The Roots of the Current Crisis: U.S. Housing and Financial Markets and the Aggregate Economy – How Did We Get Here, Which Way Out?

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See website for longer version, including references, acknowledgements

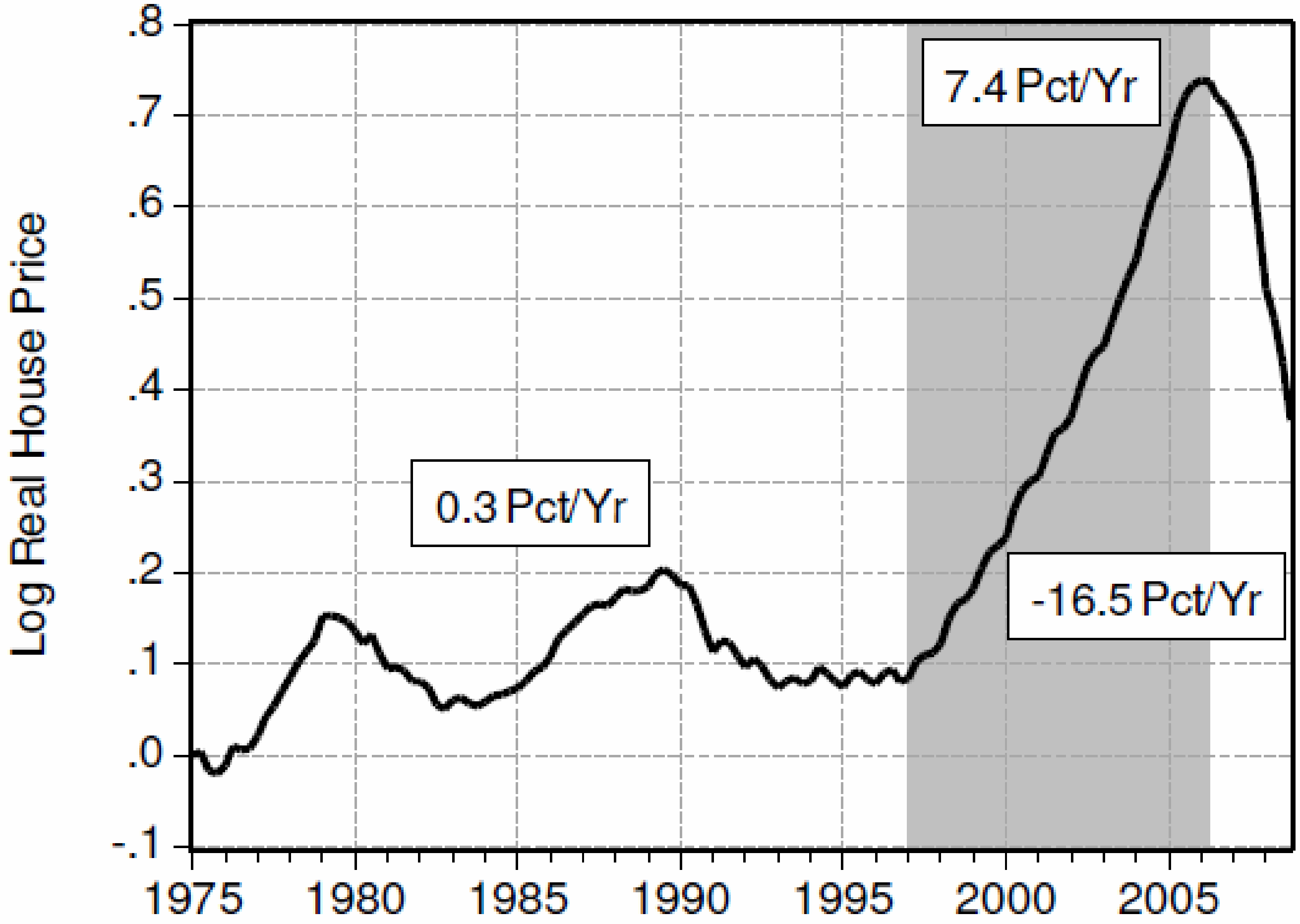
Order of today's talk

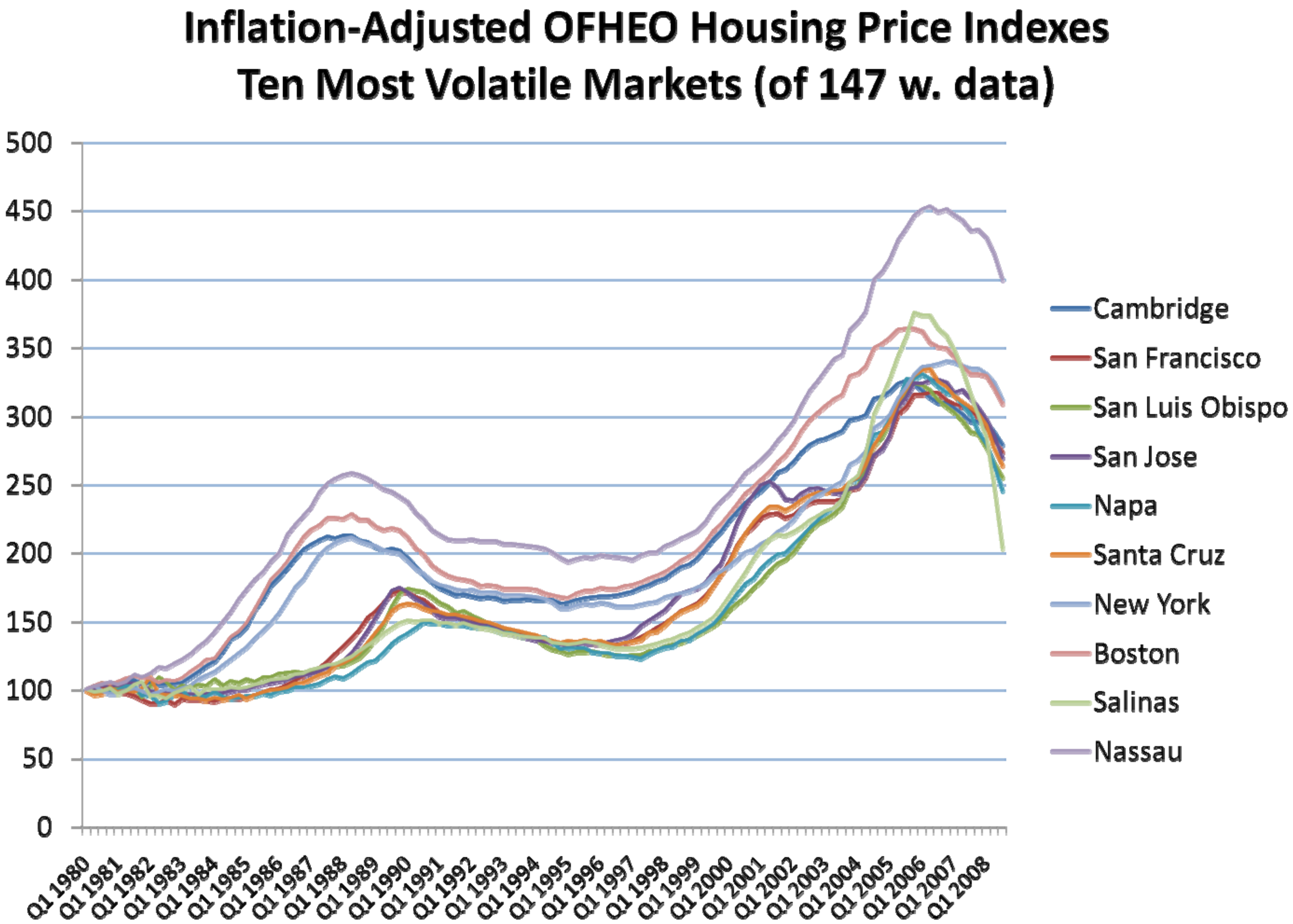
- **Origins**: structural problems in U.S. housing and financial markets
- **Spillovers** to the aggregate economy, in the U.S. and elsewhere
- **"Putting out the fire"**
- **"Fire prevention"**

