Initiative on
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THE GREAT CREDIT SQUEEZE: HOW IT HAPPENED, HOW TO PREVENT ANOTHER

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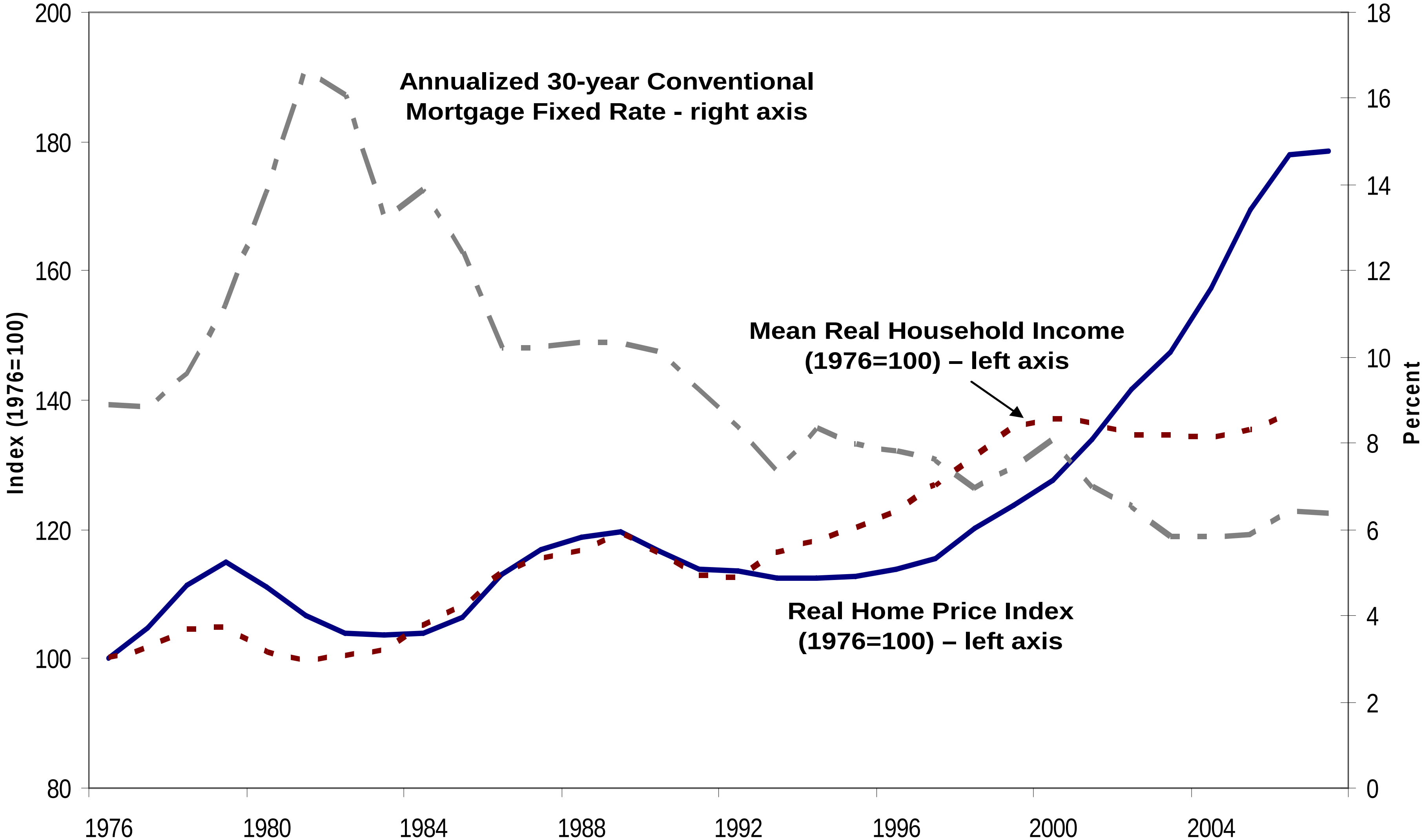
Declining Mortgage Interest Rates Fueled Strong Housing Demand. After the Dot-Com Bust, Real Estate was seen as a "Sure Thing."

