Economic Advisory Panel Meeting

May 11, 2007

Overview of the U.S. Economy

Discussion and Charts

Prepared by the staff of the
Macroeconomic and Monetary Studies Function

Prior to the overview, there will be brief presentations by FRBNY economists and Lars Svensson on measures of inflation expectations and their usefulness for monetary policy. In contrast to past meetings, we will spend less time going through the enclosed material, and more time on an updated outlook (including any news or data releases in the week prior to the meeting) and risks to the forecast. Therefore we would recommend your perusal of this material in advance.

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Overview of Recent U.S. Economic Performance

James Kahn and Jonathan McCarthy

The slowing of economic activity that began in the second quarter of 2006 has continued, despite relatively buoyant financial and labor markets. While the slowdown for the second half of 2006 was widely anticipated, its continuation into 2007:Q1 was not—at least not before data for the quarter began coming in, although it was viewed as a downside risk. While downside risk remains, the most likely scenario based on the latest indicators is a moderate pickup in growth for the remainder of 2007. Inflation appears on track to continue to moderate, though with some upside risk, but remains at or slightly above the top of the generally accepted "comfort zone."

Overall the picture is decidedly mixed. The positive indicators come from the labor and financial (specifically equity) markets, and consumer spending. The negative indicators come from weak investment (both residential and capital equipment) and productivity growth. The continued inversion of the yield curve also likely reflects some downside risk.

Inflation. After substantial increases in January and February, core PCE inflation moderated considerably in March; the 12-month change of the core PCE deflator fell to 2.1 percent [Figure 1]. This behavior is consistent with the view that core inflation in January and February was pushed up by transitory factors, and thus was a bump along a path of slow moderation. In particular, medical care price inflation moderated in March, and owners' equivalent rent (OER) inflation (but not tenant rent inflation) declined further in the month. Furthermore, continued increases in rental vacancy rates suggest that OER and tenant rent inflation may moderate more in coming months; given their large weight in core consumer price indices, lower inflation in those components will support further moderation in core inflation measures.

Alternative measures of underlying inflation, including the FRBNY's underlying inflation gauge (UIG) and smoothed inflation, which did not rise much in January and February, continued to exhibit behavior consistent with a slow moderation in inflation [Figure 5]. In addition, expected inflation measures from financial markets at various horizons remain contained, albeit at somewhat elevated levels [Figure 3,4]. The modest moves in inflation expectations, even as core inflation measures have shown more significant swings, indicate that inflation expectations remain contained and are also consistent with the more stable behavior of alternative measures of underlying inflation. A rise in household inflation expectations (as reflected in the Michigan survey) may reflect the recent rise in gasoline and energy prices, feed-though of which into core prices is an upside risk.

Real activity. Real GDP growth in 2007Q1 slowed to 1.3% (annual rate) [Figure 2]. A good portion of the weakness reflected negative contributions from inventory investment and net exports, which are unlikely to persist. Nevertheless, the data suggest continued downside risk from the housing market and sluggish capital spending.

Residential investment fell sharply in 2007Q1. Housing market indicators generally were even softer than expected [Figures 7, 8], suggesting that the weakness in the housing market and residential investment could persist. Although housing starts stabilized some in February and March, the continued elevated level of the inventories-sales ratio and another increase in the homeownership vacancy rate indicate a potentially significant overhang in that sector that may require further adjustment in production and perhaps in prices as well.

Despite the continued weakness in housing, there is little evidence that the problems in that sector have spilled over into the broader economy (with the exception of some effects on capital spending; see below). In addition, the problems in the subprime mortgage market have yet to spread much further into the broader housing market and the aggregate economy. Nevertheless, these risks remain, which contribute to the maintained downside risk to real activity.

Real equipment and software expenditures rose modestly in 2007Q1 [Figure 9], supported by a surge in computer expenditures (this surge probably reflects some shifting of expenditures from 2006Q4 to 2007Q1). Even so, capital spending has been sluggish in recent quarters, particularly because of weakness in transportation and “other” equipment. In part, this may reflect the effects of the weakness of the housing market on items like trucks and construction machinery. At this time, some recovery of capital goods orders in March and continued strength in IT production would suggest that the current weakness may soon end; however, continued sluggishness in this sector represents a downside risk.

Furthermore, the sluggish behavior of capital expenditures since spring 2006 exemplifies some medium-term downside risks to real activity. Slower growth of investment spending may indicate that firms see a greater risk of weaker final demand. It also could indicate that firms expect the recent slowdown in productivity growth to persist (see below). Currently, the sources of the weakness of capital spending remain unclear; some commentators have argued that greater uncertainty has been a factor, but this does not seem consistent with the continued firm growth of payrolls.

Beyond capital spending, manufacturing indicators suggest that the sector remains sluggish. Increases in production [Figure 10] and orders in March reduced concern about the sector entering a more severe decline; however, survey measures (see below) suggest no significant rebound is yet apparent. Indications that the inventory cycle in some sectors may be nearing an end suggest that the sector could see somewhat more robust growth in the coming months.

In contrast to the weakness in housing and capital spending, consumption remained robust in 2007Q1, though the monthly patterns suggest some slowing in 2007Q2 [Figure 6]. Part of the reason for the continued robustness in consumption may be that the labor market has remained strong. Most labor market indicators— e.g. payroll employment, the unemployment rate, new unemployment insurance claims—continue to suggest firm conditions.

US trade. The current account deficit remains at high levels relative to GDP (about 6½% in 2006) [Figure 11]. If oil prices remain do not rise much further, there may be some reduction in those levels in 2007, as there was in 2006:Q4 [Figure 12]. The trade deficit averaged $62.8 billion per month over the 12 months through February, a little less than it was in mid-2006. Much of the recent variation in the nominal deficit has reflected oil import price and volume fluctuations. In contrast, the non-oil deficit has been fairly stable. Although energy price fluctuations probably will continue to influence the overall deficit, the non-oil deficit is likely to remain stable. After a strong positive growth contribution in 2006Q4, net exports contributed -0.5 percent to GDP growth in 2007Q1. The deficit for the remainder of the year is expected to have close to a zero growth contribution.

Labor market. Despite slowing real activity, job growth has been fairly well maintained, though growth in hours of work has slowed. For the three months through March, job growth averaged 152,000 per month (private employment growth was about 124,000 per month during this period), 35,000 below the average pace in 2006 [Figure 13]. Revisions raised the level and growth rate of payrolls in 2006. Employment has fallen in manufacturing, but has been surprisingly stable in construction. Growth in total hours (non-farm business sector) was actually negative in Q1, and slipped to 1.1% year-over-year. The 12-month change in average hourly earnings was 4.0%, higher than in previous years but about the same as it was in mid-2006. Compensation growth had been somewhat stronger, but fell sharply in Q1; the Employment Cost Index rose somewhat less than hourly earnings, but its growth has begun to converge toward that of hourly earnings [Figure 15]. The sharp decline in compensation growth left year-over-year growth in unit labor costs at just 1.3 percent.

The unemployment rate was 4.4% in March, compared to its last peak of 6.3% (June 2003) and low of 3.8% (April 2000). The labor force participation rate has not risen much and remains below the late 1990s levels, surprisingly given the decline in unemployment [Figure 14]. This pattern may indicate changing labor supply patterns and thus signal little further increase in participation. Thus there may be little slack in the labor market. If real growth recovers to near potential, the unemployment rate would likely remain near its current level over the medium term.

The continued solid growth of employment in the face of modest growth in real activity over the past year is reflected in slower productivity growth, notwithstanding the somewhat weaker growth in hours. After several years of very strong (in excess of 3 percent) numbers following the 2001 recession, productivity growth has averaged only 1.6 percent since mid-2004 [Figure 16]. To some extent this reflects normal cyclical slowing of productivity growth as an expansion matures. The slowing may be exacerbated by the residential construction downturn, during which output in that sector appears to have declined much more than employment. But there may be some justification for the concern that the underlying trend in productivity growth has slowed relative to the strong pace observed from 1996 to 2004.

Surveys. Business surveys have remained in low but positive territory, consistent with the sluggish real growth that we have seen. The latest ISM manufacturing survey actually showed a sizeable uptick [Figure 17], well up from a late-2006 swoon, but still within the range of moderate levels experienced over the past two years. It also indicated increased upward price pressures, perhaps due in part to energy price increases. Consumer confidence surveys have slipped recently, particularly in their expectations components, but remain at moderate levels that have prevailed during the current expansion [Figure 18].

Financial markets and monetary policy. With the Fed funds target holding firm at 5.25% since June 2006, and few significant surprises in the announcements and minutes, financial market developments have revolved around economic news and its impact on the likely course of Fed policy. Over the past six months, market expectations of the funds rate have consistently had a downward tilt, but with the timing of future possible cuts generally at least several months into the future. The current path is now somewhat steeper beginning 3-4 months out than the comparable path was last November [Figure 19], suggesting that markets expect a loosening not any sooner, but possibly more steeply. At the same time, interest rate uncertainty has remained low [Figure 20].

This apparent concern about downside risk is also reflected in the yield curve. While the gap between 3-month and 10-year rates has not changed a lot over the last six months [Figure 21], the slope near the front end of the curve has become much steeper [Figures 22, 23]. Notwithstanding those concerns, equity markets, with the exception of a brief scare in late February and early March, have steadily advanced [Figure 24]. Implied volatilities are up slightly from their low levels earlier in the year, but down from their March spike [Figure 25]. Although spreads on subprime mortgage-backed securities remained elevated, other credit spreads have not indicated much spillover from subprime mortgages. Spreads on other consumer asset-backed securities remained near their levels of early in the year, while those on speculative grade corporate securities also have remained fairly low compared to historical levels.

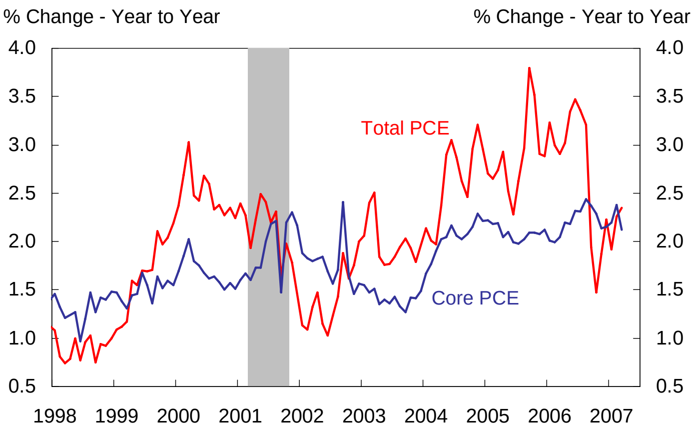
Even though concerns about a significant U.S. economic contraction appeared to have subsided somewhat, foreign exchange markets are consistent with expectations that U.S. real growth and interest rate path will be somewhat weaker relative to other economies. The dollar displayed renewed weakness relative to many currencies, including a roughly 2% depreciation against the euro. The major exception to this trend was the Japanese yen: the dollar has held firm against then yen or even appreciated slightly relative to last November. More recently it appreciated more than 1% against the yen, likely reflecting the reinstatement of many carry positions as market turmoil subsided and expectations of tighter Japanese policy were reduced.

Fed policy remains, at least by conventional measures, non-accommodative if not tight. The current funds rate has remained above a conventional Taylor Rule level [Figure 26], the yield curve remains inverted, and financial markets appear to believe that future rate cuts are more likely than increases. Comparison with a “gradual Taylor Rule” that builds in typical inertia shows that the Fed was relatively aggressive in the tightening phase and that policy has remained somewhat tight [Figure 27]. A justification for this would be that the FOMC wants to guard against any increase in core inflation, given that it currently lies slightly above the generally accepted view of the “comfort zone,” even with the economy growing at somewhat below potential. Under this interpretation, the risks on each side are relatively balanced, and future moves await further data.

Conclusion. Remarkably little has changed over the last six months, which does in itself represent some bad news, since it means that the period of slow growth has persisted, and specifically that the housing sector correction has lasted longer than anticipated. The other major new development is the surprising strength of the labor market (albeit more for employment than hours), with the unfortunate flip side (given slow GDP growth) of a slowdown in productivity growth. The most likely scenario remains a return to stronger GDP growth in the remainder of 2007, but with the possibility that potential growth has slowed, and with continued downside risks given the negative indicators from investment activity and the housing sector. At the same time, inflation appears to be moderating, with inflation expectations apparently well contained.