Origins

Path of Real USA house price index, 1975:q1 - 2008:q4

Source: OFHEO, Macromarkets, BEA





Inflation-Adjusted OFHEO Housing Price Indexes
Ten Most Volatile Markets (of 147 w. data)
500
450
400
350
300
250
200
150
100
50
0
Q1 1980
Q1 1981
Q1 1982
Q1 1983
Q1 1984
Q1 1985
Q1 1986
Q1 1987
Q1 1988
Q1 1989
Q1 1990
Q1 1991
Q1 1992
Q1 1993
Q1 1994
Q1 1995
Q1 1996
Q1 1997
Q1 1998
Q1 1999
Q1 2000
Q1 2001
Q1 2002
Q1 2003
Q1 2004
Q1 2005
Q1 2006
Q1 2007
Q1 2008
Cambridge
San Francisco
San Luis Obispo
San Jose
Napa
Santa Cruz
New York
Boston
Salinas
Nassau

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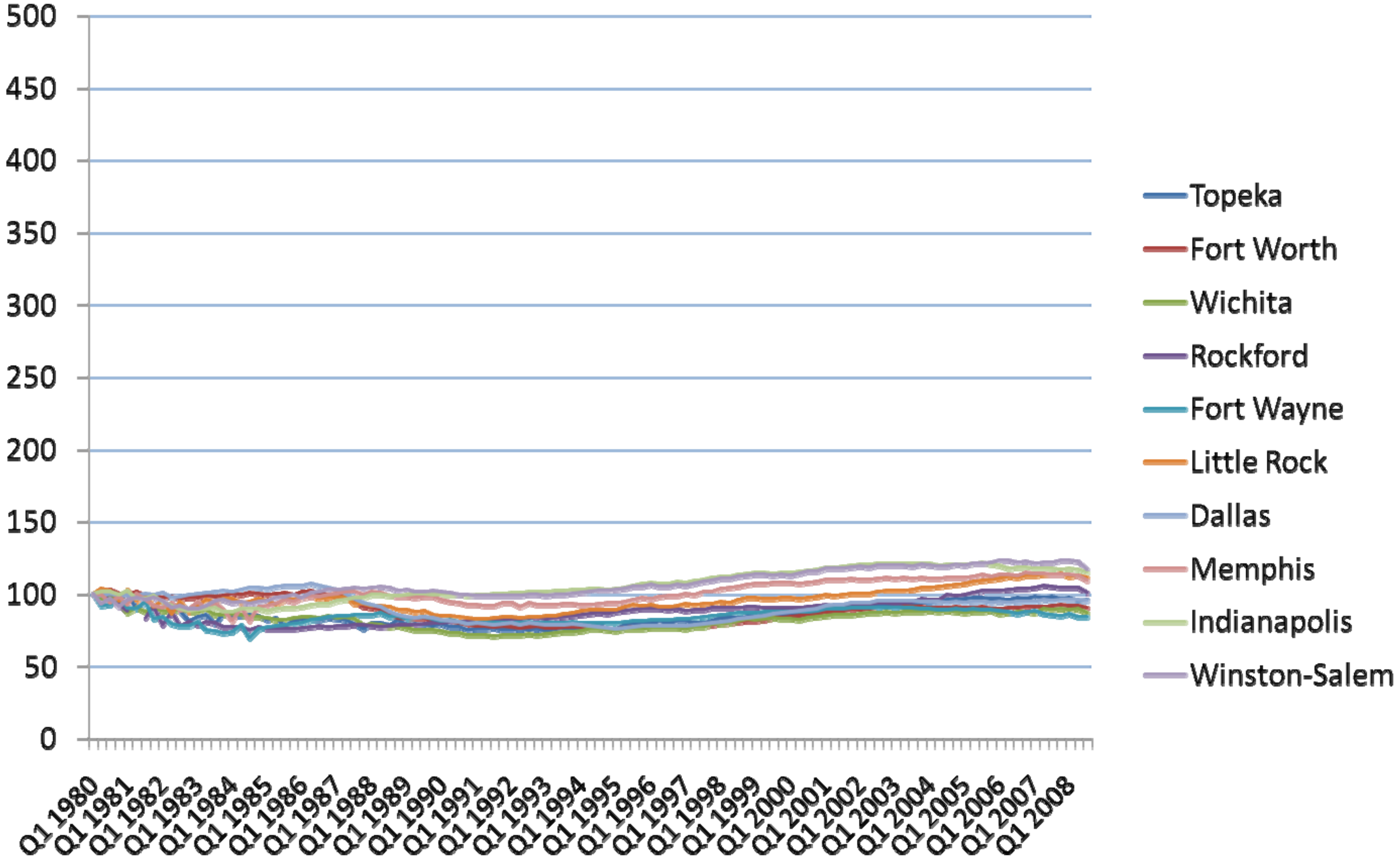
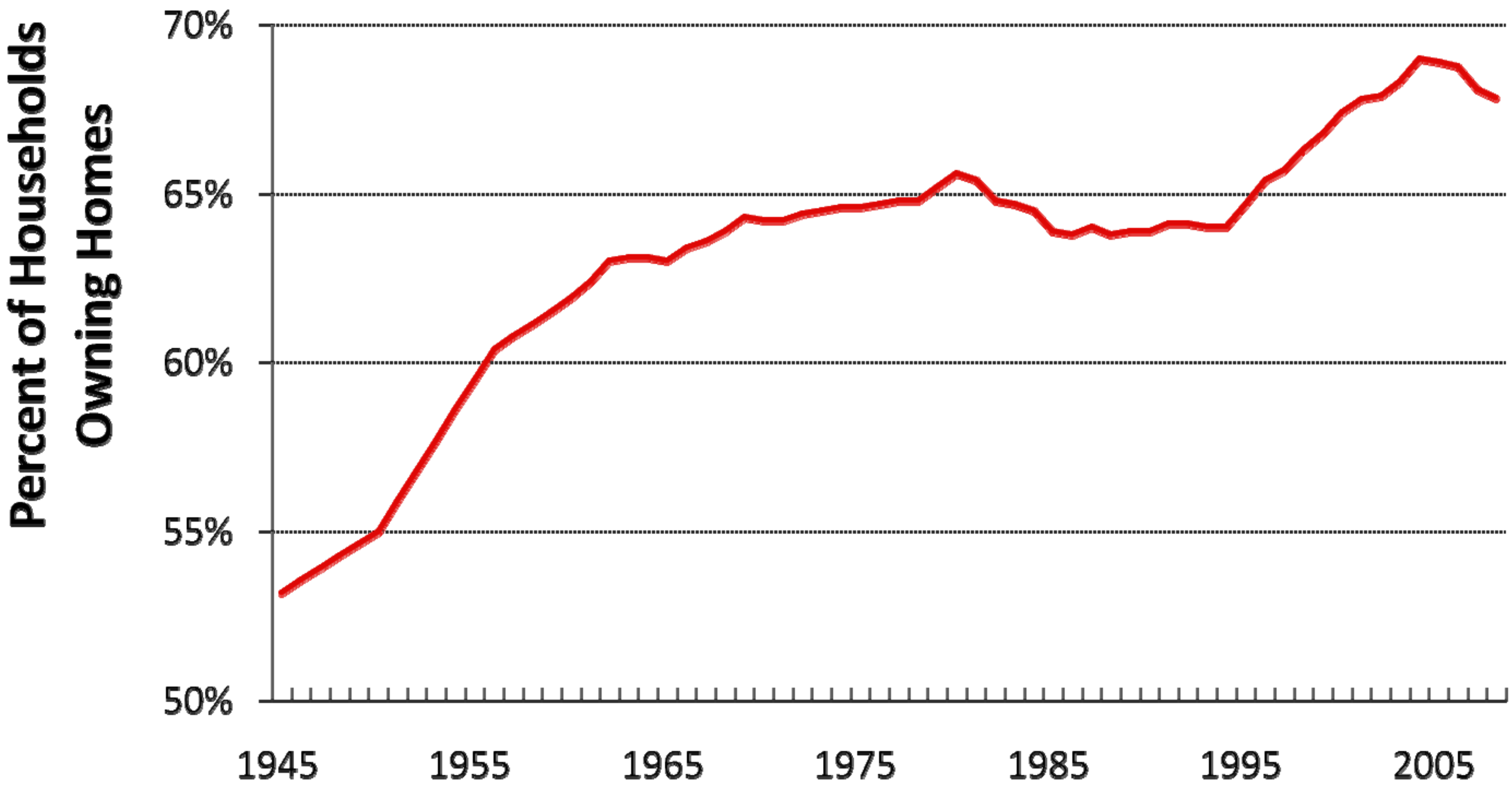
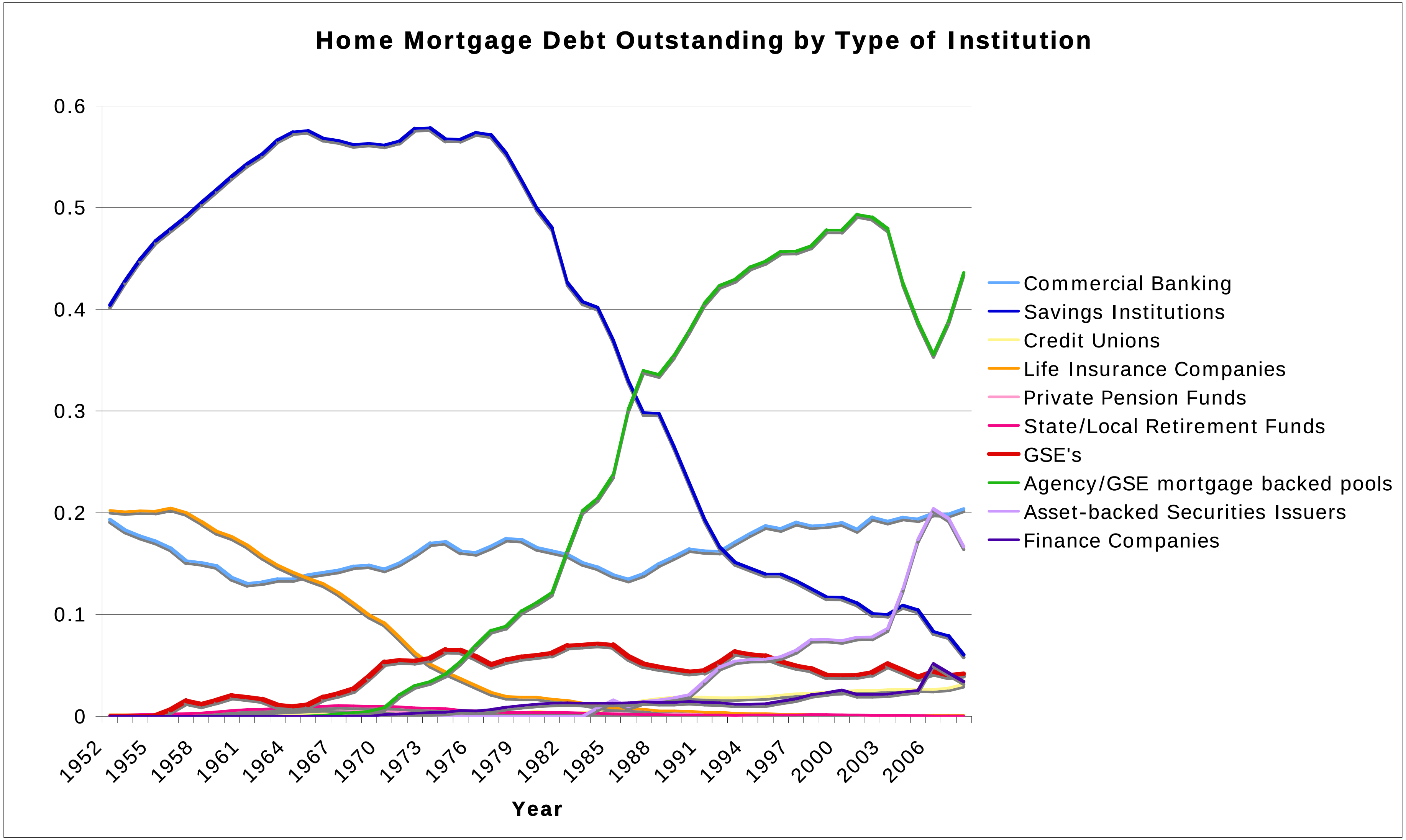


