Columbia Business School

Professor Chris Mayer

(Columbia Business School; NBER;
Visiting Scholar, Federal Reserve Bank of New York)

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

THE PAUL MILSTEIN CENTER FOR REAL ESTATE

Columbia Business School

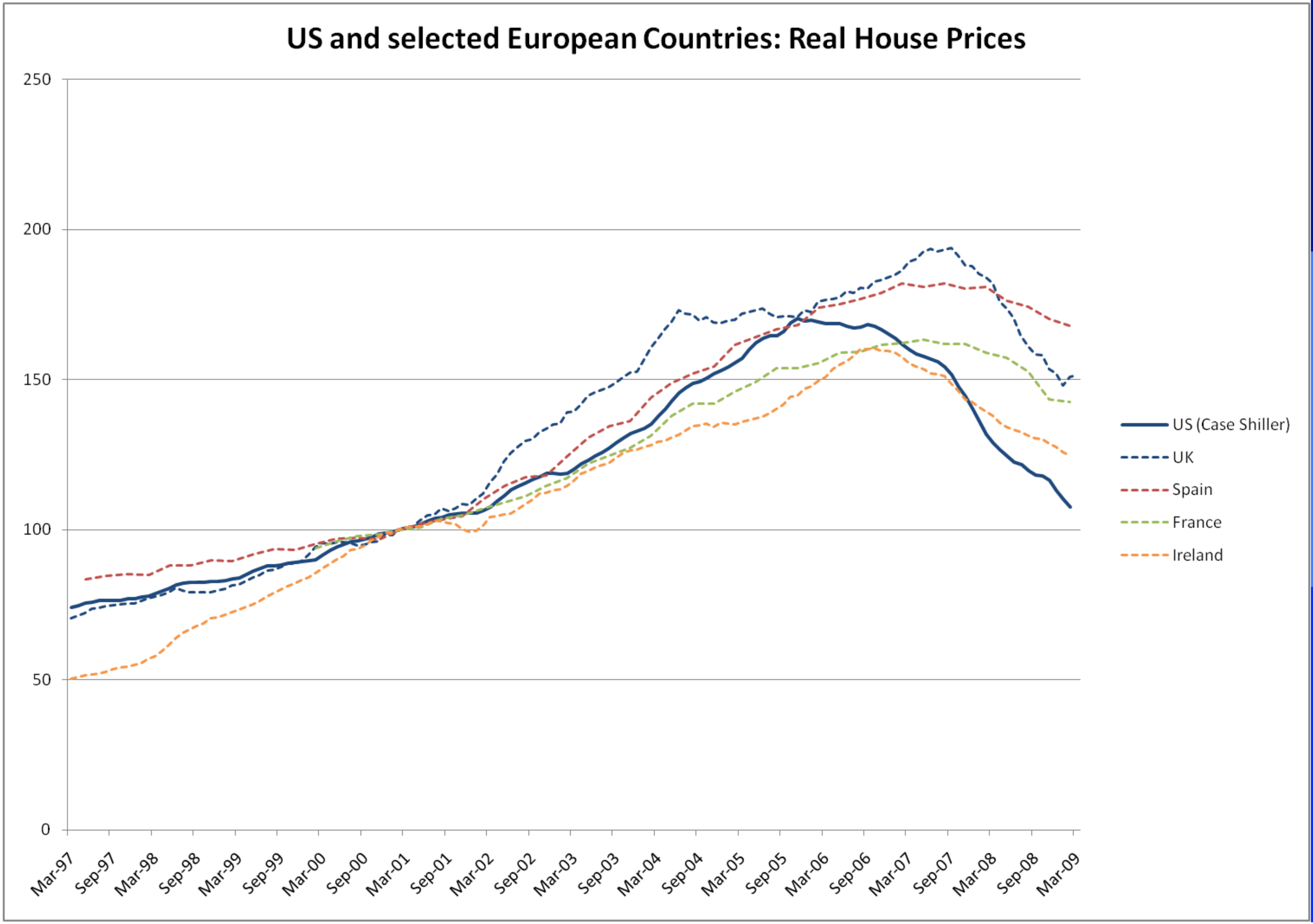
A House of Cards:

Housing and the Credit Crisis

Key facts about the housing boom

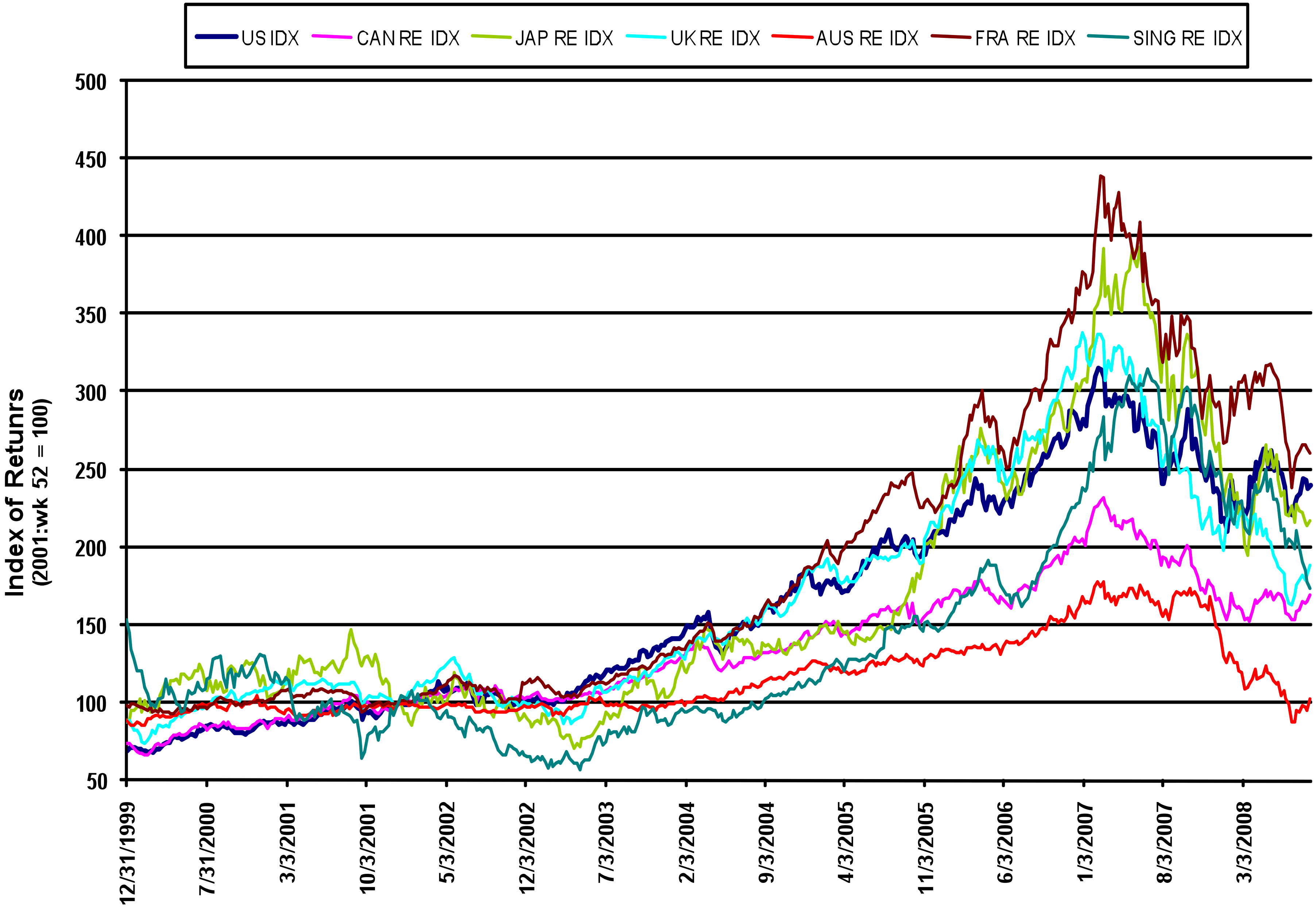
- Housing markets boomed across most of the world, but not everywhere
- Real asset prices boomed in both investor and consumer markets
- Housing prices exhibited wildly different patterns across markets in the US
  - Cyclical markets on coasts overshot fundamentals
  - Midwest and south saw little speculation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