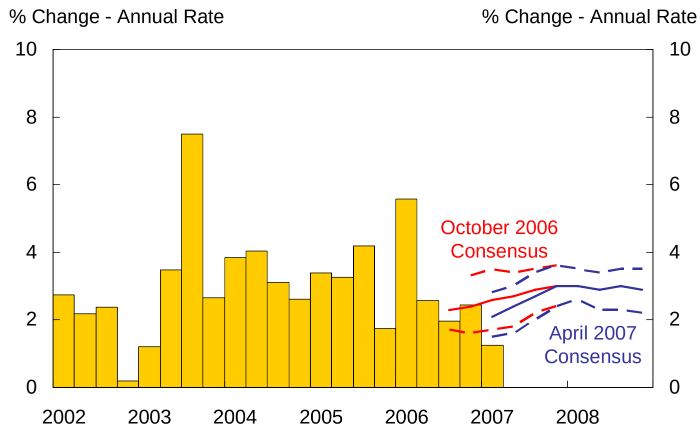
Overview

Figure 1: Total and Core PCE Deflator



Source: Bureau of Economic Analysis

Figure 2: Actual and Forecasted GDP Growth



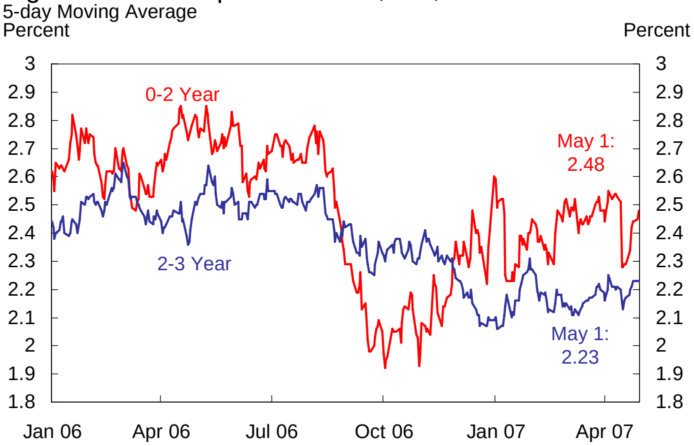
Source: Bureau of Economic Analysis and Blue Chip

Note: Dotted lines represent top and bottom ten forecasts.

Inflation

Figure 3: TIPS Implied Inflation, 0-2, 2-3 Year Horizons

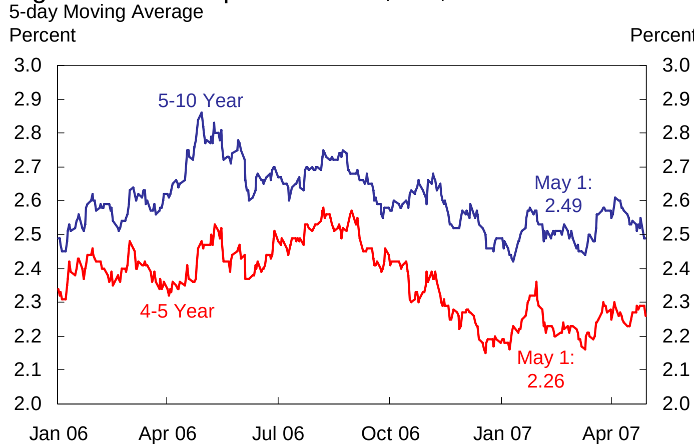
5-day Moving Average



Source: Federal Reserve Board of Governors

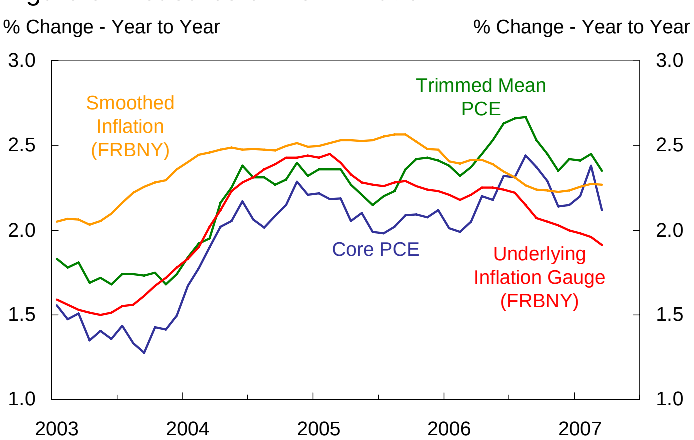
Figure 4: TIPS Implied Inflation, 4-5, 5-10 Year Horizons

5-day Moving Average



Source: Federal Reserve Board of Governors

Figure 5: Measures of PCE Inflation

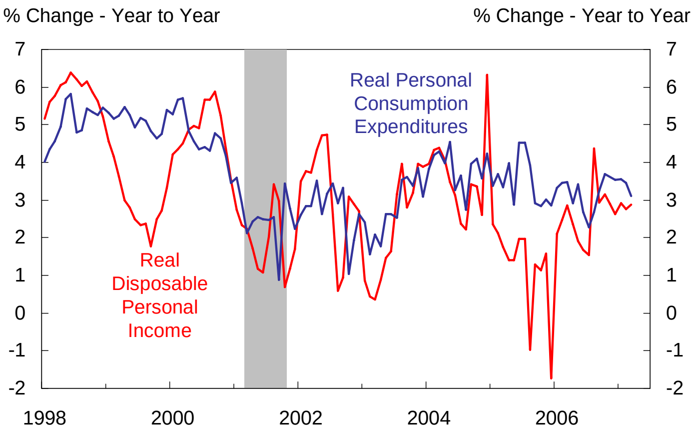


Source: Bureau of Economic Analysis, Dallas Fed and FRBNY

Note: Shading represents NBER recessions, unless otherwise noted.

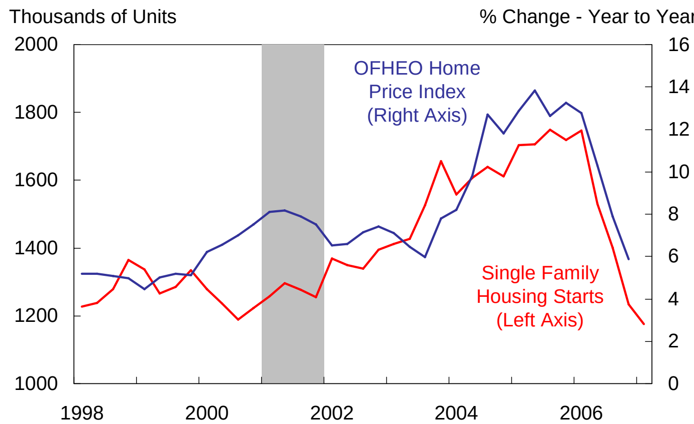
Real Activity

Figure 6: Real PCE and DPI



Source: Bureau of Economic Analysis

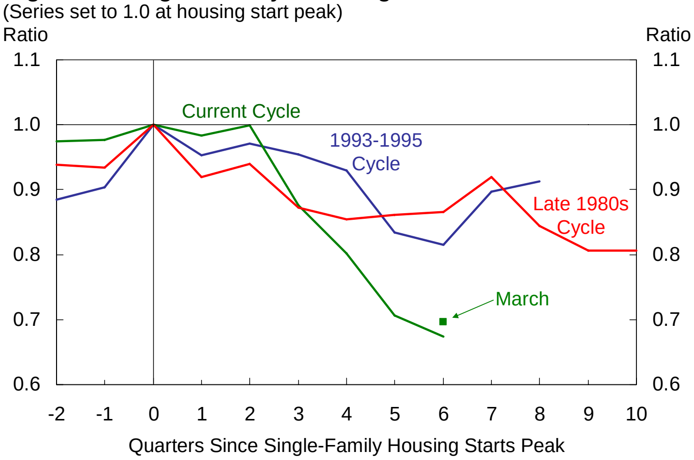
Figure 7: Housing Market Snapshot



Source: Census Bureau and Office of Federal Housing Enterprise Oversight

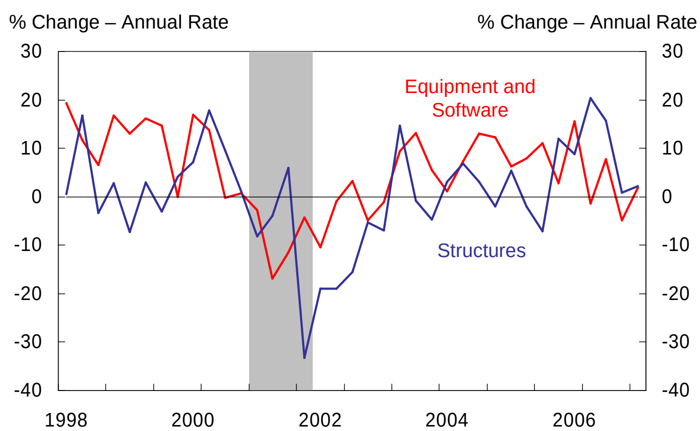
Figure 8: Single-Family Housing Starts

(Series set to 1.0 at housing start peak)



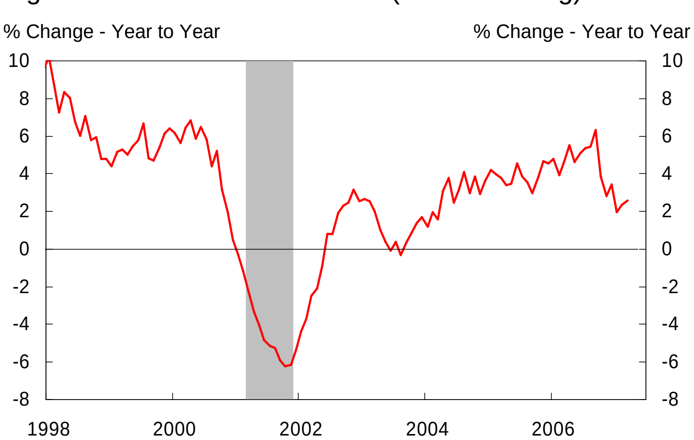
Source: Census Bureau

Figure 9: Private Nonresidential Investment



Source: Bureau of Economic Analysis

Figure 10: Industrial Production (Manufacturing)

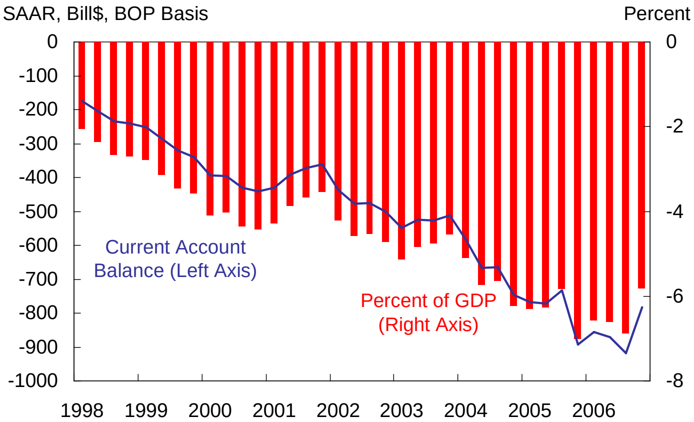


Source: Federal Reserve Board

Note: Shading represents NBER recessions, unless otherwise noted.