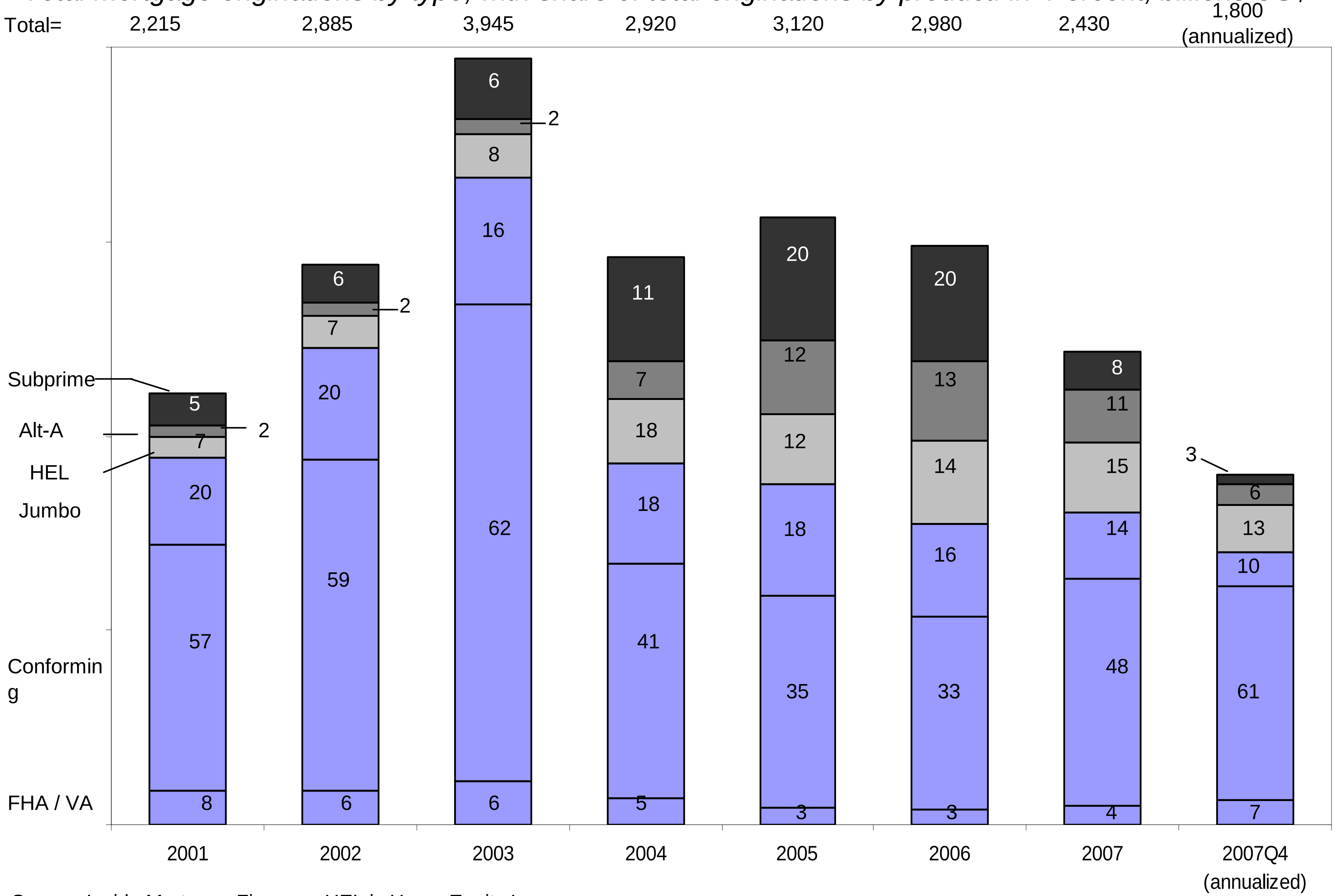
Real Home Prices and Real Household Income (1976=100); 30-year conventional mortgage rate



Source: OHFEO; Federal Reserve; Bureau of the Census. Home Prices and Income are deflated by CPI less Shelter.

Conventional Mortgage Lending Grew Rapidly 2001-2003. Subprime and Home Equity Lending Exploded 2003-2006

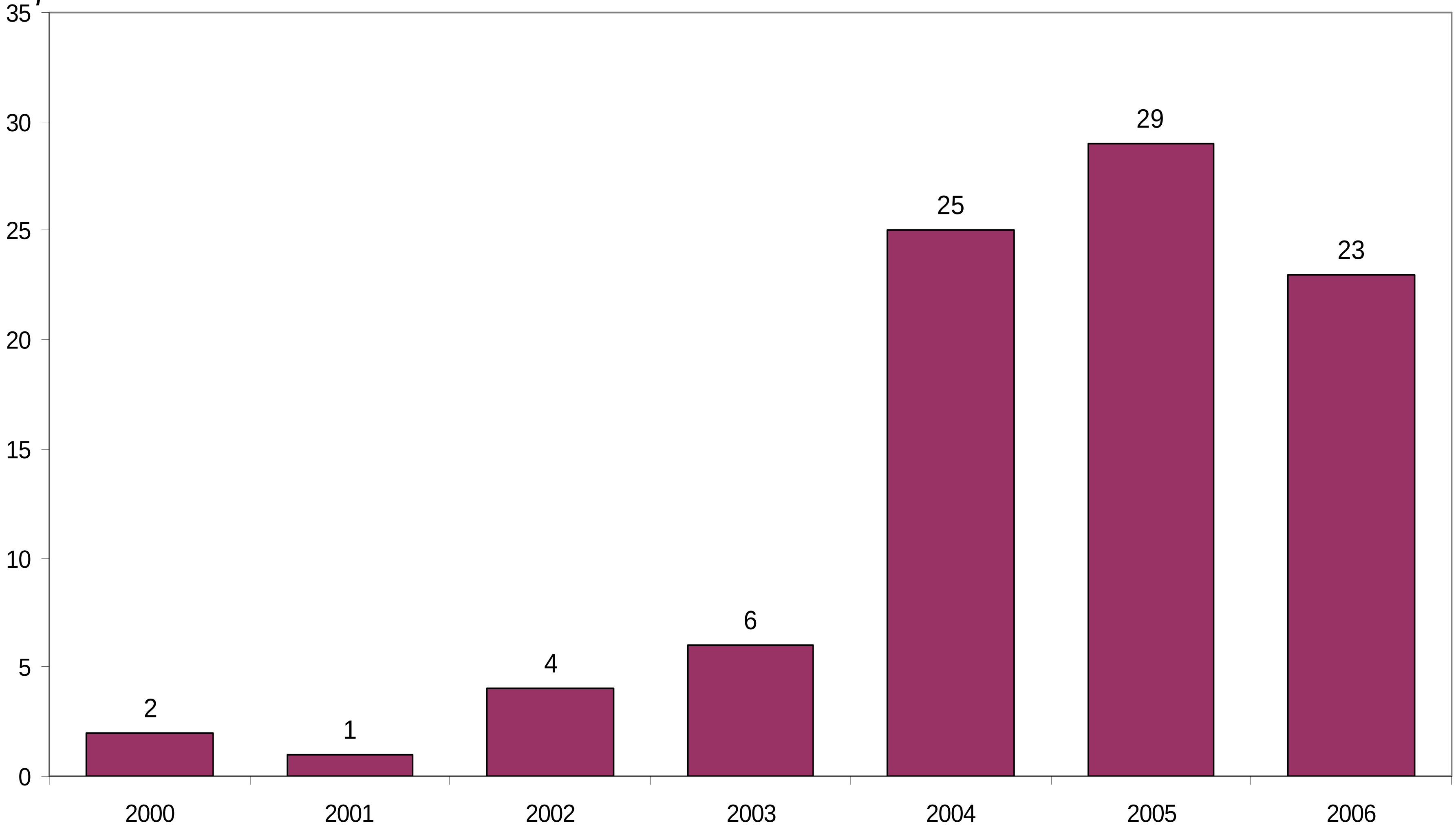
Total mortgage originations by type; with share of total originations by product: in Percent; billions US$



