



***Credit, Housing, Commodities
and the Economy***
***Chartered Financial Analysts Institute
Annual Conference***

May 13, 2008

**Janet L. Yellen
President and CEO
Federal Reserve Bank of San Francisco**

Overview

- ❑ **Financial turmoil and the credit crunch**
- ❑ **Downturn in housing markets**
- ❑ **Surge in commodity prices**
- ➔ **Implications for the outlook and policy**

The unwinding of a credit market bubble

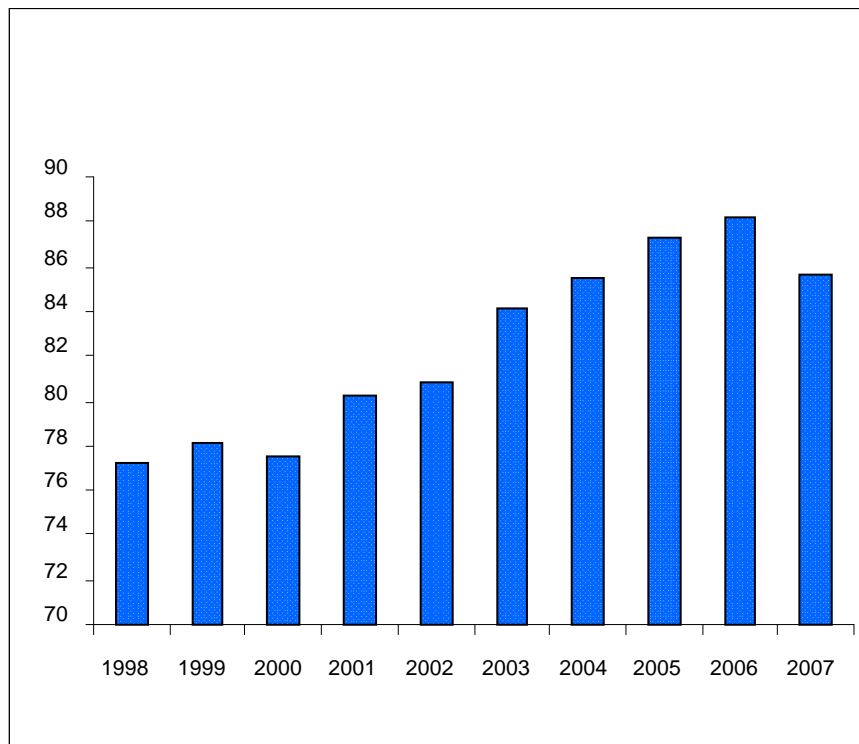
- ❑ A bubble-like situation had developed in the credit markets.
 - Very low long-term real interest rates
 - Investors accepted meager rewards for risk
- ❑ Abundance of liquidity was reflected in:
 - Easy financing for leveraged buyouts
 - Carry trades
 - Rapid growth in subprime lending
- ❑ Suggested a benign view of underlying risks.

What caused the bubble?

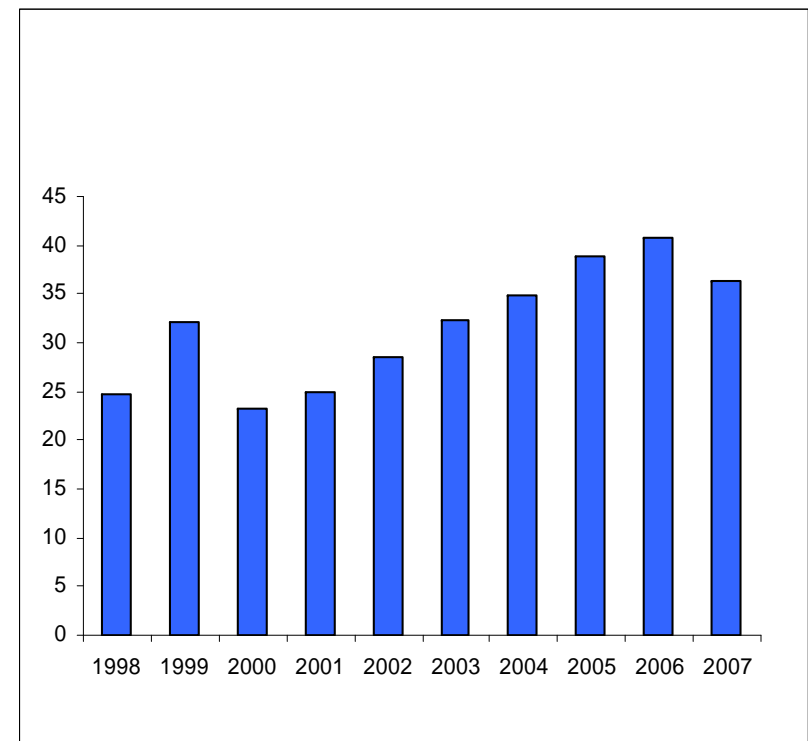
- Securitization and financial engineering appeared to improve risk-return tradeoff.**
- Up-front origination fees undermined strong underwriting incentives.**
- Institutions in the “shadow banking sector” sought to increase leverage and reach for yield.**
- Overreliance on credit ratings that proved unreliable.**
- Some lessons:**
 - Inadequate risk management by many sophisticated institutions.**
 - Shortcomings in financial supervision and regulation.**

Underwriting standards deteriorated

Combined Loan-to-Value Ratios
(2/28 Subprime Mortgages)



Percent without Full Documentation
(2/28 Subprime Mortgages)



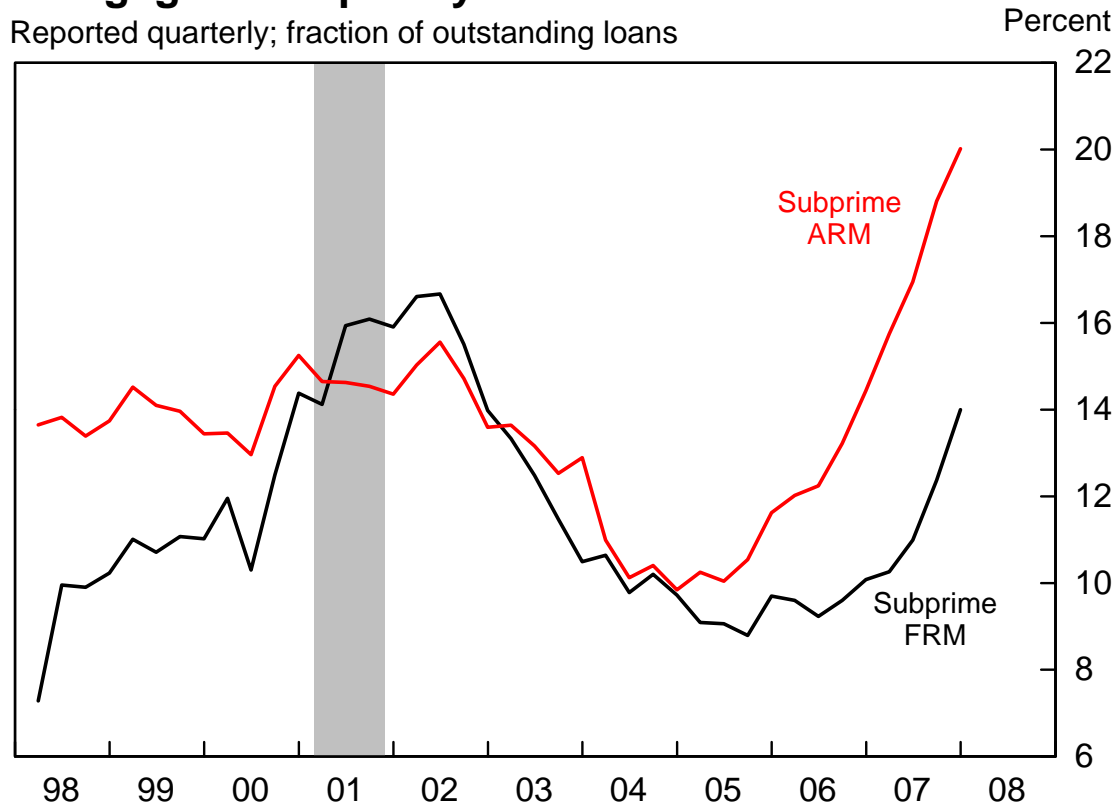
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Subprime mortgage delinquencies are rising