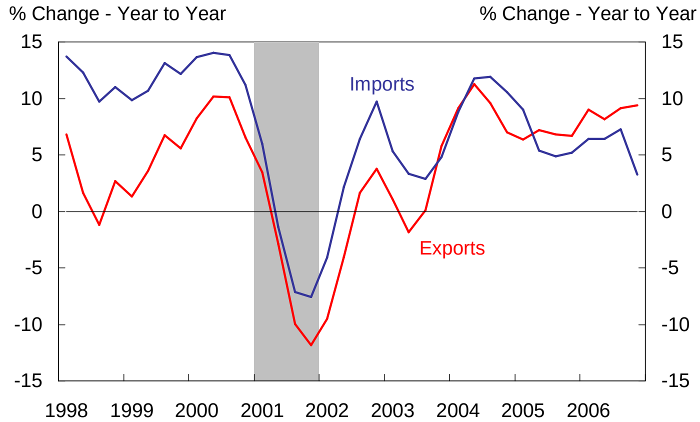
U.S. Trade

Figure 11: Current Account Balance



Source: Bureau of Economic Analysis

Figure 12: Real Imports and Exports

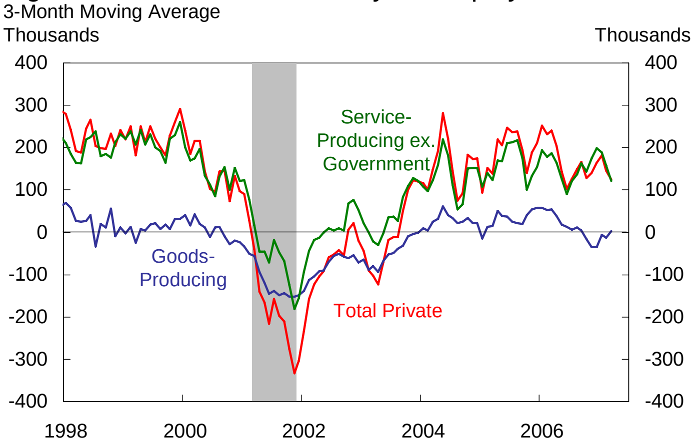


Source: Bureau of Economic Analysis

Labor Markets

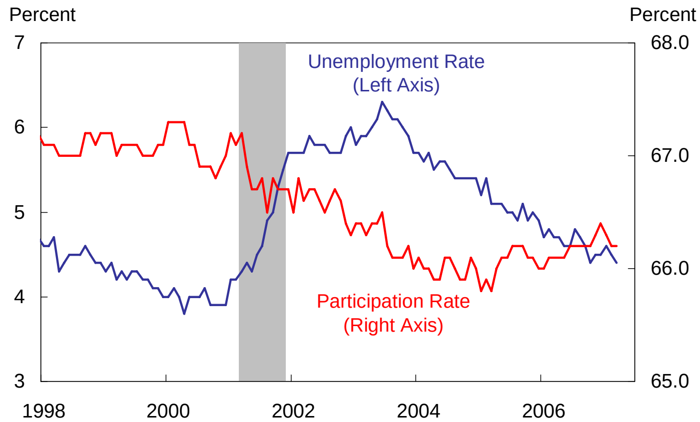
Figure 13: Private Nonfarm Payroll Employment

3-Month Moving Average



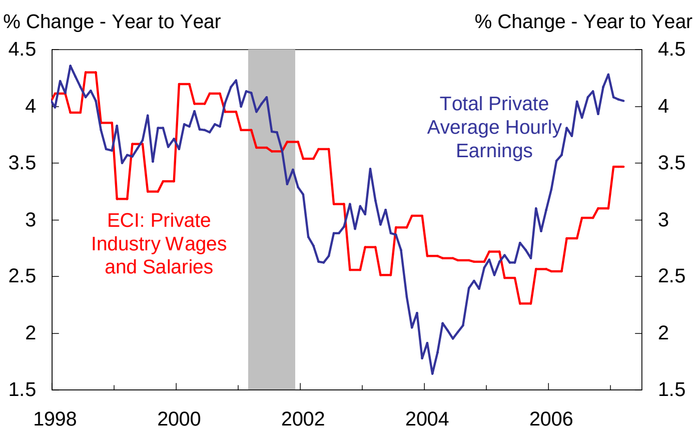
Source: Bureau of Labor Statistics

Figure 14: Unemployment and Participation Rates



Source: Bureau of Labor Statistics

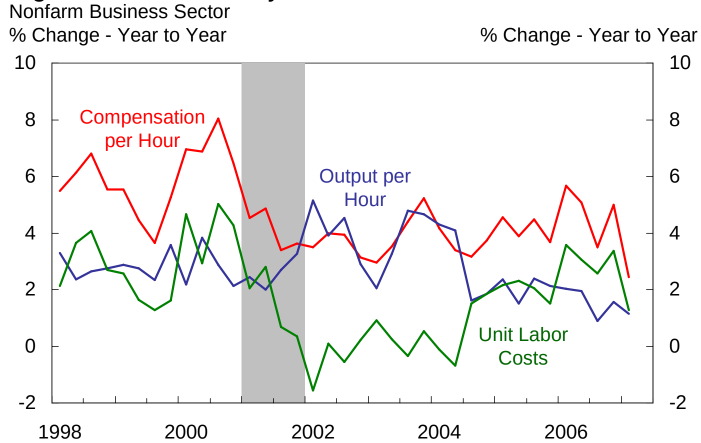
Figure 15: Average Hourly Earnings vs. ECI



Source: Bureau of Labor Statistics

Figure 16: Productivity and Unit Labor Costs

Nonfarm Business Sector

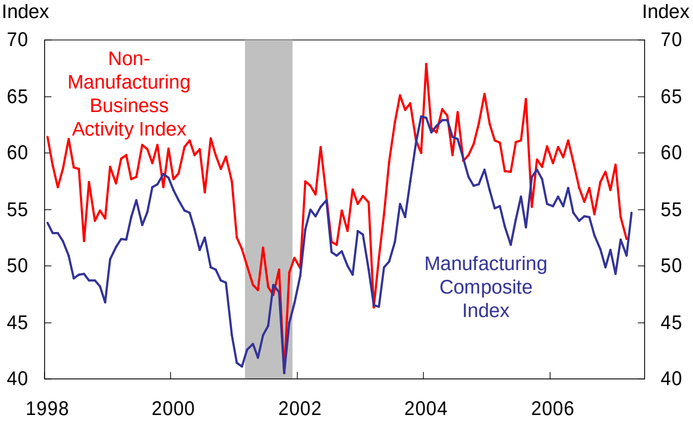


Source: Bureau of Labor Statistics

Note: Shading represents NBER recessions, unless otherwise noted.

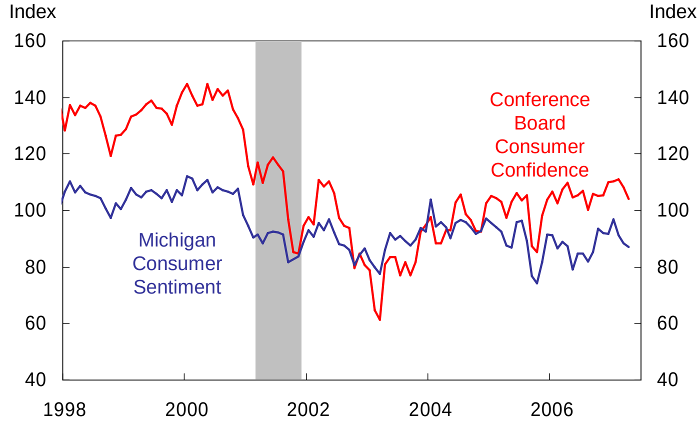
Surveys

Figure 17: ISM Indices



Source: Institute for Supply Management

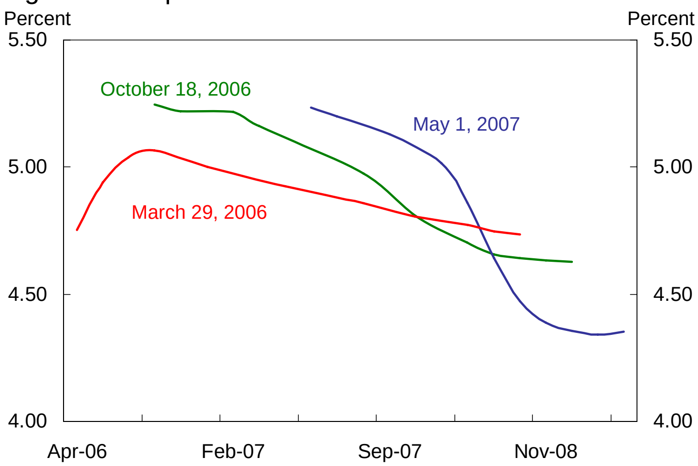
Figure 18: Consumer Confidence Surveys



Source: University of Michigan and Conference Board

Financial Markets

Figure 19: Expected Fed Funds Rate



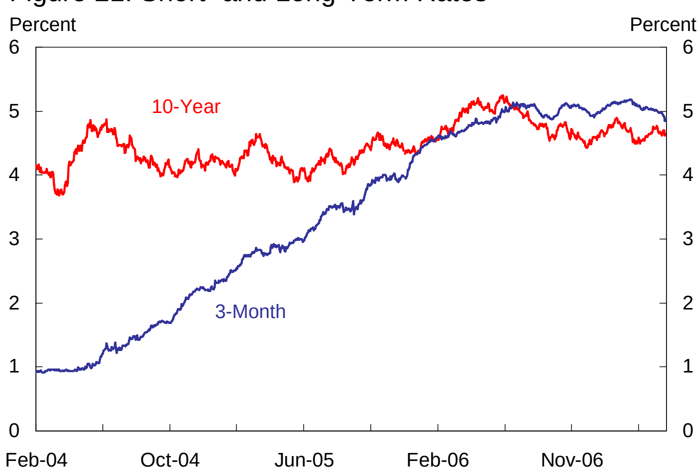
Source: Federal Reserve Board

Figure 20: Expected Interest Rate Volatility

Source: Datastream and FRBNY

Note: Implied volatilities from swaptions.

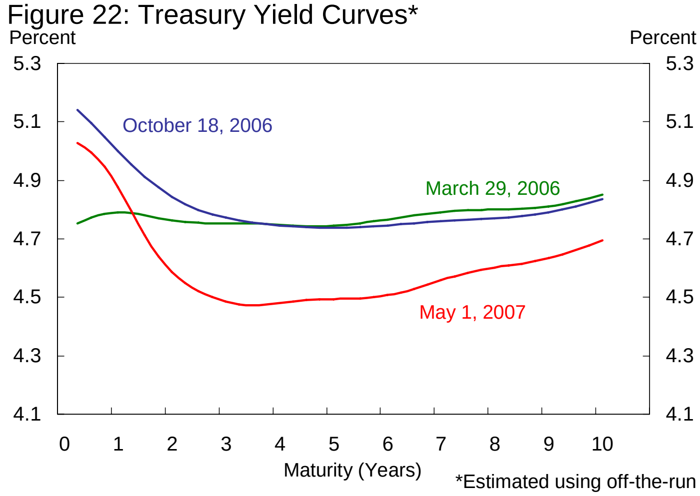
Figure 21: Short- and Long-Term Rates



Source: Bloomberg

Note: Yields of on-the-run securities.

Figure 22: Treasury Yield Curves*



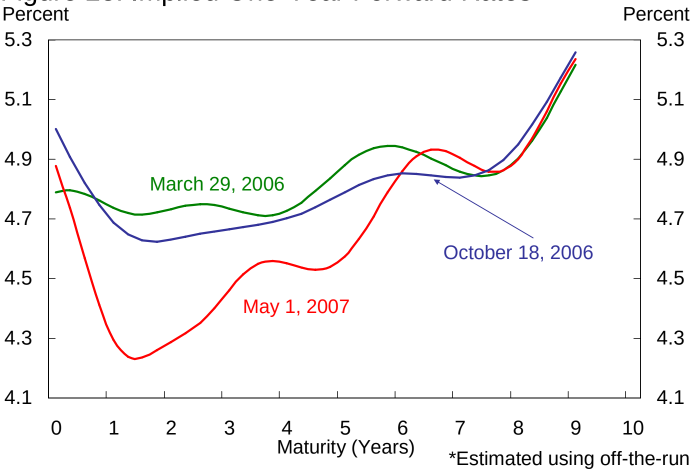
Source: 8:40AM quotes and FRBNY Calculations

*Estimated using off-the-run Treasury securities

Note: Shading represents NBER recessions, unless otherwise noted.

Financial Markets, ctd.

