

Page 11: **Implied One-Year Forward Rates** are calculated by this Bank from Treasury constant maturity yields. Yields to maturity, $R(m)$, for securities with $m = 1, \dots, 10$ years to maturity are obtained by linear interpolation between reported yields. These yields are smoothed by fitting the regression suggested by Nelson and Siegel (1987),

$$R(m) = a_0 + (a_1 + a_2)(1 - e^{-m/50})/(m/50) - a_2 \times e^{-m/50},$$

and forward rates are calculated from these smoothed yields using equation (a) in table 13.1 of Shiller (1990),

$$f(m) = [D(m)R(m) - D(m-1)] / [D(m) - D(m-1)],$$

where duration is approximated as $D(m) = (1 - e^{-R(m) \times m})/R(m)$. These rates are linear approximations to the true instantaneous forward rates; see Shiller (1990). For a discussion of the use of forward rates as indicators of inflation expectations, see Sharpe (1997). **Rates on 3-Month Eurodollar Futures and Rates on Selected Federal Funds Futures Contracts** trace through time the yield on three specific contracts. **Rates on Federal Funds Futures on Selected Dates** displays a single day's snapshot of yields for contracts expiring in the months shown on the horizontal axis. **Inflation-Indexed Treasury Securities and Yield Spreads** are those plotted on page 3. **Inflation-Indexed 10-Year Government Notes** shows the yield of an inflation-indexed note that is scheduled to mature in approximately (but not greater than) 10 years. The current French note has a maturity date of 7/25/2015, the current U.K. note has a maturity date of 8/16/2013, and the current U.S. note has a maturity date of 7/15/2015. **Inflation-Indexed Treasury Yield Spreads and Inflation-Indexed 10-Year Government Yield Spreads** equal the difference between the yields on the most recently issued inflation-indexed securities and the unadjusted security yields of similar maturity.

Page 12: **Velocity** (for MZM and M2) equals the ratio of GDP, measured in current dollars, to the level of the monetary aggregate. **MZM and M2 Own Rates** are weighted averages of the rates received by households and firms on the assets included in the aggregates. Prior to 1982, the 3-month T-bill rates are secondary market yields. From 1982 forward, rates are 3-month constant maturity yields.

Page 13: **Real Gross Domestic Product** is GDP as measured in chained 2000 dollars. The **Gross Domestic Product Price Index** is the implicit price deflator for GDP, which is defined by the Bureau of Economic Analysis, U.S. Department of Commerce, as the ratio of GDP measured in current dollars to GDP measured in chained 2000 dollars.

Page 14: **Investment Securities** are all securities held by commercial banks in both investment and trading accounts.

Page 15: **Inflation Rate Differentials** are the differences between the foreign consumer price inflation rates and year-over-year changes in the U.S. all-items Consumer Price Index.

Page 17: **Treasury Yields** are Treasury constant maturities as reported in the Board of Governors of the Federal Reserve System's H.15 release.

Sources

Agence France Trésor: French note yields.

Bank of Canada: Canadian note yields.

Bank of England: U.K. note yields.

Board of Governors of the Federal Reserve System:

Monetary aggregates and components: H.6 release. Bank credit and components: H.8 release. Consumer credit: G.19 release. Required reserves, excess reserves, clearing balance contracts, and discount window borrowing: H.4.1 and H.3 releases. Interest rates: H.15 release. Nonfinancial commercial paper: Board of Governors website. Nonfinancial debt: Z.1 release. M2 own rate.

Bureau of Economic Analysis: GDP.

Bureau of Labor Statistics: CPI.

Chicago Board of Trade: Federal funds futures contract.

Chicago Mercantile Exchange: Eurodollar futures.

Congressional Budget Office: Potential real GDP.

Federal Reserve Bank of Philadelphia: Survey of Professional Forecasters inflation expectations.

Federal Reserve Bank of St. Louis: Adjusted monetary base and adjusted reserves, monetary services index, MZM own rate, one-year forward rates.

Organization for Economic Cooperation and Development: International interest and inflation rates.

Standard & Poor's: Stock price-earnings ratio, stock price composite index.

University of Michigan Survey Research Center: Median expected price change.

U.S. Department of the Treasury: U.S. security yields.

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Note: *Available on the Internet at research.stlouisfed.org/publications/review/.

Are Banks Vulnerable to a Housing Bust?

House prices in the United States have soared over the past five years. A common measure of the trend in house prices is the repeat sales index produced by the Office of Federal Housing Enterprise Oversight. According to this measure, between 2001:Q1 and 2005:Q3, U.S. house prices increased by an average of 40 percent in nominal terms and 29 percent relative to the consumer price index (excluding the shelter component of the index). This rapid appreciation has led some analysts to forecast a correction in real house prices—possibly even a decline in nominal prices.

A decline in house prices would reduce household wealth, which could restrain the growth of consumer expenditures and overall economic activity. Mortgage default rates could increase sharply if a decline in house prices were accompanied by slower growth of household income or rising interest rates. Furthermore, a decline in house prices would reduce the value of collateral behind the \$8 trillion residential mortgage debt market and would thereby increase the losses lenders experience on loan defaults. The popularity of nontraditional mortgage loans, such as interest-only loans and adjustable-rate loans that permit negative amortization ("option ARMs"), raises additional concern about default risk because such loans expose borrowers to more interest-rate and house-price risk than traditional fixed-rate, amortizing loans.

How exposed are banks to residential real estate? As a share of their total assets, commercial bank holdings of residential real estate loans and securities have risen markedly since the mid-1990s. For example, between 1999:Q1 and 2005:Q1, the sum of bank holdings of 1-to-4-family residential real estate loans and the market value of their holdings of mortgage-backed securities (excluding those issued or guaranteed by a government agency or government-sponsored enterprise, such as Fannie Mae and Freddie Mac) increased from about 15 percent of total bank assets to nearly 20 percent. More comprehensive measures that include all residential real estate loans show similar increases in exposure, as does the ratio of untapped home equity lines of credit to total bank assets.

These simple exposure measures provide little information, however, about whether banks today are more vulnerable to a decline in house prices than they were in the past. Although the share of bank assets consisting of residential real estate loans and securities has increased since 1999, so too has bank equity-capital relative to total bank assets. Between 1999:Q1 and 2005:Q1, equity-capital increased from 8.5 percent of total bank assets to 9.9 percent of total assets. Because capital serves as a cushion against loan and security losses, the increase in real estate loans and securities as a share of bank assets is less worrisome than it would have otherwise been.

The national averages, of course, mask considerable variation across banks in their holdings of residential real estate loans and securities and in their capital-to-assets ratios. One might assume that risks are greater for banks located in regions that have seen the most rapid house price appreciation. Loan-to-value ratios have tended to be lower in such regions, however, suggesting that the mortgage market may have adapted to a possibly higher risk of house price declines in those states. Further, the growth of the mortgage-backed securities market and proliferation of interstate branch banking may have reduced banks' exposure to local real estate shocks by facilitating greater geographic diversification of their real estate loan and securities portfolios. Finally, a portion of the residential real estate loans and securities held by banks are guaranteed by third parties, and many banks purchase only highly rated securities that have little credit risk. Thus, to get a complete picture of how vulnerable individual banks are to a decline in house prices, we need to know more about the composition of their real estate loan and securities portfolios.

—David C. Wheelock

Views expressed do not necessarily reflect official positions of the Federal Reserve System.

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Conventions used in this publication:

1. Unless otherwise indicated, data are monthly.
2. Shaded areas indicate recessions, as determined by the National Bureau of Economic Research.
3. *Percent change at an annual rate* is the simple, not compounded, monthly percent change multiplied by 12. For example, using consecutive months, the percent change at an annual rate in x between month $t-1$ and the current month t is: $[(x_t/x_{t-1})-1] \times 1200$. Note that this differs from *National Economic Trends*. In that publication, monthly percent changes are compounded and expressed as annual growth rates.
4. The *percent change from year ago* refers to the percent change from the same period in the previous year. For example, the percent change from year ago in x between month $t-12$ and the current month t is: $[(x_t/x_{t-12})-1] \times 100$.

We welcome your comments addressed to:

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On March 23, 2006, the Board of Governors of the Federal Reserve System will cease the publication of the M3 monetary aggregate. It will also cease publishing the following components: large-denomination time deposits, RPs, and eurodollars.

or to:

stlsFRED@stls.frb.org

Definitions

M1: The sum of currency held outside the vaults of depository institutions, Federal Reserve Banks, and the U.S. Treasury; travelers checks; and demand and other checkable deposits issued by financial institutions (except demand deposits due to the Treasury and depository institutions), minus cash items in process of collection and Federal Reserve float.

MZM (money, zero maturity): M2 minus small-denomination time deposits, plus institutional money market mutual funds (that is, those included in M3 but excluded from M2). The label MZM was coined by William Poole (1991); the aggregate itself was proposed earlier by Motley (1988).

M2: M1 plus savings deposits (including money market deposit accounts) and small-denomination (under \$100,000) time deposits issued by financial institutions; and shares in retail money market mutual funds (funds with initial investments under \$50,000), net of retirement accounts.

M3: M2 plus large-denomination (\$100,000 or more) time deposits; repurchase agreements issued by depository institutions; Eurodollar deposits, specifically, dollar-denominated deposits due to nonbank U.S. addresses held at foreign offices of U.S. banks worldwide and all banking offices in Canada and the United Kingdom; and institutional money market mutual funds (funds with initial investments of \$50,000 or more).

Bank Credit: All loans, leases, and securities held by commercial banks.

Domestic Nonfinancial Debt: Total credit market liabilities of the U.S. Treasury, federally sponsored agencies, state and local governments, households, and nonfinancial firms. End-of-period basis.

Adjusted Monetary Base: The sum of currency in circulation outside Federal Reserve Banks and the U.S. Treasury, deposits of depository financial institutions at Federal Reserve Banks, and an adjustment for the effects of changes in statutory reserve requirements on the quantity of base money held by depositories. This spliced chain index is numerically larger than the Board of Governors' measure, which excludes vault cash not used to satisfy statutory reserve requirements and Federal Reserve Bank deposits used to satisfy required clearing balance contracts; see Anderson and Rasche (1996a, 2001, 2003).