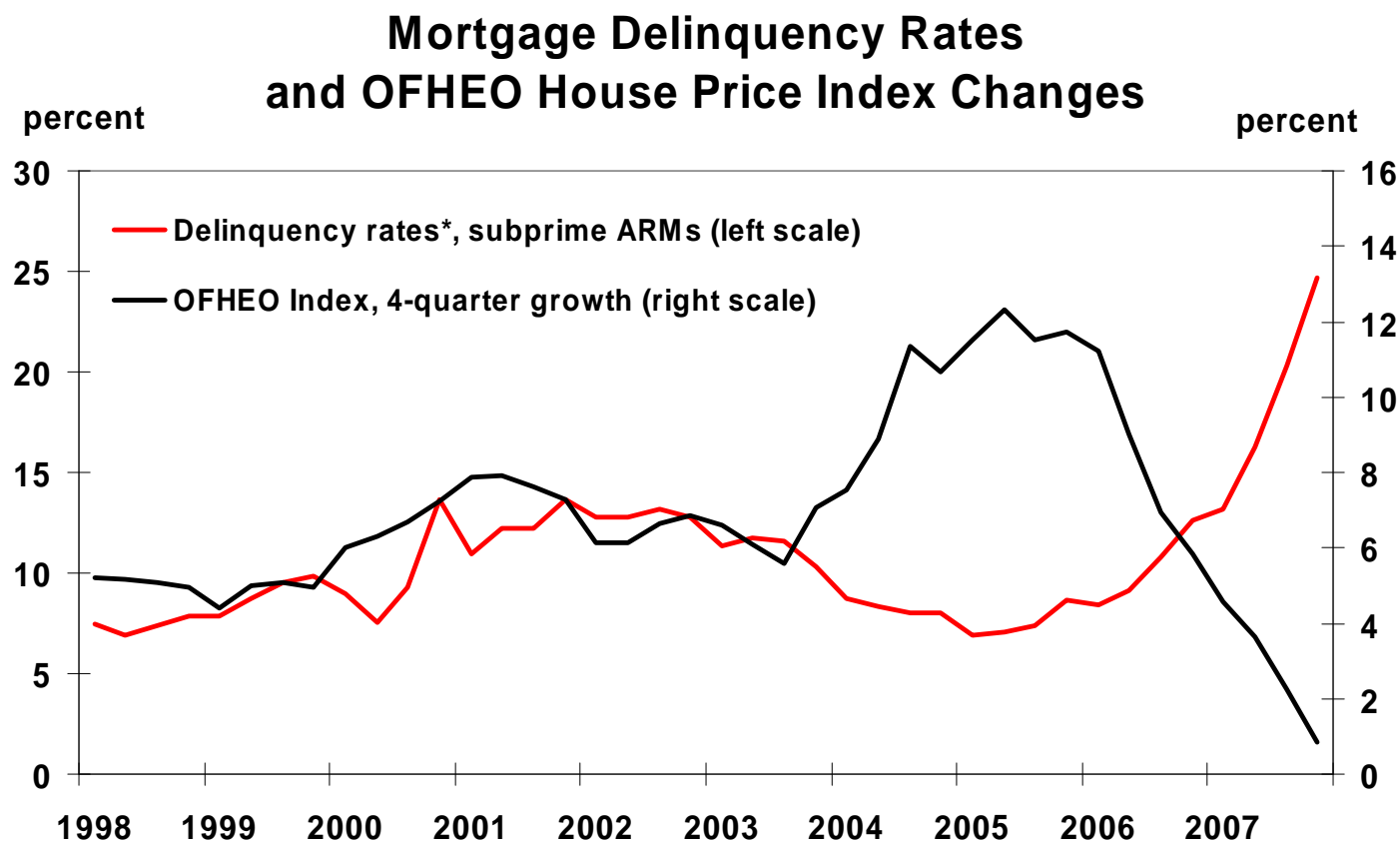
Mortgage Delinquency Rates

Reported quarterly; fraction of outstanding loans



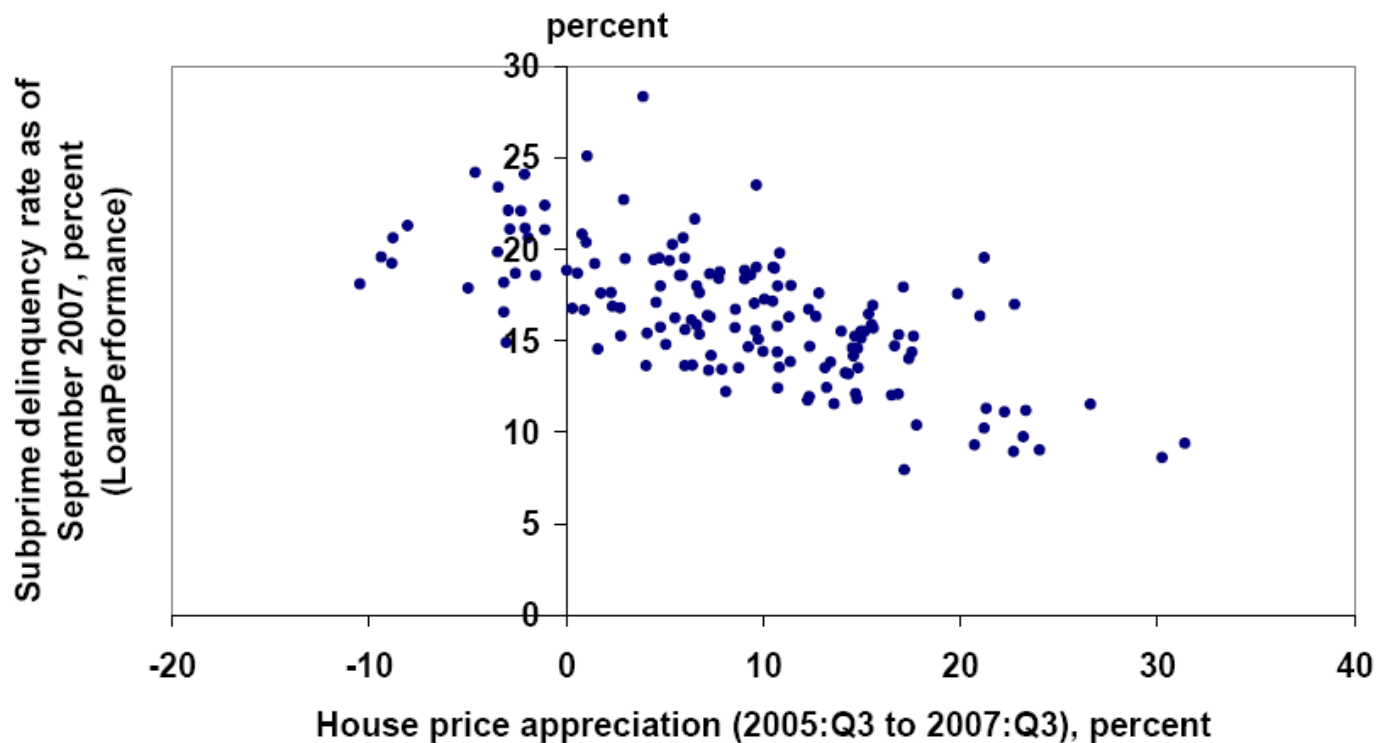
Delinquent mortgages are 30 days or more past due but not in foreclosure.

Subprime delinquencies rose as house price appreciation slowed



Sources: Office of Federal Housing Enterprise Oversight and Mortgage Bankers Association * 60 days or more past due or in foreclosure

Subprime delinquencies and house price changes vary inversely across MSAs

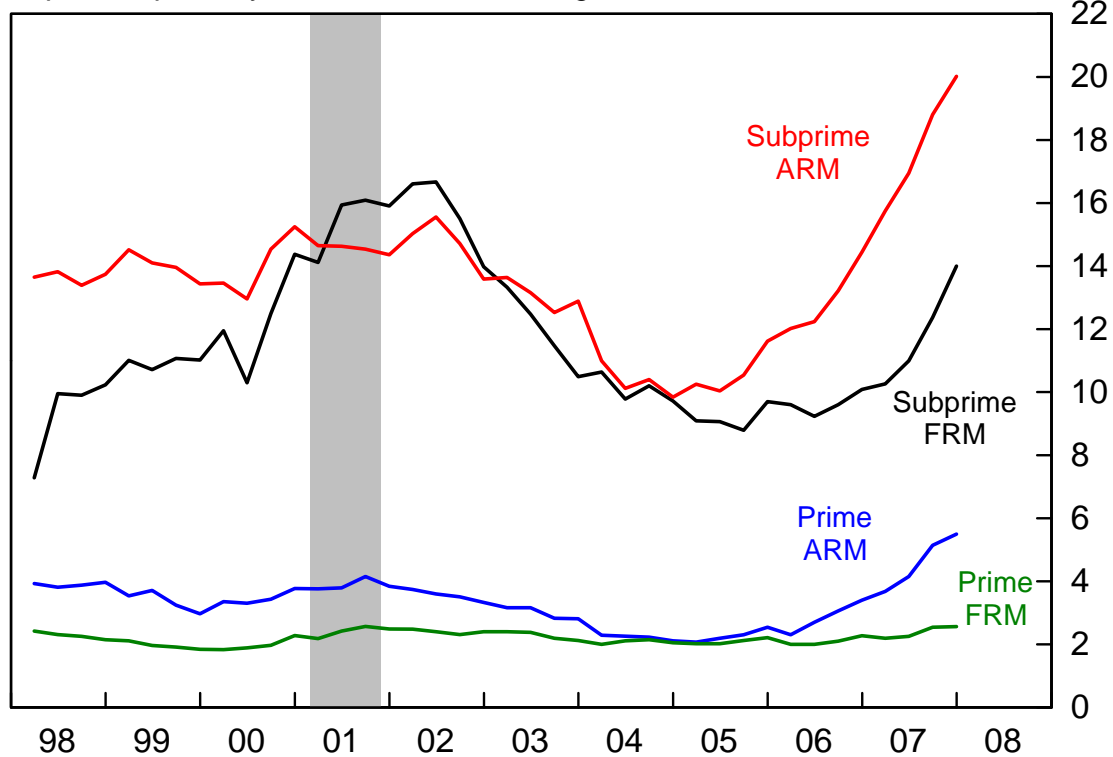


Prime mortgage delinquencies are rising too

Mortgage Delinquency Rates

Reported quarterly; fraction of outstanding loans

Percent



Delinquent mortgages are 30 days or more past due but not in foreclosure.

Subprime problems triggered financial market disruptions

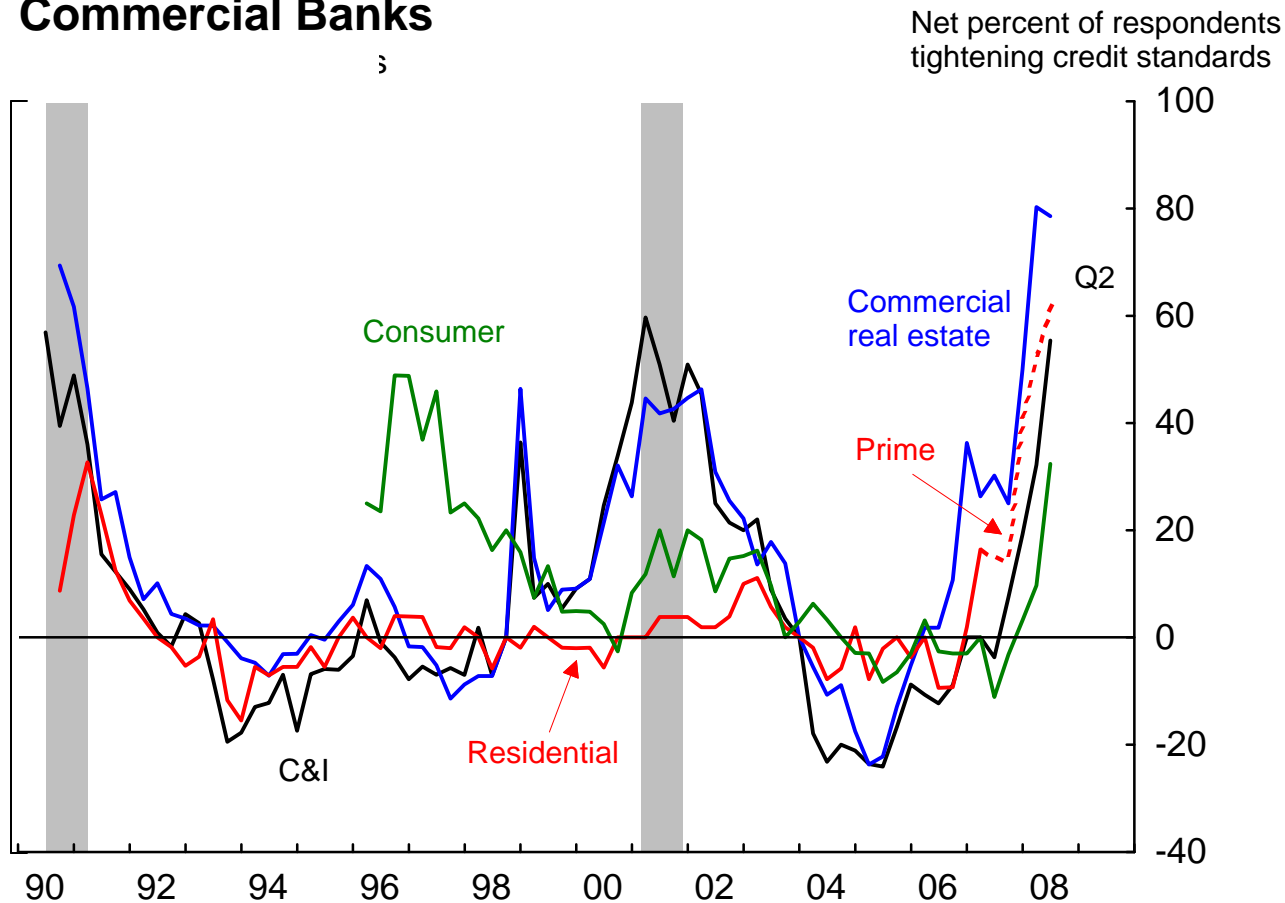
- ❑ Rising subprime delinquencies triggered disruptions in the markets for asset-backed securities (ABS).**
 - Contagion to municipal bonds and other ABS markets**
- ❑ Prices fell, imposing losses on ABS holders.**
- ❑ Heavy ABS exposure of banks and “shadow banks”-- highly leveraged institutions that “borrow short” to hold long-term assets including ABS.**
 - Includes investment banks, hedge funds, SIVs/conduits.**

The emergence of a credit crunch

- Financial institutions are deleveraging—scaling back their balance sheets.**
- Commercial banks experienced unanticipated buildup of loans on their balance sheets.**
- Many financial institutions are raising capital.**
- But banks are tightening credit terms and restricting availability.**