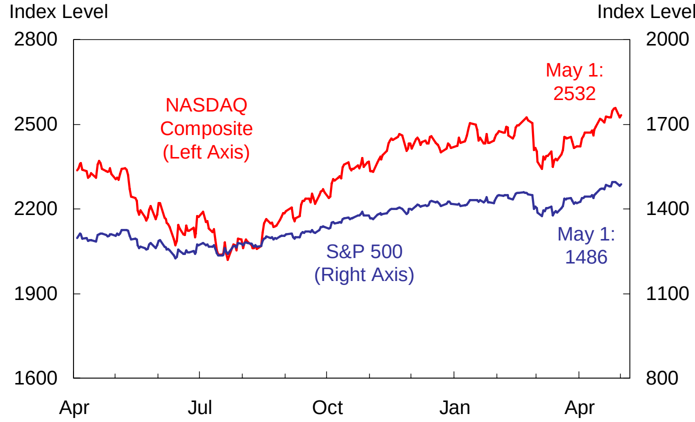
Figure 23: Implied One-Year Forward Rates



*Estimated using off-the-run Treasury securities

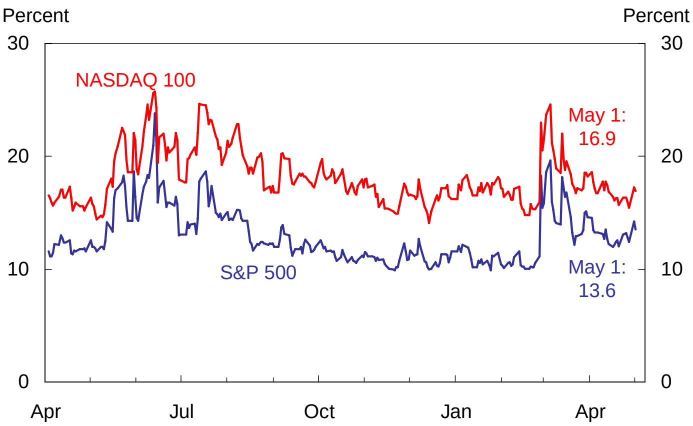
Source: 8:40AM quotes and FRBNY Calculations

Figure 24: Equity Market Values



Source: Bloomberg

Figure 25: Equity Market Implied 1-Month Volatilities

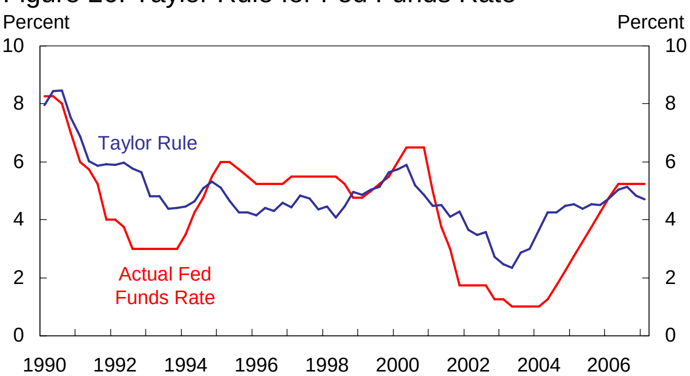


Source: CBOE

Note: Annualized

Current Policy Stance

Figure 26: Taylor Rule for Fed Funds Rate

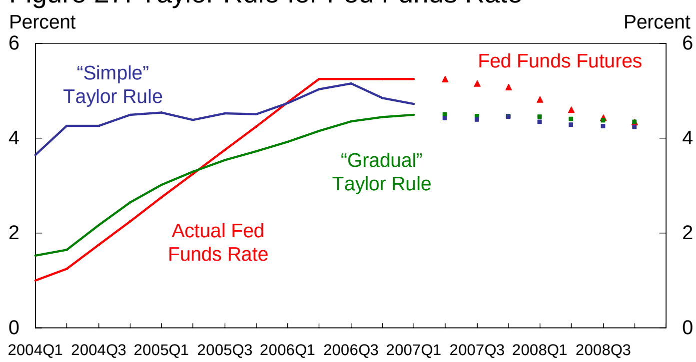


"Simple" Taylor Rule: $i_t^*=[4.0+1.5(\Pi_t-1.5)+.5(y_t-y_t^*)]$

4.0% is the assumed steady state nominal interest rate, Π_t is the yr/yr Core PCE deflator, 1.5% is the assumed target inflation rate, y_t is the log of real GDP and y_t^* is the log of the Congressional Budget Office's estimate of potential GDP.

Source: FRBNY and Author's Calculations. Future Taylor Rule calculations are based on FRBNY forecasts for output and inflation.

Figure 27: Taylor Rule for Fed Funds Rate



"Simple" Taylor Rule: $i_t^*=[4.0+1.5(\Pi_t-1.5)+.5(y_t-y_t^*)]$ "Gradual" Taylor Rule: $i_t=.8i_{t-1}+.2\,i_t^*$

4.0% is the assumed steady state nominal interest rate, Π_t is the yr/yr Core PCE deflator, 1.5% is the assumed target inflation rate, y_t is the log of real GDP and y_t^* is the log of the Congressional Budget Office's estimate of potential GDP.

Future Taylor Rule calculations are based on FRBNY forecasts for output gap and inflation (indicated by dotted line). Gradual Taylor Rule uses lagged Fed Funds target through 2004Q2 and its own lagged value from then on.

Source: FRBNY, Author's Calculations, and Federal Reserve Board.

Note: Shading represents NBER recessions, unless otherwise noted.

Economic Advisory Panel Meeting

May 11, 2007

Reference Charts and Tables

Prepared by the staff of the
Macroeconomic and Monetary Studies Function

Inflation: PCE Deflator

PCE Deflator

(percent change at an annual rate)

	24 Month	12 Month	6 Month	3 Month	1 Month
PCE Deflator	3.1	3.2	3.8	2.9	3.2
Market-Based	3.0	3.1	3.9	2.7	3.0
Durable Goods	-0.7	-0.7	-0.5	-0.6	0.7
Motor Vehicles and Parts	1.4	1.3	0.6	0.8	1.3
Nondurable Goods	4.2	4.0	7.2	3.9	4.1
Clothing and Shoes	-0.6	-0.1	2.8	-0.9	13.9
Services	3.3	3.6	3.0	3.0	3.3
Housing	3.2	3.9	4.8	4.3	3.3
Transportation	4.0	3.7	4.0	3.8	-1.0
Medical Care	3.0	3.0	3.0	3.3	4.4
PCE Deflator Excluding Food and Energy	2.2	2.4	2.6	2.3	3.2
Market-Based	1.9	2.1	2.5	1.9	2.9
Personal Business Services-MB	2.0	0.9	-0.1	-2.8	5.8
Personal Business Services-NMB	2.2	2.2	1.3	0.4	3.8

Source: Bureau of Economic Analysis

Note: Data through March 2007

Note: Shading represents NBER recessions, unless otherwise noted.

Inflation: Consumer Prices

Consumer Price Data

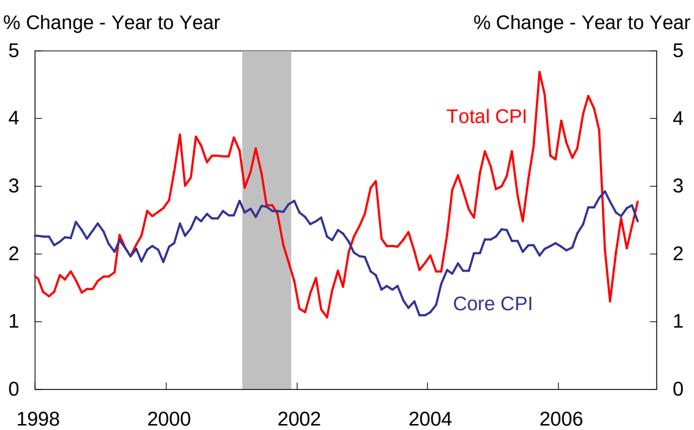
(percent change at an annual rate)

	Weights (December 2005) Total	Core	24 Month	12 Month	6 Month	3 Month	1 Month
Consumer Price Index	100.00		3.4	2.1	3.1	0.6	-6.3
Energy	8.69		13.6	-4.6	4.5	-17.1	-59.7
All Items Ex. Energy			2.5	2.9	3.0	2.8	2.4
Food	13.94		2.5	2.6	2.7	3.3	4.4
Food Away From Home (NSA)	5.95		3.0	3.0	3.0	2.6	1.8
All Items Ex. Food and Energy	77.37	100.00	2.5	2.9	3.1	2.7	2.3
Core Chain-Weight CPI (NSA)			2.2	2.6	2.0	2.1	3.2
Core Goods	22.25	28.76	0.5	0.5	0.6	0.3	0.0
Apparel	3.79	4.90	0.1	0.9	2.2	2.0	6.2
Medical Care Commodities	1.46	1.89	3.1	3.7	2.4	2.5	1.7
Durable Goods	11.58	14.97	-0.1	-0.7	-0.9	-1.0	-5.1
New Vehicles	5.16	6.67	0.5	0.4	-1.0	-0.6	-1.7
Used Vehicles	1.80	2.33	1.6	-0.4	1.4	-1.4	-11.2
Core Services	55.06	71.16	3.2	3.9	4.0	3.6	3.5
Rent of Primary Residence	5.83	7.54	3.4	3.9	4.5	4.5	4.9
Owners' Equivalent Rent	23.44	30.30	3.1	4.0	4.7	4.1	4.1
Lodging Away from Home	2.61	3.37	3.2	8.5	3.3	3.9	5.4
Medical Care Services	4.76	6.15	4.4	4.4	4.2	4.2	4.2
Transportation Services	5.71	7.38	2.6	2.1	2.5	1.7	1.0

Source: Bureau of Labor Statistics

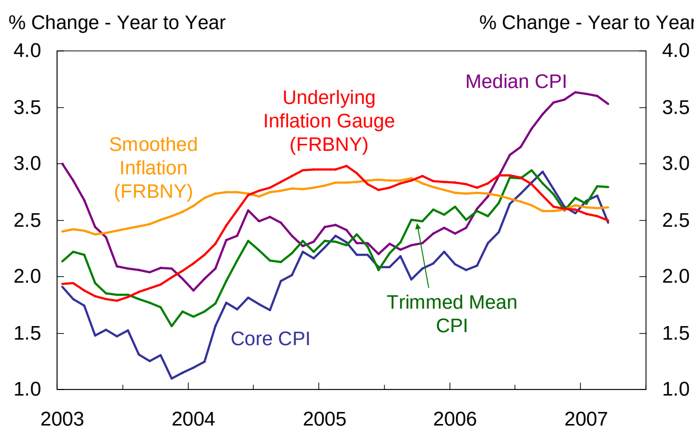
Note: Data through March 2007

Total and Core CPI



Source: Bureau of Labor Statistics

Alternative Measures of CPI



Source: Bureau of Labor Statistics, Cleveland Fed, and FRBNY

Note: Shading represents NBER recessions, unless otherwise noted.

Inflation: Producer Prices

Producer Price Data

(percent change at an annual rate)

	24 Month	12 Month	6 Month	3 Month	1 Month
Finished Goods	3.8	0.8	1.1	-3.2	-11.9
Finished Consumer Goods	4.4	0.6	1.0	-4.5	-15.9
Finished Consumer Goods Ex. Food	5.3	0.1	-0.5	-8.3	-22.5
Nondurables Ex. Food	7.2	0.1	-0.7	-11.1	-30.7
Durables	0.7	0.0	0.1	-0.3	6.3
Capital Equipment	1.9	1.5	1.6	1.1	3.3
Electronic Computers (NSA)	-22.8	-23.3	-26.7	-25.3	-26.3
Communication and Related Equipment (NSA)	-0.2	0.5	1.2	0.0	0.0
Finished Goods Ex. Food & Energy	1.9	1.3	1.0	0.5	3.1
Finished Consumer Goods Ex. Food & Energy	2.0	1.2	0.6	0.2	2.9
Intermediate Materials	6.6	4.7	3.5	-2.9	-14.7
Intermediate Materials Ex. Food & Energy	5.4	7.3	6.7	3.7	0.0
Crude Materials	9.1	-8.2	6.1	5.9	-37.3
Crude Materials Ex. Food & Energy	13.5	20.7	27.6	-2.3	18.0

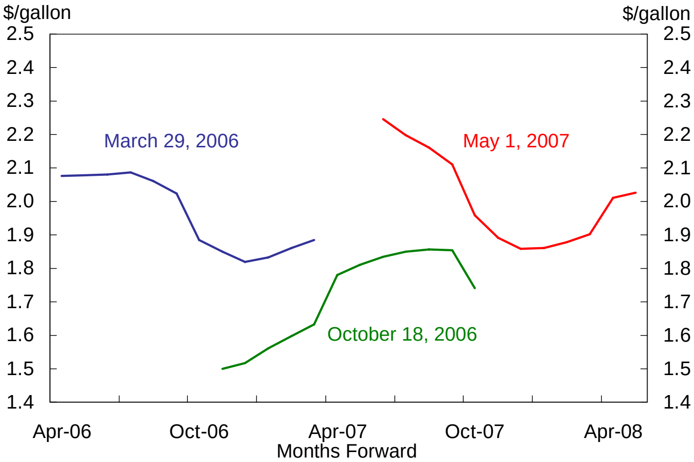
Source: Bureau of Labor Statistics

Note: Data through March 2007

Note: Shading represents NBER recessions, unless otherwise noted.