Columbia Business School

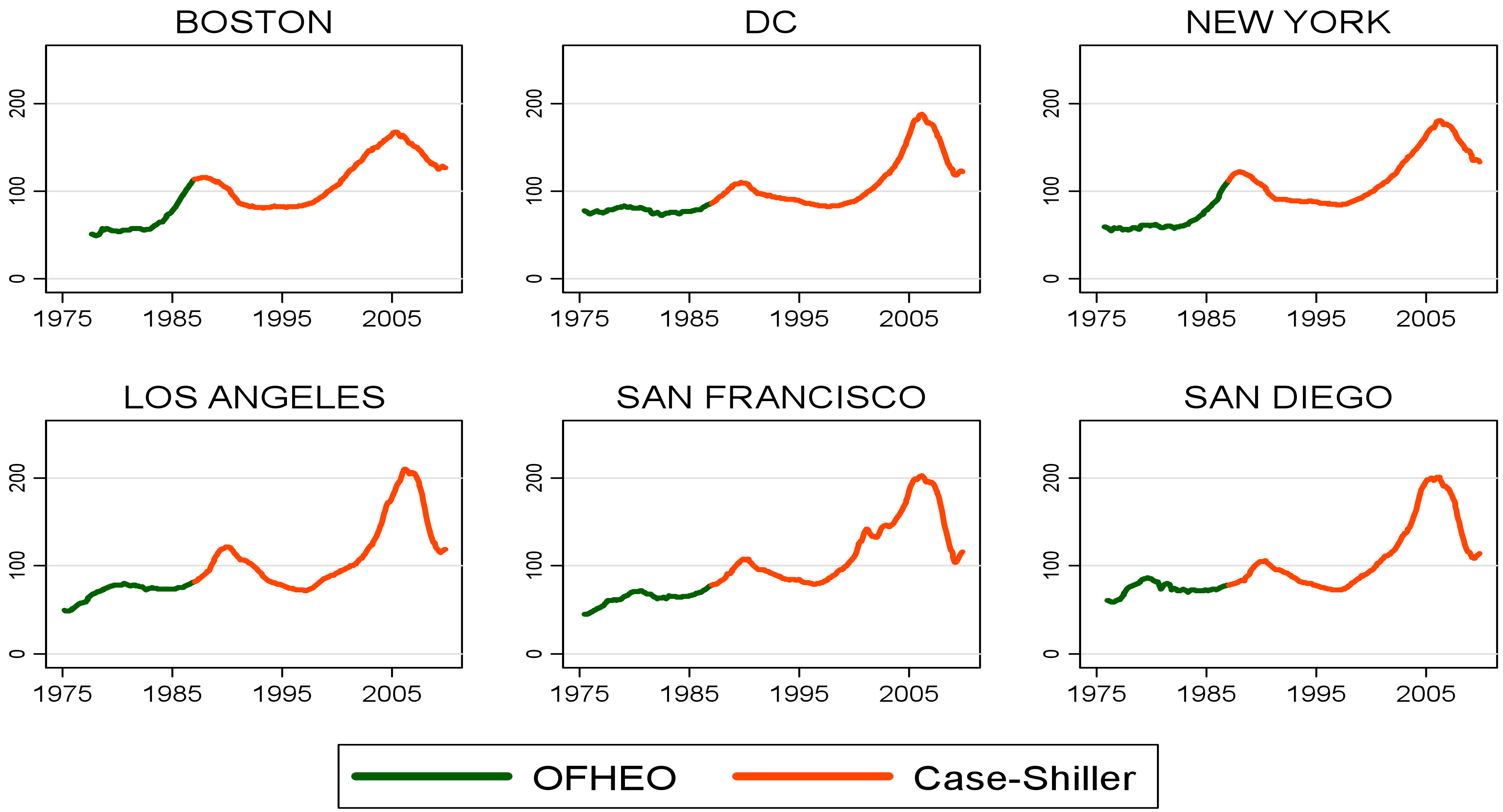


Columbia Business School

Commercial real estate prices shot up globally

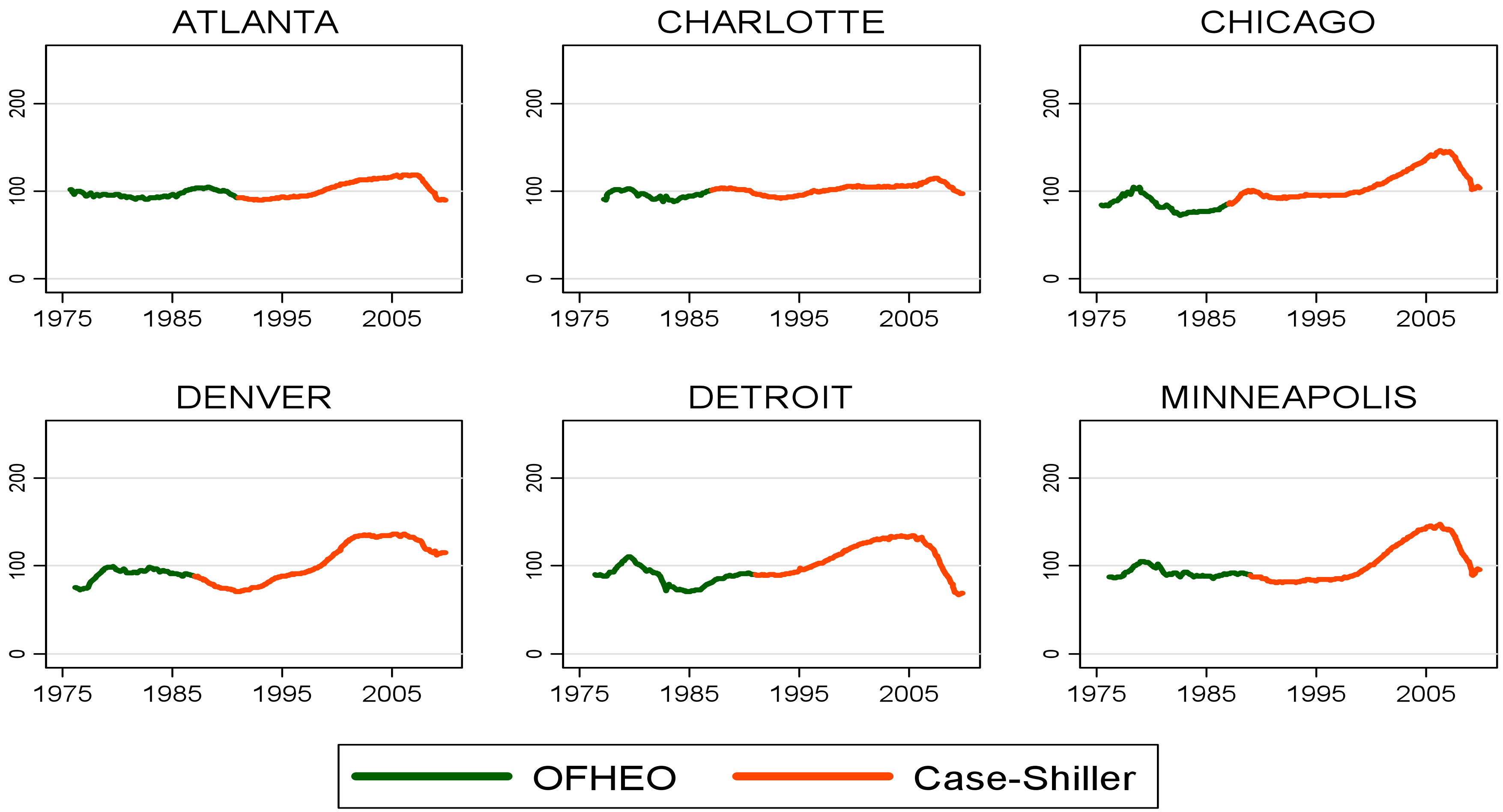


House prices in cyclical markets



