



# **Professor Chris Mayer**

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## **Lessons Learned from the Crisis: Housing, Subprime Mortgages, and Securitization**

**THE PAUL MILSTEIN CENTER FOR REAL ESTATE**

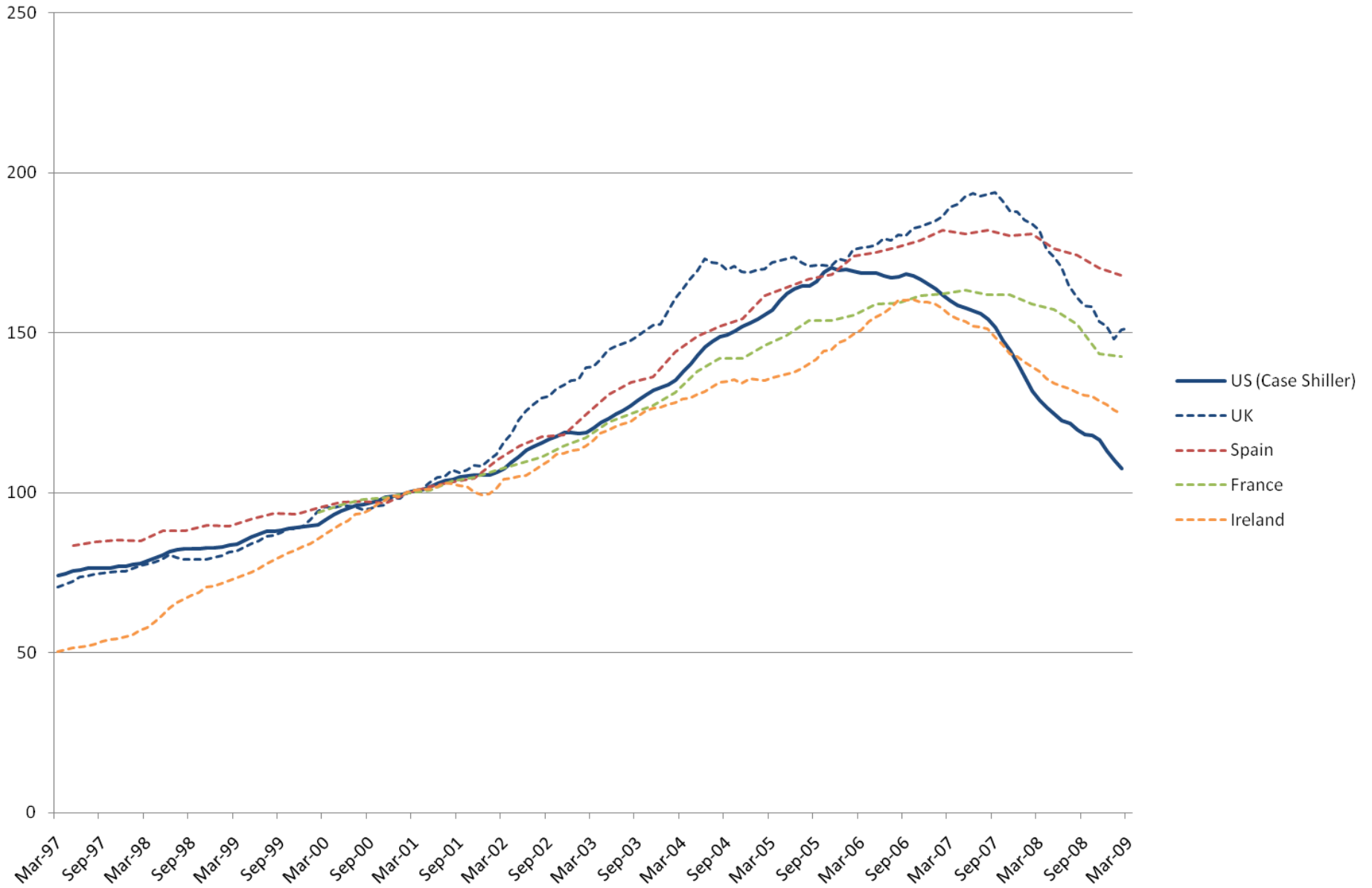
# A House of Cards: Housing and the Credit Crisis