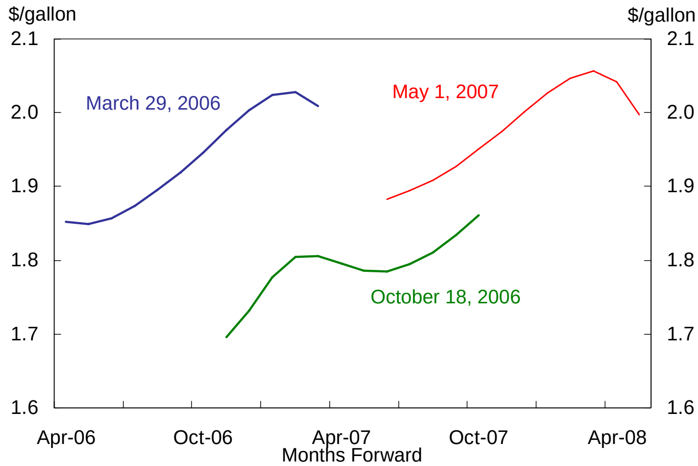
Energy Prices

Gasoline Futures



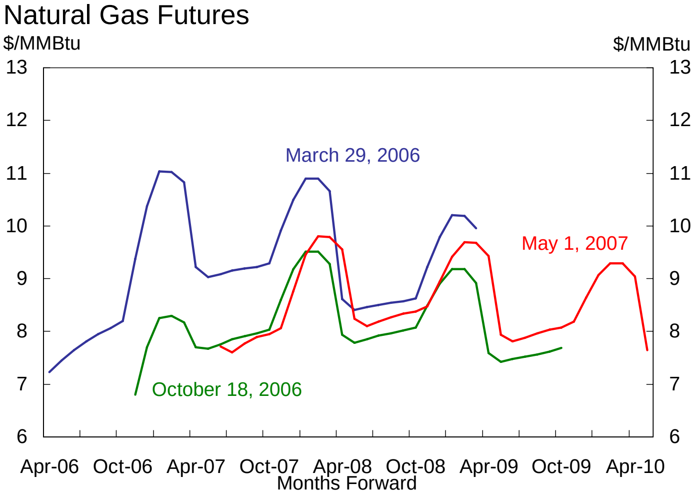
Source: Bloomberg, End-of-Day Quotes

Heating Oil Futures



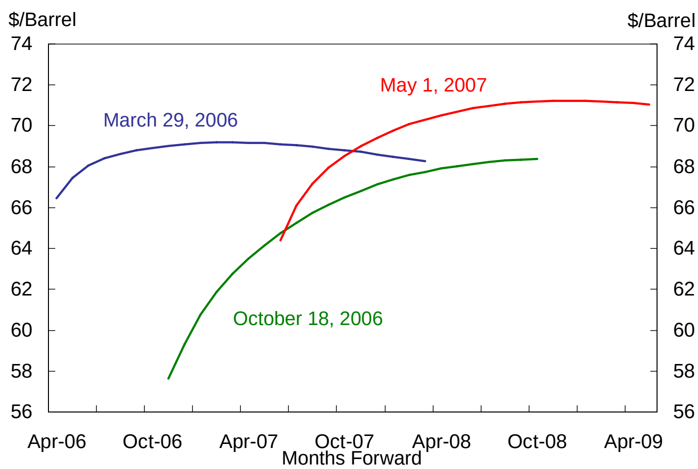
Source: Bloomberg, End-of-Day Quotes

Natural Gas Futures



Source: Bloomberg, End-of-Day Quotes

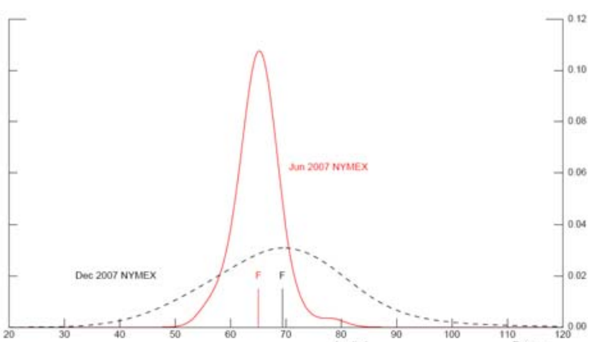
Crude Oil Futures



Source: Bloomberg, End-of-Day Quotes

Implied Distribution of Petroleum Prices

April 26, 2007



	Futures	Median	Implied Volatility	2/3 Bounds	Excess Skewness
Jun 2007 Contract	65.06	65.06	28.12	[61.21,68.71]	-0.03
Dec 2007 Contract	69.36	68.98	25.61	[56.36,81.07]	-0.09

*The implied distribution is calculated using the 'volatility smile' method. The implied volatility is an average of the volatilities comprising the smile. The 2/3 bounds are calculated directly from the distribution. The excess skewness is relative to the lognormal distribution.

Source: Federal Reserve Board

Note: Shading represents NBER recessions, unless otherwise noted.

Real Activity: Consumer Spending

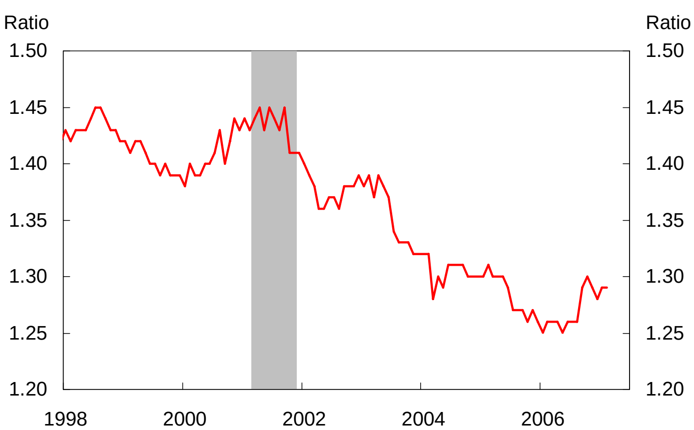
Real Personal Consumption Expenditures
(Quarterly Percent Change at Annual Rate)

	2006Q2	2006Q3	2006Q4	2007Q1
Personal Consumption Expenditures	2.6	2.8	4.2	3.8
Durable Goods	-0.1	6.4	4.4	7.3
Motor vehicles and parts	-1.3	8.6	-4.4	11.4
Furniture and household equipment	3.3	6.6	13.2	7.3
Other durable goods	-3.7	1.6	7.5	-0.7
Nondurable goods	1.4	1.5	5.9	2.9
Food	2.0	-0.7	6.6	0.8
Clothing and shoes	-3.7	5.5	6.8	6.8
Gasoline, fuel oil, and other energy goods	0.6	5.0	1.2	9.1
Other nondurable goods	3.5	1.9	6.5	2.1
Services	3.7	2.8	3.4	3.7
Housing services	2.4	2.5	3.2	2.1
Household operation services	8.4	9.6	3.6	5.9
Gas and electric	15.8	21.7	5.3	10.1
Other	3.4	1.7	2.3	2.8
Transportation services	1.7	1.4	3.8	2.5
Medical care services	2.6	2.1	3.5	4.6
Recreation services	0.8	2.9	3.3	-0.5
Other	6.1	1.6	3.4	4.8
Energy goods and services	6.2	11.0	2.6	9.6
PCE less food and energy	2.4	2.8	4.0	4.0

Source: Bureau of Economic Analysis

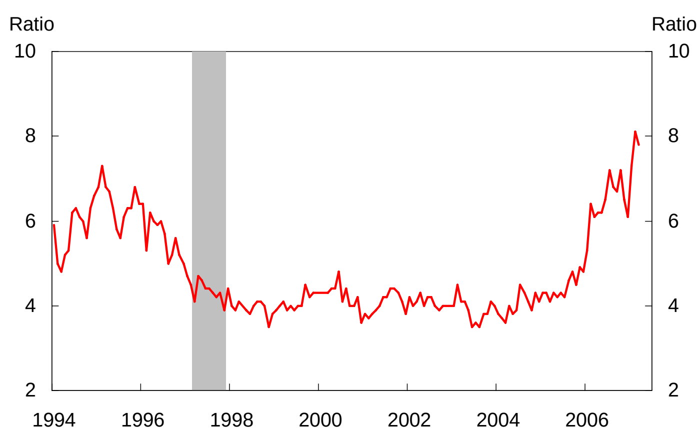
Note: Data through March 2007

Total Business Inventory-Sales Ratio



Source: Census Bureau

Month's Supply of New Single Family Housing
Ratio of Houses for Sale to Houses Sold

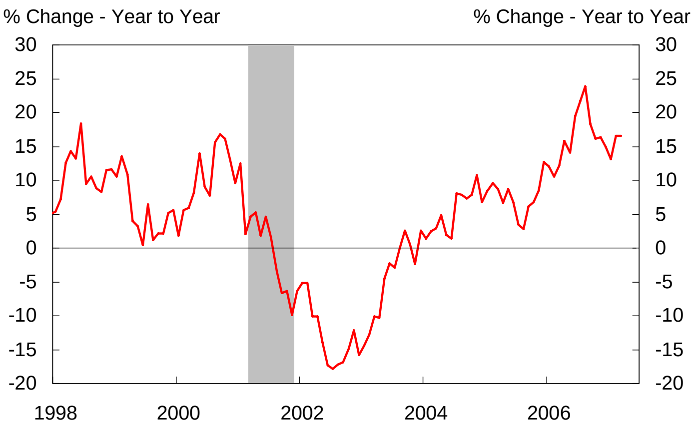


Source: Census Bureau

Note: Shading represents NBER recessions, unless otherwise noted.

Real Activity: Consumer Spending, ctd.

Private Nonresidential Construction

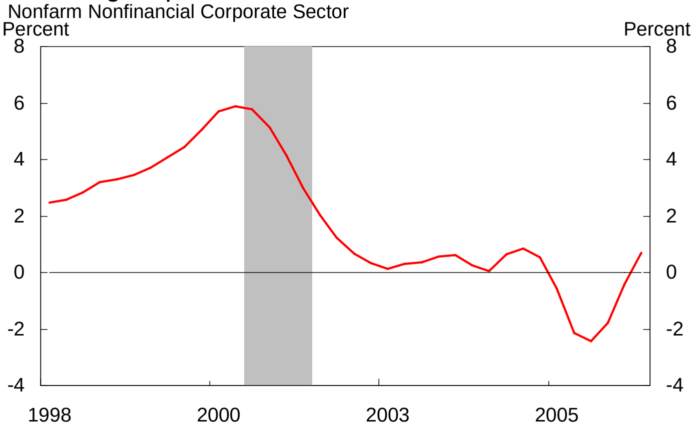


Source: Census Bureau

Household and Business Finances

Financing Gap as a Percent of Value Added

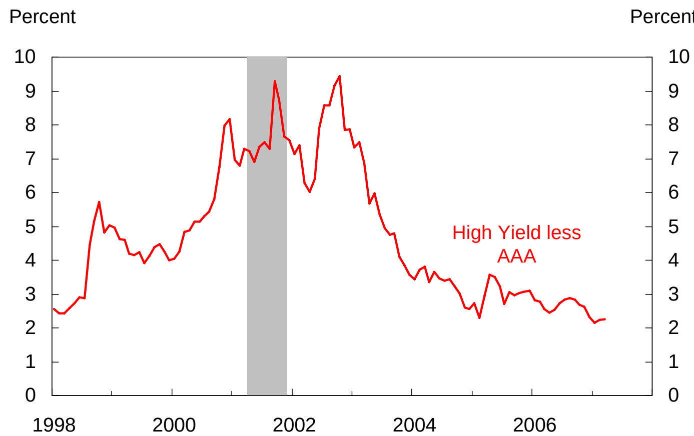
Nonfarm Nonfinancial Corporate Sector



Source: Flow of Funds, Federal Reserve Board, and BEA

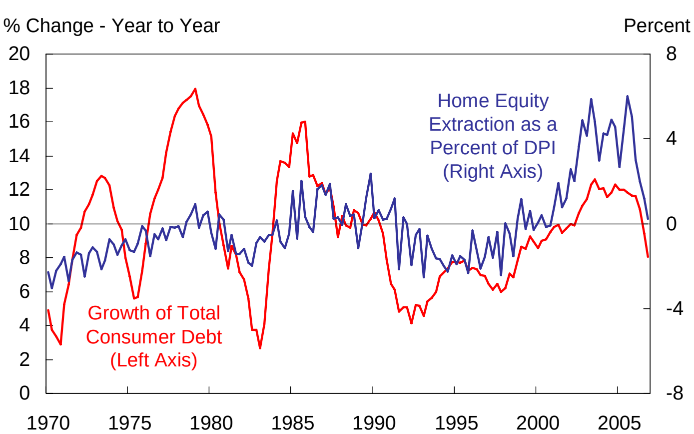
Financing gap is capital expenditures less the sum of U.S. internal funds and inventory valuation adjustment (IVA).