U.S. Homeownership, 1945-2008



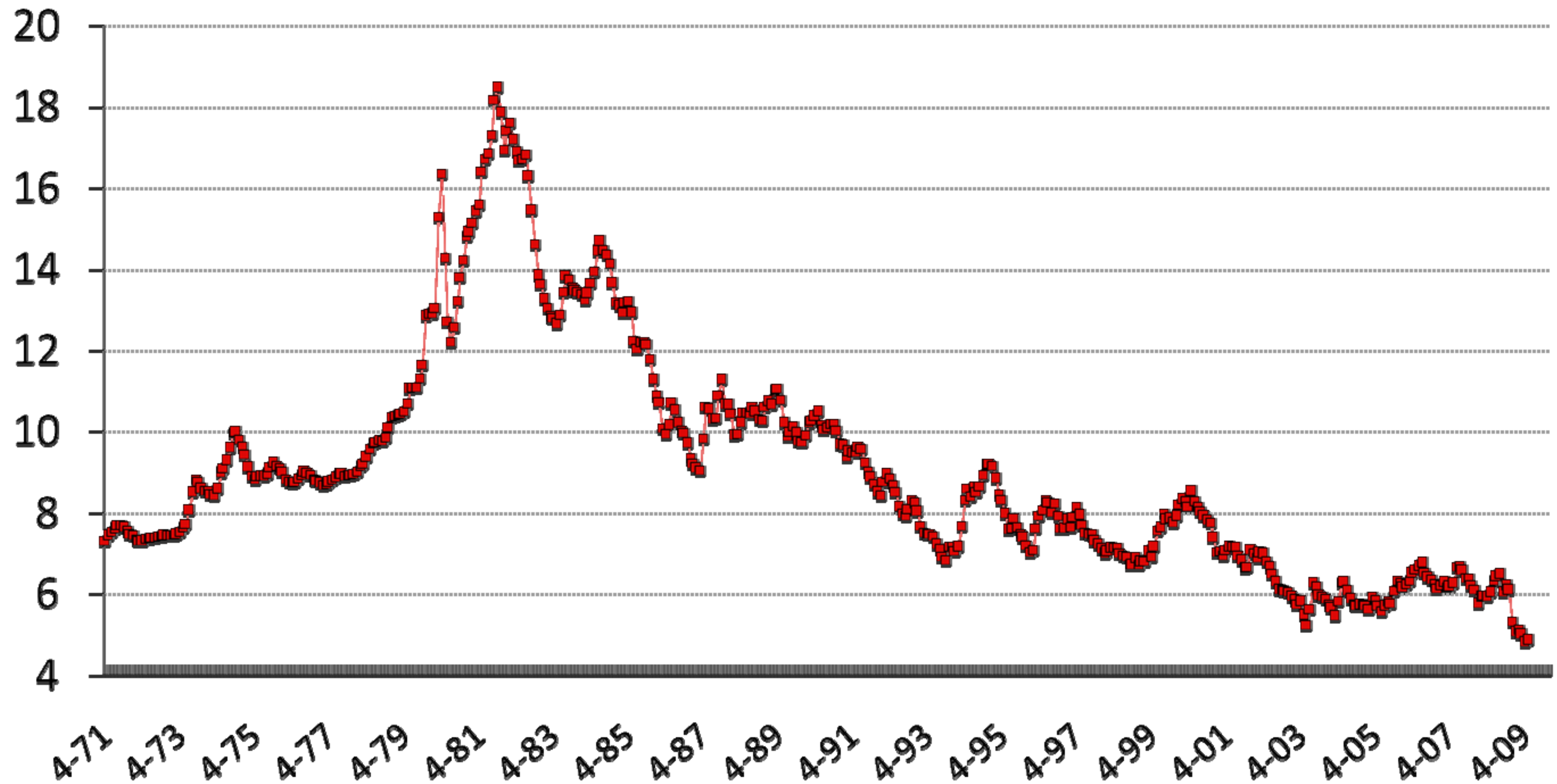
Some of the financial players

- Depository institutions (banks, S&Ls)
- Mortgage bankers and mortgage brokers
- Fannie Mae and Freddie Mac; Ginnie Mae
- FHA
- Wall Street ("Private Label")
- Private Mortgage Insurers (PMI)
- Rating agencies (S&P, Moody's, Fitch)



Richard Green, from FRB data

Fixed Rate Mortgage Interest Rates
(Monthly Freddie Mac Data)



Recent events: setting the stage

- Post 1930s, U.S. housing finance developed along a "depository institution" model. Banks, savings and loans originated, serviced loans and held them in portfolio.
- Limited effectiveness, especially with 1000s of local banks and S&Ls. Economies of scale, geographic mismatch.
- Evolution towards a capital markets based system "unbundled" the functions. But big incentive problems loomed, as originators, servicers become fee based and less tied to loan performance; and as investors are "sliced and diced" with mortgage backed securities and other financial engineering.
- Fannie and Freddie get large; problems of "private" institutions with a *perceived* line of credit to U.S. Treasury.