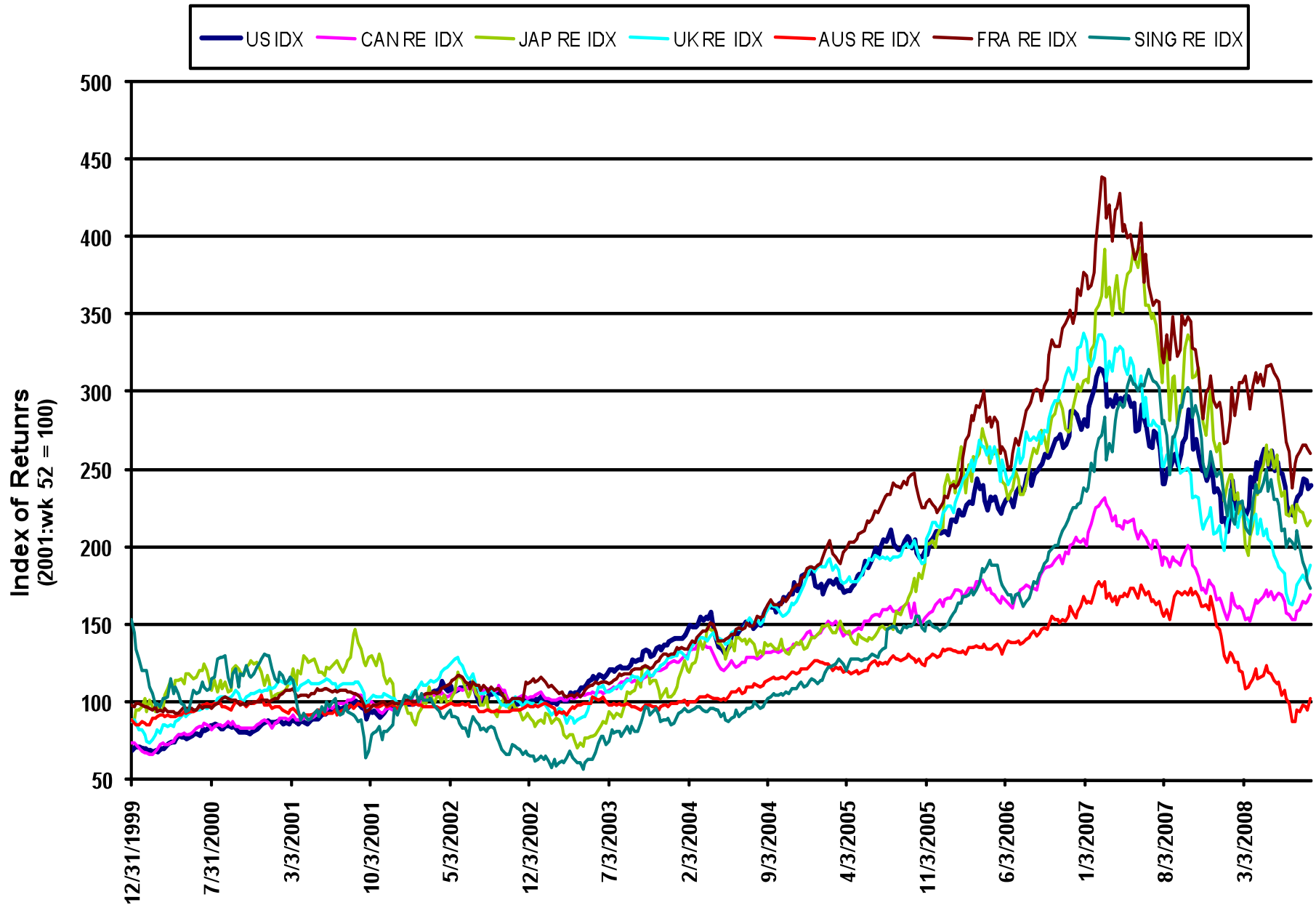
## Key facts about the housing boom

- Housing markets boomed across most of the world, but not everywhere
- Real asset prices boomed in both investor and consumer markets
- Housing prices exhibited wildly different patterns across markets in the US
  - Cyclical markets on coasts overshot fundamentals
  - Midwest and south saw little speculation
  - Huge bubbles in “sand states”