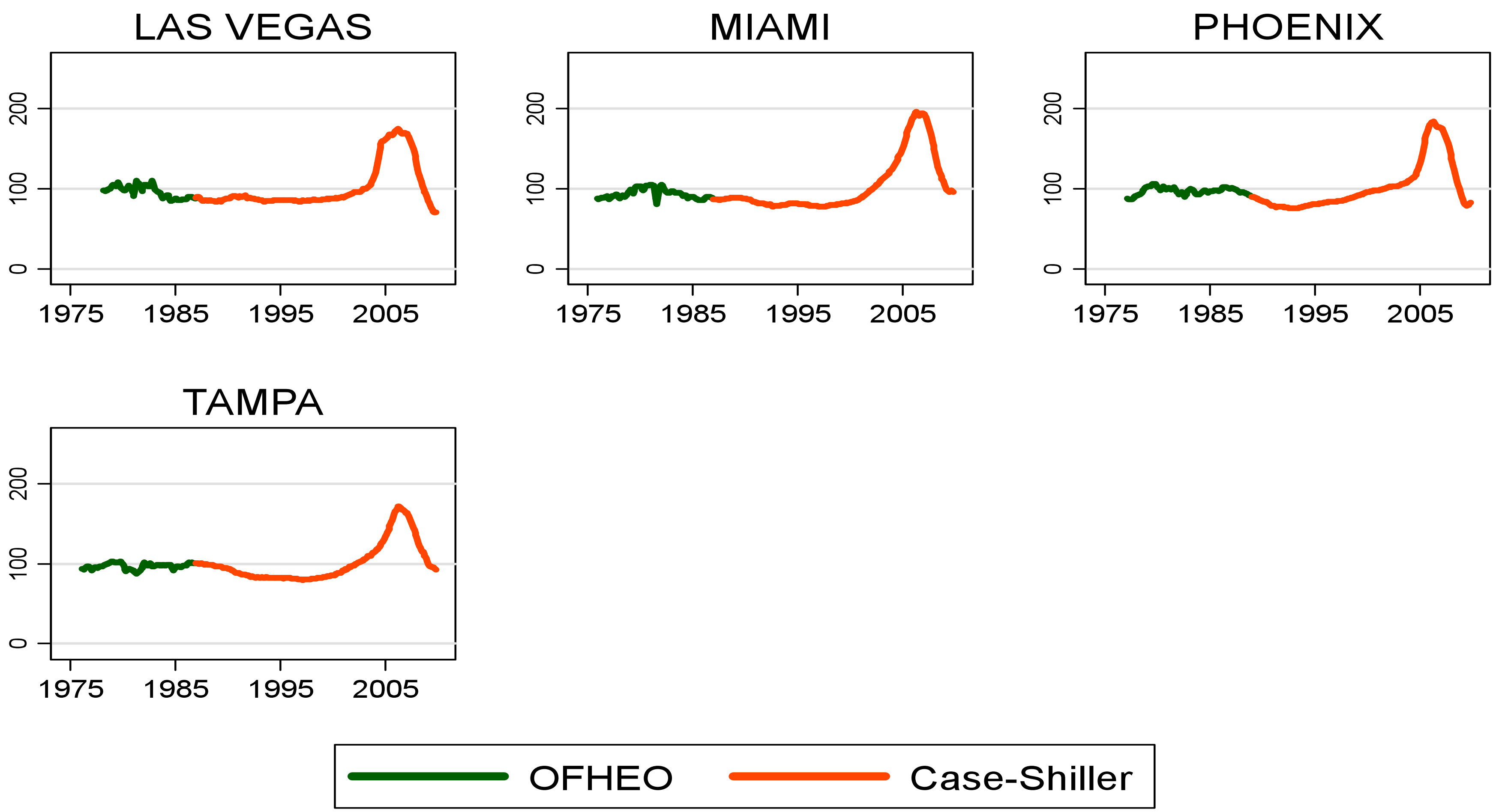
Source: OFHEO, Case-Shiller Index and BLS
OFHEO Index Current as of Quarter 3 2009
Case-Shiller Index Current as of November 2009
Real Home Price Index