Recent events

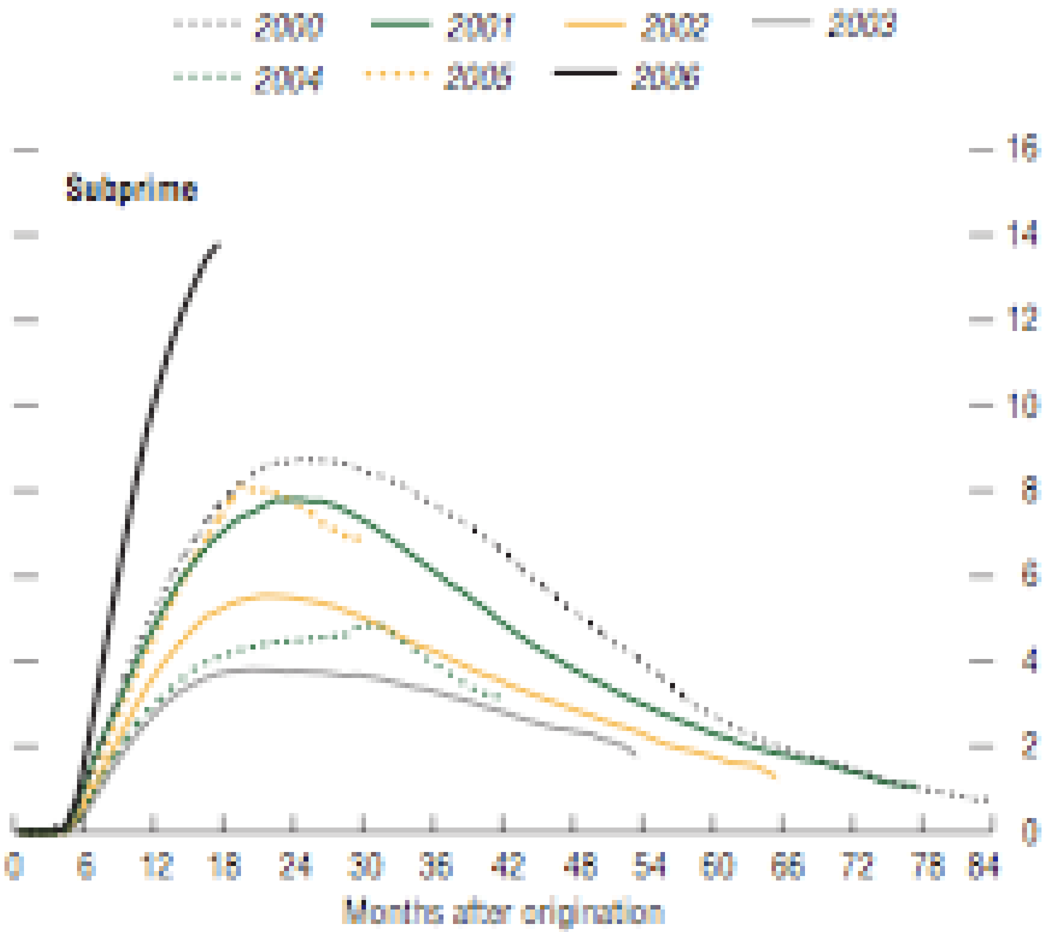
- From 1975-1996, OFHEO house price index grew 0.3-0.7% per annum, inflation adjusted.
- From 1997-2006, real OFHEO HPI grew 5-7% per annum.
  - Partly fueled by the "Greenspan put," as Fed lowered rates to keep economy humming after the 2001 recession.
- Post 2000, Wall Street becomes more involved in MBS, very aggressive in promoting subprime. Chasing market share, Fannie and Freddie follow. Prudential regulation of the overall housing finance system weakens, just when it needs to strengthen.
  - When housing prices are growing rapidly, problems are masked. But "if something can't go on forever, it will stop."
- Post 2006, house prices turn; subprime market crashes; prime mortgages follow.

The “prime” & “subprime” mortgage markets in the U.S.

- **Prime market** (58% of originations in 2006): serves borrowers with strong credit histories.
  - Conforming: meets Freddie/Fannie guidelines (including loan ≤ \$600,000; limit was \$417 for most cities during the key 2006 period)
  - Nonconforming (including jumbo market, for larger loans)
- **Alt-A market** (16% in 2006): close to prime, one or two higher risk indicators.
- **Subprime** (24% in 2006): high risk, blemished credit.
- **Government insured** (FHA, VA; 3% in 2006) provides prime terms to some subprime borrowers.

Figure 1.6. Nonprime 60-Day Delinquencies by Mortgage Vintage Year

(In percent of original balance)