Adjusted Reserves: The sum of vault cash and Federal Reserve Bank deposits held by depository institutions and an adjustment for the effects of changes in statutory reserve requirements on the quantity of base money held by depositories. This spliced chain index is numerically larger than the Board of Governors' measure, which excludes vault cash not used to satisfy statutory reserve requirements and Federal Reserve Bank deposits used to satisfy required clearing balance contracts; see Anderson and Rasche (1996a, 2001, 2003).

Monetary Services Index: An index that measures the flow of monetary services received by households and firms from their holdings of liquid assets; see Anderson, Jones, and Nesmith (1997). Indexes are shown for the assets included in M2, with additional data at research.stlouisfed.org/msi/index.html.

Note: M1, M2, M3, Bank Credit, and Domestic Nonfinancial Debt are constructed and published by the Board of Governors of the Federal Reserve System. For details, see *Statistical Supplement to the Federal Reserve Bulletin*, tables 1.21 and 1.26. MZM, Adjusted Monetary Base, Adjusted Reserves, and Monetary Services Index are constructed and published by the Research Division of the Federal Reserve Bank of St. Louis.

Notes

Page 3: Readers are cautioned that, since early 1994, the level and growth of M1 have been depressed by retail sweep programs that reclassify transactions deposits (demand deposits and other checkable deposits) as savings deposits overnight, thereby reducing banks' required reserves; see Anderson and Rasche (2001) and research.stlouisfed.org/aggreg/swdata.html. **Primary Credit Rate, Discount Rate, and Intended Federal Funds Rate** shown in the chart **Reserve Market Rates** are plotted as of the date of the change, while the **Effective Federal Funds Rate** is plotted as of the end of the month. Interest rates in the table are monthly averages from the Board of Governors H.15 Statistical Release. The **Treasury Yield Curve** and **Real Treasury Yield Curve** show constant maturity yields calculated by the U.S. Treasury for securities 5, 7, 10, and 20 years to maturity. **Inflation-Indexed Treasury Yield Spreads** are a

measure of inflation compensation at those horizons, and it is simply the nominal constant maturity yield less the real constant maturity yield. Daily data and descriptions are available at research.stlouisfed.org/fred2/. See also *Statistical Supplement to the Federal Reserve Bulletin*, table 1.35. The 30-year constant maturity series was discontinued by the Treasury as of February 18, 2002.

Page 5: **Checkable Deposits** is the sum of demand and other checkable deposits. **Savings Deposits** is the sum of money market deposit accounts and passbook and statement savings. **Time Deposits** have a minimum initial maturity of 7 days. **Large Time Deposits** are deposits of \$100,000 or more. **Retail and Institutional Money Market Mutual Funds** are as included in M2 and the non-M2 component of M3, respectively.

Page 7: **Excess Reserves plus RCB (Required Clearing Balance) Contracts** equals the amount of deposits at Federal Reserve Banks held by depository institutions but not applied to satisfy statutory reserve requirements. (This measure excludes the vault cash held by depository institutions that is not applied to satisfy statutory reserve requirements.) **Consumer Credit** includes most short- and intermediate-term credit extended to individuals. See *Statistical Supplement to the Federal Reserve Bulletin*, table 1.55.

Page 8: **Inflation Expectations** measures include the quarterly Federal Reserve Bank of Philadelphia *Survey of Professional Forecasters*, the monthly University of Michigan Survey Research Center's *Surveys of Consumers*, and the annual Federal Open Market Committee (FOMC) range as reported to the Congress in the February testimony that accompanies the Monetary Policy Report to the Congress. Beginning February 2000, the FOMC began using the personal consumption expenditures (PCE) price index to report its inflation range; the FOMC then switched to the PCE chain-type price index excluding food and energy prices ("core") beginning July 2004. Accordingly, neither are shown on this graph. **CPI Inflation** is the percentage change from a year ago in the consumer price index for all urban consumers. **Real Interest Rates** are ex post measures, equal to nominal rates minus CPI inflation.

Page 9: **FOMC Intended Federal Funds Rate** is the level (or midpoint of the range, if applicable) of the federal funds rate that the staff of the FOMC expected to be consistent with the desired degree of pressure on bank reserve positions. In recent years, the FOMC has set an explicit target for the federal funds rate.

Page 10: **Federal Funds Rate and Inflation Targets** shows the observed federal funds rate, quarterly, and the level of the funds rate implied by applying Taylor's (1993) equation

$$f_t^* = 2.5 + \pi_{t-1} + (\pi_{t-1} - \pi^*)/2 + 100 \times (y_{t-1} - y_{t-1}^P)/2$$

to five alternative target inflation rates, $\pi^* = 0, 1, 2, 3, 4$ percent, where f_t^* is the implied federal funds rate, π_{t-1} is the previous period's inflation rate (PCE) measured on a year-over-year basis, y_{t-1} is the log of the previous period's level of real gross domestic product (GDP), and y_{t-1}^P is the log of an estimate of the previous period's level of potential output. **Potential Real GDP** is as estimated by the Congressional Budget Office.

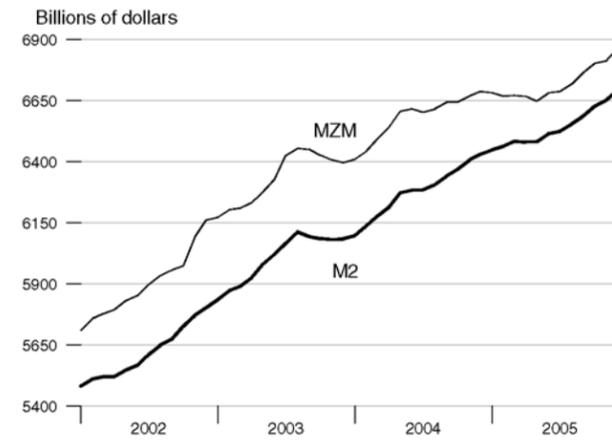
Monetary Base Growth and Inflation Targets shows the quarterly growth of the adjusted monetary base (modified to include an estimate of the effect of sweep programs) implied by applying McCallum's (1988, 1993) equation

$$\Delta MB_t^* = \pi^* + (10\text{-year moving average growth of real GDP}) - (4\text{-year moving average of base velocity growth})$$

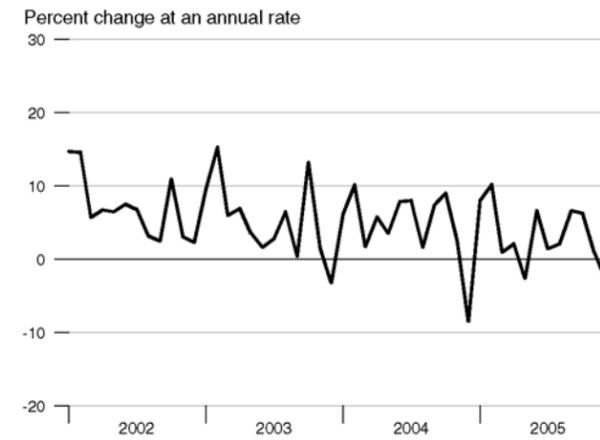
to five alternative target inflation rates, $\pi^* = 0, 1, 2, 3, 4$ percent, where ΔMB_t^* is the implied growth rate of the adjusted monetary base. The 10-year moving average growth of real GDP for a quarter t is calculated as the average quarterly growth during the previous 40 quarters, at an annual rate, by the formula $((y_t - y_{t-40})/40) \times 400$, where y_t is the log of real GDP. The 4-year moving average of base velocity growth is calculated similarly. To adjust the monetary base for the effect of retail-deposit sweep programs, we add to the monetary base an amount equal to 10 percent of the total amount swept, as estimated by the Federal Reserve Board staff. These estimates are imprecise, at best. Sweep program data are found at research.stlouisfed.org/aggreg/swdata.html.

		M1	MZM	M2	M3
Percent change at an annual rate					
	2001	3.33	15.88	8.77	11.47
	2002	4.92	12.87	7.58	8.04
	2003	6.49	7.41	6.93	6.38
	2004	5.57	3.93	4.54	5.10
	2005	1.77	2.14	4.23	6.12
<hr/>					
2003	1	8.38	7.85	6.90	6.69
	2	10.59	5.42	7.48	5.15
	3	7.63	10.46	7.69	7.59
	4	2.29	-2.08	-0.45	-0.46
2004	1	6.21	2.44	3.57	5.35
	2	5.88	8.59	7.75	9.14
	3	3.34	2.01	3.43	4.23
	4	5.71	2.78	5.77	4.03
2005	1	0.46	0.44	3.98	5.51
	2	-0.58	-0.48	1.68	5.88
	3	-1.89	3.42	3.86	8.27
	4	2.34	6.10	6.19	9.68
<hr/>					
2003	Dec	6.72	-1.96	0.72	0.04
<hr/>					
2004	Jan	-1.50	2.62	2.66	7.72
	Feb	16.89	6.26	7.93	8.61
	Mar	11.57	9.16	7.61	10.03
	Apr	-0.20	8.85	7.23	8.25
	May	3.87	11.92	11.21	11.66
	Jun	5.76	1.83	2.08	4.89
	Jul	-6.79	-2.46	0.30	0.30
	Aug	15.81	2.50	3.98	4.57
	Sep	3.58	4.94	6.60	6.49
	Oct	0.95	0.08	5.31	1.43
	Nov	13.79	4.48	7.02	4.02
	Dec	-2.01	3.44	4.52	6.27
<hr/>					
2005	Jan	-8.07	-0.89	3.45	6.65
	Feb	6.48	-2.58	2.83	4.56
	Mar	5.81	0.49	3.70	3.75
	Apr	-15.40	-0.62	-0.59	6.49
	May	11.17	-3.47	0.27	5.26
	Jun	0.95	6.07	6.10	10.61
	Jul	-17.44	0.91	1.76	3.52
	Aug	14.75	5.40	5.38	12.52
	Sep	-6.67	8.54	6.14	11.84
	Oct	3.74	6.64	7.16	9.86
	Nov	4.44	1.81	4.65	4.86
	Dec	-0.33	8.66	6.97	10.99