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

Columbia Business School

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

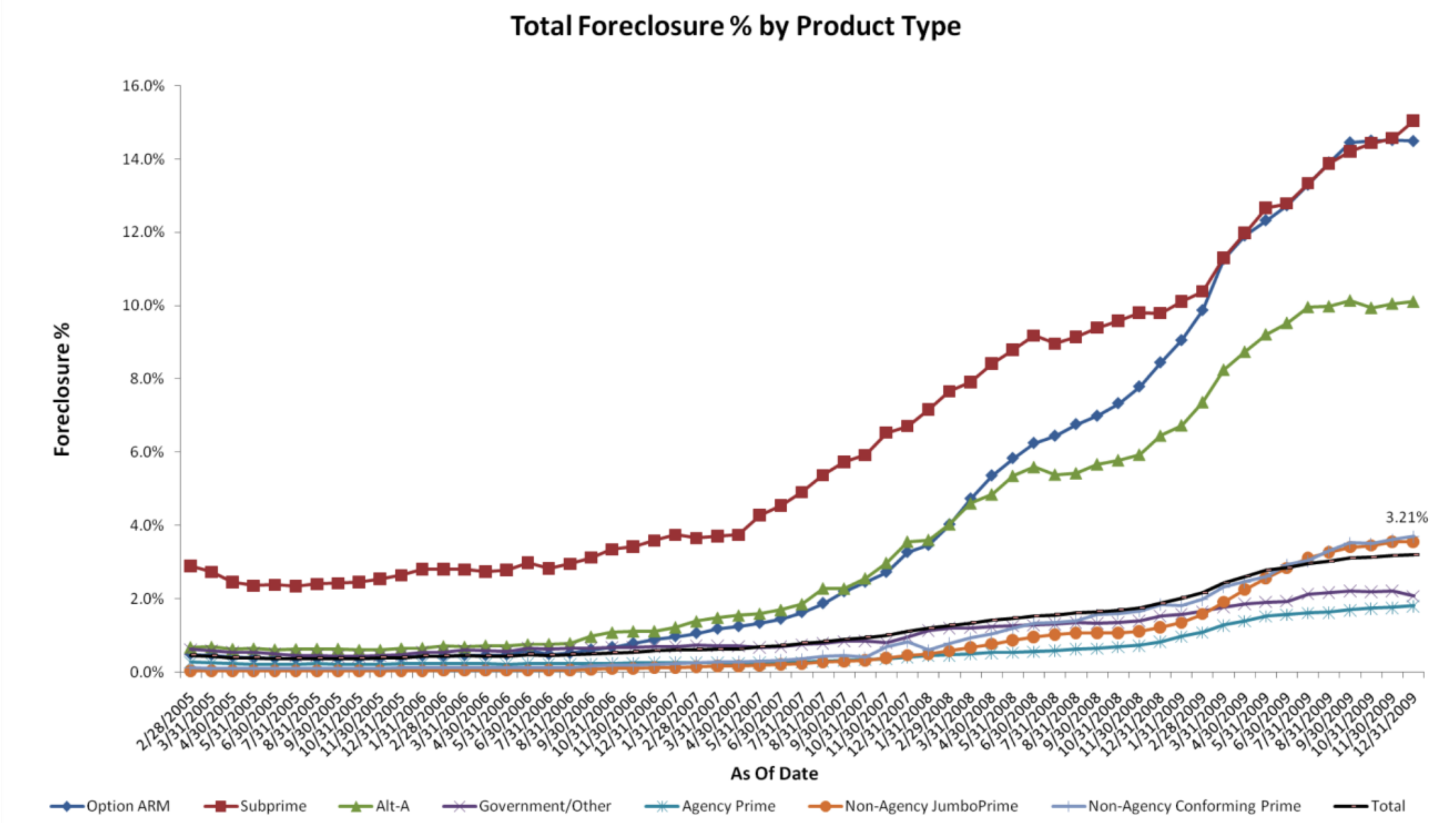
Columbia Business School

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

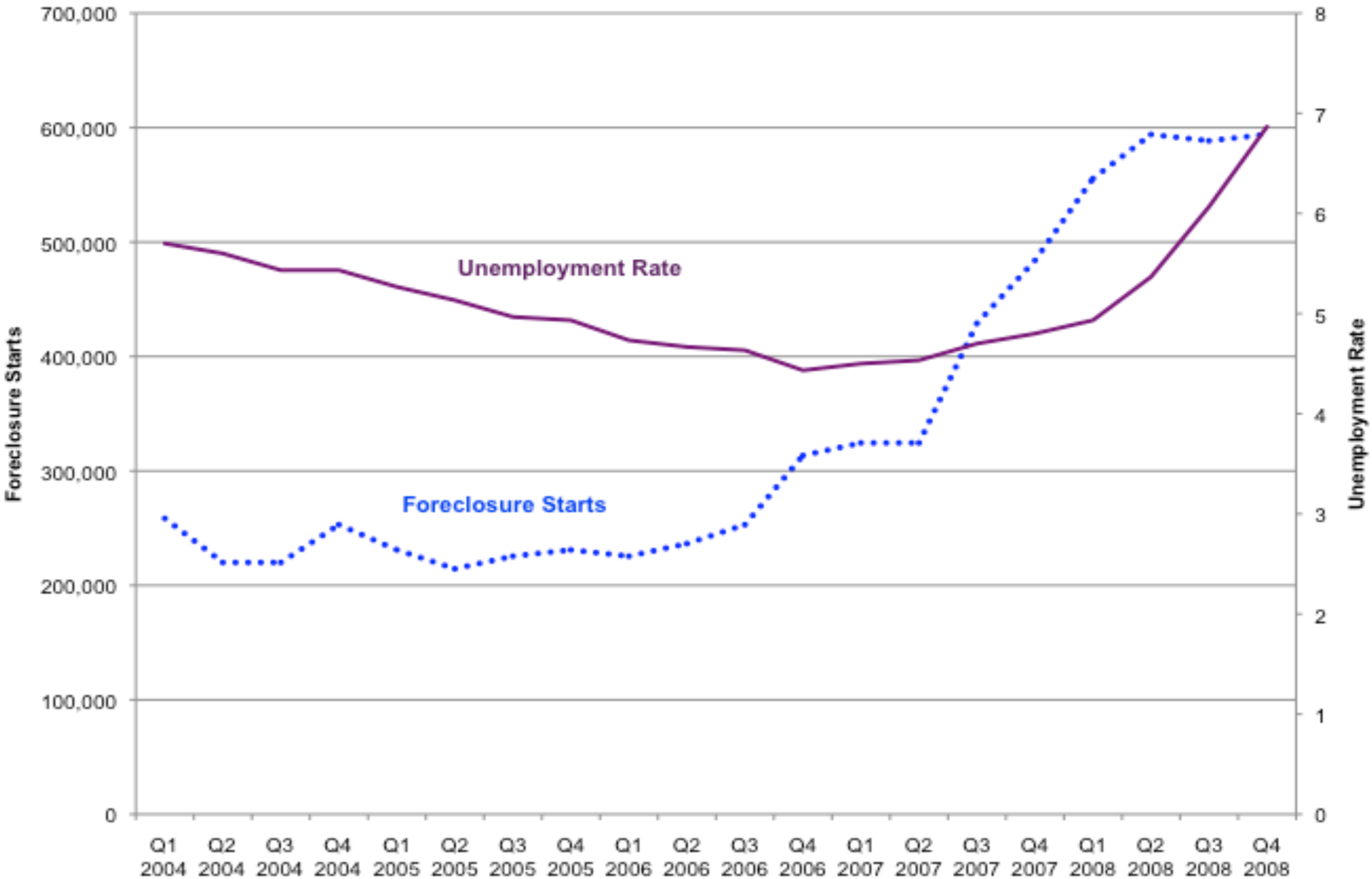
