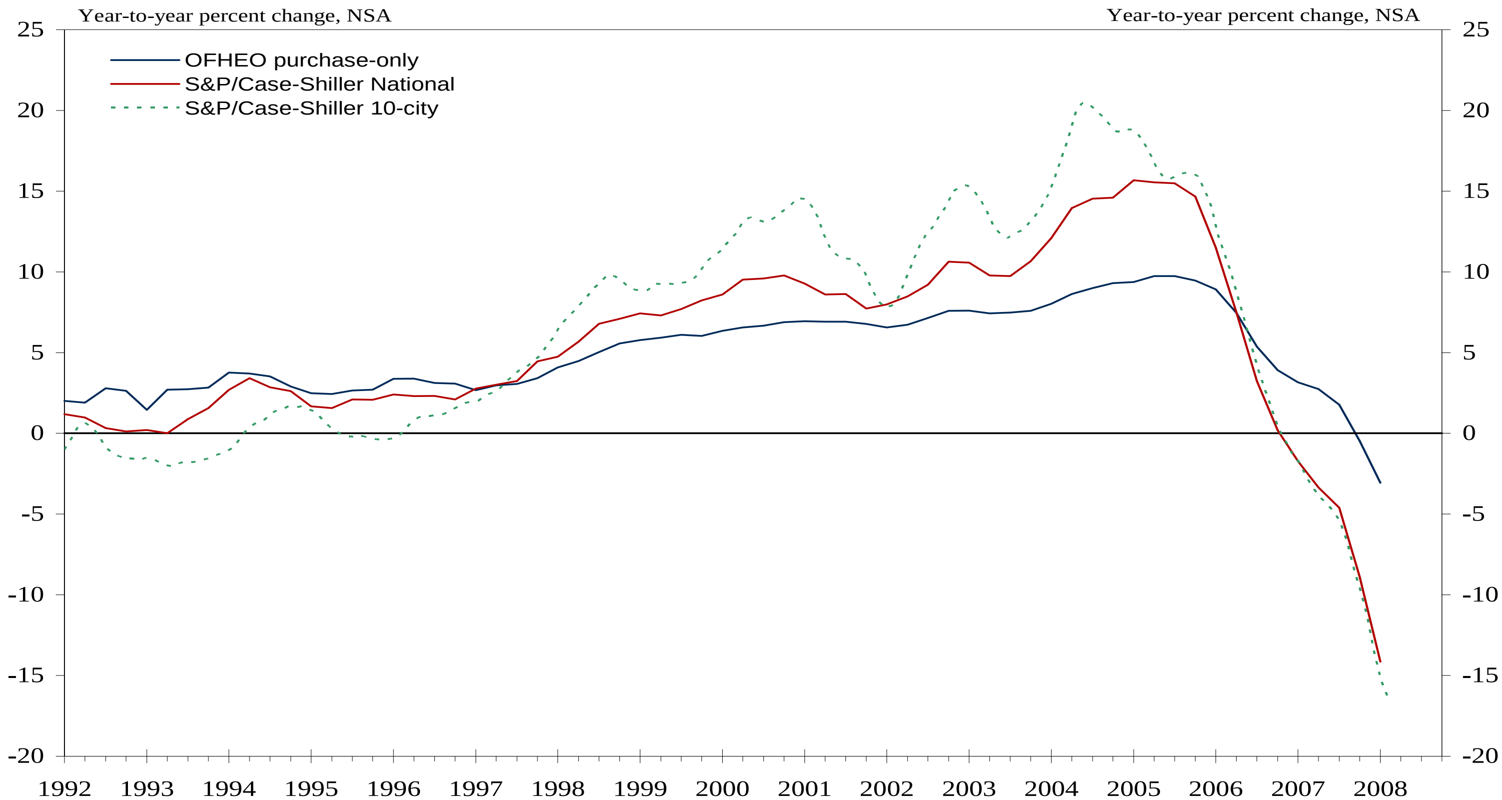
Subprime Lending Model

- **Model**: High fees, short term loans
  - Typical ARM: 2/28s and 3/27s
- **Common Misconception:** Resets on ARMs cause the high defaults
- The plan is to refinance or sell the house
  - Not to make money when rate resets
- Most subprime loans don't reach reset
  - 2003 vintage
    - 87.5% prepay or foreclosed on by 36 months

So What Went Wrong?

House Prices



Source: S&P/Case-Shiller, OFHEO, Haver Analytics

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Lots of loans made based on expected collateral values.