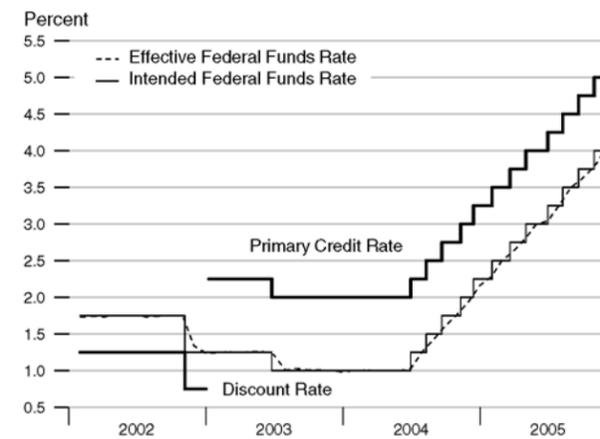
M2 and MZM



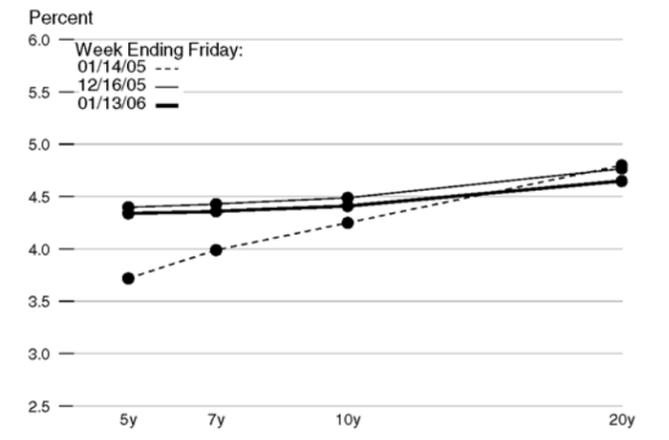
Adjusted Monetary Base



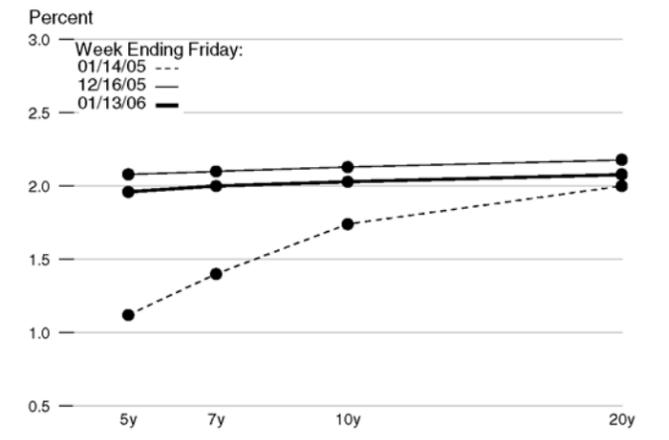
Reserve Market Rates



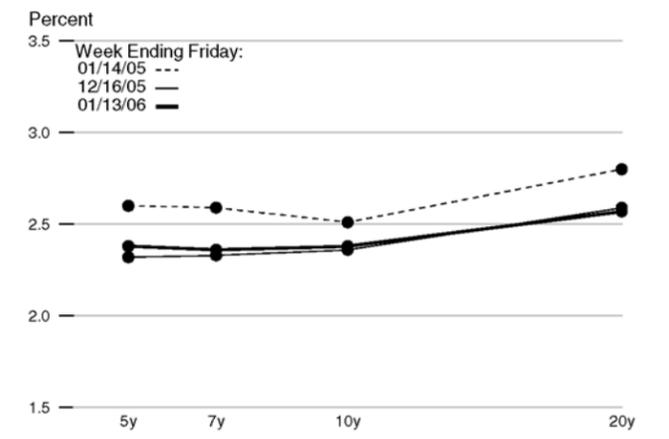
Treasury Yield Curve



Real Treasury Yield Curve

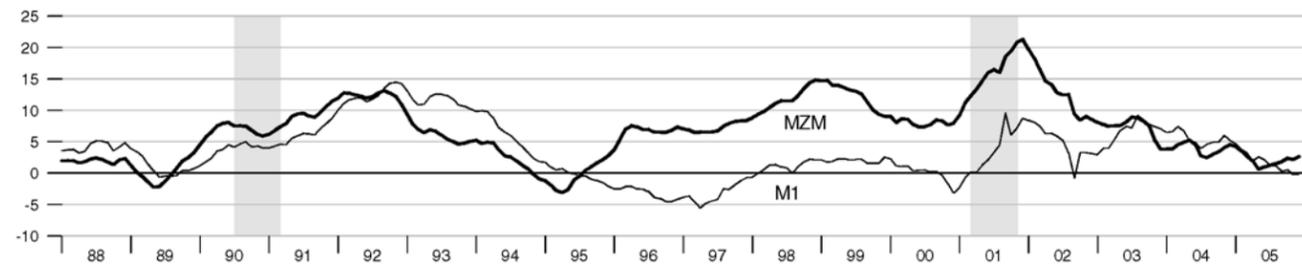


Inflation-Indexed Treasury Yield Spreads



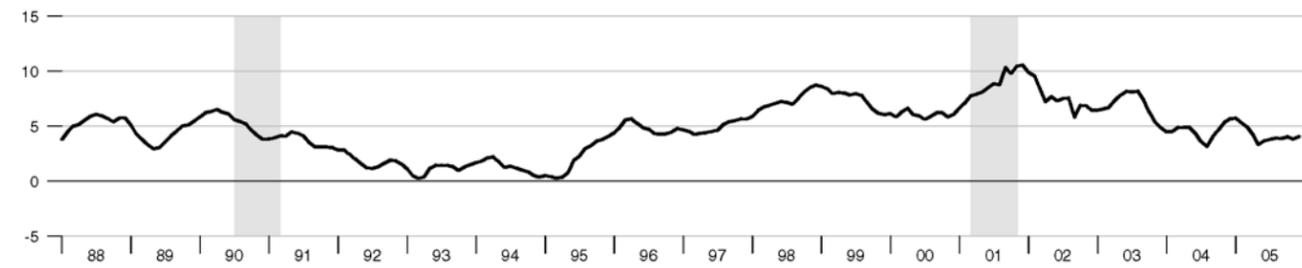
MZM and M1

Percent change from year ago



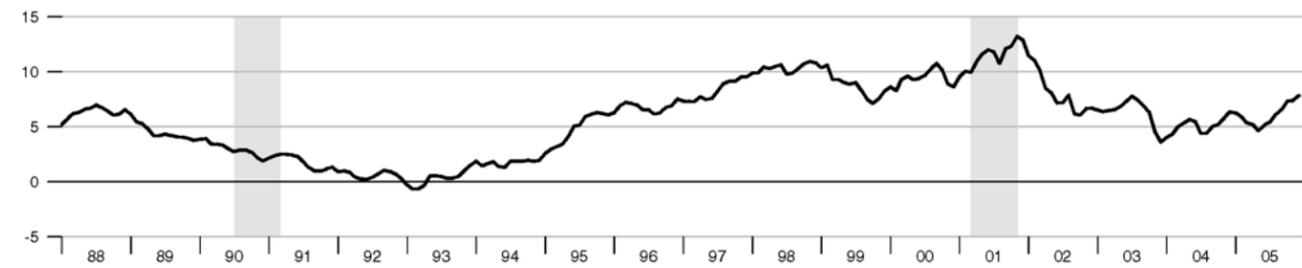
M2

Percent change from year ago



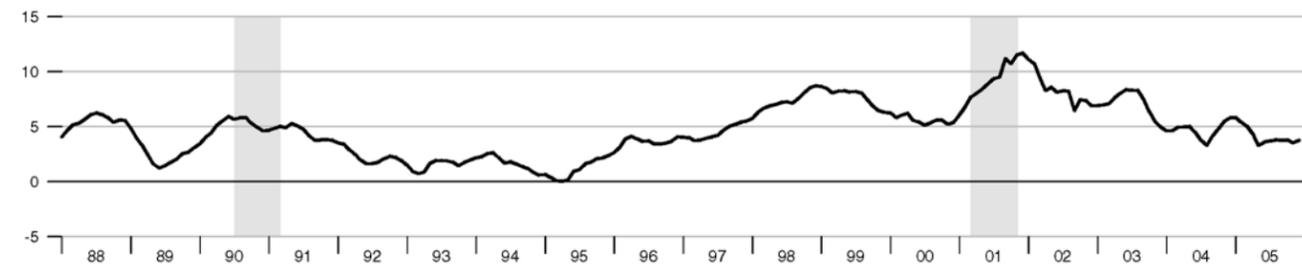
M3

Percent change from year ago



Monetary Services Index - M2

Percent change from year ago



		Federal Funds	Primary Credit Rate	Prime Rate	3-mo CDs	Treasury Yields			Corporate Aaa Bonds	S & L Aaa Bonds	Conventional Mortgage
						3-mo	3-yr	10-yr			
2001		3.89		6.92	3.69	3.47	4.08	5.02	7.08	5.01	6.97
2002		1.67		4.68	1.73	1.63	3.10	4.61	6.49	4.87	6.54
2003		1.13	2.11	4.12	1.15	1.03	2.11	4.02	5.67	4.52	5.82
2004		1.35	2.34	4.34	1.56	1.40	2.78	4.27	5.63	4.50	5.84
2005		3.21	4.19	6.19	3.51	3.21	3.93	4.29	5.23	4.28	5.86
2003	1	1.25	2.25	4.25	1.26	1.18	2.07	3.92	6.00	4.60	5.83
	2	1.25	2.23	4.24	1.17	1.06	1.77	3.62	5.31	4.28	5.51
	3	1.02	2.00	4.00	1.07	0.95	2.20	4.23	5.70	4.68	6.01
	4	1.00	2.00	4.00	1.10	0.93	2.38	4.29	5.66	4.52	5.92
2004	1	1.00	2.00	4.00	1.05	0.93	2.17	4.02	5.45	4.26	5.61
	2	1.01	2.00	4.00	1.25	1.10	2.98	4.60	5.93	4.82	6.13
	3	1.43	2.42	4.42	1.70	1.51	2.92	4.30	5.64	4.54	5.89
	4	1.95	2.94	4.94	2.25	2.04	3.05	4.17	5.48	4.39	5.73
2005	1	2.47	3.44	5.44	2.78	2.58	3.61	4.30	5.32	4.23	5.76
	2	2.94	3.91	5.91	3.23	2.93	3.73	4.16	5.15	4.15	5.72
	3	3.46	4.43	6.43	3.74	3.43	3.98	4.21	5.09	4.28	5.76
	4	3.98	4.97	6.97	4.30	3.91	4.37	4.49	5.38	4.45	6.22
2003	Dec	0.98	2.00	4.00	1.10	0.91	2.44	4.27	5.62	4.41	5.88
2004	Jan	1.00	2.00	4.00	1.06	0.90	2.27	4.15	5.54	4.42	5.74
	Feb	1.01	2.00	4.00	1.05	0.94	2.25	4.08	5.50	4.26	5.64
	Mar	1.00	2.00	4.00	1.05	0.95	2.00	3.83	5.33	4.11	5.45
	Apr	1.00	2.00	4.00	1.08	0.96	2.57	4.35	5.73	4.69	5.83
	May	1.00	2.00	4.00	1.20	1.04	3.10	4.72	6.04	4.93	6.27
	Jun	1.03	2.01	4.01	1.46	1.29	3.26	4.73	6.01	4.85	6.29
	Jul	1.26	2.25	4.25	1.57	1.36	3.05	4.50	5.82	4.71	6.06
	Aug	1.43	2.43	4.43	1.68	1.50	2.88	4.28	5.65	4.52	5.87
	Sep	1.61	2.58	4.58	1.86	1.68	2.83	4.13	5.46	4.40	5.75
	Oct	1.76	2.75	4.75	2.04	1.79	2.85	4.10	5.47	4.38	5.72
	Nov	1.93	2.93	4.93	2.26	2.11	3.09	4.19	5.52	4.45	5.73
	Dec	2.16	3.15	5.15	2.45	2.22	3.21	4.23	5.47	4.35	5.75
2005	Jan	2.28	3.25	5.25	2.61	2.37	3.39	4.22	5.36	4.24	5.71
	Feb	2.50	3.49	5.49	2.77	2.58	3.54	4.17	5.20	4.16	5.63
	Mar	2.63	3.58	5.58	2.97	2.80	3.91	4.50	5.40	4.29	5.93
	Apr	2.79	3.75	5.75	3.09	2.84	3.79	4.34	5.33	4.18	5.86
	May	3.00	3.98	5.98	3.22	2.90	3.72	4.14	5.15	4.20	5.72
	Jun	3.04	4.01	6.01	3.38	3.04	3.69	4.00	4.96	4.08	5.58
	Jul	3.26	4.25	6.25	3.57	3.29	3.91	4.18	5.06	4.18	5.70
	Aug	3.50	4.44	6.44	3.77	3.52	4.08	4.26	5.09	4.33	5.82
	Sep	3.62	4.59	6.59	3.87	3.49	3.96	4.20	5.13	4.34	5.77
	Oct	3.78	4.75	6.75	4.13	3.79	4.29	4.46	5.35	4.49	6.07
	Nov	4.00	5.00	7.00	4.31	3.97	4.43	4.54	5.42	4.42	6.33
	Dec	4.16	5.15	7.15	4.45	3.97	4.39	4.47	5.37	4.46	6.27

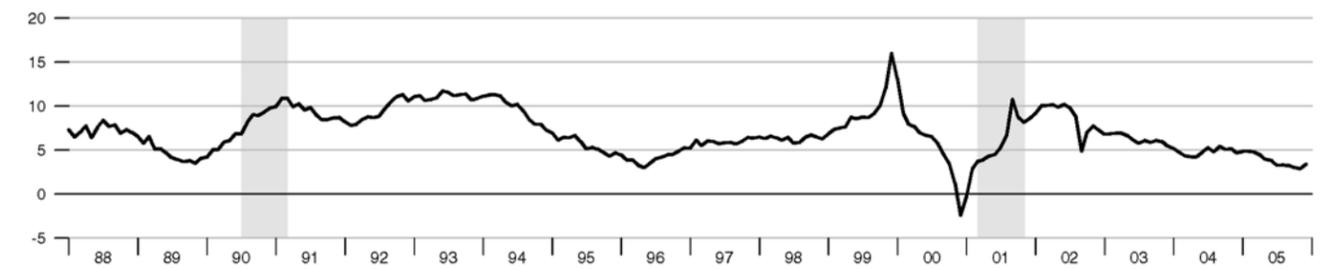
*All values are given as a percent at an annual rate.