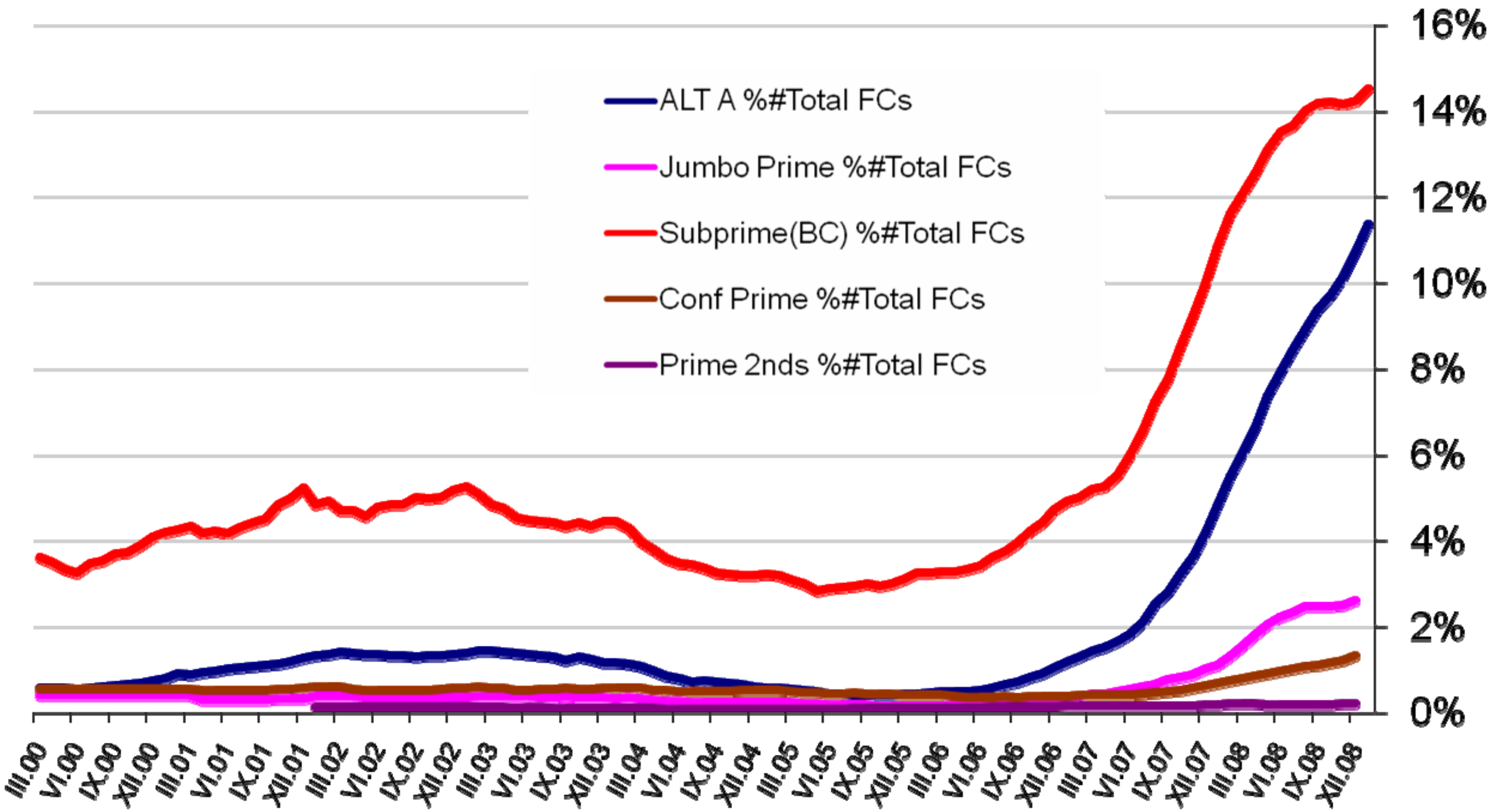


Source: IMF Global Financial Stability Report, based on data from Merrill Lynch &Intex

When bad things happen…

- Delinquency: miss one or more payments.
- Default: varies, but rule of thumb is 90 days delinquent.
- Foreclosure starts: loan is in default, lender decides to initiate proceedings.
- Foreclosure inventory: loans in the foreclosure process.

National foreclosure rate by mortgage sectors



Source: Yongping Liang, from First American CoreLogic, all LoanPerformance© databases