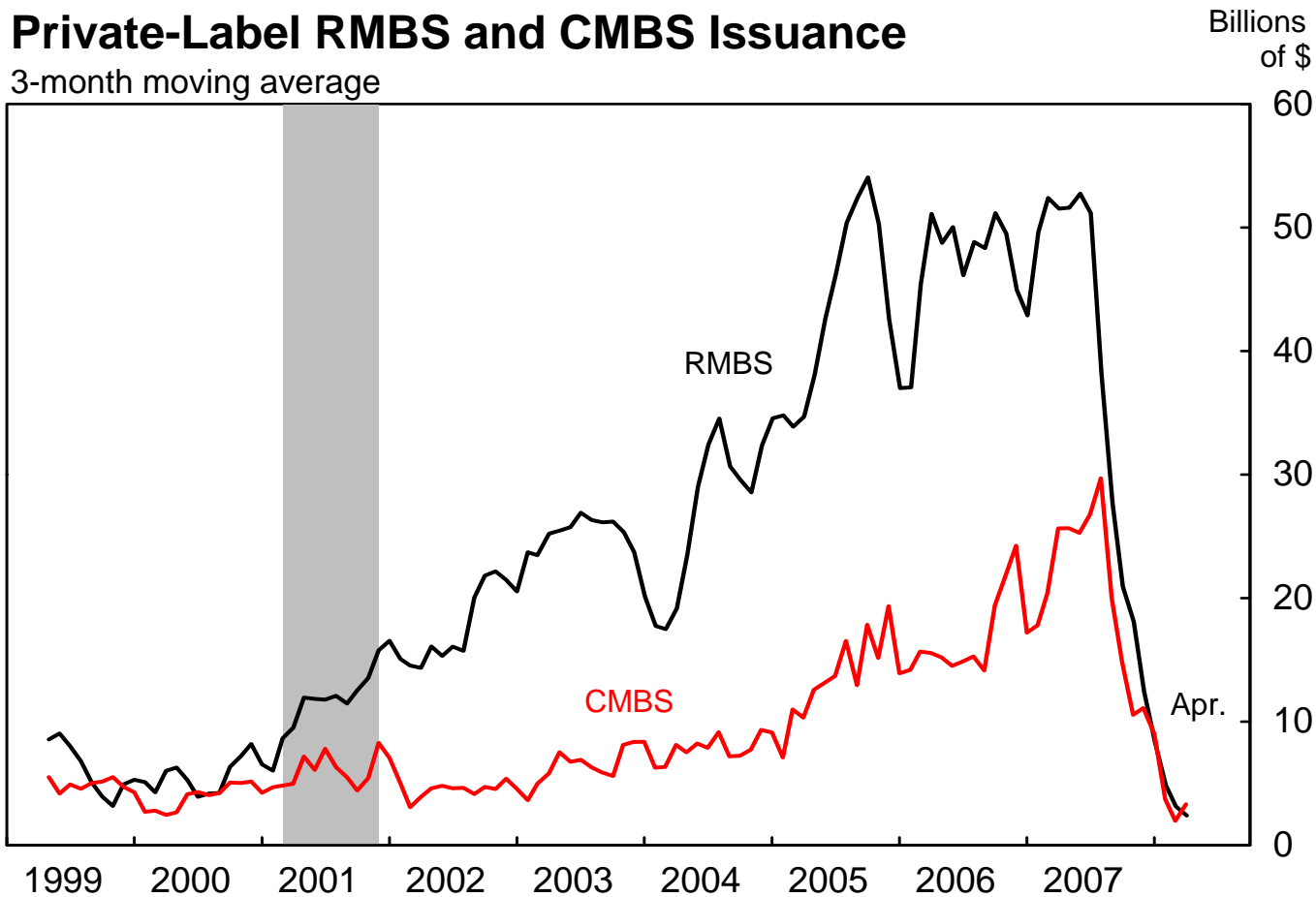
Banks are tightening credit standards

Credit Conditions, Domestic Commercial Banks



Source: Federal Reserve Senior Loan Officer Opinion Survey

New issuance of ABS has plummeted

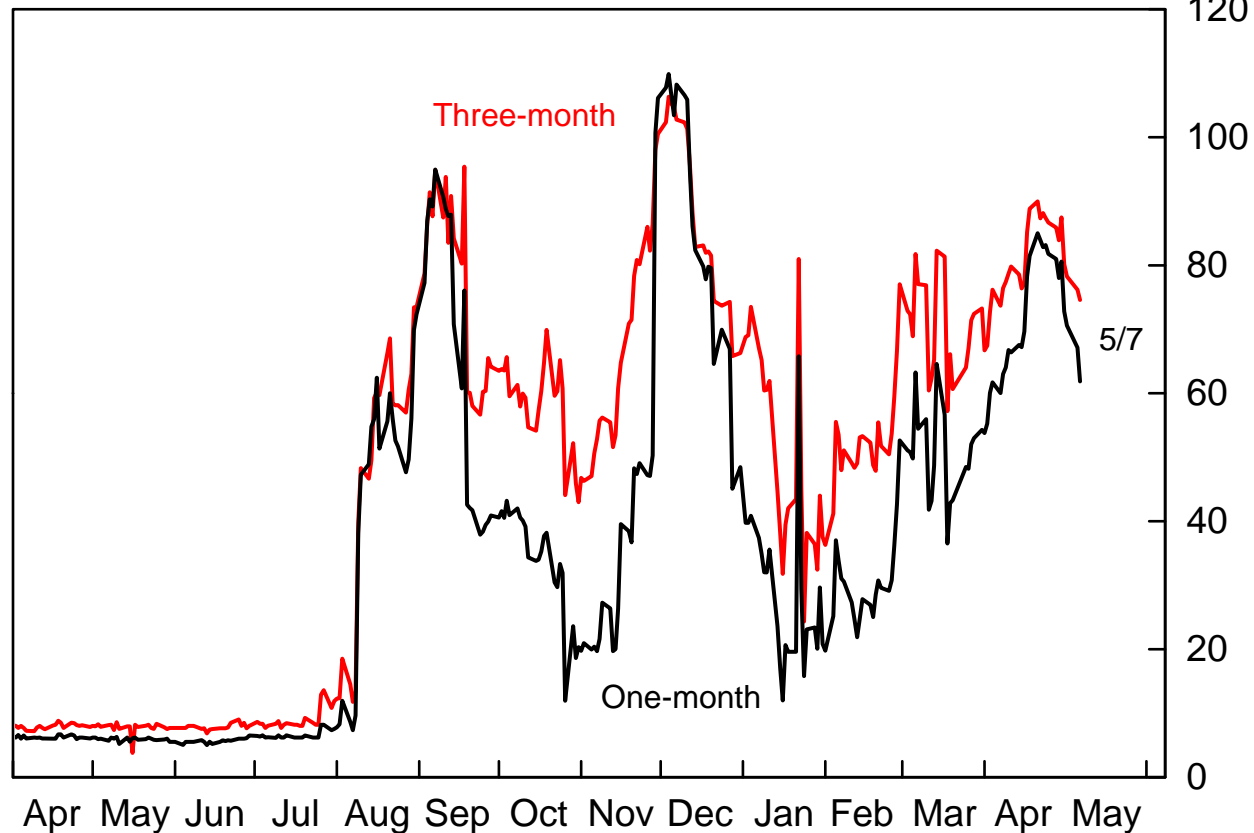


Source: Asset-Backed Alert

The interbank lending market is under stress

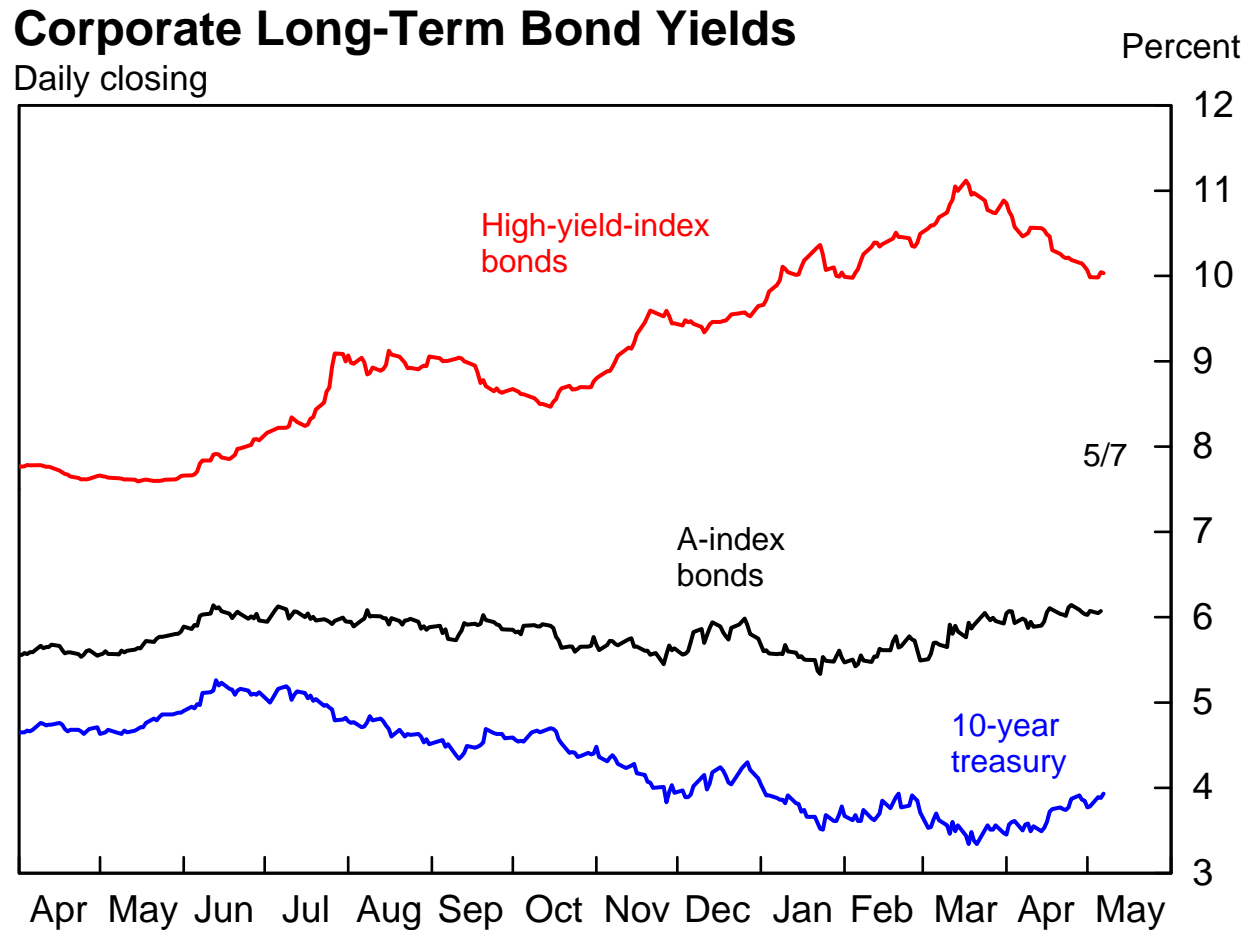
Spread between LIBOR and Expected Funds Rate