	Money Stock				Bank Credit	Adjusted Monetary Base		Reserves	MSI M2
	M1	MZM	M2	M3		Monetary Base			
2001	1140.215	5223.438	5219.902	7646.741	5344.001	641.167	86.172	271.439	
2002	1196.344	5895.446	5615.409	8261.403	5596.950	697.092	88.158	294.191	
2003	1273.946	6332.382	6004.606	8788.514	6120.442	740.926	93.308	315.219	
2004	1344.897	6581.409	6277.338	9236.793	6597.516	776.704	96.061	329.910	
2005	1368.637	6722.557	6543.006	9801.865	7239.205	806.308	96.357	343.599	
2003	1	1235.469	6195.709	5866.596	8624.845	5954.725	726.940	91.196	307.910
	2	1268.185	6279.599	5976.326	8735.938	6135.073	738.451	92.117	313.666
	3	1292.370	6443.859	6091.199	8901.791	6187.761	744.331	95.163	319.766
	4	1299.762	6410.361	6084.306	8891.481	6204.207	753.981	94.758	319.534
2004	1	1319.929	6449.505	6138.564	9010.315	6428.351	761.427	95.031	322.486
	2	1339.324	6587.990	6257.514	9216.103	6560.282	771.146	96.600	328.774
	3	1350.520	6621.038	6311.119	9313.488	6645.830	782.780	96.796	331.731
	4	1369.815	6667.102	6402.156	9407.267	6755.599	791.464	95.817	336.649
2005	1	1371.380	6674.440	6465.918	9536.882	6992.253	798.241	96.656	339.987
	2	1369.379	6666.370	6493.088	9677.109	7166.755	802.631	96.050	341.128
	3	1362.911	6723.410	6555.819	9877.278	7350.225	808.399	96.508	344.200
	4	1370.880	6826.008	6657.198	10116.19	7447.587	815.960	96.214	349.079
2003	Dec	1305.081	6396.868	6085.195	8885.301	6251.311	752.952	92.971	319.634
2004	Jan	1303.448	6410.822	6098.708	8942.455	6321.751	756.790	93.206	320.482
	Feb	1321.799	6444.242	6139.032	9006.604	6442.661	763.195	95.937	322.499
	Mar	1334.540	6493.452	6177.951	9081.885	6520.641	764.295	95.950	324.478
	Apr	1334.317	6541.332	6215.194	9144.307	6540.998	767.951	97.095	326.515
	May	1338.617	6606.287	6273.248	9233.171	6549.961	770.211	95.779	329.610
	Jun	1345.039	6616.350	6284.101	9270.830	6589.886	775.275	96.927	330.197
	Jul	1337.428	6602.798	6285.668	9273.163	6602.291	780.464	95.691	330.486
	Aug	1355.047	6616.533	6306.493	9308.479	6632.671	781.527	96.023	331.433
	Sep	1359.084	6643.783	6341.195	9358.822	6702.529	786.349	98.674	333.274
	Oct	1360.163	6644.202	6369.273	9369.946	6713.832	792.248	97.558	334.886
	Nov	1375.791	6669.000	6406.537	9401.368	6759.506	793.878	96.828	336.880
	Dec	1373.491	6688.104	6430.657	9450.486	6793.460	788.267	93.065	338.181
2005	Jan	1364.258	6683.116	6449.132	9502.881	6892.662	793.540	95.087	339.216
	Feb	1371.622	6668.727	6464.333	9538.993	6999.367	800.277	97.805	339.882
	Mar	1378.259	6671.476	6484.290	9568.773	7084.731	800.906	97.076	340.864
	Apr	1360.574	6668.027	6481.126	9620.515	7112.411	802.312	97.440	340.777
	May	1373.235	6648.732	6482.584	9662.669	7166.646	800.580	94.556	340.497
	Jun	1374.327	6682.350	6515.553	9748.143	7221.207	805.002	96.155	342.109
	Jul	1354.354	6687.408	6525.125	9776.768	7281.201	805.964	95.584	342.723
	Aug	1370.998	6717.509	6554.403	9878.795	7360.533	807.389	95.815	344.072
	Sep	1363.381	6765.314	6587.930	9976.270	7408.941	811.844	98.126	345.805
	Oct	1367.635	6802.769	6627.211	10058.20	7419.862	816.108	97.757	347.587
	Nov	1372.690	6813.052	6652.876	10098.96	7438.453	816.789	97.141	348.787
	Dec	1372.315	6862.202	6691.507	10191.41	7484.447	814.982	93.744	350.864

*All values are given in billions of dollars.