Spillovers

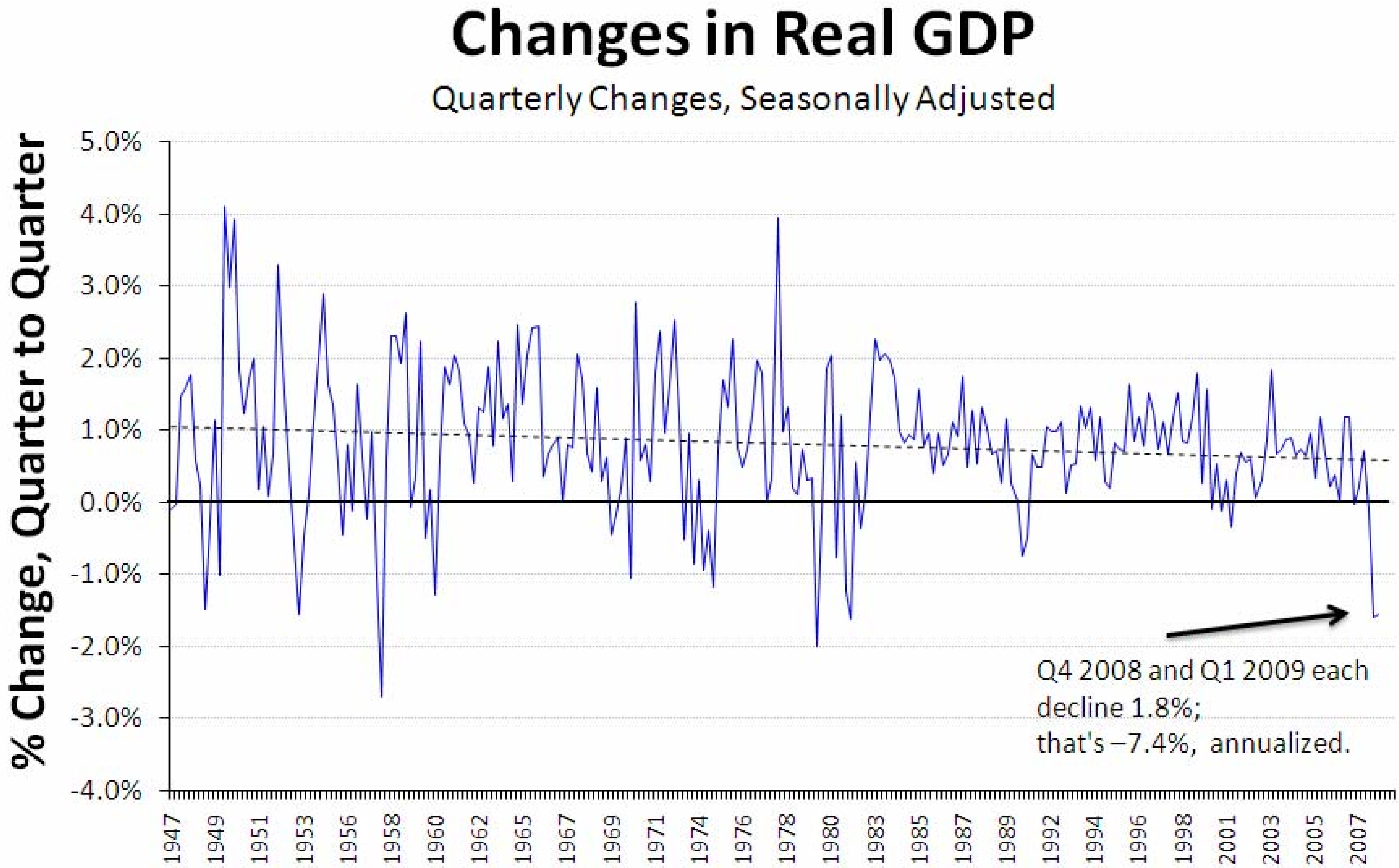
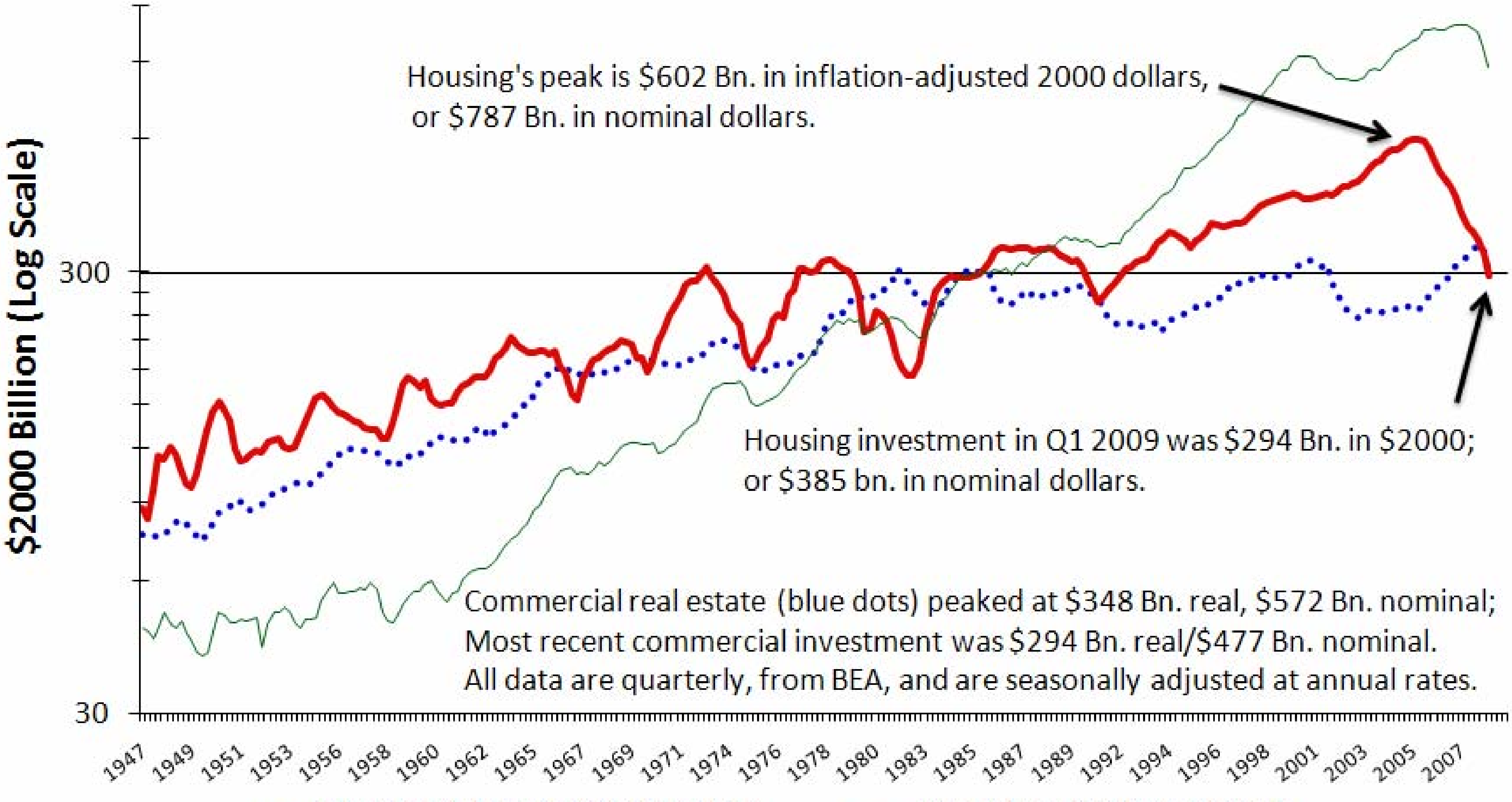


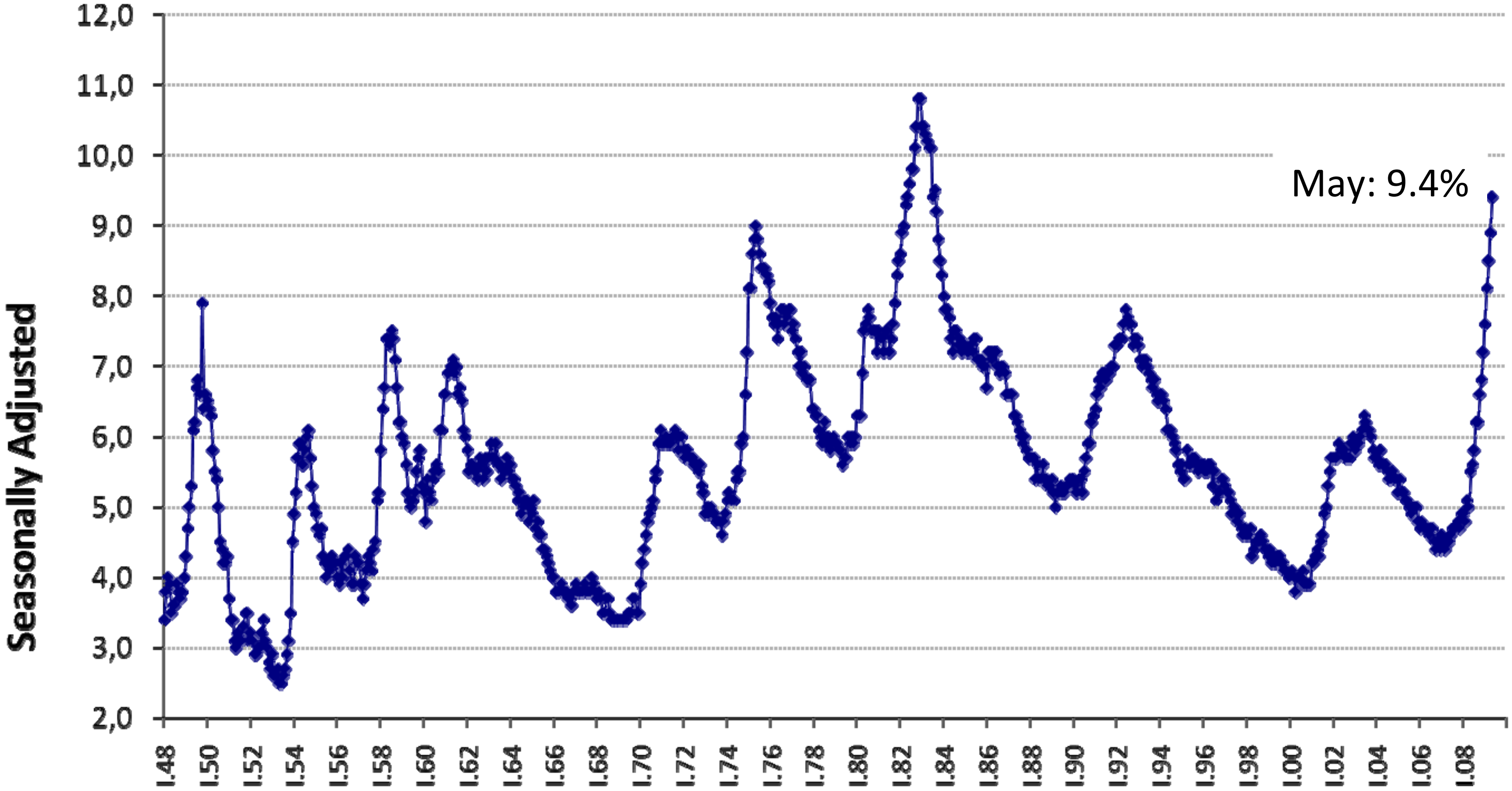
Chart by S. Malpezzi, UW-Madison Real Estate, from BEA data