Corporate Bond Yield Spread



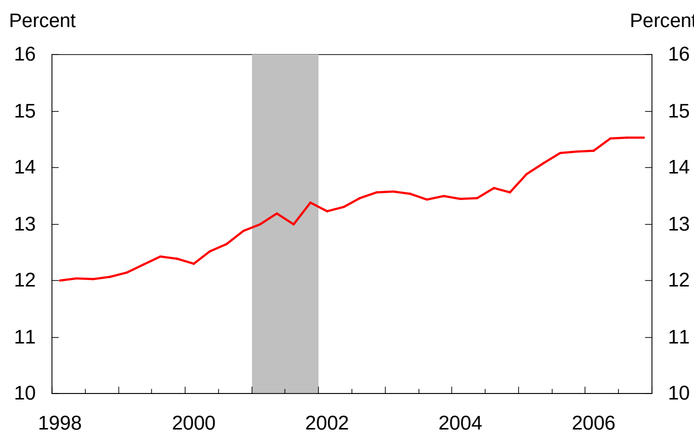
Source: Bloomberg

Consumer Debt and Home Equity Extraction



Source: Flow of Funds and Bureau of Economic Analysis

Consumer Debt Service over DPI

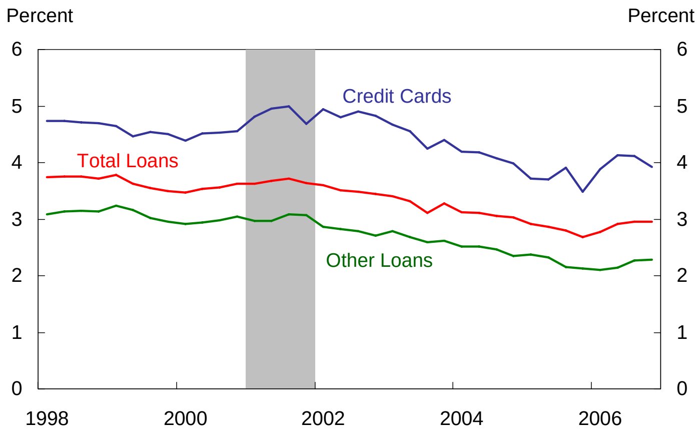


Source: Federal Reserve Board

Note: Shading represents NBER recessions, unless otherwise noted.

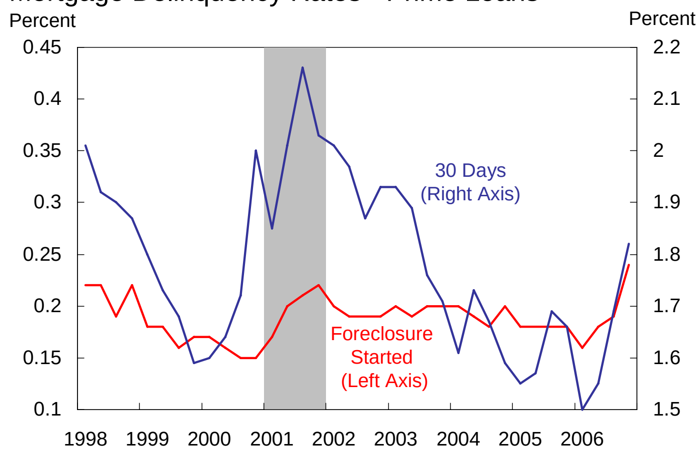
Household and Business Finances, ctd.

Consumer Installment Debt Delinquency Rates



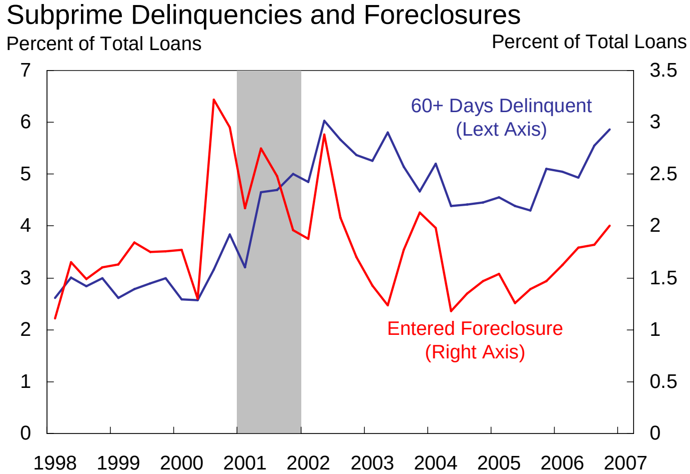
Source: Federal Reserve Board

Mortgage Delinquency Rates - Prime Loans



Source: Mortgage Bankers Association

Subprime Delinquencies and Foreclosures

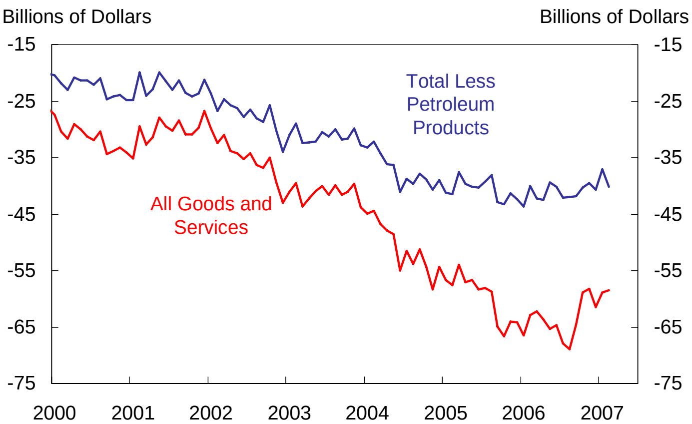


Source: Mortgage Bankers Association and Economy.com

Note: Shading represents NBER recessions, unless otherwise noted.

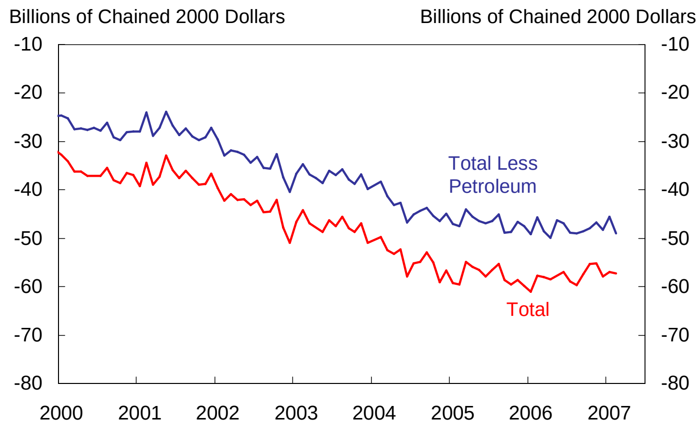
U.S. Trade: Goods and Services

Trade Balance in Goods and Services



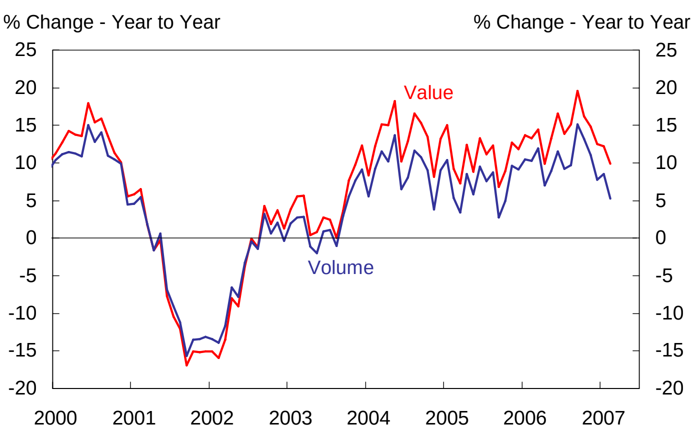
Source: Census Bureau

Real Trade Balance of Goods



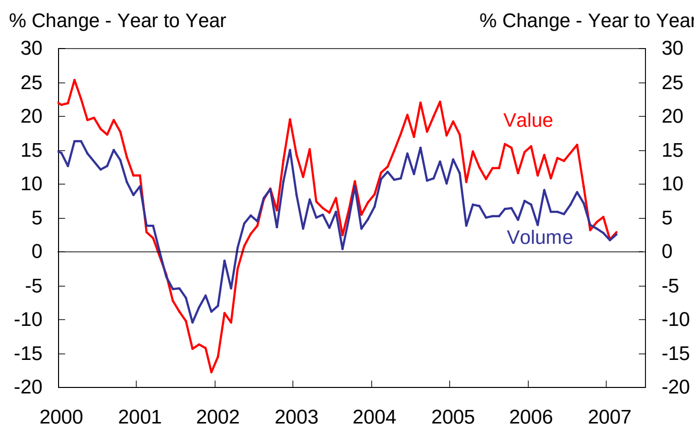
Source: Census Bureau

Exports of Goods



Source: Census Bureau

Imports of Goods



Source: Census Bureau

Note: Shading represents NBER recessions, unless otherwise noted.

Labor Market: Nonfarm Payroll Employment

Annualized Growth of Nonfarm Payroll Employment
(percent change at an annual rate)

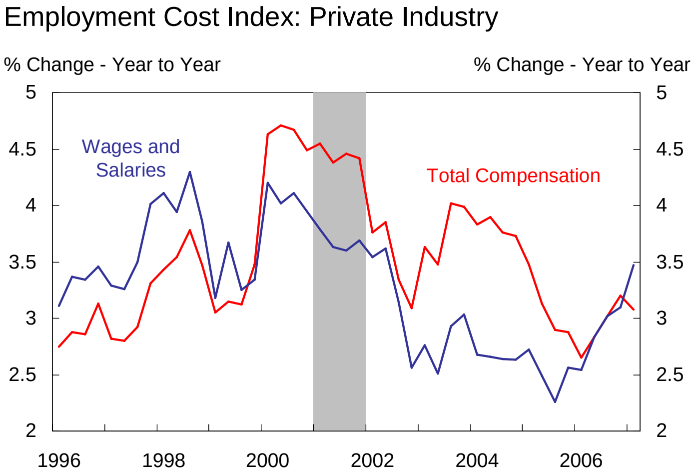
	24 Month	12 Month	6 Month	3 Month	1 Month
Total	1.8	1.8	1.4	1.8	2.7
Private	2.0	1.9	1.4	1.8	2.8
Goods-Producing	1.5	1.7	0.5	0.2	2.8
Construction	4.8	4.1	0.9	1.8	0.9
Manufacturing	-0.4	0.2	-0.1	-0.9	-1.0
Durables	0.3	0.9	0.4	-0.8	-0.5
Nondurables	-1.7	-1.1	-0.9	-1.1	-1.8
Private Service Providing	2.1	2.0	1.7	2.1	2.0
Wholesale Trade	2.0	2.3	1.7	1.7	2.1
Retail Trade	0.7	-0.3	-1.1	-0.2	-0.7
Transportation and Warehousing	2.4	2.4	2.5	2.3	3.2
Utilities	-1.1	-0.9	0.0	-0.1	0.2
Information	-0.6	-0.3	-0.4	0.5	0.4
Financial Activities	2.2	2.7	2.3	2.9	4.2
Professional and Business Services	3.5	3.1	2.4	2.2	1.3
Temporary Help Services	4.3	1.2	-0.8	-1.9	-3.9
Education and Health Services	2.8	2.6	2.7	3.5	3.5
Leisure and Hospitality	2.6	2.6	2.9	3.6	1.9
Food and Drinking Places	3.0	3.2	3.3	3.7	2.3
Other Services	0.3	0.8	0.8	0.9	2.9
Government	1.0	1.1	1.6	2.0	2.9
Federal Government	0.0	-0.1	-0.1	-0.6	-0.4
State Government	1.2	1.5	2.1	3.0	6.1
Local Government	1.1	1.2	1.7	2.1	2.5

Source: Bureau of Labor Statistics

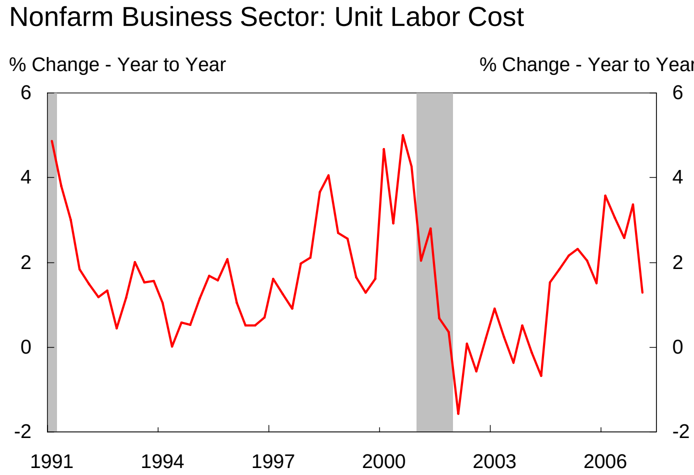
Note: Data through March 2007.

Note: Shading represents NBER recessions, unless otherwise noted.