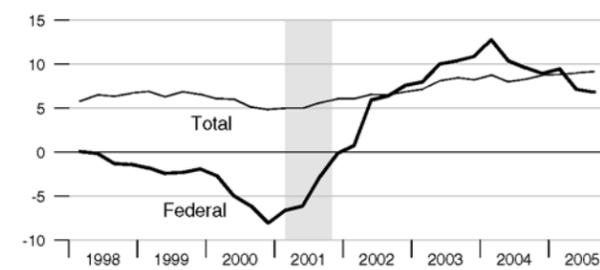
Adjusted Monetary Base

Percent change from year ago



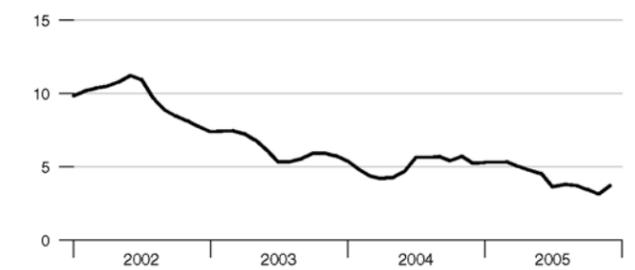
Domestic Nonfinancial Debt

Percent change from year ago



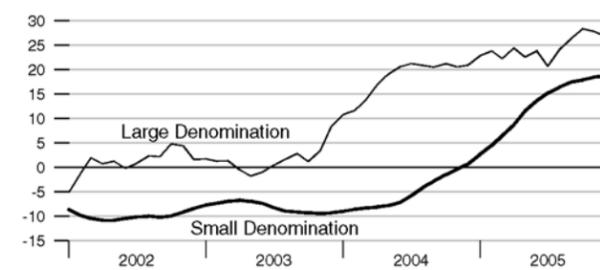
Currency Held by the Nonbank Public

Percent change from year ago



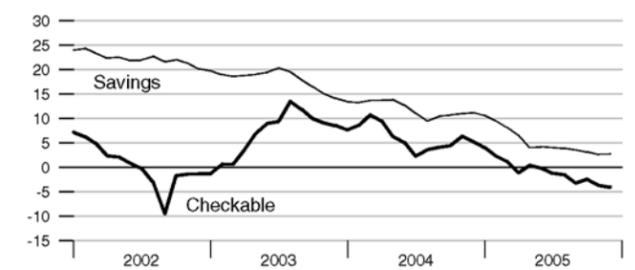
Time Deposits

Percent change from year ago



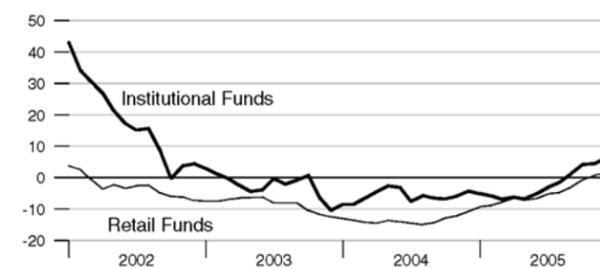
Checkable and Savings Deposits

Percent change from year ago



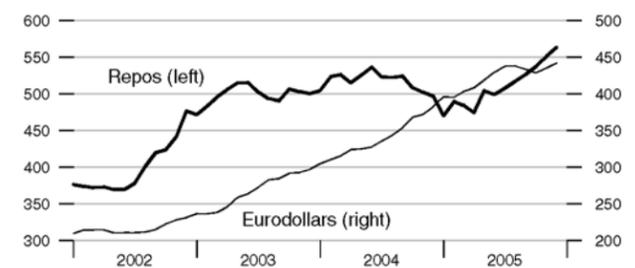
Money Market Mutual Fund Shares

Percent change from year ago



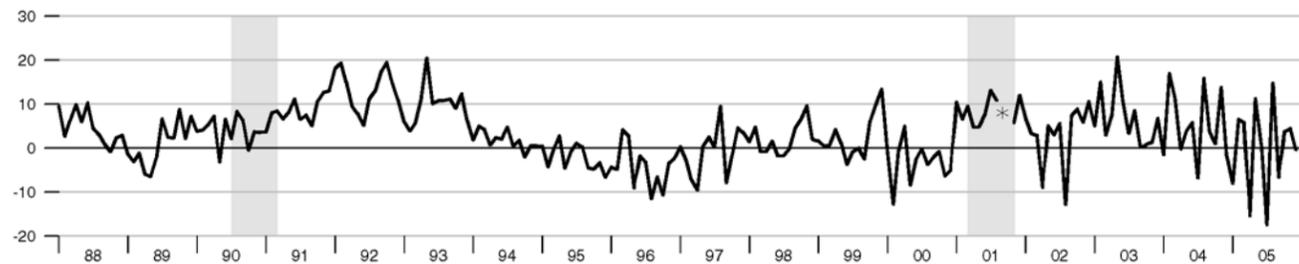
Repurchase Agreements and Eurodollars

Billions of dollars



M1

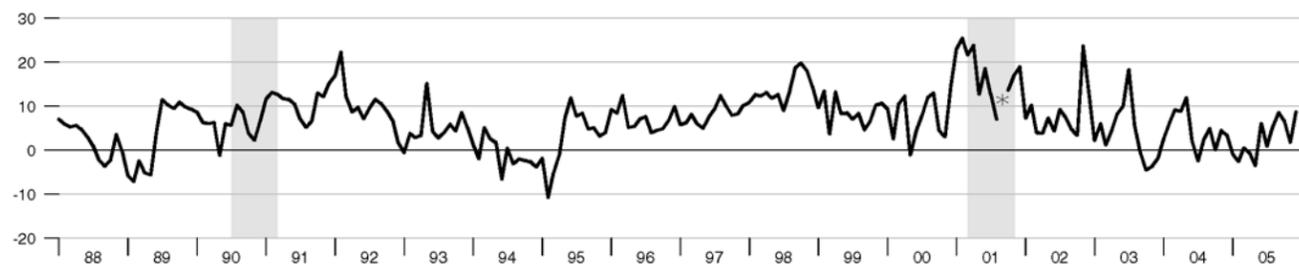
Percent change at an annual rate



*Actual values for September and October 2001 are 55.87 and -38.35 percent rate, respectively.

MZM

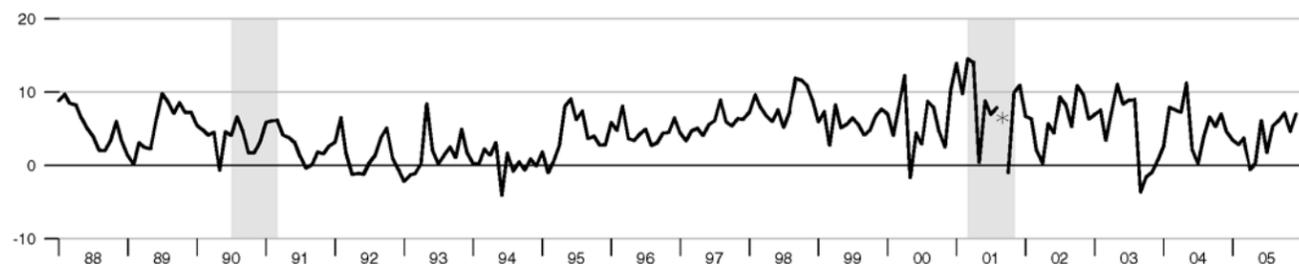
Percent change at an annual rate



*Actual value for September 2001 is 39.41 percent rate.

M2

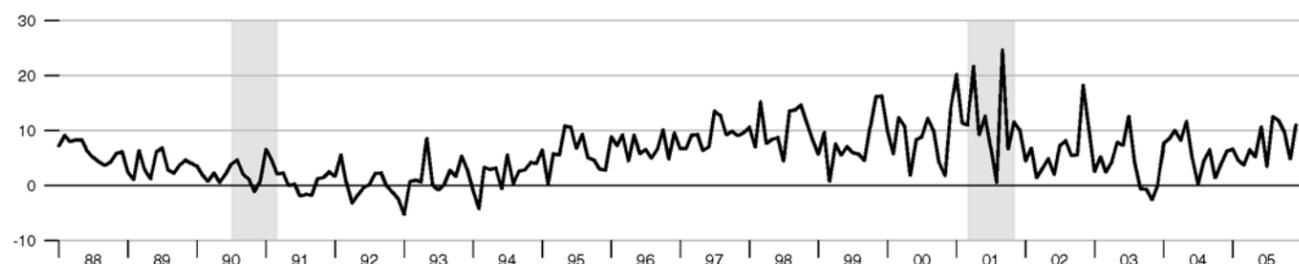
Percent change at an annual rate



*Actual value for September 2001 is 24.90 percent rate.