Daily closing; expected funds rate from Overnight Indexed Swap (OIS) contract



LIBOR: London InterBank Offered Rate

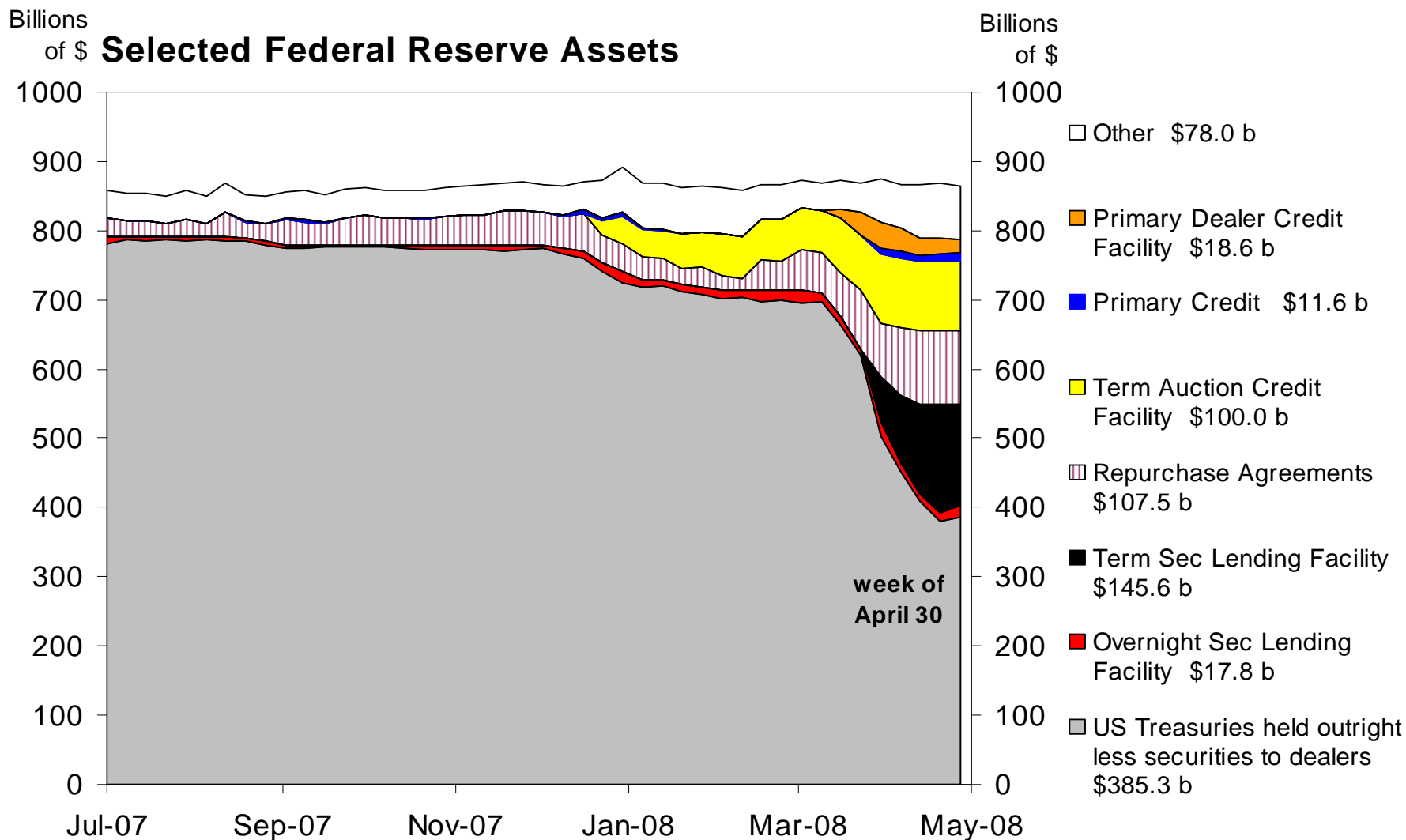
Corporate bond spreads have risen



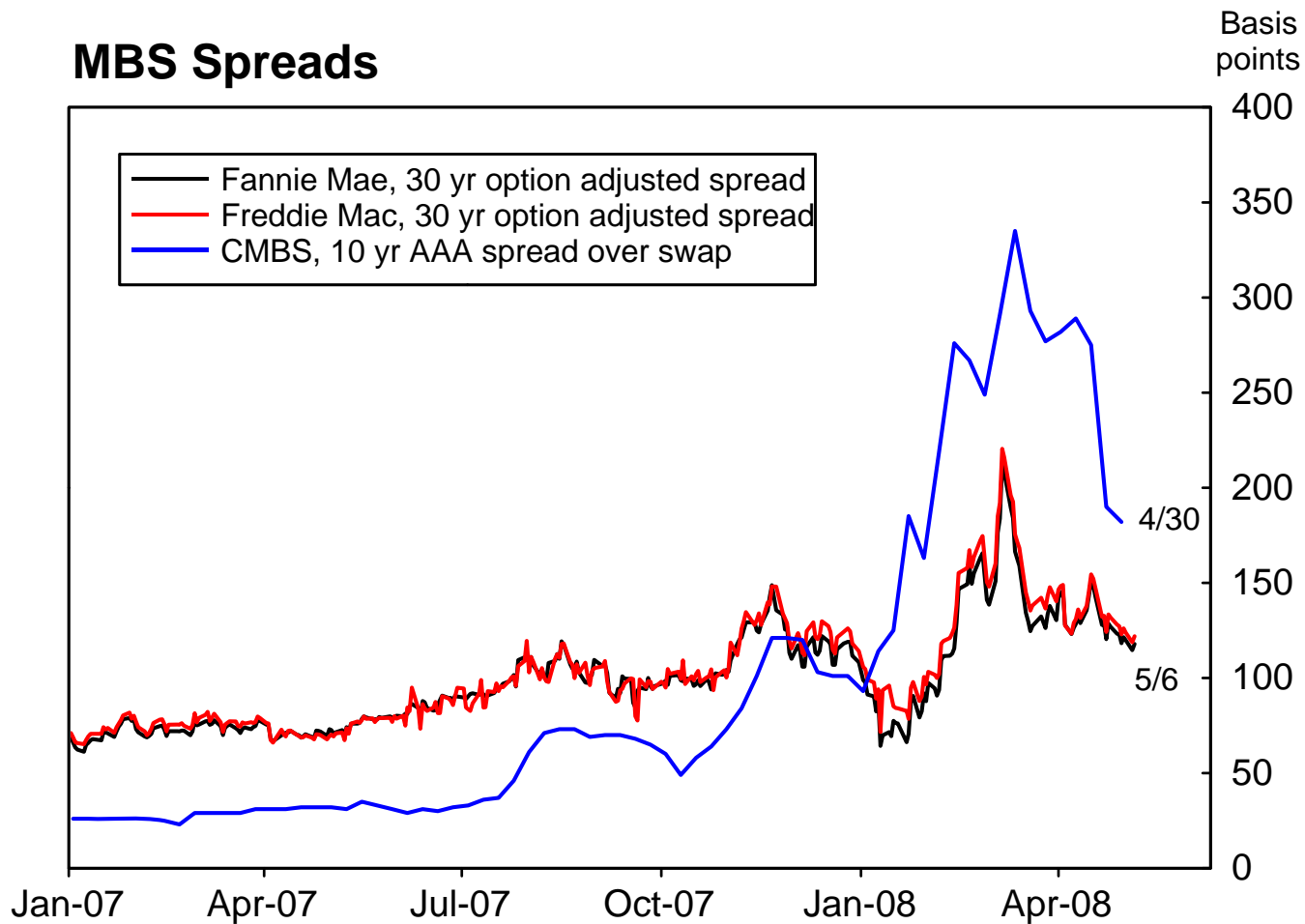
Fed initiatives to improve market liquidity

- ❑ **Enhanced discount window lending**
 - Reduced rate spread and lengthened term of lending
- ❑ **Established Term Auction Facility (TAF)**
 - Term discount window loans at auction rate; \$150 billion
- ❑ **Initiated term repurchase (repo) transactions**
 - Agency debt accepted as collateral for 28-day repos; \$100 billion
- ❑ **Established Term Securities Lending Facility (TSLF)**
 - Lends Treasuries for highly rated ABS; up to \$200 billion
- ❑ **Provided financing for acquisition of Bear Stearns**
 - Term financing to support purchase by JP Morgan; \$29 billion
- ❑ **Established Primary Dealer Credit Facility (PDCF)**
 - Overnight borrowing from discount window by primary dealers