Causes of Foreclosure

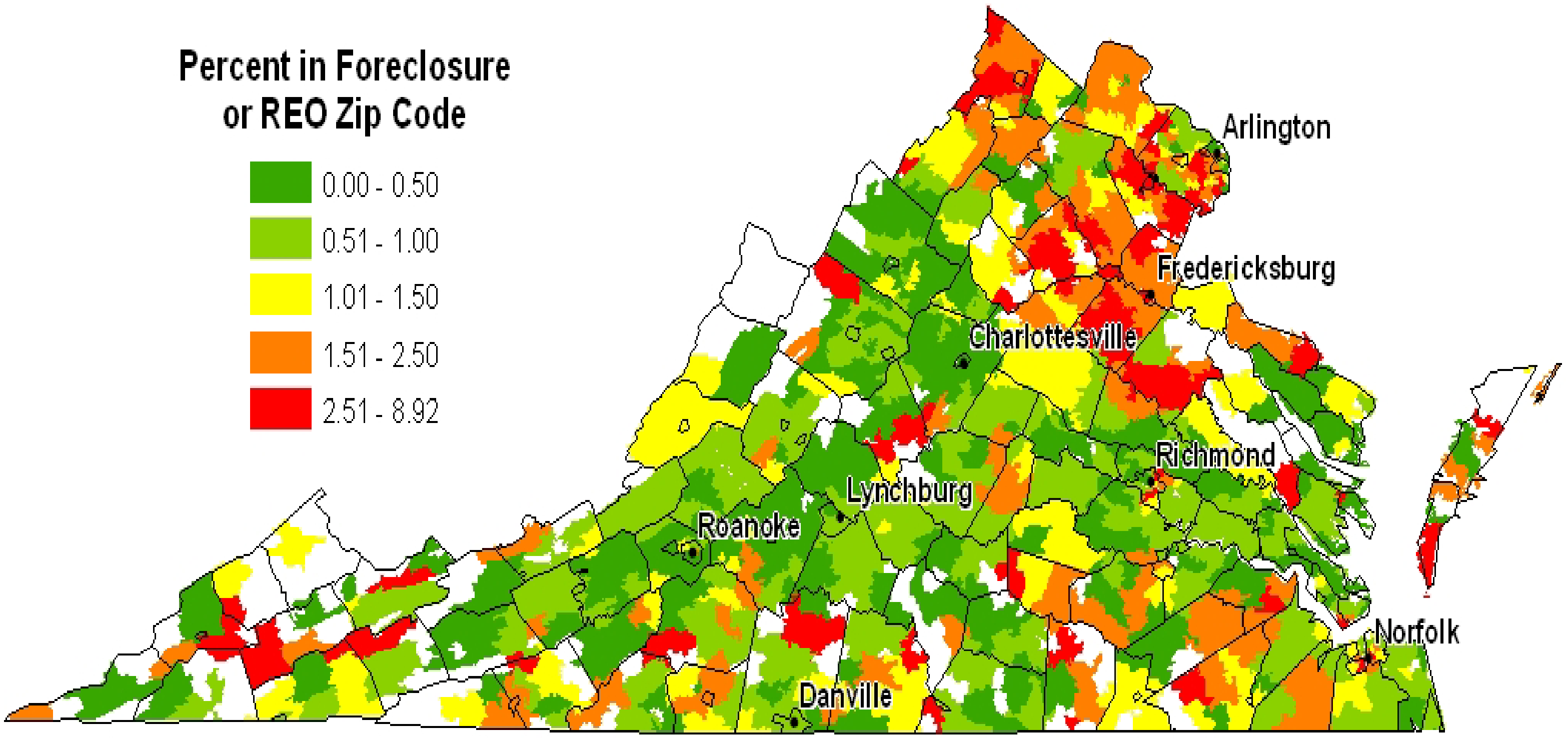
- House Price Drops
  - Less value to staying in house
  - Biggest in California, Florida, Las Vegas
    - Which had the biggest increase and then drop in house prices

- Problems making payments
  - Job loss, divorce, illness, death
  - Slowdown in overall economy will make this worse

Lots of Regional Variation

- Worst hit states
  - Biggest price increases and then drops
    - California, Florida, Nevada
  - Slow growth, high unemployment
    - Ohio, Michigan
- Now rest of country effected
  - Because of declining economic conditions nationally

Lots of Regional Variation even within Virginia



Source: Federal Reserve Bank of Richmond estimates using LPS (Lender Processing Services, Inc) Applied Analytics and Mortgage Banker's Association data. Data from December 2008. Uncategorized zip codes have less than 100 loans or have no data available.

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