M3

Percent change at an annual rate



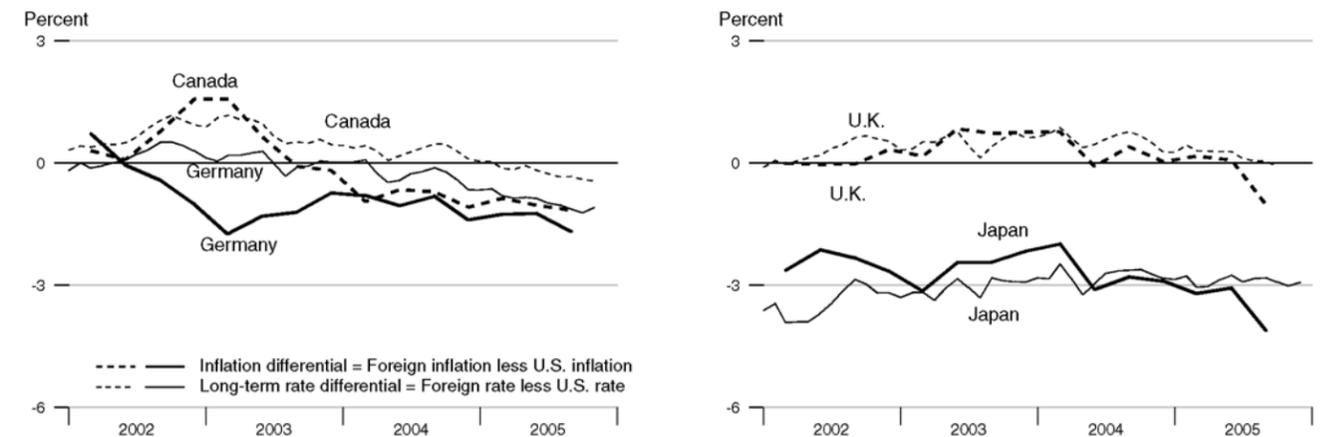
Standard & Poor's 500



Recent Inflation and Long-Term Interest Rates

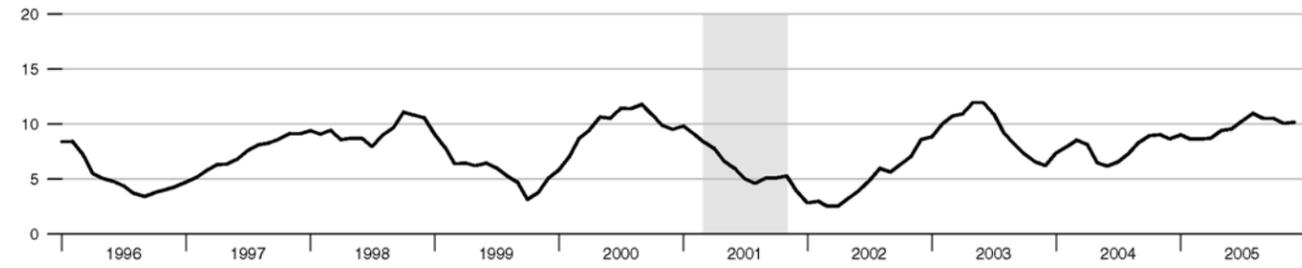
	Consumer Price Inflation Rates				Long-Term Government Bond Rates			
	Percent change from year ago				Percent			
	2004Q4	2005Q1	2005Q2	2005Q3	Sep05	Oct05	Nov05	Dec05
United States	3.37	3.00	2.93	3.80	4.20	4.46	4.54	4.47
Canada	2.29	2.13	1.90	2.64	3.87	4.06	4.10	.
France	2.08	1.70	1.69	1.90	3.13	3.29	.	.
Germany	1.98	1.74	1.70	2.13	3.07	3.24	3.45	.
Italy	1.98	1.92	1.84	2.03	3.29	3.44	3.66	.
Japan	0.48	-0.20	-0.14	-0.31	1.38	1.54	1.52	1.54
United Kingdom	3.41	3.17	3.01	2.78	4.24	4.37	.	.

Inflation and Long-Term Interest Rate Differentials



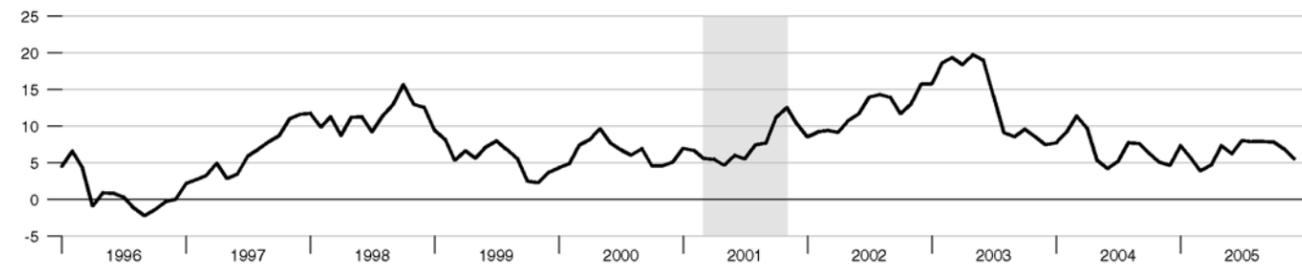
Bank Credit

Percent change from year ago



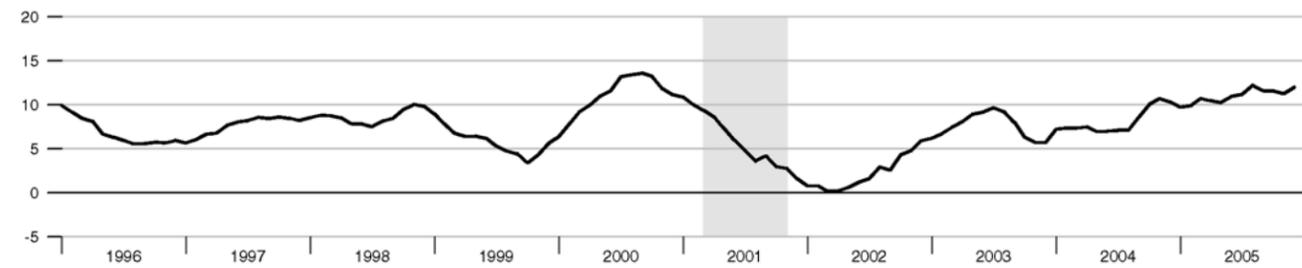
Investment Securities in Bank Credit at Commercial Banks

Percent change from year ago



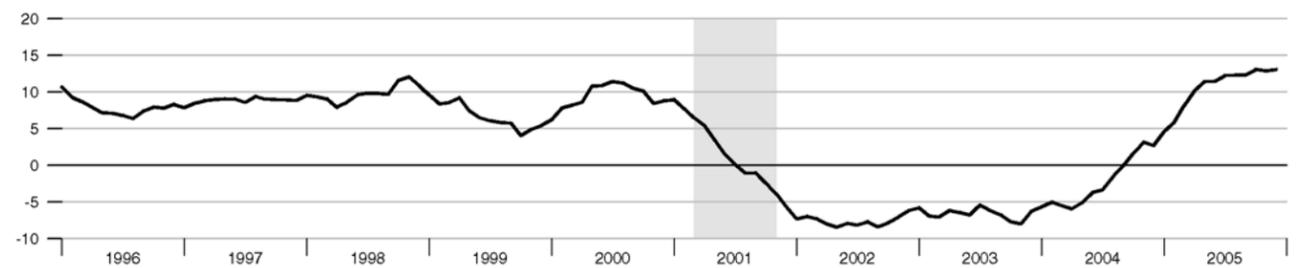
Total Loans and Leases in Bank Credit at Commercial Banks

Percent change from year ago



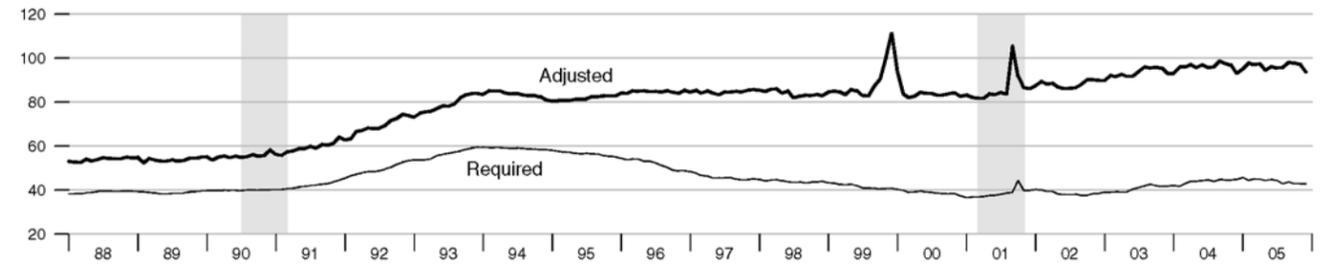
Commercial and Industrial Loans at Commercial Banks

Percent change from year ago



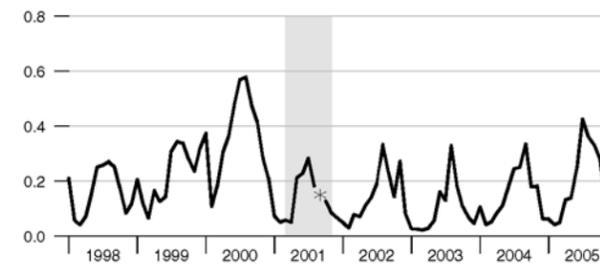
Adjusted and Required Reserves

Billions of dollars



Total Borrowings, nsa

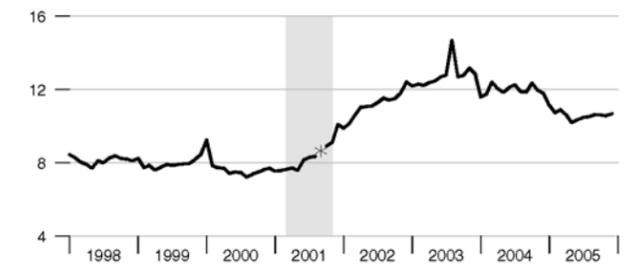
Billions of dollars



*Actual value for September 2001 is \$3.4 billion.

Excess Reserves plus RCB Contracts

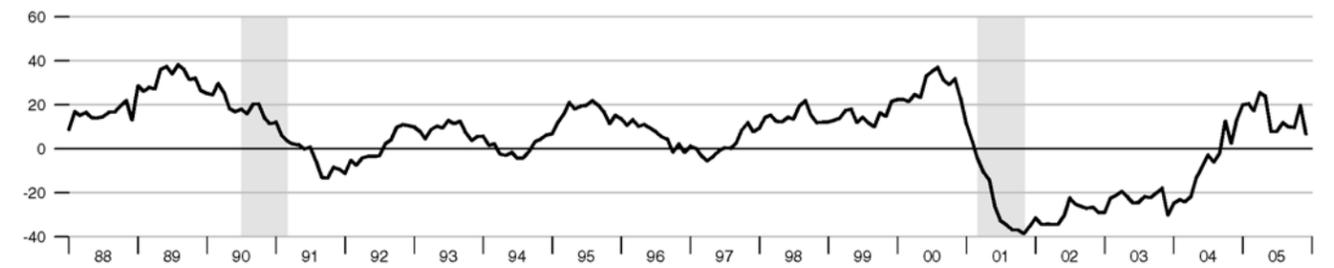
Billions of dollars



*Actual value for September 2001 is \$26.43 billion.