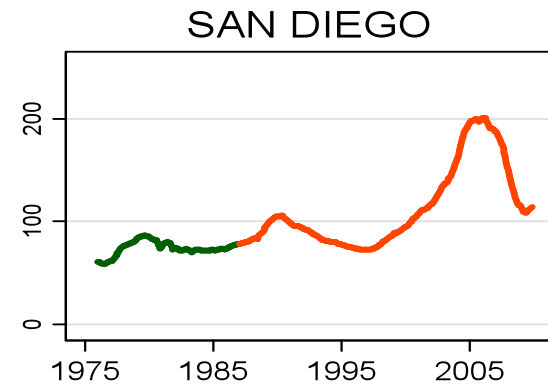
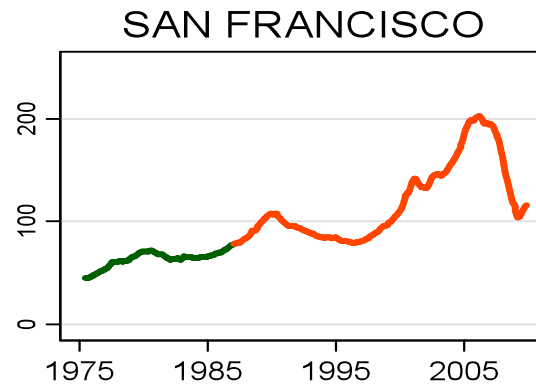
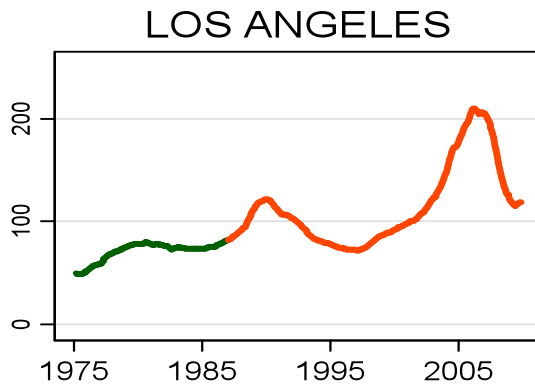
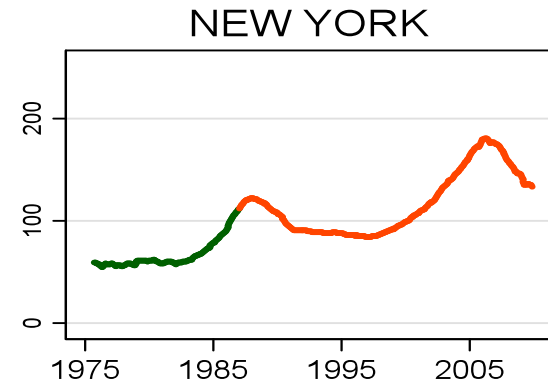
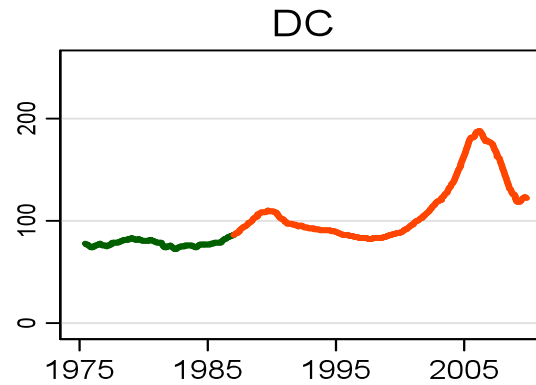
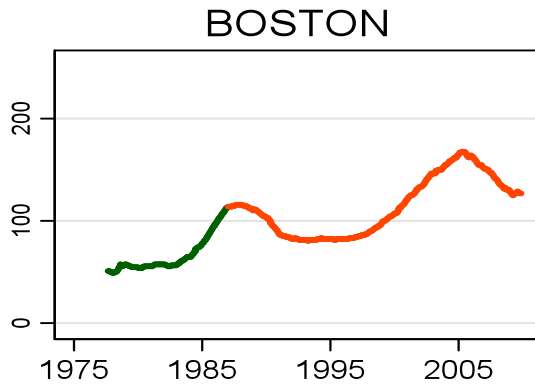
### US and selected European Countries: Real House Prices