Real Investment



S. Malpezzi
UW Real Estate

Unemployment Rate



“Putting out the fire”

Liquidity, or insolvency?

Obama Administration's Financial Stability Plan

- Stress test for banks
- Balance sheet transparency
- Capital assistance program
- Public-private investment fund
- Consumer & business lending initiative
- Affordable housing support and foreclosure prevention
- Small business and community lending

Other firefighting ideas being floated, in no particular order

- Standardize/simplify default and workout rules
- Build more low cost housing
- Demolish a lot of houses
- Revamp/coordinate financial regulation
- Standardize and simplify the mortgage menu for most borrowers
- Further increase the conforming loan limit
- Increase deposit insurance
- Decrease deposit insurance
- Reduce capital gains taxes
- Change the mortgage interest deduction to a credit
- Moratoria on foreclosures
- Mortgage cramdown in bankruptcy

“Fire prevention”

Some principles

- Balance consumer and industry interests
- Balance safety and soundness, with need to innovate
  - Don’t simply push all the risk to less transparent, less regulated corners of the financial system, e.g. private equity, hedge funds
- Foster true intermediation
  - Ensure resources flow to the best investments
  - Transparency; improving information flow in markets
- Maintain Fed independence
- Take over and liquidate failing institutions: no zombies!

More principles

- Strengthen prudential regulation and supervision; minimize conflicts between prudential regulation and “social regulation”
- Capital requirements: “keep it real;” focus on real equity, downplay “Tier 1” which can include bogus capital.
- Limit “shopping for a regulator”
- Monitor excess liquidity
  - A financial pro’s comment: “I can underwrite credit risk, but liquidity is a state of mind.”
- Coordinate with European and other global regulatory bodies to avoid “shopping” at the national level

Making markets more transparent

- Treat real estate – housing and commercial –as an asset class, understand its characteristics
  - U.S. has some of the best housing price data in the world (NAR, Case-Shiller, OFHEO). Unfortunately, that's damning it with faint praise. ***Most countries need substantial improvement in housing data systems.***
- Strengthen professionalism, e.g. in valuation
- Cut down industry "cheerleading"
- Credit default swaps should be exchange traded rather than over-the-counter

Systemic regulation?

- Proposal: set up the Financial Services Oversight Council, a single entity to monitor and regulate “systemic risk”
  - Possibly with interagency cooperation, but probably housed at the Fed?
- Details fuzzy; conceivably the SR could set capital and leverage rules, modify with market conditions
- Biggest problems are probably:
  - Recognizing systemic risk ex ante
  - Avoid “self-fulfilling prophecies”

Other Administration regulatory proposals

- Scrap the OTS. From OCC and scraps of OTS, create a new National Bank Supervisor that oversees large banks.
  - FDIC will remain main regulator of small banks?
- FDIC waxing, OCC waning?
  - FDIC has been more consumer-oriented (e.g. pushing mortgage workouts); OCC is seen as favoring status quo.
- Fed to get new powers to oversee entire financial firms, subsidiaries regulated by others no longer off limits. They can declare an interest in any firm that poses a systemic risk.
- Fed will require Treasury approval for emergency lending, asset purchases.
- Council of Regulators: regular meetings of heads of major regulatory agencies

Other Administration regulatory proposals

- Give FDIC power to liquidate failed ***non-bank*** financial institutions
  - Note: When Lehman collapsed, no regulator had obvious powers to oversea liquidation. (Lehman was an investment bank, with no deposits, so FDIC was out of the loop).
- New Consumer Financial Protection Agency to regulate mortgages, credit cards, auto loans, etc.
- Require underwriters of MBS and other asset-backed securities to retain a 5% stake to align interests with investors
- Stronger oversight of Ratings Agencies
- Most derivative contracts must be either exchange-traded; newer, over-the-counter derivatives will be more heavily regulated
- Coordinate supervision of large global companies with European, other regulators.
- Encourage higher global capital standards.

Strengthening FHA

- Emphasize FHA as the primary federal government homeownership program.
  - Emphasize homeownership for those for whom it makes economic sense
  - Limit FHA high-risk lending and apply risk-based pricing to eliminate cross-subsidies in FHA.
- Bring back the FHA property inspection as a requirement for higher LTV mortgages
- FHA should adopt a "commodity mortgage standard" (Anthony Yezer)
  - FHA approved lenders would agree to price off a standard schedule for commodity mortgages.
  - Even the numerically challenged can shop effectively for the lowest price.
  - See parallels to making 401K participation the default option for a new hire.
- FHA needs to staff and organize commensurate with its expanded role

Fannie and Freddie: now what?

- This one is hard.
  - Break them up into a large number of small firms?
  - Let the pieces be acquired by banks and other financial intermediaries?
  - Relaunch as one or two successor GREs?
    - Government *Regulated* Agencies, publicly owned?
  - Back to the GSE model, but with more effective regulation?
- In any case, give FHA, through Ginnie Mae, a significant competitive edge in the secondary market?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