New facilities change the composition of Fed's balance sheet

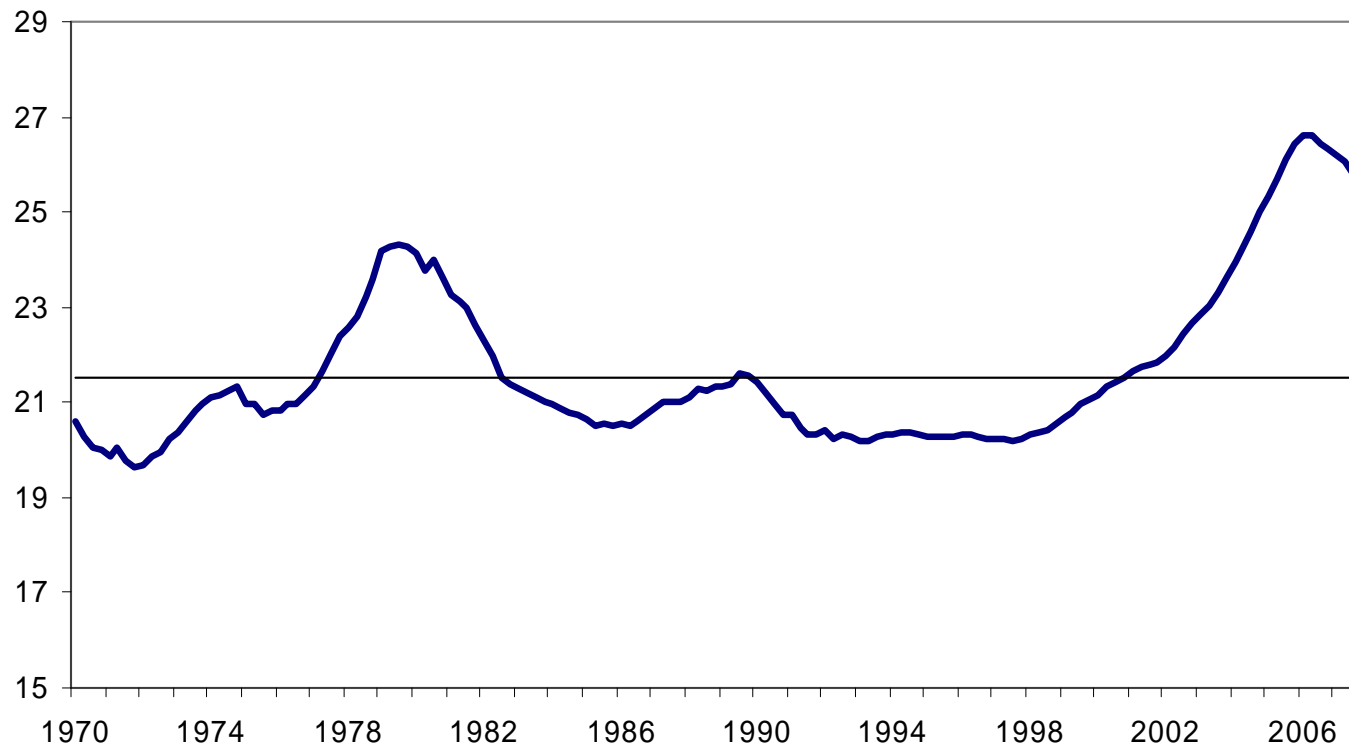


Spreads on MBS receded in wake of Fed initiatives



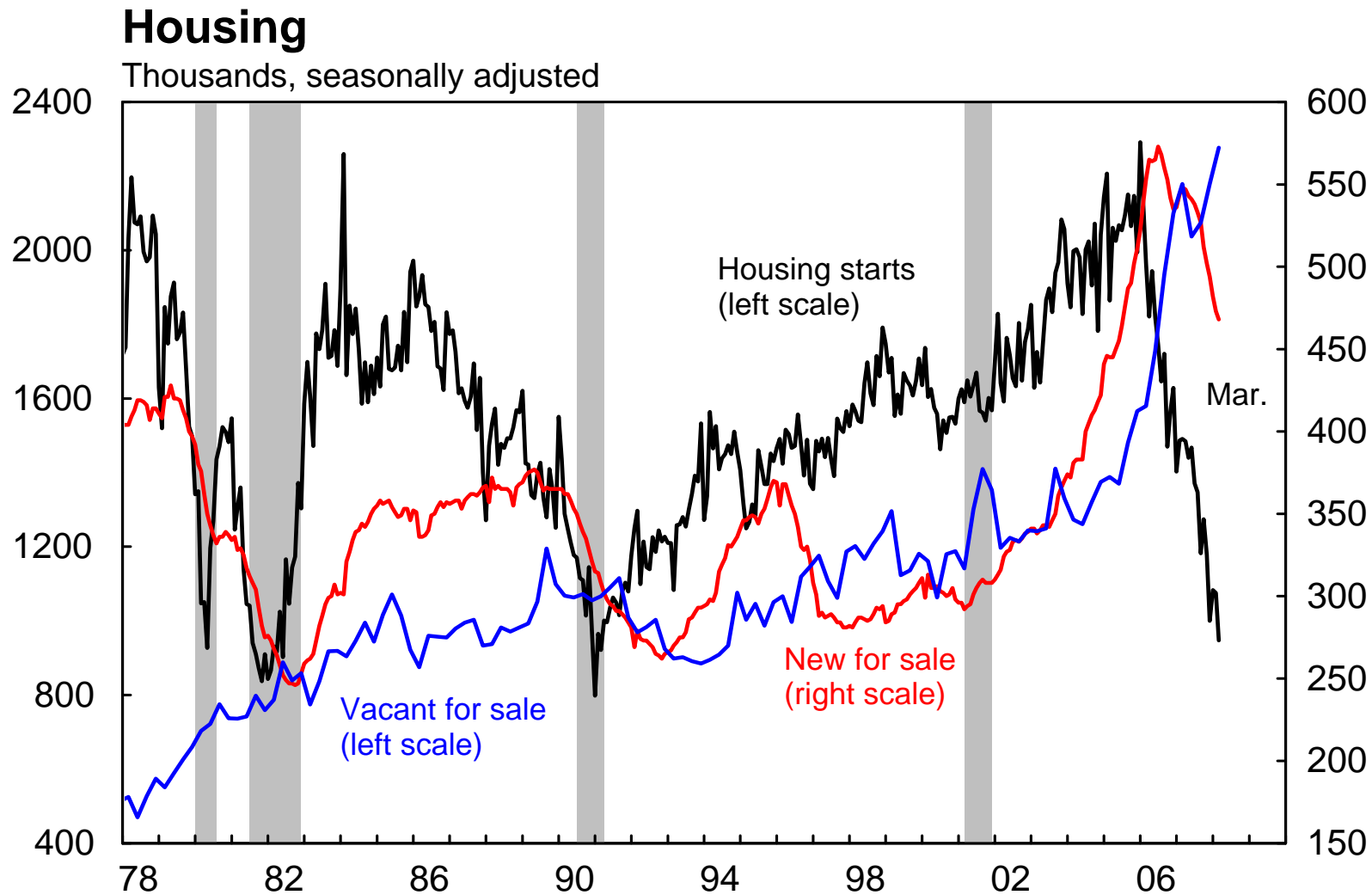
The housing price-to-rent ratio soared

Price-rent ratio

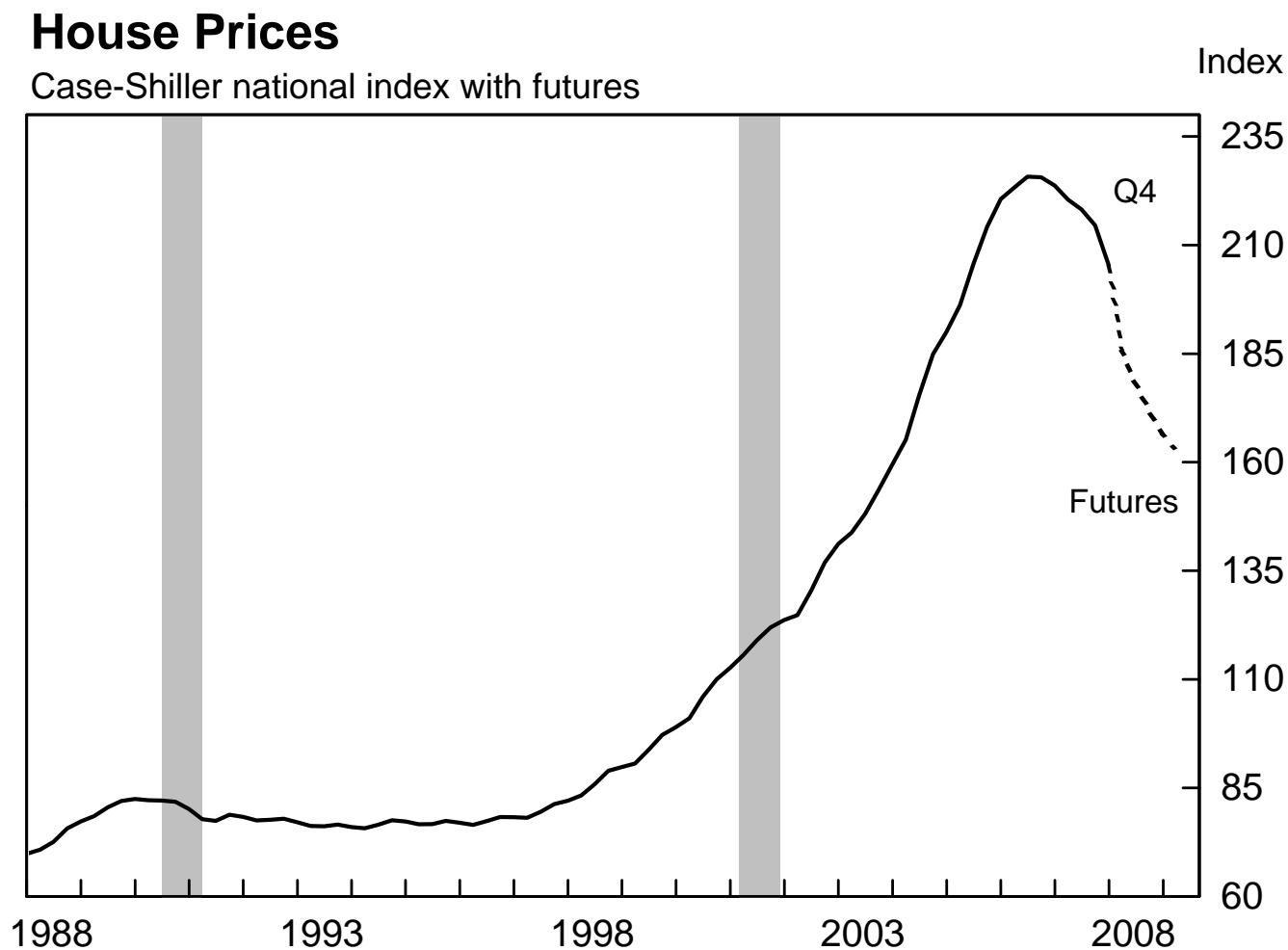


Source: BLS. Data are adjusted as in Gallin (forthcoming)