Nonfinancial Commercial Paper

Percent change from year ago

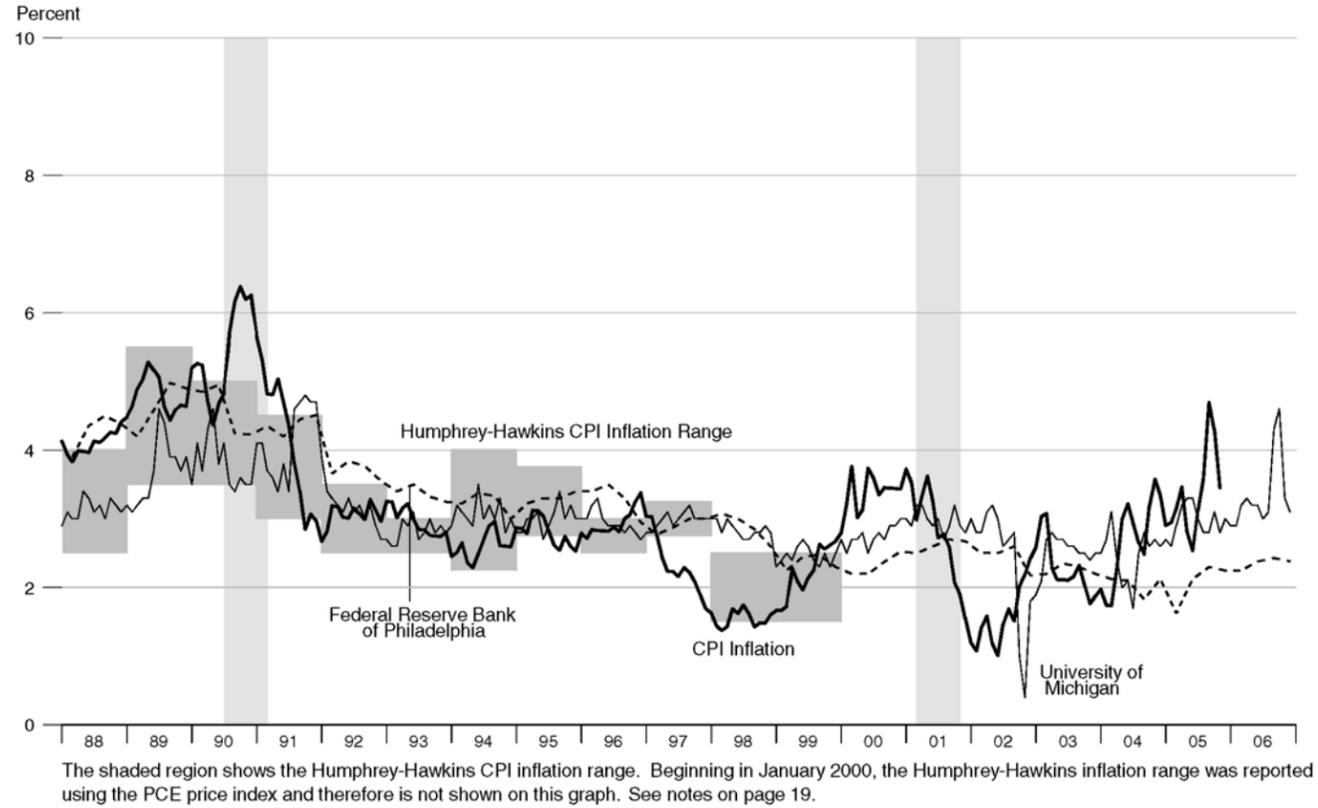


Consumer Credit

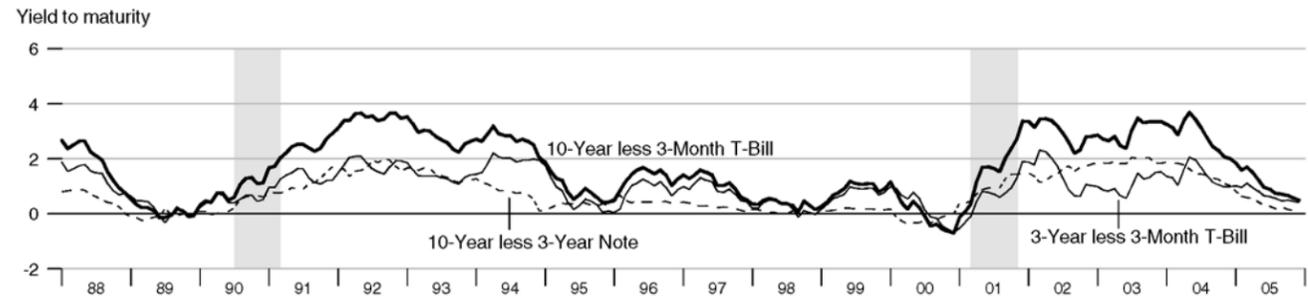
Percent change from year ago



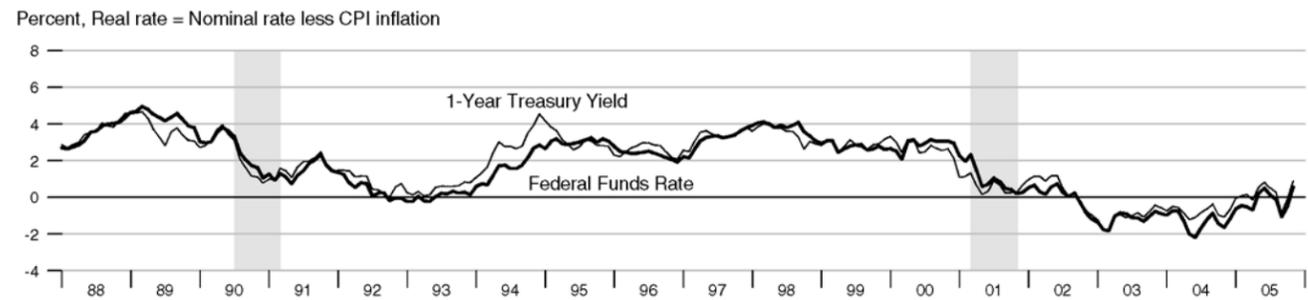
Inflation and Inflation Expectations



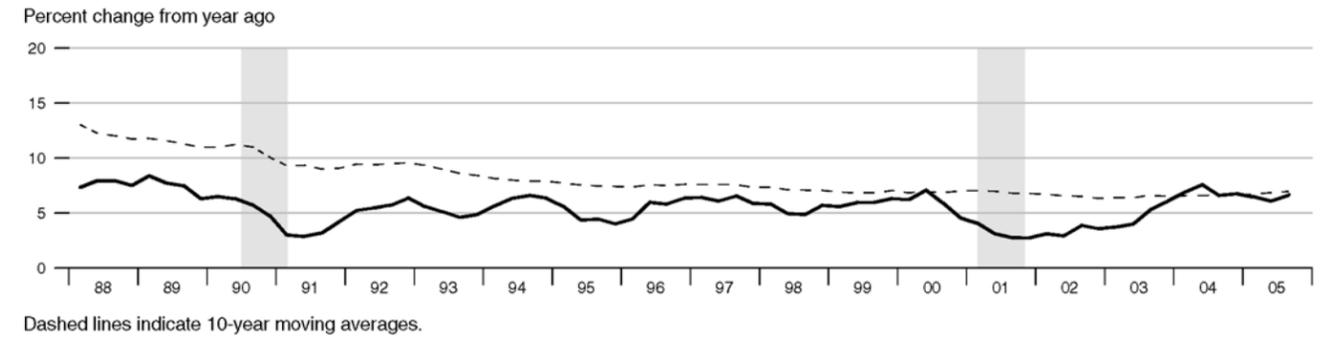
Treasury Security Yield Spreads



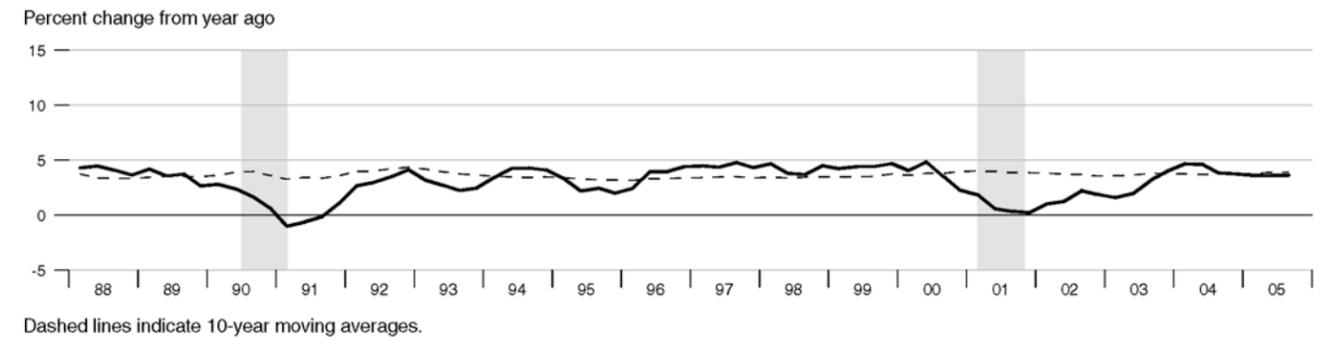
Real Interest Rates



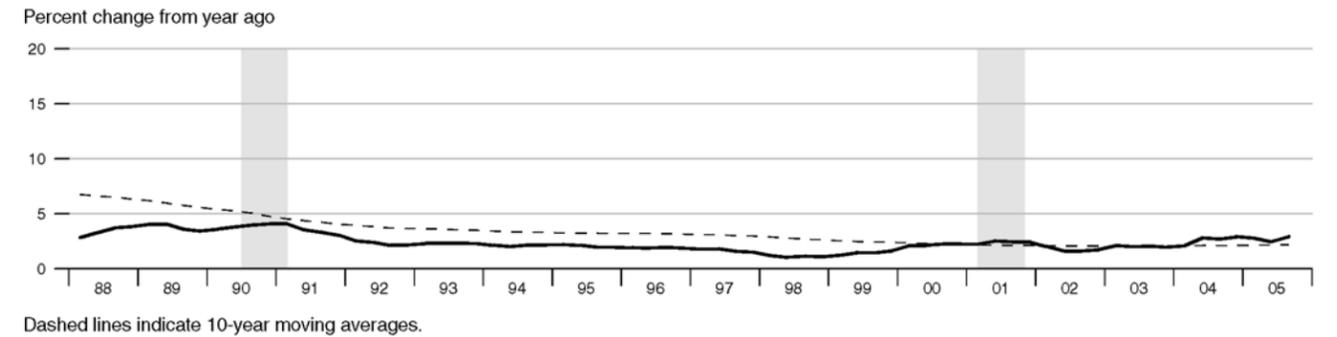