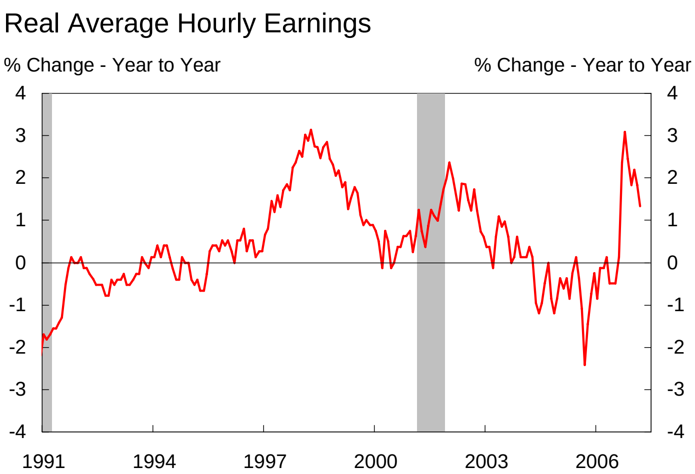
Labor Market: Labor Costs, Earnings and Hours



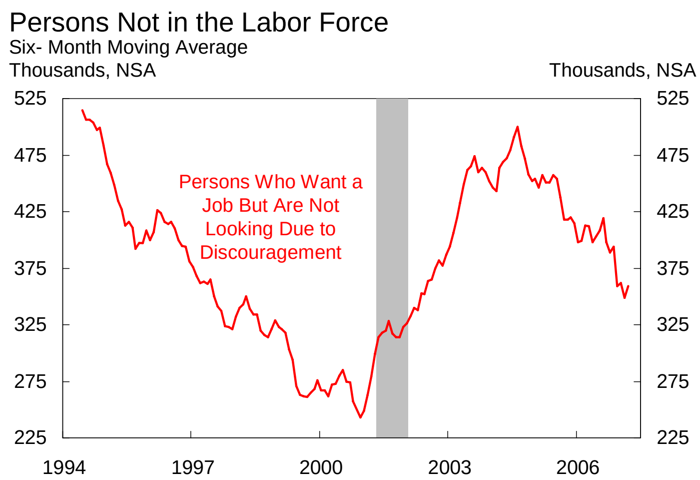
Source: Bureau of Labor Statistics



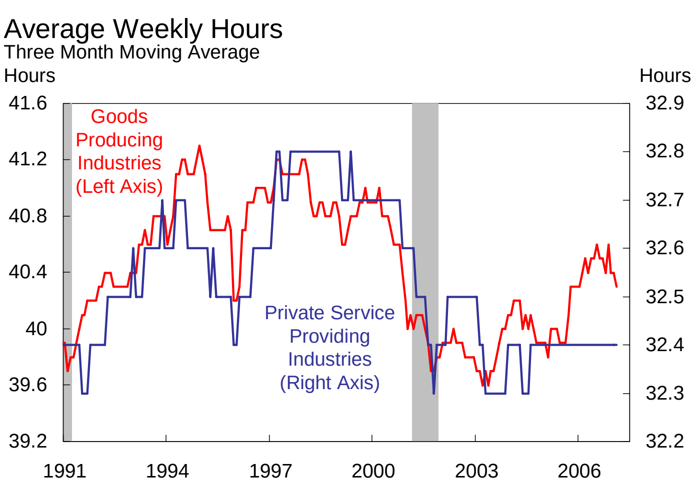
Source: Bureau of Labor Statistics



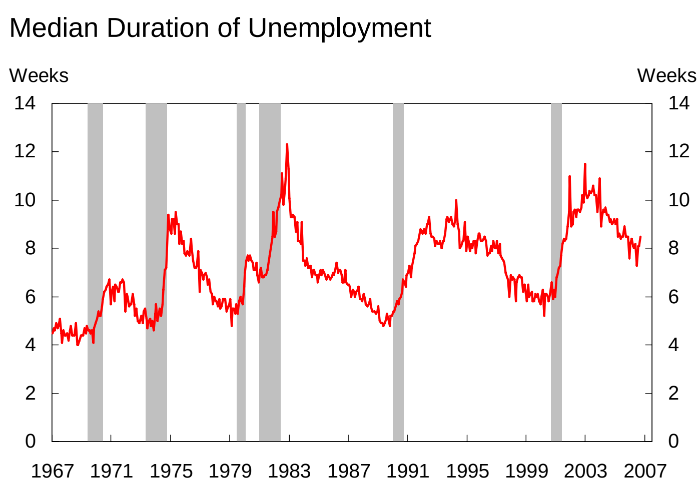
Source: Bureau of Labor Statistics



Source: Bureau of Labor Statistics



Source: Bureau of Labor Statistics

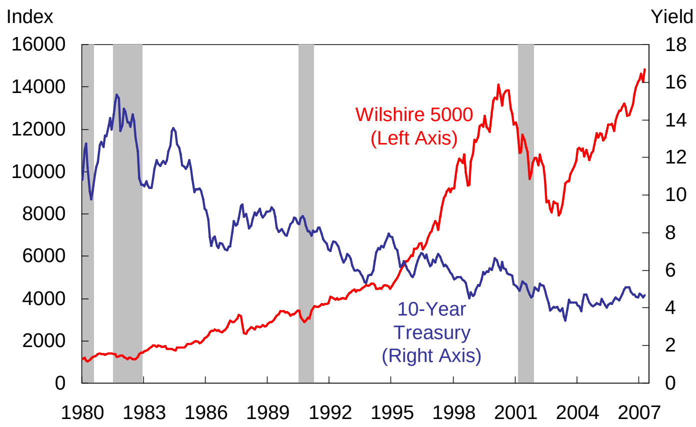


Source: Bureau of Labor Statistics

Note: Shading represents NBER recessions, unless otherwise noted.

Financial Markets

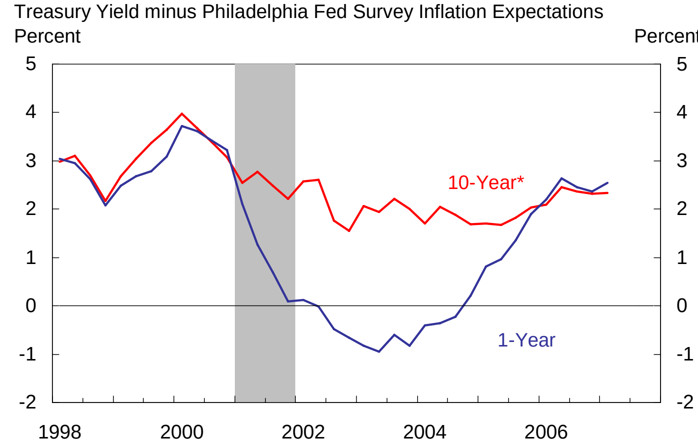
Ten-Year Treasury Bond and Wilshire 5000 Index



Source: Federal Reserve Board

Real Interest Rates

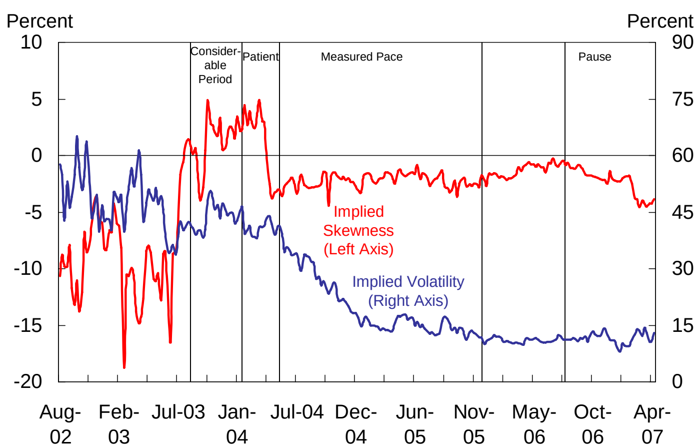
Treasury Yield minus Philadelphia Fed Survey Inflation Expectations



Source: Federal Reserve Board and Philadelphia Fed

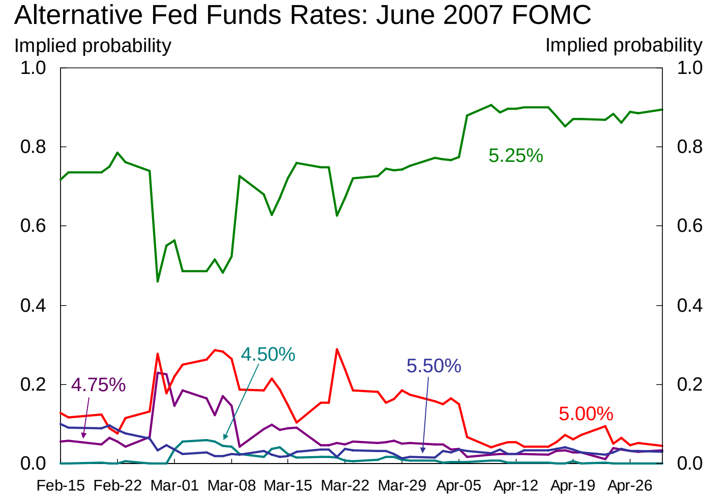
*After 2003, calculated using inflation-indexed bonds

Implied Skewness and Volatility of Fed Funds Rate



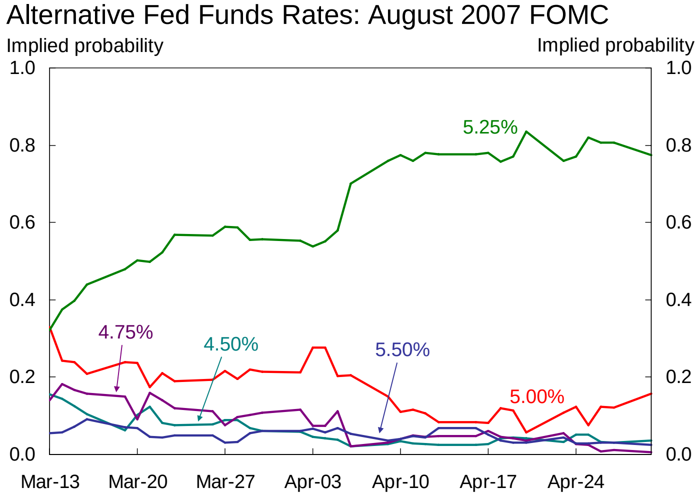
Source: CME and FRBNY Calculations

Alternative Fed Funds Rates: June 2007 FOMC



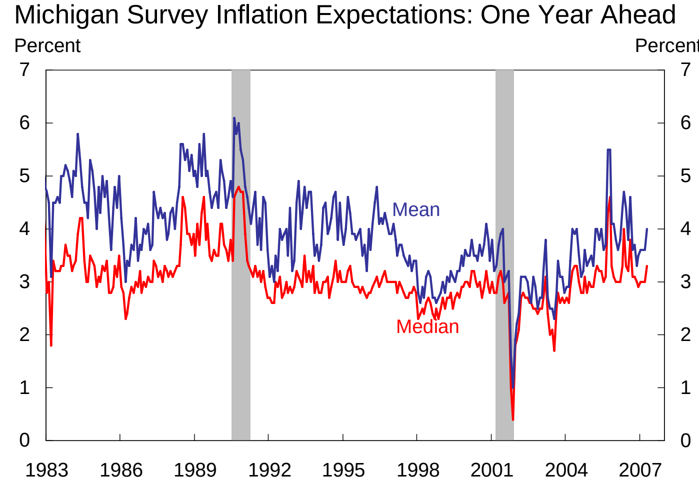
Source: Cleveland Federal Reserve Bank

Alternative Fed Funds Rates: August 2007 FOMC



Source: Cleveland Federal Reserve Bank

Michigan Survey Inflation Expectations: One Year Ahead



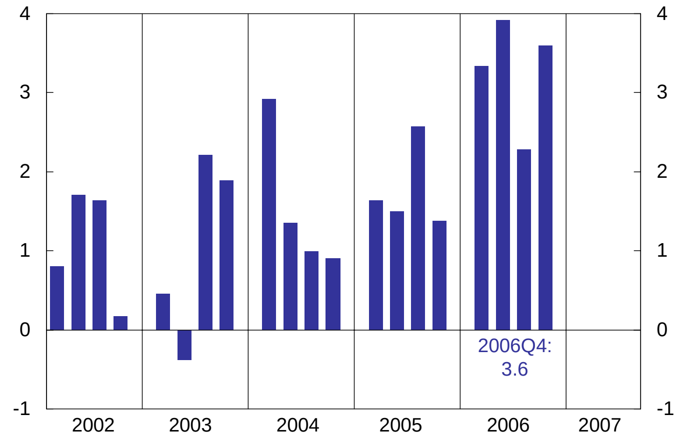
Source: University of Michigan

Note: Shading represents NBER recessions, unless otherwise noted.