Housing markets have hit the skids



House prices are still heading down

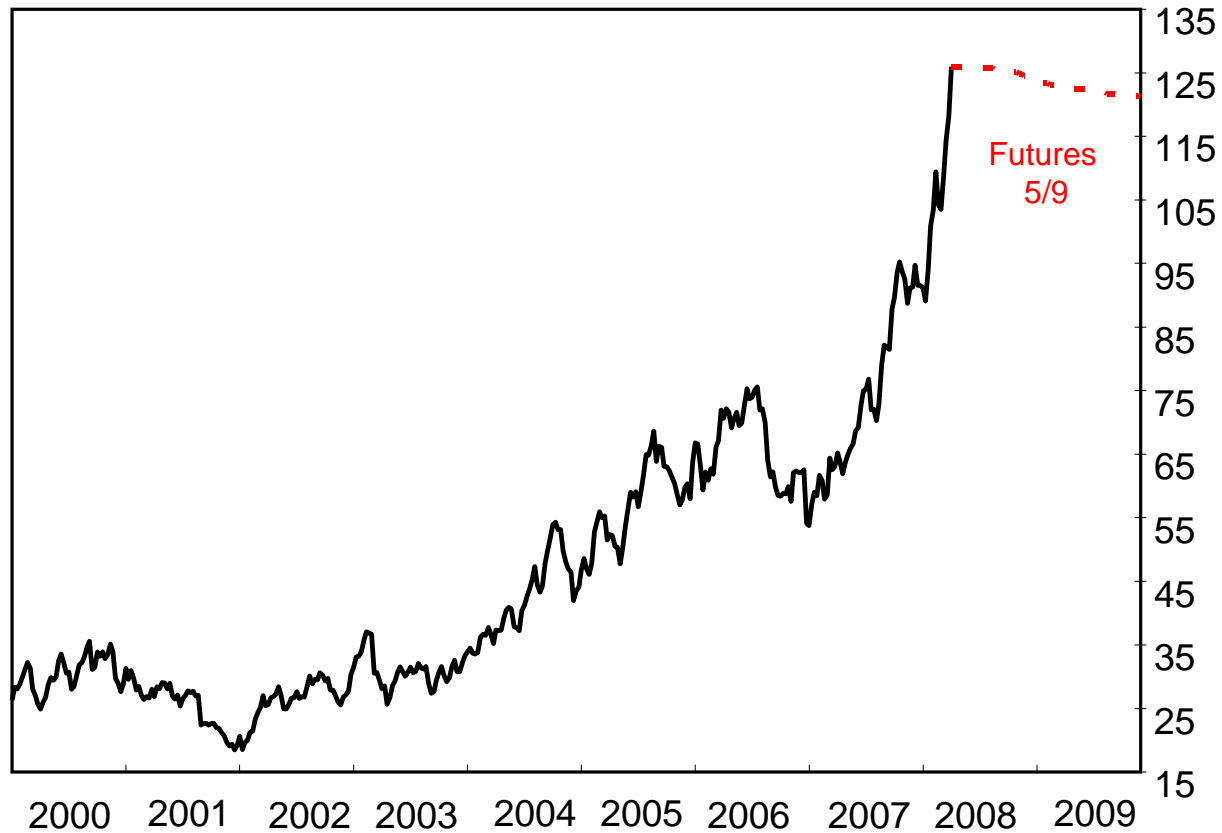


The price of crude oil has jumped

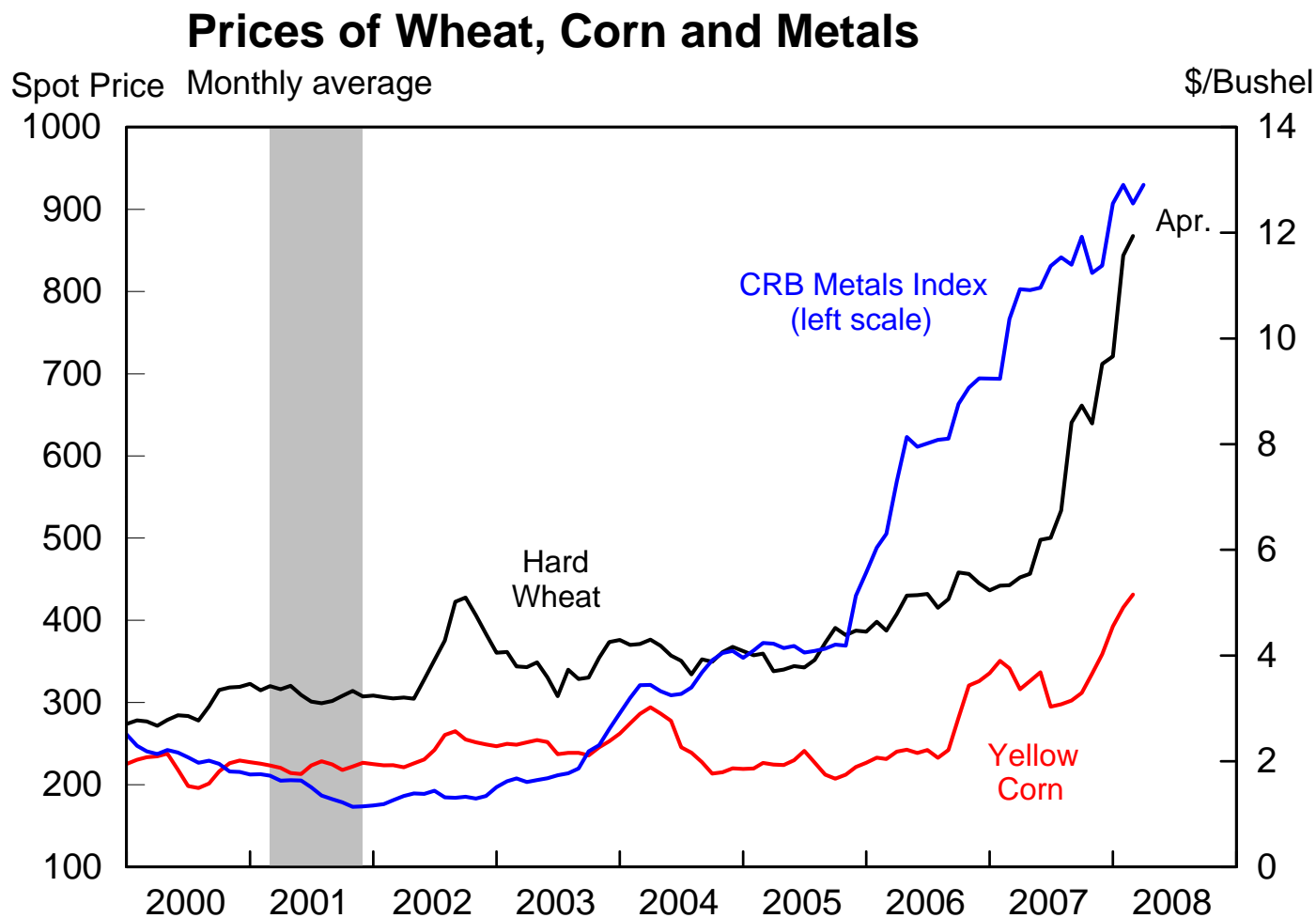
Price of Oil

West Texas Intermediate; weekly closing price

\$/Barrel

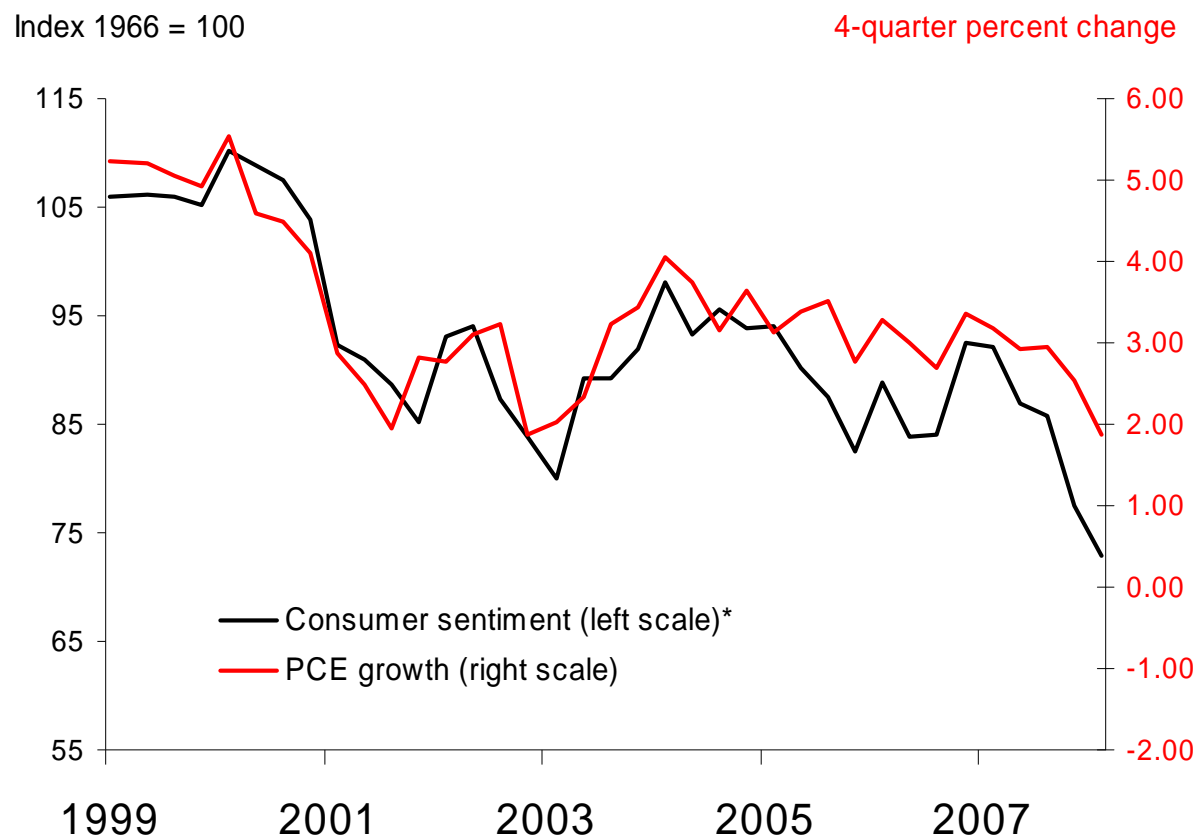


Prices of other commodities are also up



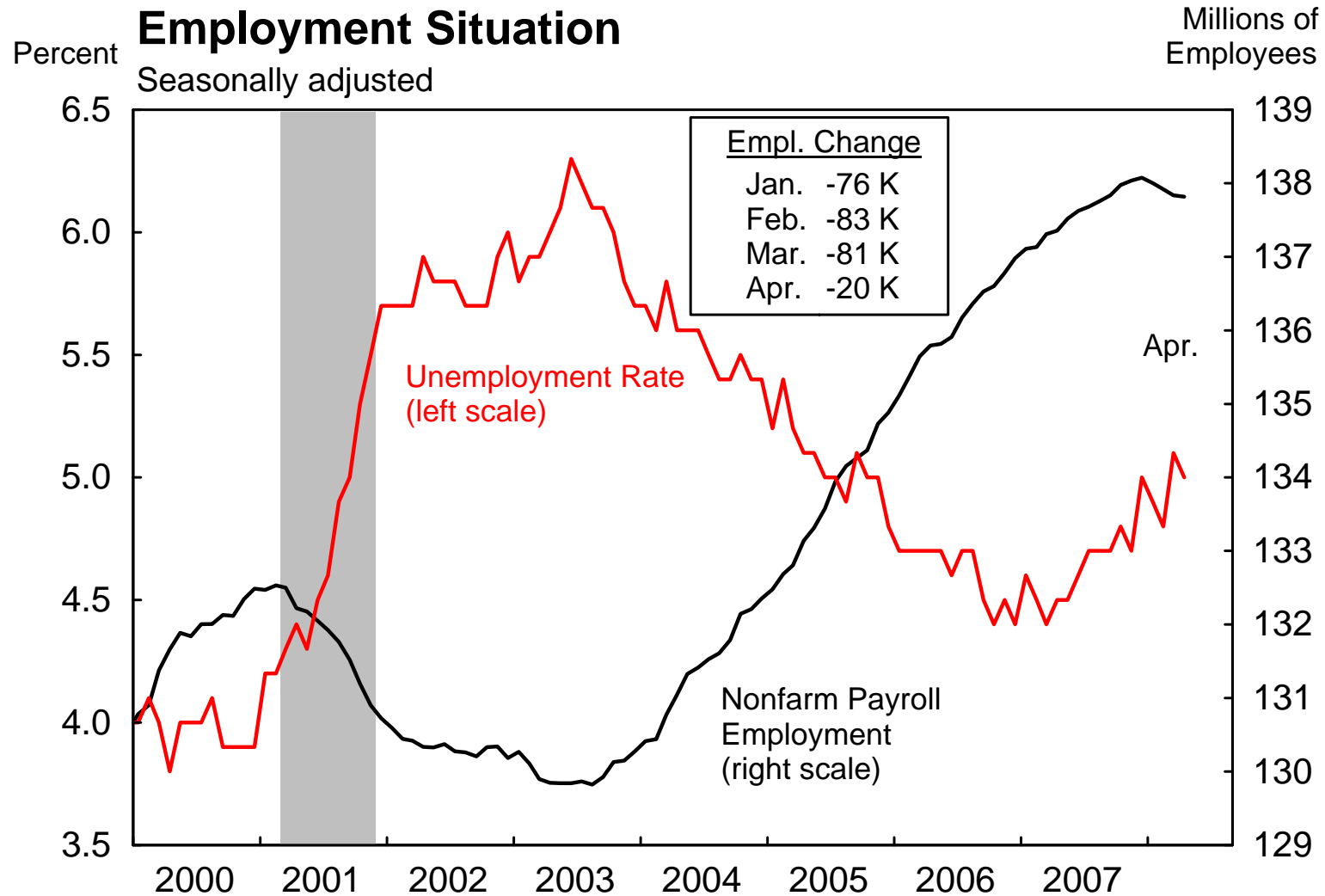
Consumer spending growth and sentiment are down

Consumer Sentiment and PCE Growth



*Source for consumer sentiment is Reuters/Michigan Survey.

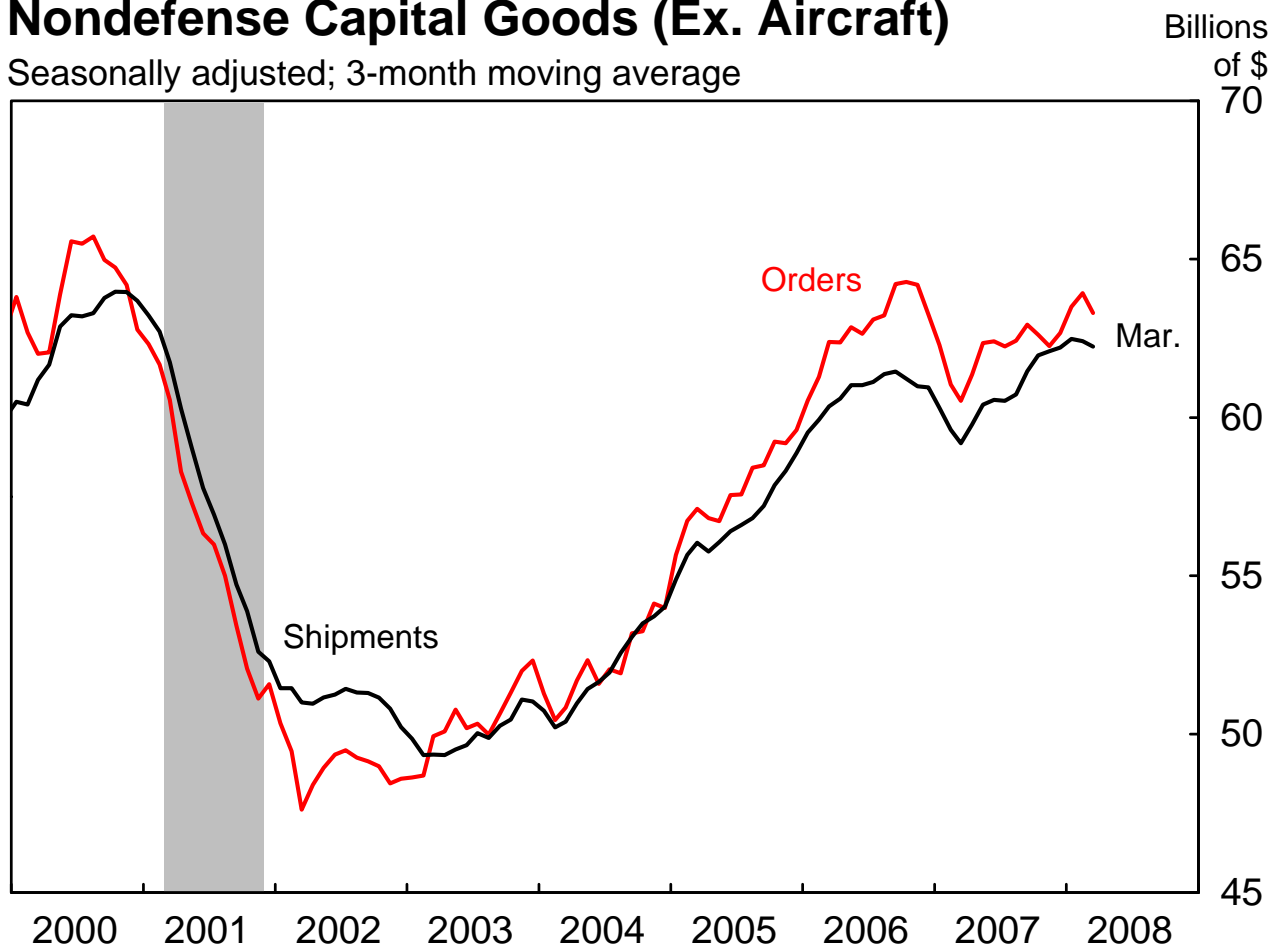
Employment is shrinking and unemployment rising