# Commercial real estate prices shot up globally

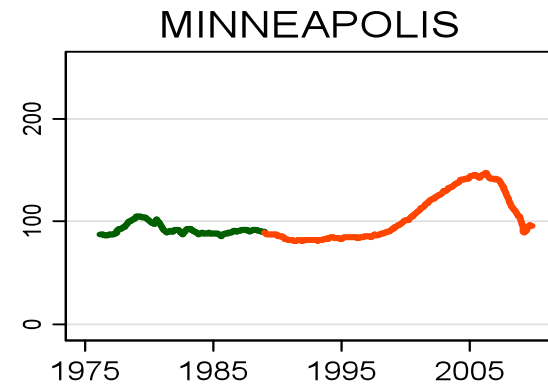
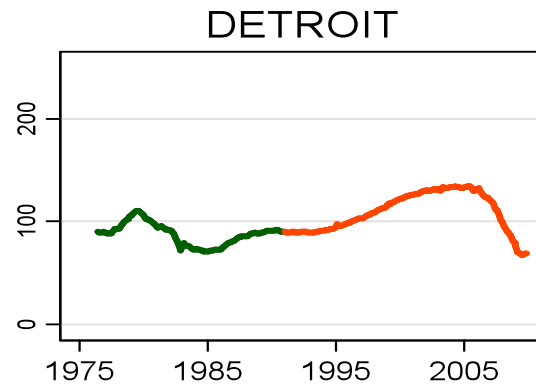
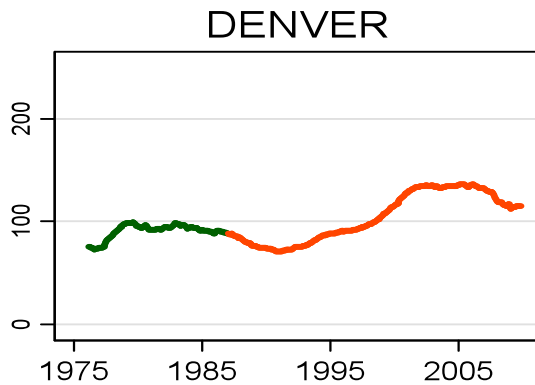
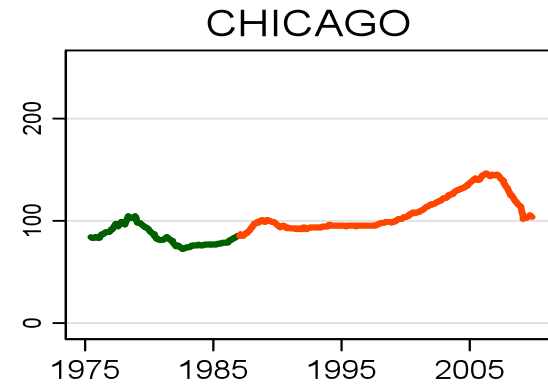
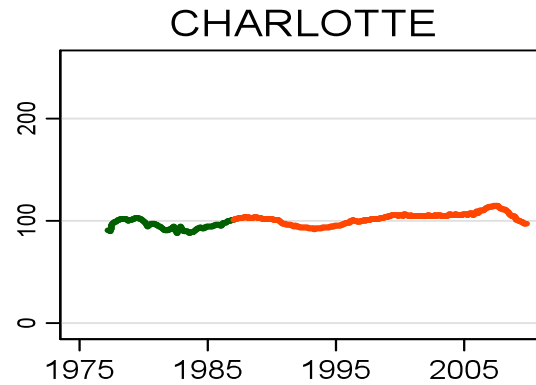
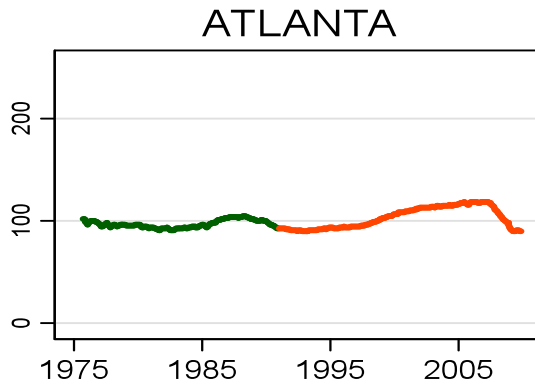