Source: Inside Mortgage Finance. HEL is Home Equity Loan.

Starting in 2004 Lenders moved into Riskier Lending by Making Interest Only and Negative Amortization Loans. Much of the Lending was Made not to Low-Income Borrowers, but to those Seeking Cash for Other Spending, or Wanting More Expensive Houses

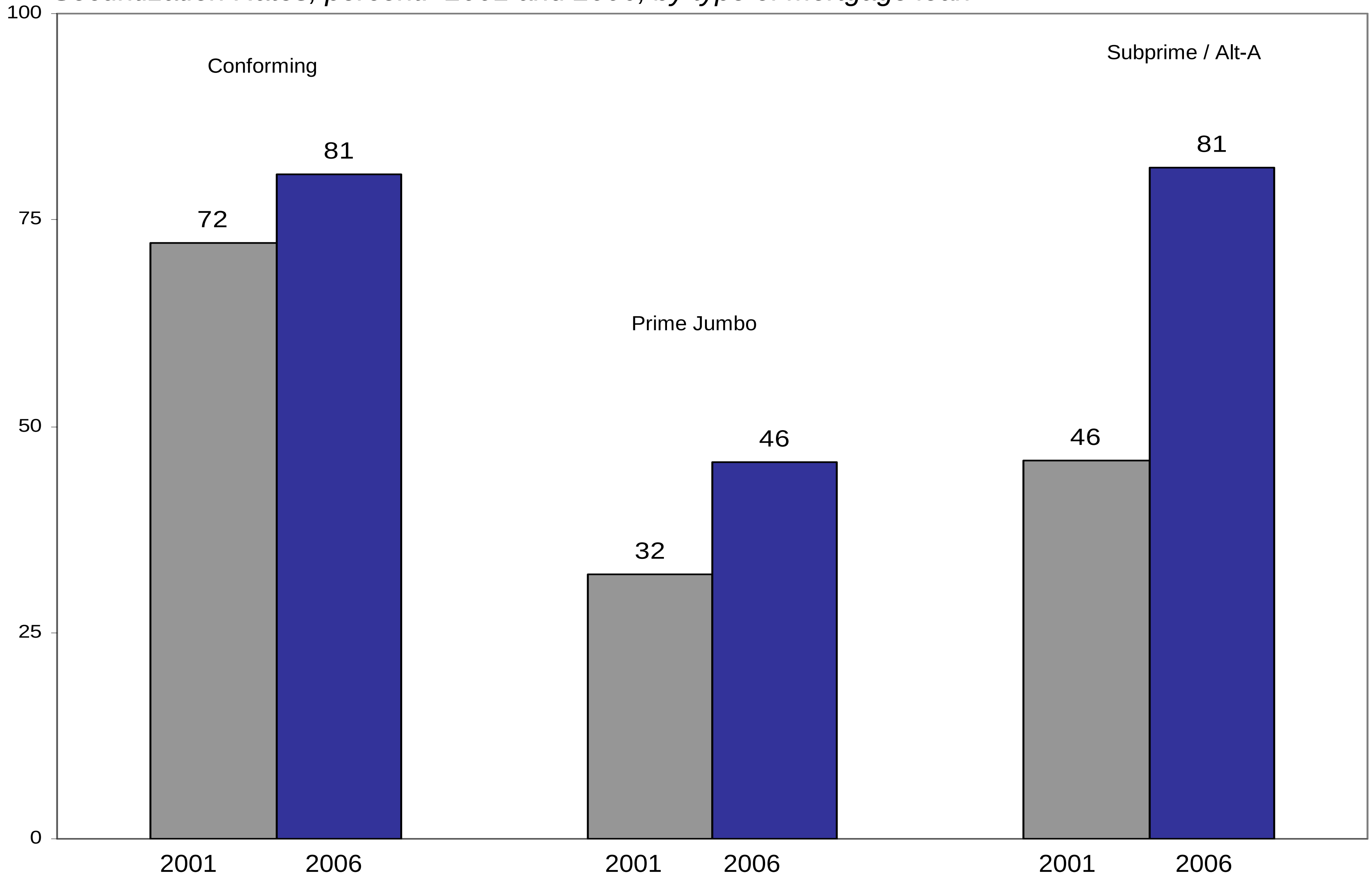
Interest-Only and Negative Amortization Share of Total Purchase Mortgage Originations: 2000-2006; percent



