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

May 13, 2008

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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
What caused the bubble?

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- Some lessons:
  - Inadequate risk management by many sophisticated institutions.
  - Shortcomings in financial supervision and regulation.
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.
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

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

Net percent of respondents tightening credit standards

Source: Federal Reserve Senior Loan Officer Opinion Survey
New issuance of ABS has plummeted
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

![Graph showing selected Federal Reserve assets from July 2007 to May 2008.](Graph)

- **Other**: $78.0 b
- **Primary Dealer Credit Facility**: $18.6 b
- **Primary Credit**: $11.6 b
- **Term Auction Credit Facility**: $100.0 b
- **Repurchase Agreements**: $107.5 b
- **Term Sec Lending Facility**: $145.6 b
- **Overnight Sec Lending Facility**: $17.8 b
- **US Treasuries held outright less securities to dealers**: $385.3 b

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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

Housing
Thousands, seasonally adjusted

Housing starts
(left scale)

New for sale
(right scale)

Vacant for sale
(left scale)

Mar.
House prices are still heading down

House Prices
Case-Shiller national index with futures
The price of crude oil has jumped
Prices of other commodities are also up

Prices of Wheat, Corn and Metals

Spot Price  Monthly average  $/Bushel


Hard Wheat

CRB Metals Index (left scale)

Yellow Corn

Apr.
Consumer spending growth and sentiment are down

**Consumer Sentiment and PCE Growth**

Index 1966 = 100

*Source for consumer sentiment is Reuters/Michigan Survey.*
Employment is shrinking and unemployment rising

**Employment Situation**
Seasonally adjusted

- **Unemployment Rate** (left scale)
  - January 2008: 4.0%
  - February 2008: 4.3%
  - March 2008: 4.6%
  - April 2008: 5.0%

- **Nonfarm Payroll Employment** (right scale)
  - January 2008: 130 million
  - April 2008: 139 million

**Empl. Change**
- January: -76 K
- February: -83 K
- March: -81 K
- April: -20 K

**Note:** Employment is shrinking and unemployment rising.
Capital spending has slowed

Nondefense Capital Goods (Ex. Aircraft)
Seasonally adjusted; 3-month moving average

Shipments
Orders

Billions of $
U.S. net exports are a source of strength
Economic growth has stalled

Real Gross Domestic Product (GDP)
Percent change at seasonally adjusted annual rate

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Headline inflation has risen

PCE Price Inflation
12 month percent change

Overall PCE Price Index

Core PCE Price Index
Stagflation involves high inflation and weak growth

Total CPI and Real GDP
4-quarter percent change


Total CPI
Real GDP

2008 Q1

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Stagflation involves a wage-price spiral

Total CPI and Unit Labor Cost
4-quarter percent change

- Total CPI
- Unit Labor Cost

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Inflation expectations drive the wage-price spiral

University of Michigan Inflation Expectations

Rate of inflation

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Monetary policy has eased