Capital spending has slowed

Nondefense Capital Goods (Ex. Aircraft)

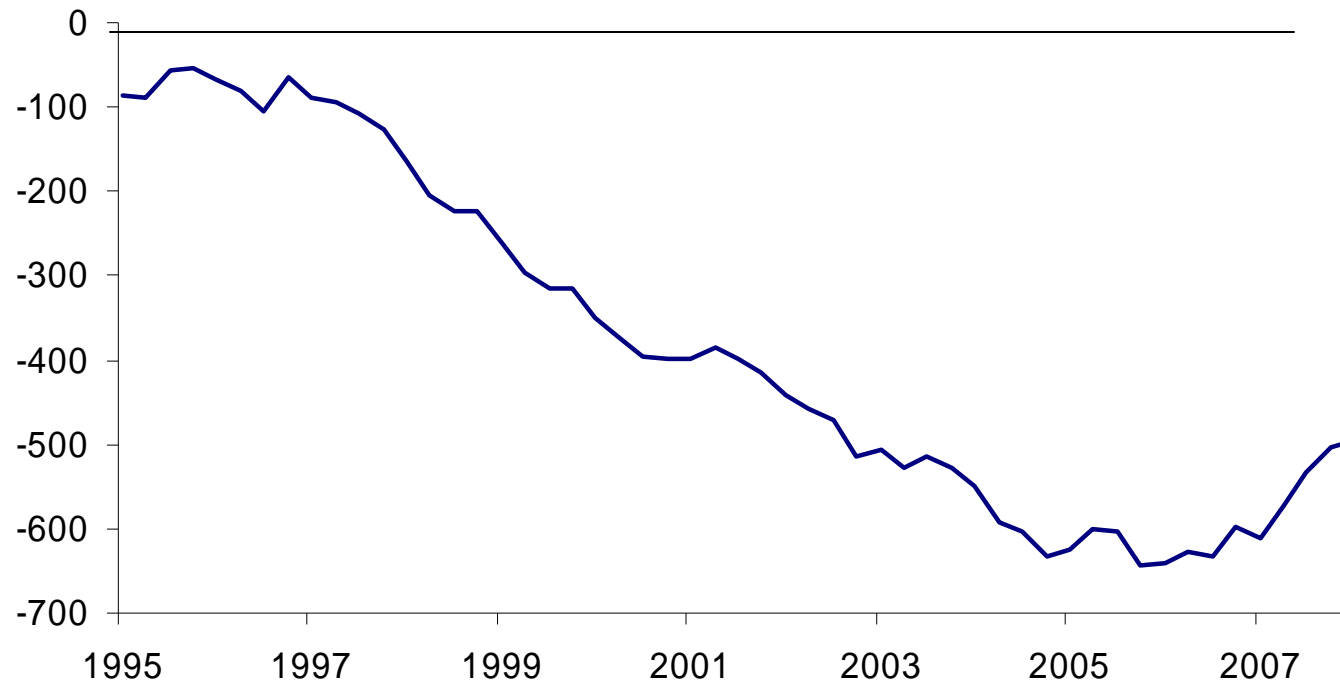
Seasonally adjusted; 3-month moving average



U.S. net exports are a source of strength

U.S. Net Exports

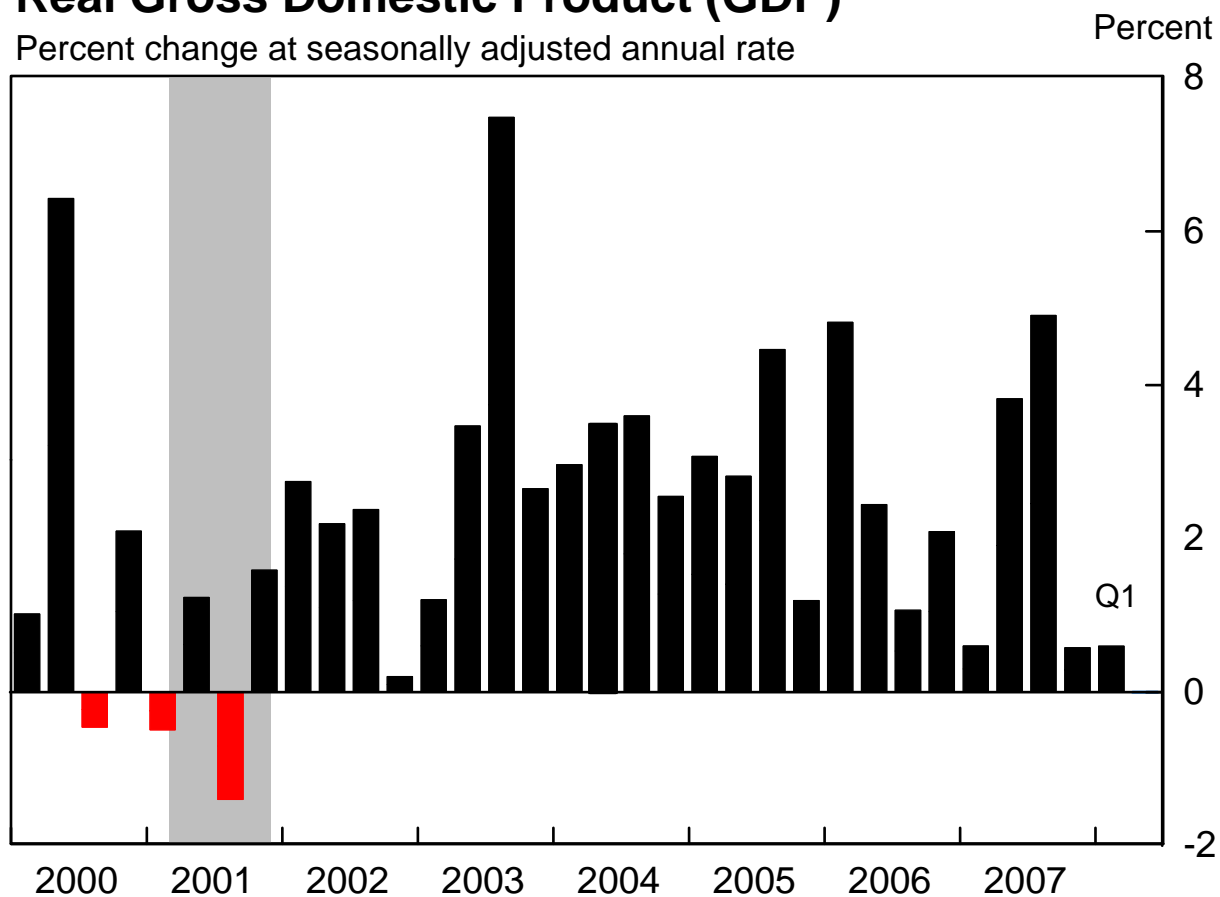
Billions of chained 2000 dollars



Economic growth has stalled

Real Gross Domestic Product (GDP)