Source: Credit Suisse; LoanPerformance

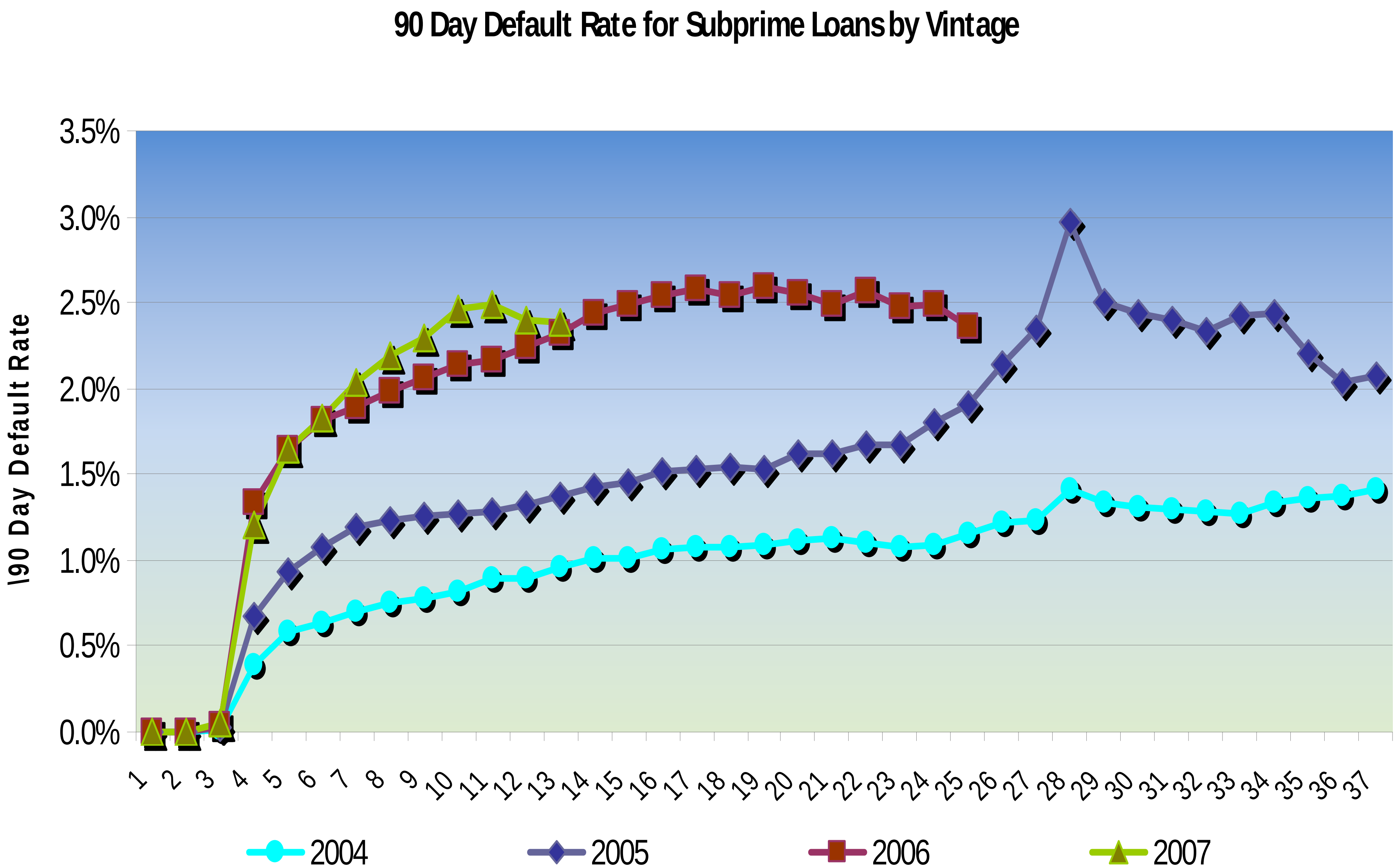
Securitization was Important in Expanding the Supply of Higher-Risk Loans