International Overview

Euro Area Real GDP Growth

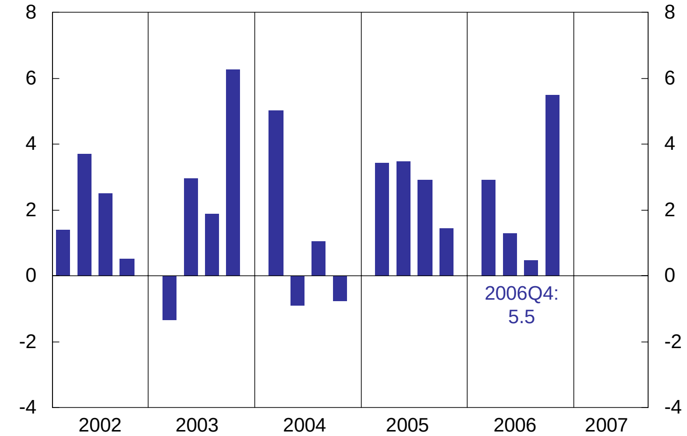
% Change at an Annual Rate | % Change at an Annual Rate



Source: Eurostat

Japan Real GDP Growth

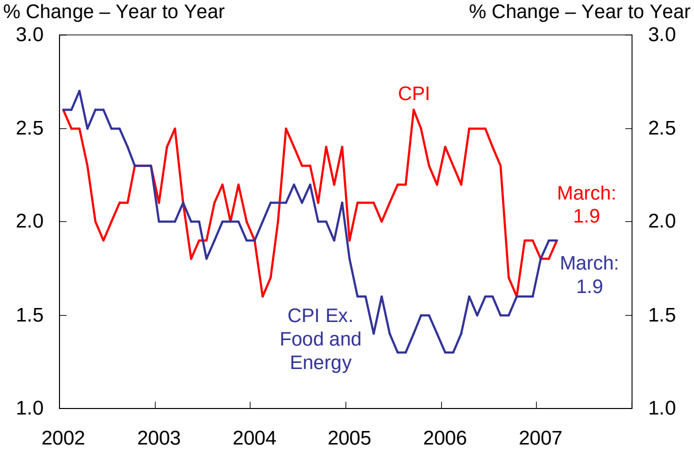
% Change at an Annual Rate | % Change at an Annual Rate



Source: BIS

Euro Area Inflation

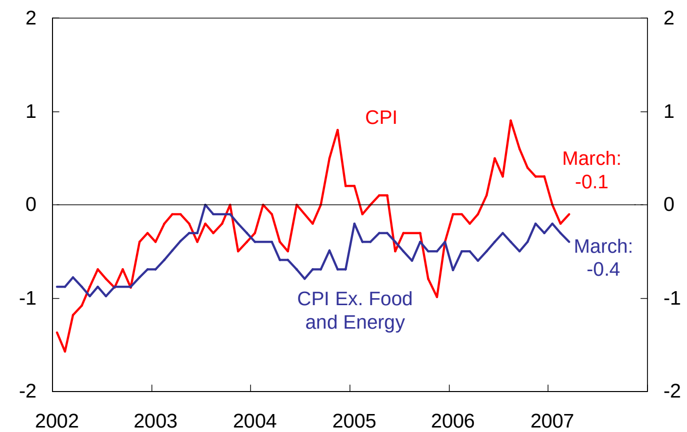
% Change – Year to Year | % Change – Year to Year



Source: BIS and Federal Reserve Board

Japan Inflation

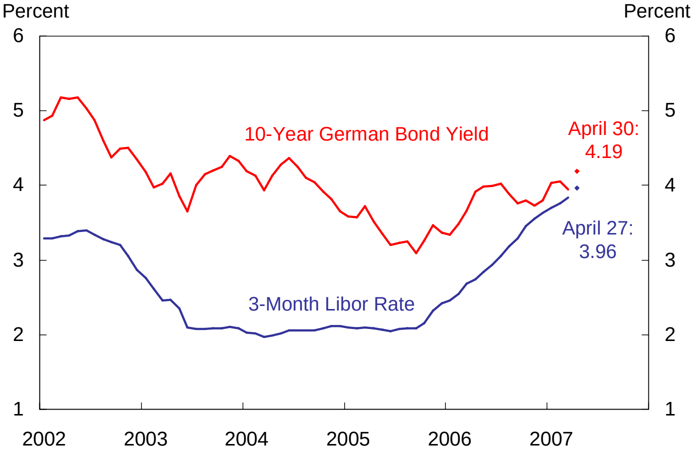
% Change – Year to Year | % Change – Year to Year



Source: BIS and Federal Reserve Board

Euro Area Short-Term and Long-Term Interest Rates

Percent | Percent

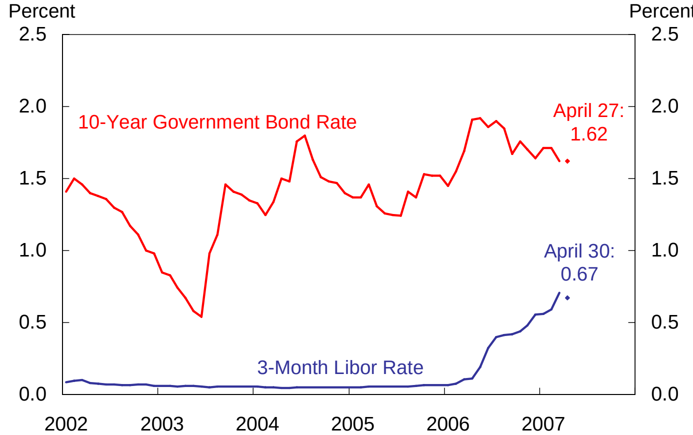


Source: BIS and Federal Reserve Board

Note: Data are monthly averages.

Japan Short-Term and Long-Term Interest Rates

Percent | Percent



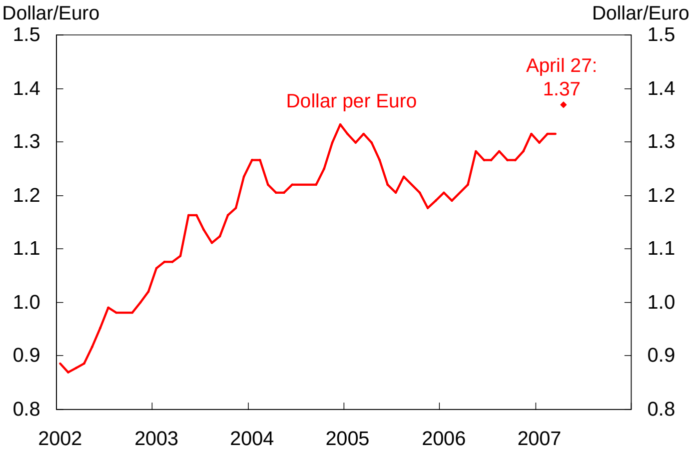
Source: Bloomberg and Federal Reserve Board

Note: Data are monthly averages.

Note: Shading represents NBER recessions, unless otherwise noted.

International Overview, ctd.

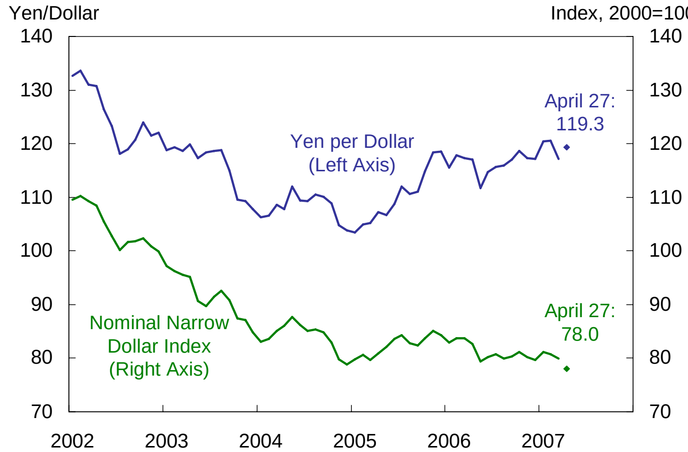
Euro-Dollar Exchange Rates



Source: BIS

Note: Data are monthly averages.

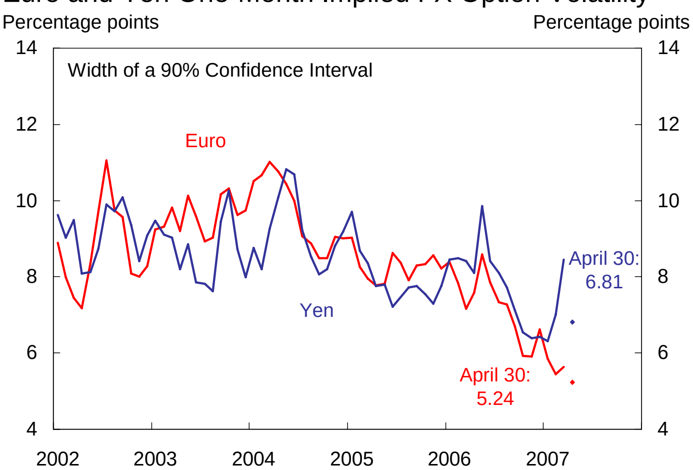
Yen-Dollar Exchange Rate and Narrow Dollar Index



Source: BIS and Federal Reserve Board

Note: Data are monthly averages.

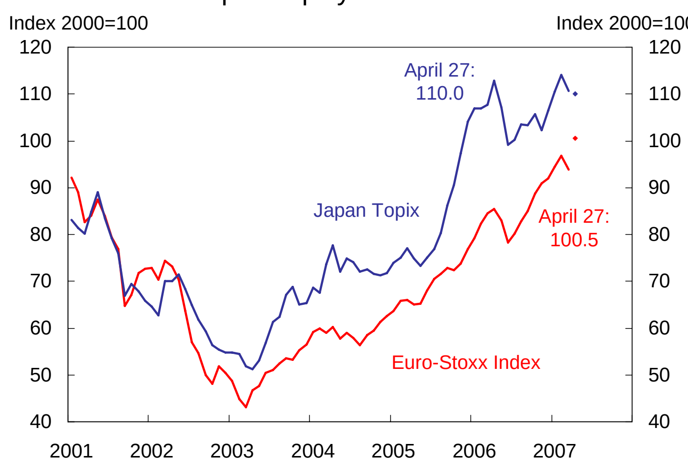
Euro and Yen One-Month Implied FX Option Volatility



Source: Reuters

Note: Data are monthly averages.

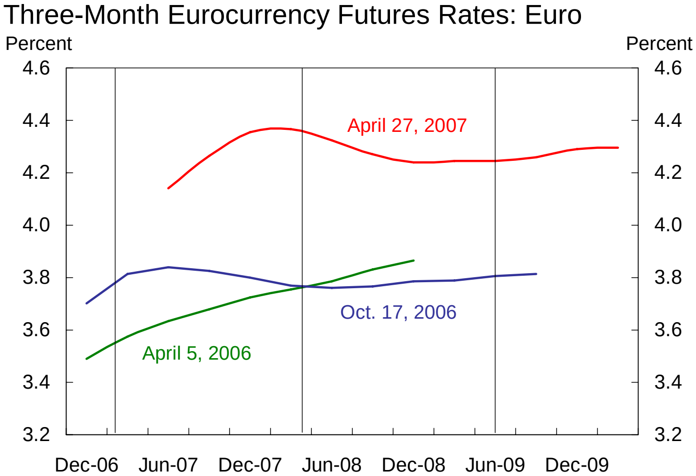
Euro Area and Japan Equity Indices



Source: BIS and Bloomberg

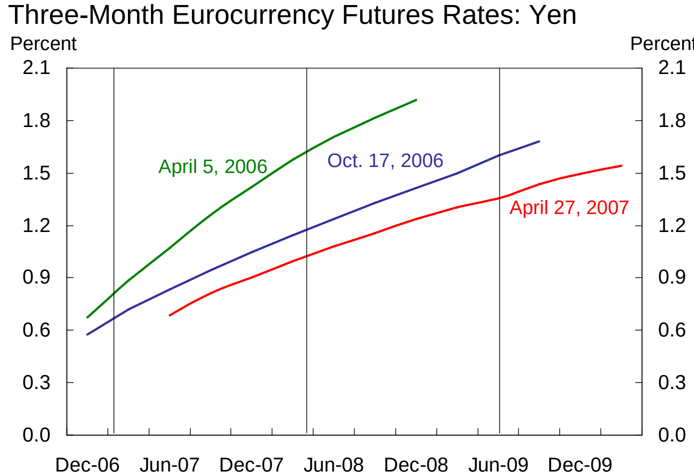
Note: Data are monthly averages.

Three-Month Eurocurrency Futures Rates: Euro



Source: Datastream

Three-Month Eurocurrency Futures Rates: Yen



Source: Datastream

Note: Shading represents NBER recessions, unless otherwise noted.