# House prices in cyclical markets



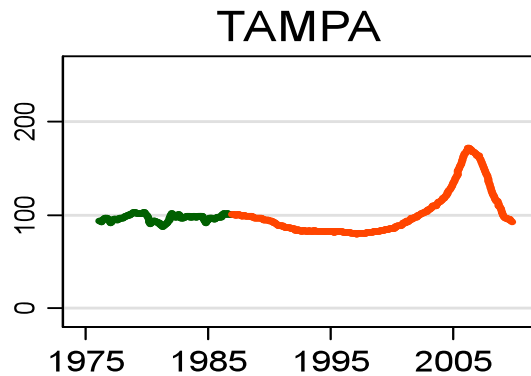
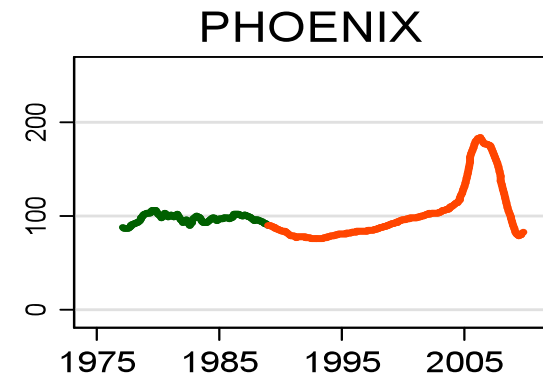
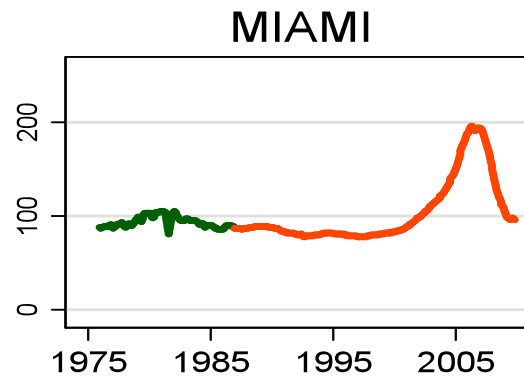
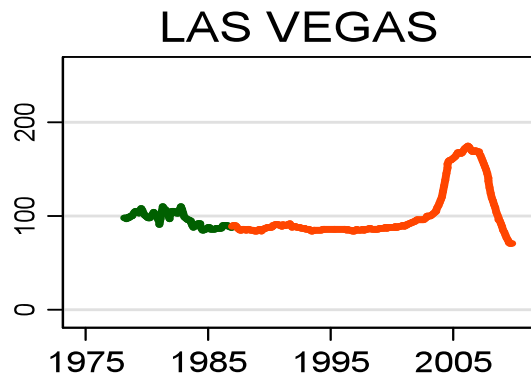
Source: OFHEO, Case-Shiller Index and BLS  
 OFHEO Index Current as of Quarter 3 2009  
 Case-Shiller Index Current as of November 2009  
 Real Home Price Index

# House prices in steady markets



Source: OFHEO, Case-Shiller Index and BLS  
 OFHEO Index Current as of Quarter 3 2009  
 Case-Shiller Index Current as of November 2009  
 Real Home Price Index

# House prices in “bubble” markets



Source: OFHEO, Case-Shiller Index and BLS  
OFHEO Index Current as of Quarter 3 2009  
