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

LAS VEGAS

MIAMI

PHOENIX

TAMPA

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%
Foreclosures and Unemployment

The graph illustrates the trends in foreclosures and unemployment rates from Q1 2004 to Q4 2008.

- **Foreclosure Starts**: Shows a steady increase from Q1 2004 to Q4 2008, peaking sharply in Q4 2008.
- **Unemployment Rate**: Starts high in Q1 2004, with a gradual decrease until Q4 2007, after which there is a sharp increase.

The data suggests a correlation between rising foreclosures and rising unemployment rates during this period.
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

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Auto Loans

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Student Loans

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<td>175</td>
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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!