Securitization Rates, percent. 2001 and 2006, by type of mortgage loan



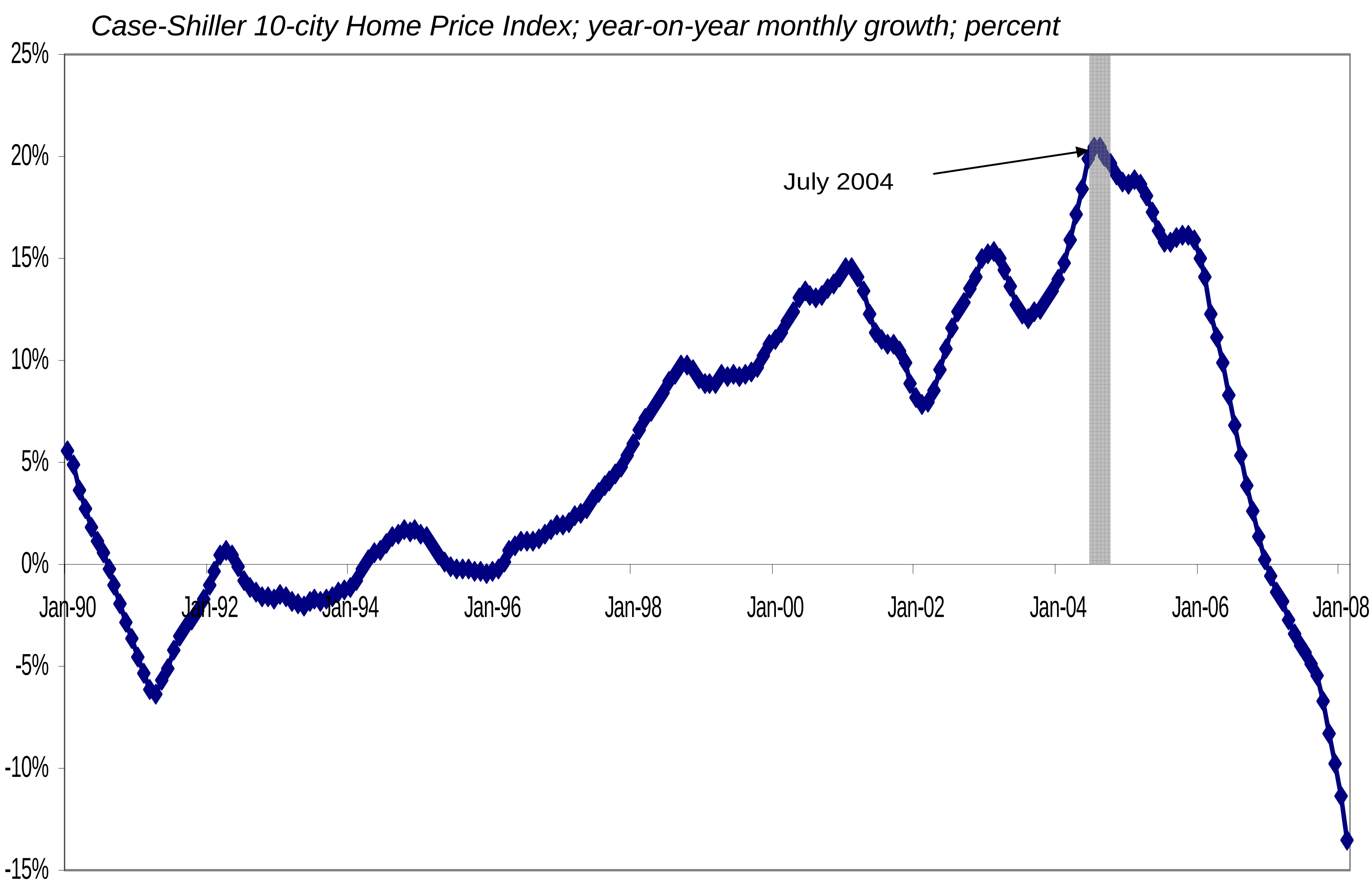
Source: Inside Mortgage Finance

Since 2004, Delinquencies Have Increased Each Successive Vintage Year, Reflecting the Erosion of Lending Standards as well as Low (and Subsequently Negative) House Price Growth.