Source: Lender Processing Services

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%



Columbia Business School

Foreclosures and Unemployment



Columbia Business School

Understanding the foreclosure crisis

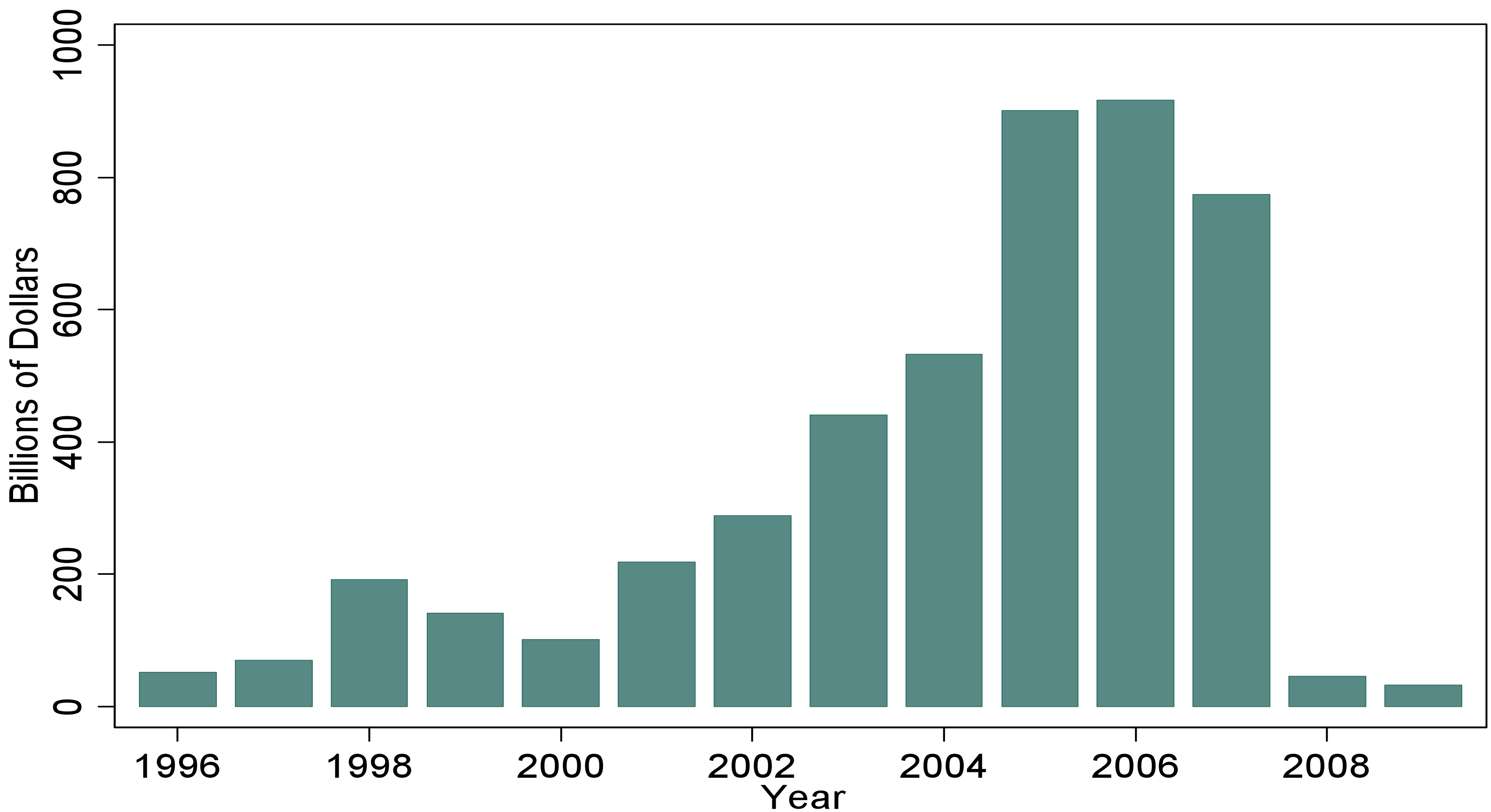
- Irresponsible underwriting practices were a large driver of defaults and foreclosures
  - Borrowers defaulted within months of origination
  - Controlling for LTV, subprime/atl-a loans default at much higher rates
- Foreclosures tied strongly to underwater borrowers (a growing problem)
- Defaults of 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