Case-Shiller Index Current as of November 2009  
Real Home Price Index



# Understanding the housing boom/bust

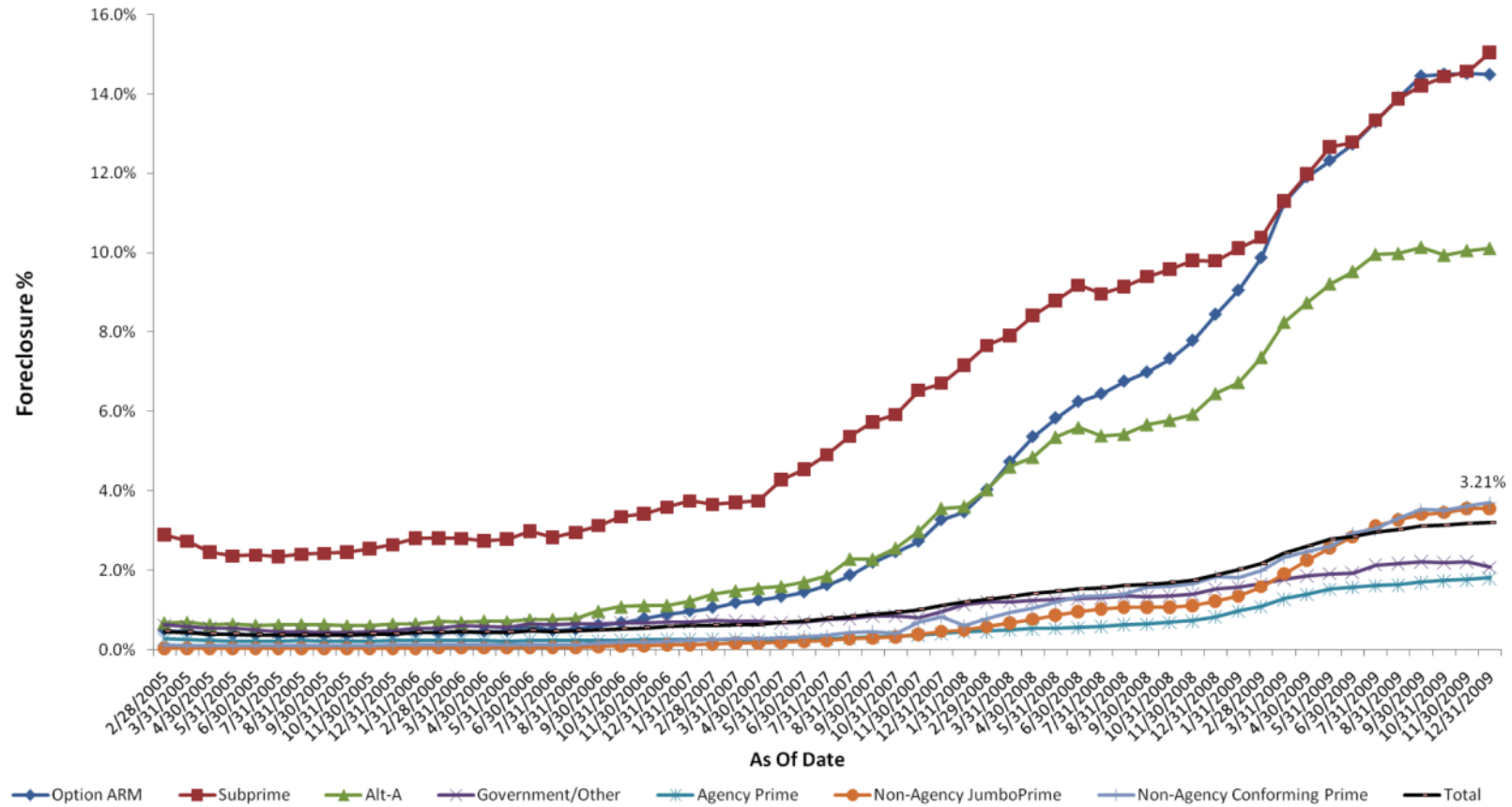
- Low mortgage rates drove real estate prices up across the world (through 2004)
  - *Further evidence on rates*: Rate declines driven by Fed MBS purchases stabilized house prices in 2009, even as unemployment grew
- In 2005 as rates rose, house prices accelerated up, almost surely driven (in part) by irresponsible lending
  - Median subprime purchase loan had 100% LTV from 2005 to 2007
  - Low-doc loans & piggyback liens were common
  - Bubble markets had much higher percentage of subprime loans than expensive markets