Source: McDash Analytics

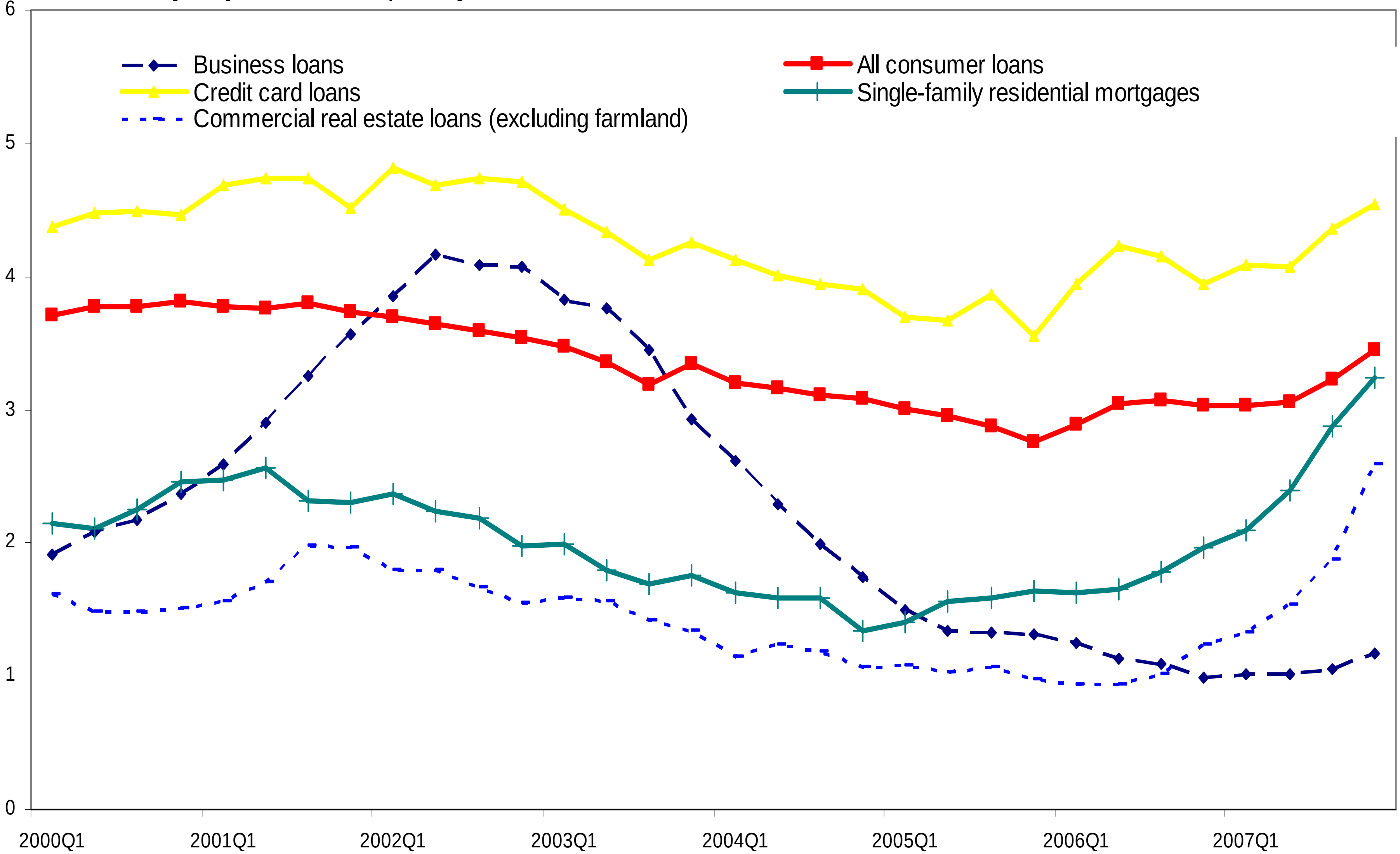
The Rate of Growth of House Prices Began to Decline Starting in Mid-2004. Prices Began to Decline in 2007 as the Price Bubble Burst



Source: S&P / Case-Shiller Index

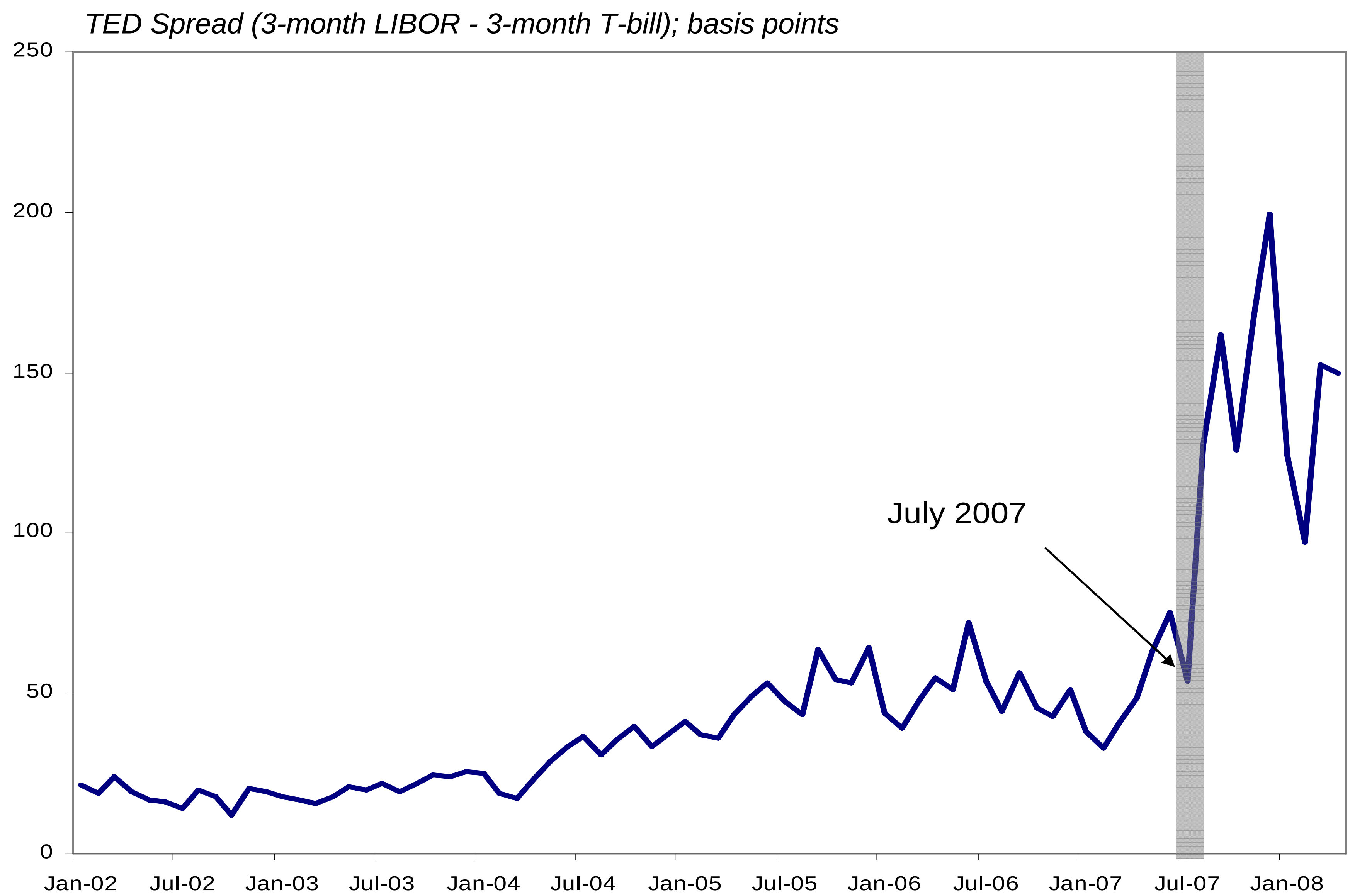
Delinquency Rates Started to Rise for Mortgages starting in 2004Q4 – immediately after house prices increases slowed. Delinquencies on most other financial assets also began to rise also.