Columbia Business School

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

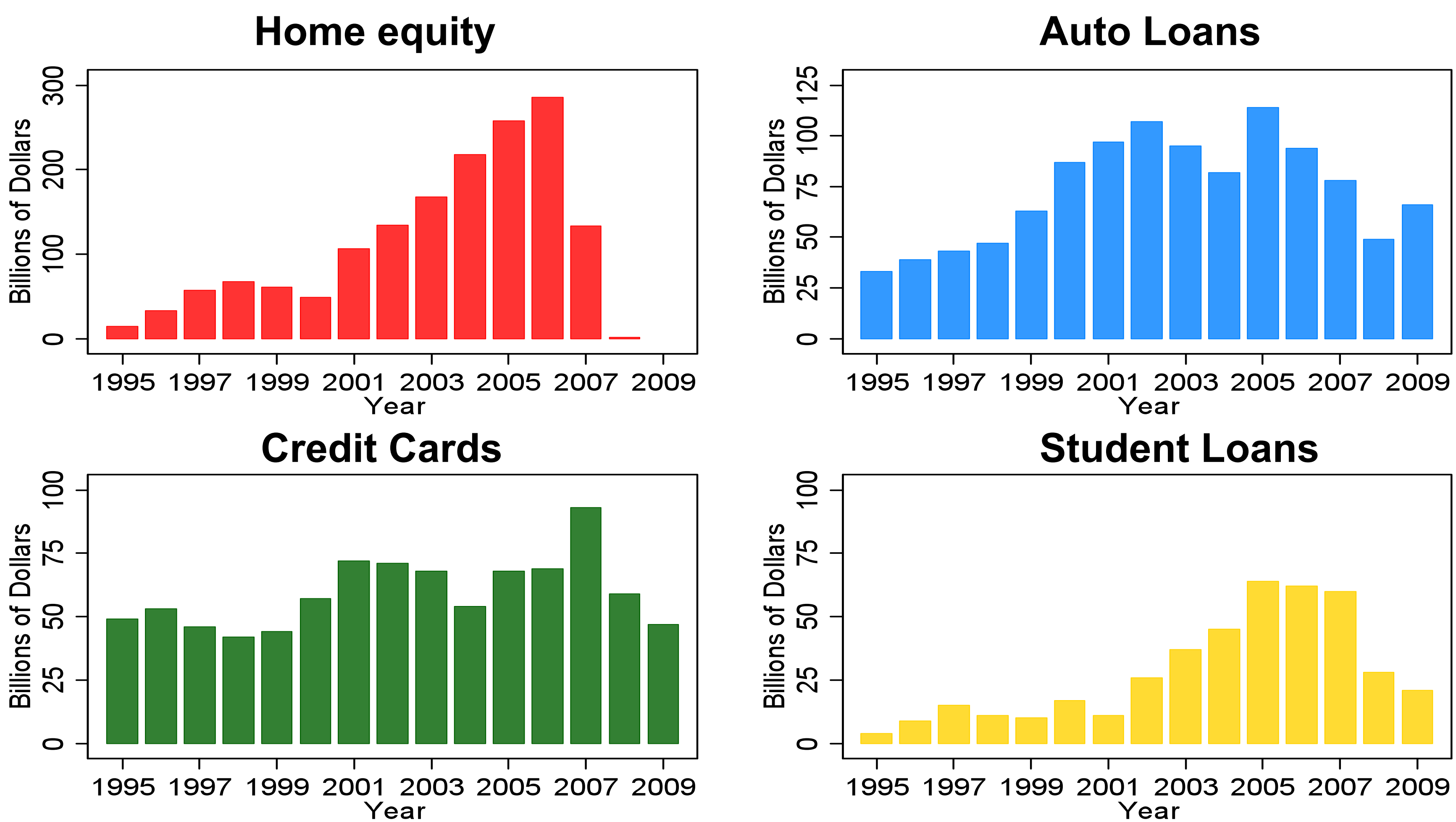


Gross Non-Agency MBS Issuance by Year (Includes CMBS)
Current as of 2010 Q1
Source: SIFMA

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



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!