Percent change at seasonally adjusted annual rate

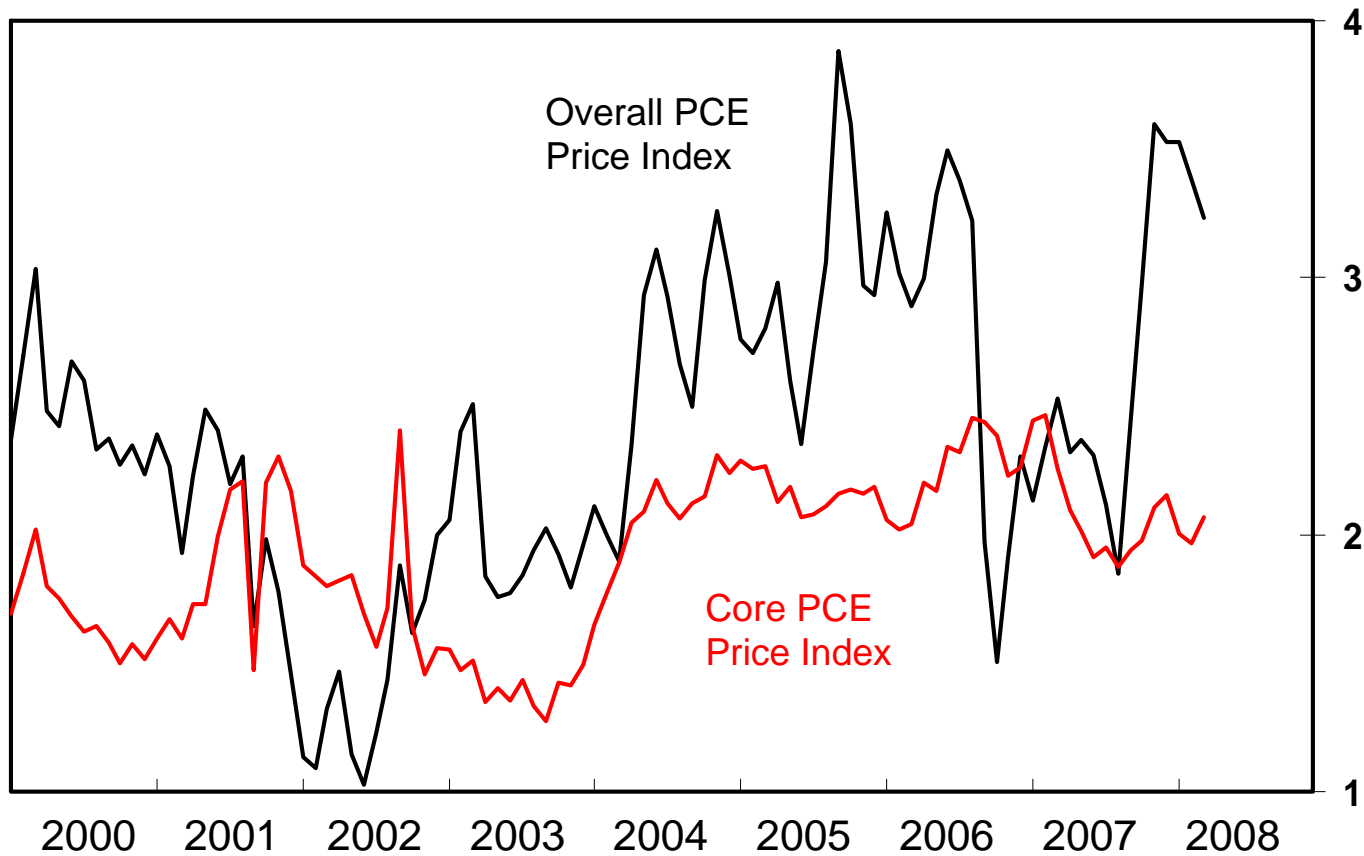


Headline inflation has risen

PCE Price Inflation

12 month percent change

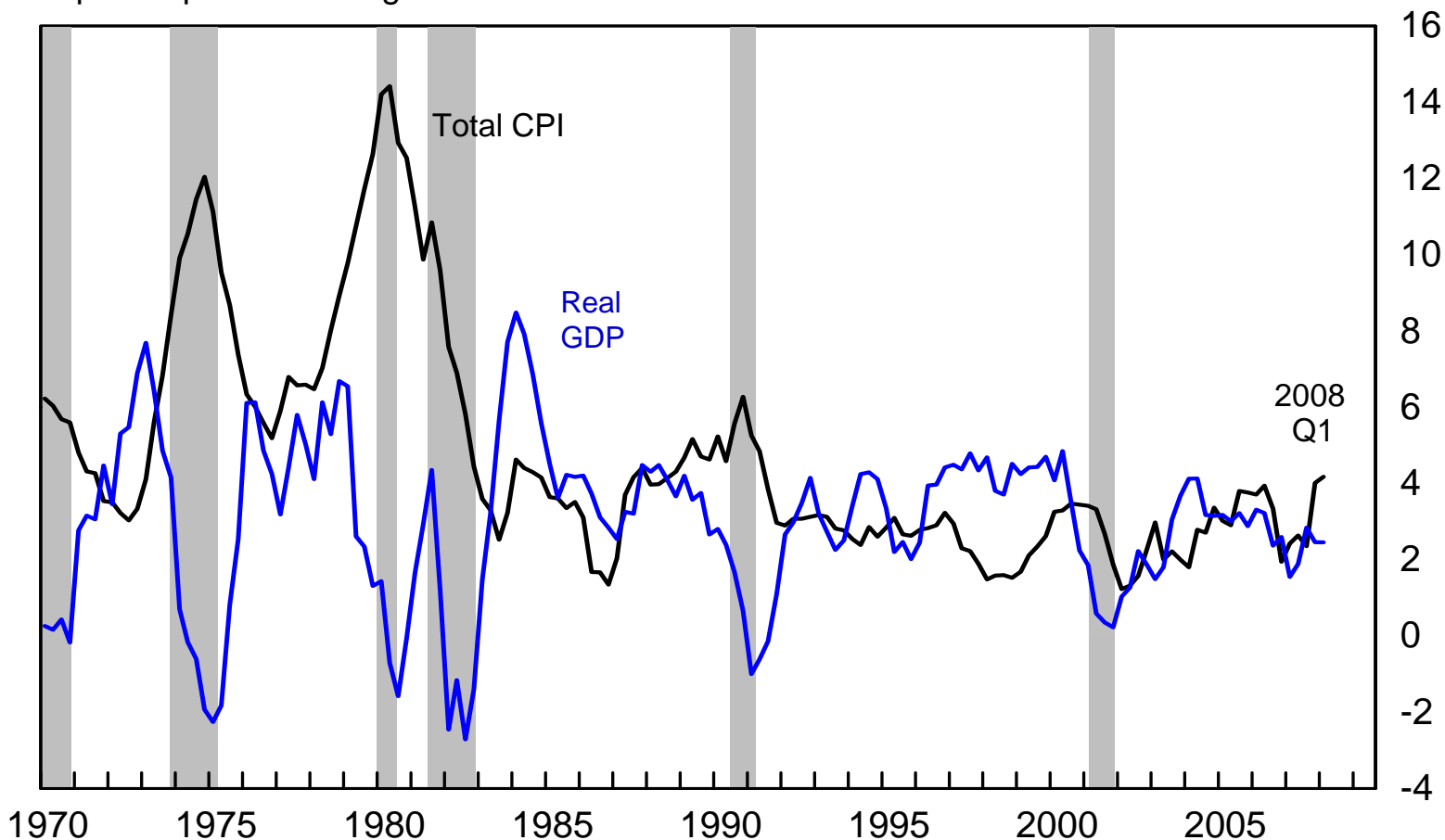
Percent



Stagflation involves high inflation and weak growth

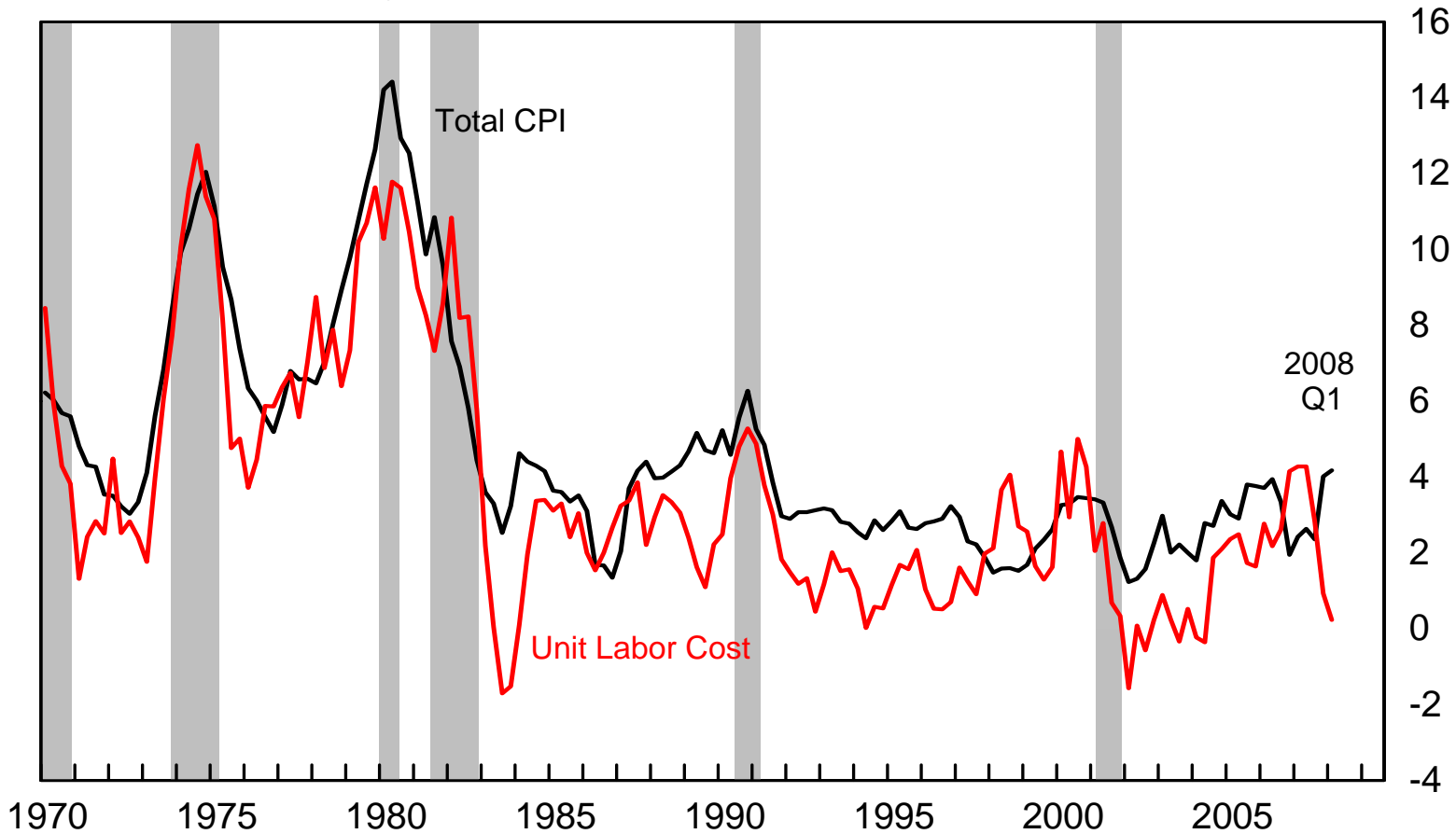
Total CPI and Real GDP

4-quarter percent change



Stagflation involves a wage-price spiral

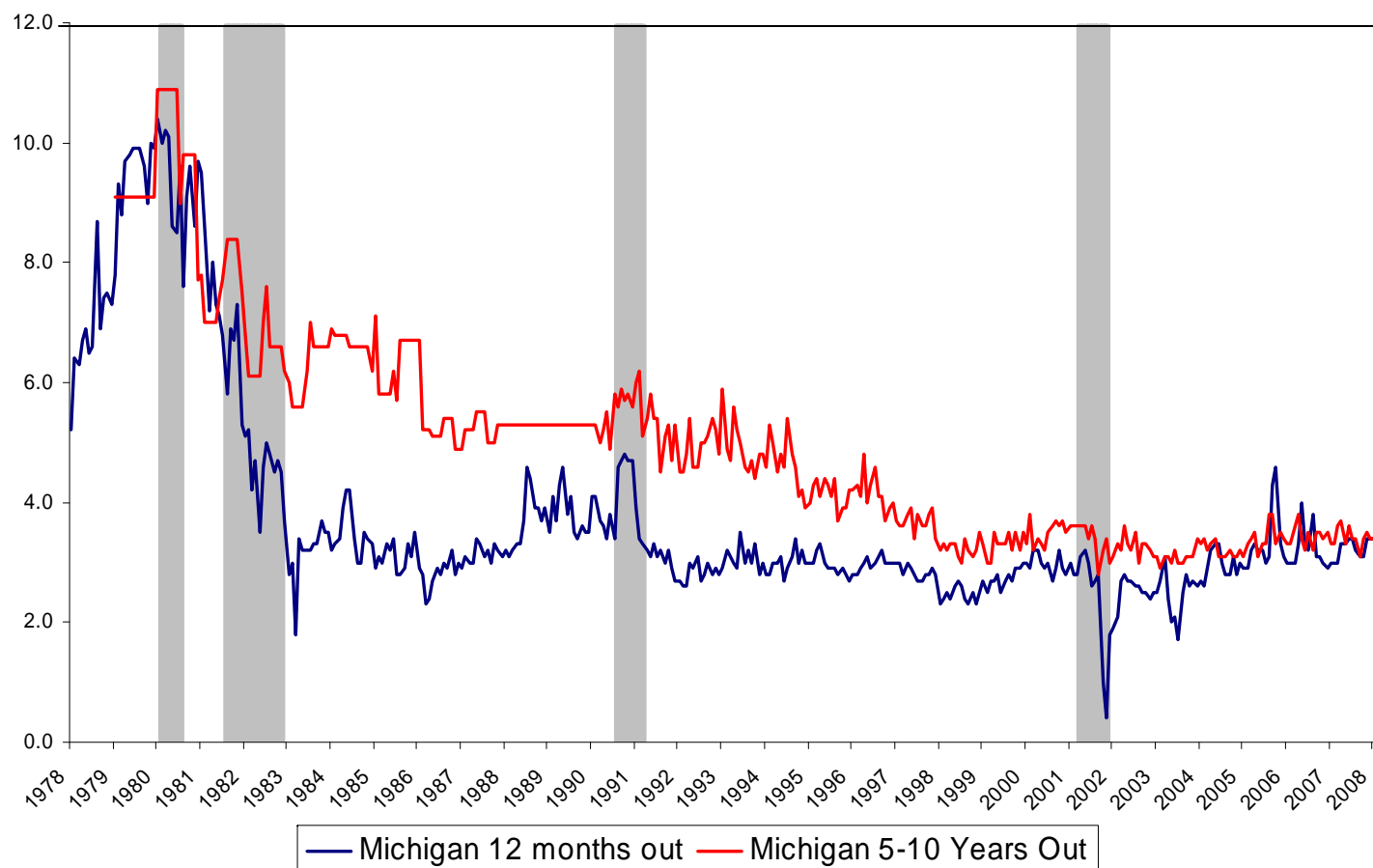
Total CPI and Unit Labor Cost
4-quarter percent change



Inflation expectations drive the wage-price spiral

University of Michigan Inflation Expectations

Rate of inflation



Monetary policy has eased