Seasonally adjusted Delinquency Rates on Loans at all Commercial Banks



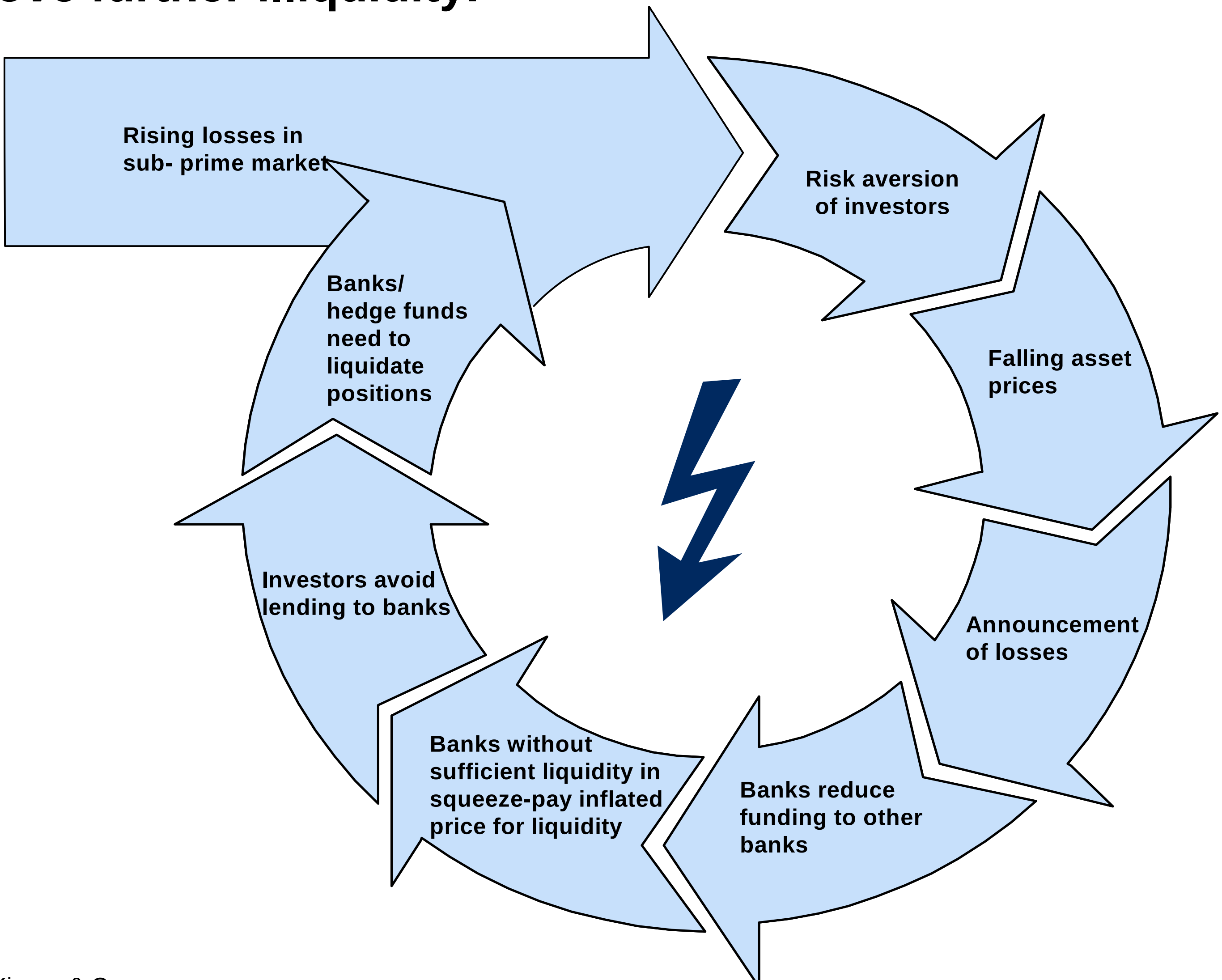
Source: Federal Reserve Board of Governors

The Risk Premium Spiked Up in the Summer of 2007



Source: Federal Reserve; British Bankers Association (BBA)

When the defaults started, this made financial institutions reluctant to lend to each other. Intermediaries could not roll over their borrowing. Markets started to freeze up world-wide. There was a vicious cycle, which drove further illiquidity.