# Understanding the housing boom/bust

- Speculation and fraud played key roles in the bubbles (not just “undeserving” homeowners)
  - Homeownership rate fell after 2004Q4, even as prices were accelerating up
- Irresponsible lending surely contributed to the sharp decline in prices once the market started falling
  - Vicious cycle of foreclosures driving down prices, leading to more foreclosures

**Foreclosure inventories continue to climb to record highs.  
December Foreclosure Rate = 3.21%  
Month over Month Increase of 0.82%, Year over Year Increase of 70.7%**

**Total Foreclosure % by Product Type**



# Foreclosures and Unemployment



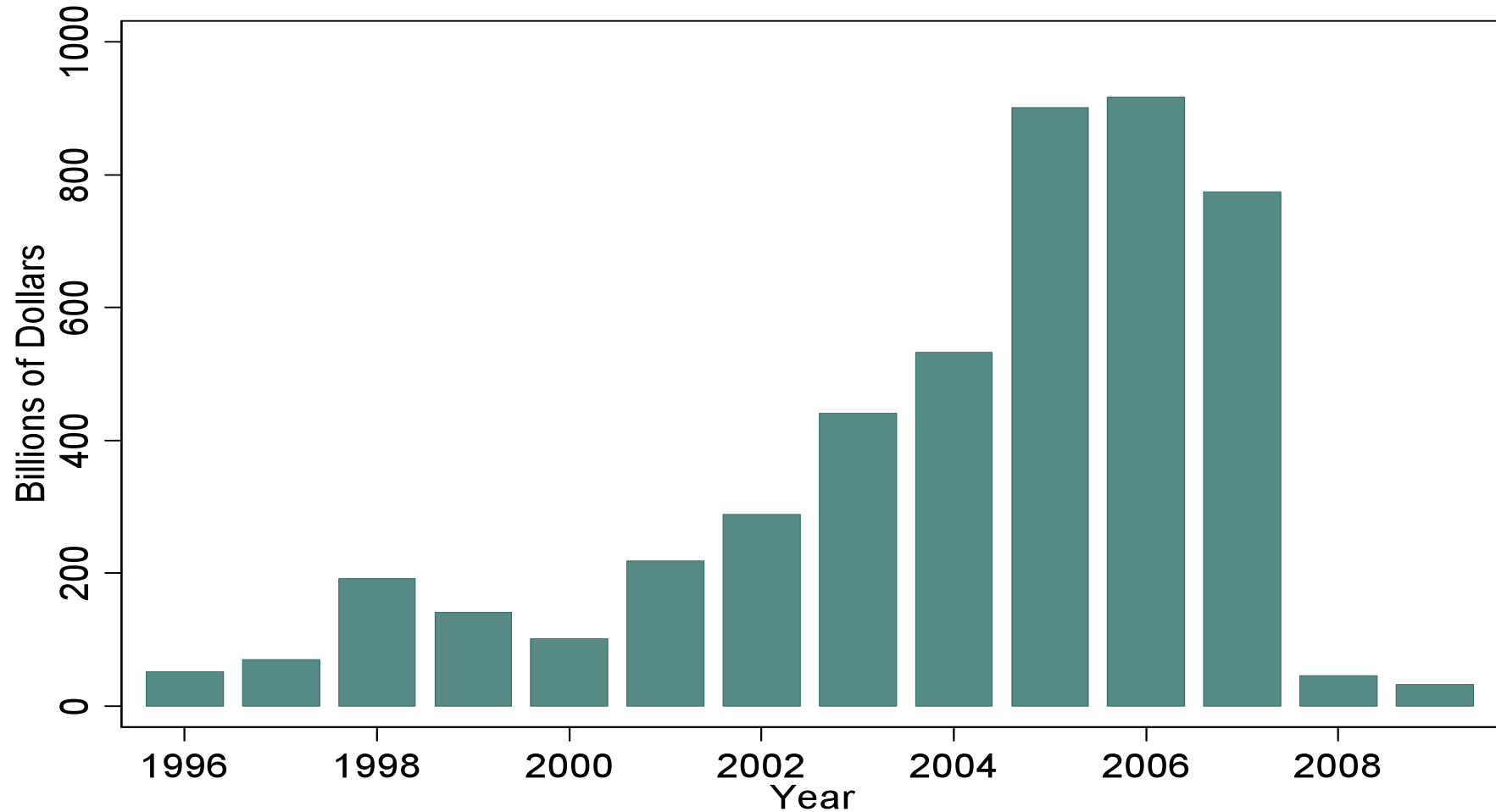
# Understanding the foreclosure crisis

- Irresponsible underwriting practices were a large driver of defaults and foreclosures
  - Borrowers defaulted within months of origination
  - Controlling for LTV, subprime/alt-a loans default at much higher rates
- Foreclosures tied strongly to underwater borrowers (a growing problem)
- Defaults of subprime/alt-a loans are not primarily due to prepayment penalties or mortgage payment resets
- Minority neighborhoods bore brunt of subprime lending; Minority borrowers did not pay higher rates

# Understanding the foreclosure crisis

- Servicers of securitized mortgages foreclose much more frequently than portfolio lenders
  - Controversial point among some researchers
  - Key: hard to measure modifications (and effort), but see foreclosures
  - Portfolio lenders successfully resolve early payment defaults with fewer foreclosures
  - OCC/OTS 2009 reports
    - Bank loans modified 50% more frequently
    - Securitized modifications have 70% higher re-default rate

# Issuance of MBS collapses in 2007Q4



Gross Non-Agency MBS Issuance by Year (Includes CMBS)  
Current as of 2010 Q1  
Source: SIFMA

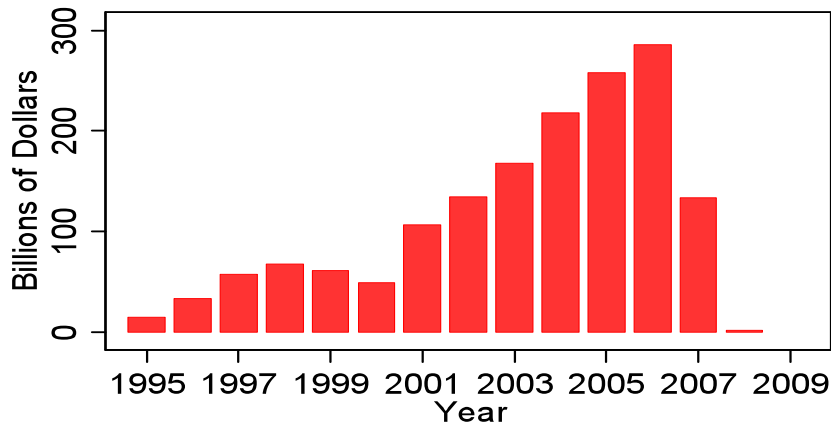
# Understanding securitizations' failures

- Ratings agencies failed us at the most important time
  - Ratings inflation in 2005-7
  - Competition drove worse ratings performance
- Servicers manage securitized portfolios badly
- “Originate to distribute” resulted in many *lemons*
  - GSEs put securitize less profitable mortgages
  - Broker originated mortgages fail more frequently
  - Better capitalized sponsors issued best securities
  - Securitized wrong loans: riskiest mortgages suffered biggest problems