Source: McKinsey & Company

Summary of What Happened

- Americans became convinced that rising home prices were almost inevitable.
- Strong demand for homes was driven by falling interest rates, the increased availability of mortgages, and expectations of continuing capital gains.
- From 2001 to 2003 much of the mortgage growth was from prime conformable loans. After that the share of subprime and Alt-A mortgages increased. There appears to have been an erosion of mortgage lending standards.
- The “originate to distribute” model suffered from incentive problems because the mortgage originators often sold the mortgage quickly to another bank. The originators lacked an incentive to ensure the loan would be serviced, and the purchasing banks failed to check what they were buying.

Summary of What Happened (continued)

- Securitization of mortgages expanded greatly, channeling funds into the market, including foreign capital. Structured securities, called CDOs, were developed of increasing complexity, many of which received high credit ratings from the ratings agencies despite the shaky mortgages underlying them.

- Some observers blame the Fed for keeping interest rates “too low” or blame foreign investors for flooding the US market with liquidity seeking high returns. These factors did play a role in sustaining the US housing boom, but do not, in our judgment, carry blame for what happened.

- Financial institutions are regulated and supervised by a bewildering array of federal and state authorities. None of them acted forcefully to stop or mitigate the erosion of lending standards or to warn of serious problems brewing in the mortgage market.

Summary of What Happened (continued)

- Price increases eventually slowed. Delinquencies began to rise as early as 2004. As delinquencies rose, this burned through the cushion built into the structured securities and some defaulted. The risk premium jumped in the summer of 2007 and there was chill on borrowing world wide between financial institutions. Central banks acted promptly to provide liquidity to ease the crisis and the Fed started lowering rates.

- The boom in residential housing turned into a severe slump as new single family starts fell in half over the next few months. The drop in construction, together with soaring oil prices and the tightening of lending standards, has pushed the US economy into a recession or at least a period of very weak growth. Although we believe the US economy will weather this storm and resume at least slow growth, a deeper recession is possible.

Summary of What Happened (continued)

- Risk management practices in financial institutions failed. The models that were used to assess risk had not factored in the possibility of a broad downturn in the housing market. Further, several institutions reported that they had not followed their own internal rules for risk management. Departments within these companies that were making huge profits developing and trading the new securities were allowed to take large risks without adequate internal monitoring.

Short-Run Policies

- Fiscal stimulus
- Sharp reduction in federal funds rate
- Federal Reserve as lender of last resort
- Policies toward Fannie Mae and Freddie Mac
- Mortgage foreclosure policy

Federal Reserve as Lender of Last Resort

- Lending from the discount window
  - Encourage use (narrower spread to funds rate, anonymous auctions)
  - Expand collateral accepted (for loans, swapped directly for Treasuries)
  - Expand institutions with access (primary dealers)
- Rescue of Bear Stearns
  - Shareholders get very little, but creditors made whole
- What next?
  - Risk of further crises
  - More capital needed

Policies toward Fannie Mae and Freddie Mac

- Encourage capital raising and do not push them to do much more lending
- Risk of insolvency
- Possible policy actions
  - Forbearance
  - Government equity investment?
  - Nationalization?

Mortgage Foreclosure Policy

- What is the appropriate role for government?
- Key actions to date
  - Expanded reach of FHA
  - Additional mortgage counseling
  - Hope Now agreement for borrowers facing rate resets
  - Project Lifeline
- Recommended further actions
  - Clarify servicers' fiduciary responsibilities
  - Change bankruptcy law in limited way
  - Further expand eligibility for FHA-guaranteed loans

Long-Run Reforms, By Stage of Process (or Actor)

- Improve mortgage origination
- Improve commercial bank regulation
- Investment bank regulation?
- Toward improvement in credit ratings
- Improve the pricing of derivatives
- Improve bond insurer regulation
- Hedge funds
- Regulatory restructuring

Long-Run Reforms, By Theme

- Financial institutions should be more transparent.
- Financial institutions should be less leveraged and more liquid.
- Financial institutions should be supervised more effectively.

Financial Institutions Should Be More Transparent

- Mortgages:
  - simpler disclosures and counseling in advance
  - broader and stronger restrictions under HOEPA
  - federal oversight of state regulation of originators
- Asset-backed securities: report on underlying assets
- Credit ratings agencies:
  - greater clarity in comparing ratings across asset classes
  - report on agencies' track records
  - disclose limitations of ratings for newer instruments
- Commercial banks: clearer off-balance-sheet accting
- Derivatives: standardize and trade on exchanges

Financial Institutions Should Be Less Leveraged and More Liquid

- Commercial banks:
  - capital requirements for off-balance-sheet liabilities
  - required issuance of uninsured subordinated debt
- Investment banks:
  - regulation and supervision of capital, liquidity, and risk management
- Bond insurers:
  - higher capital requirements

Financial Institutions Should Be Supervised More Effectively

- Commercial banks:
  - closer supervision of risk-management practices
  - consolidation of federal regulation and supervision
- Bond insurers:
  - closer supervision of underwriting standards for new products