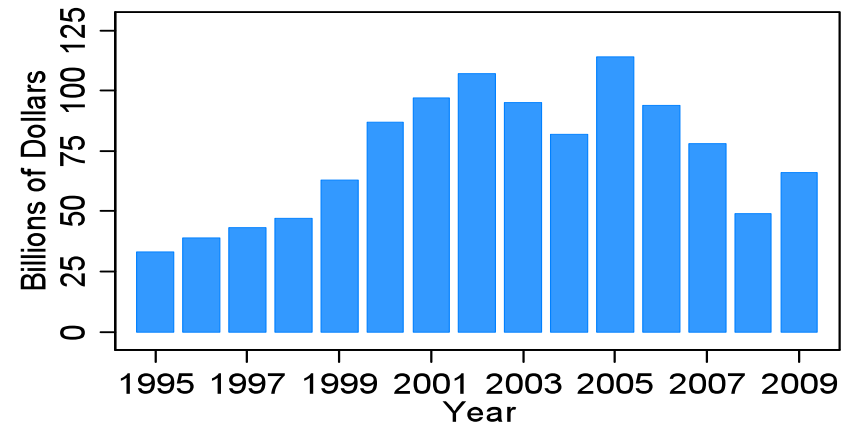


# Auto loans and credit card securitizations survive

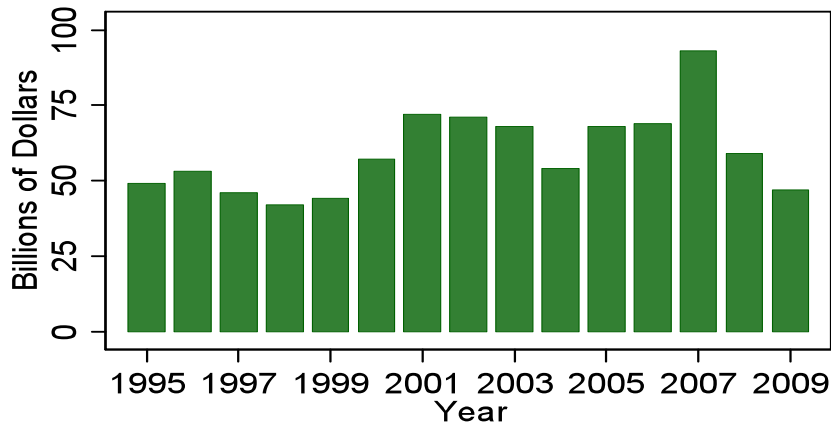
### Home equity



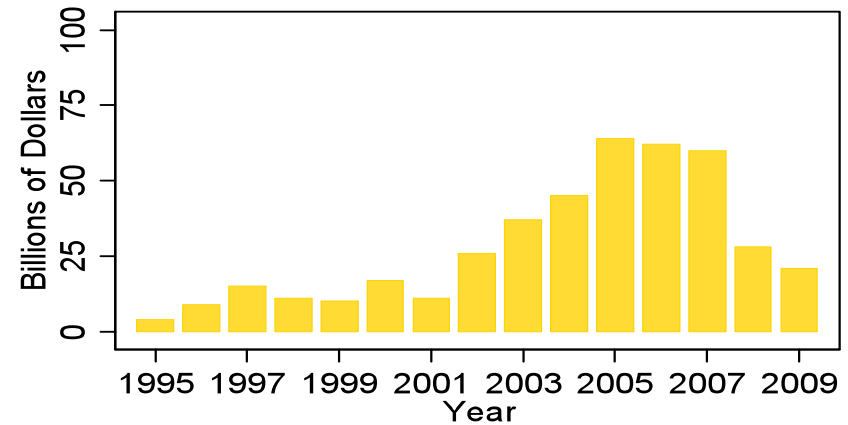
### Auto Loans



### Credit Cards



### Student Loans



Gross Issuance of Home Equity, Auto, Credit Card and Student Loan ABS by Year  
 Current as of 2010 Q1  
 Source: Bloomberg

# Understanding securitizations' failures

- What were investors thinking?
  - Downsides of securitization were well-known
  - Some failures were priced, most were not
  - CDOs bid down to cheap levels
- What worked right?
  - Credit cards, student loans; covered bonds
  - Higher quality issuers
  - Less complicated structures with lower leverage
  - Fewer embedded conflicts of interest

# Conclusion

- We have learned a lot about how housing markets work, but maybe not enough to consider how to prevent future crises
- Foreclosure problem is ongoing, much more research is needed
- Securitization structures can be fixed using lessons learned
- How to reform rating process?
  - No easy lessons to be learned for future
  - Look at role of regulation in encouraging purchase of rated securities!