Gross Domestic Product



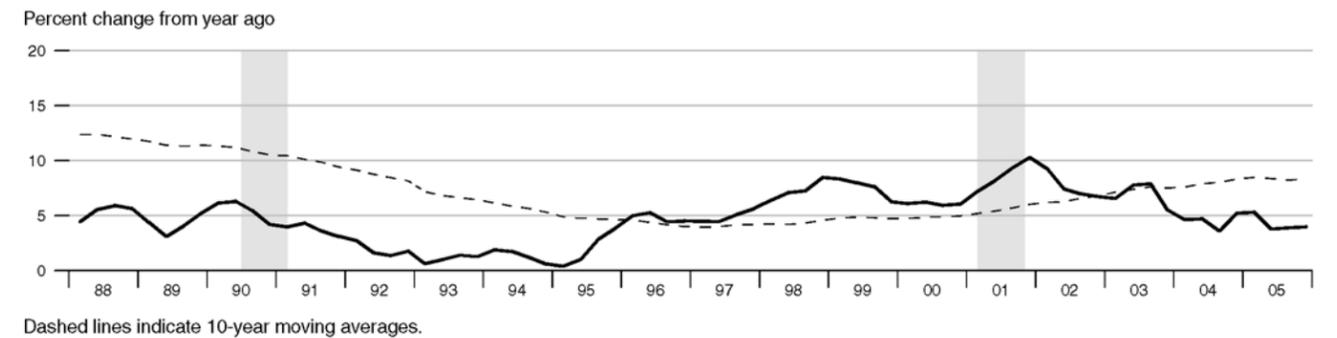
Real Gross Domestic Product



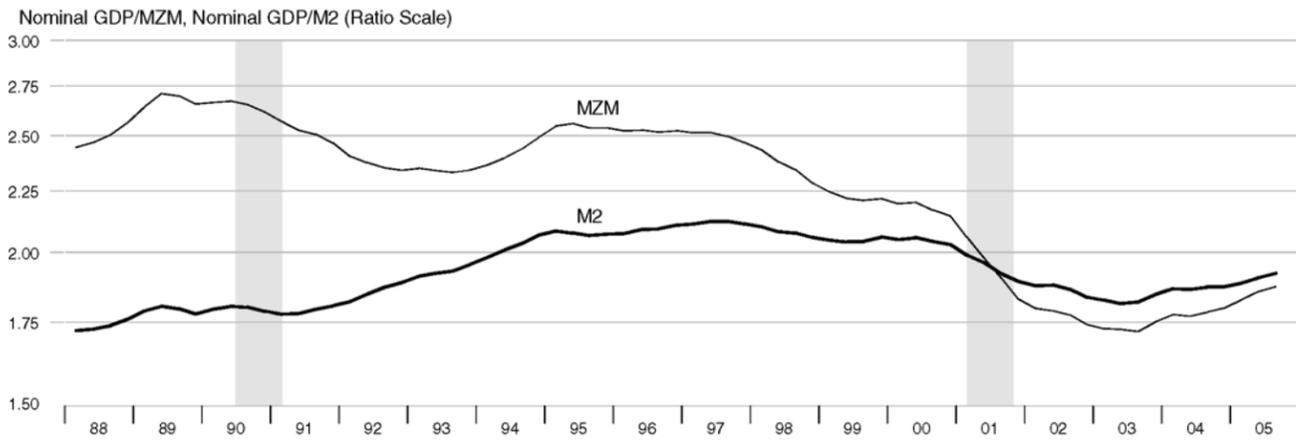
Gross Domestic Product Price Index



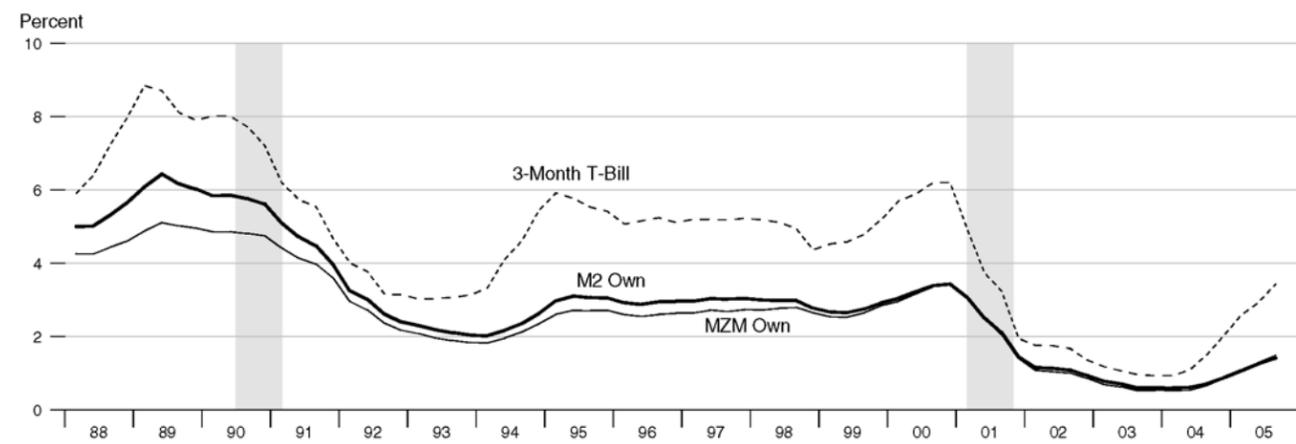
M2



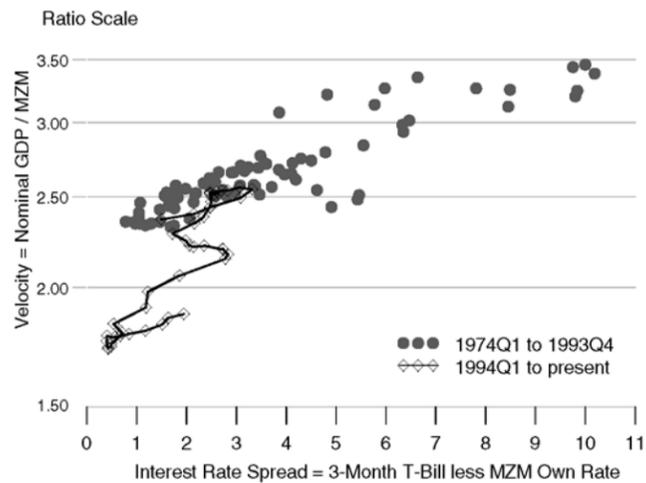
Velocity



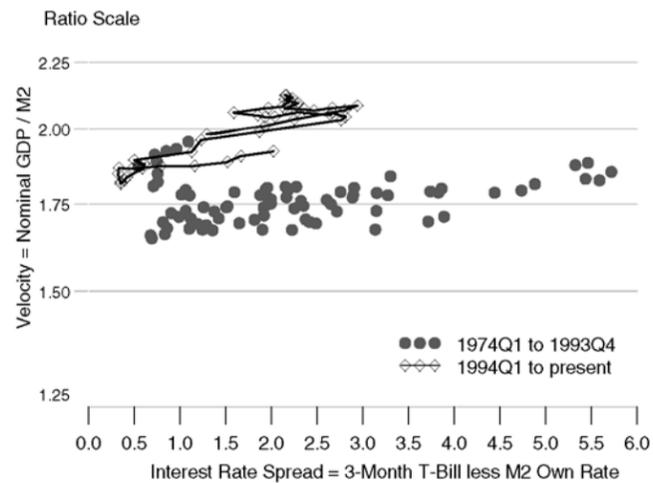
Interest Rates



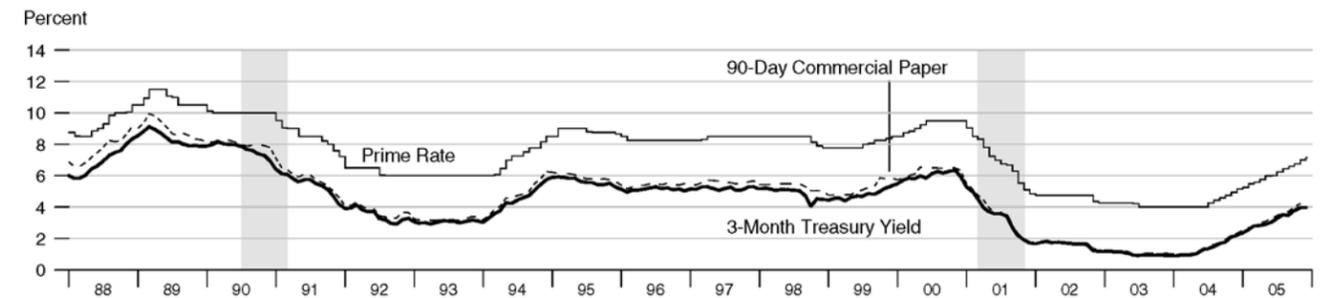
M2M Velocity and Interest Rate Spread



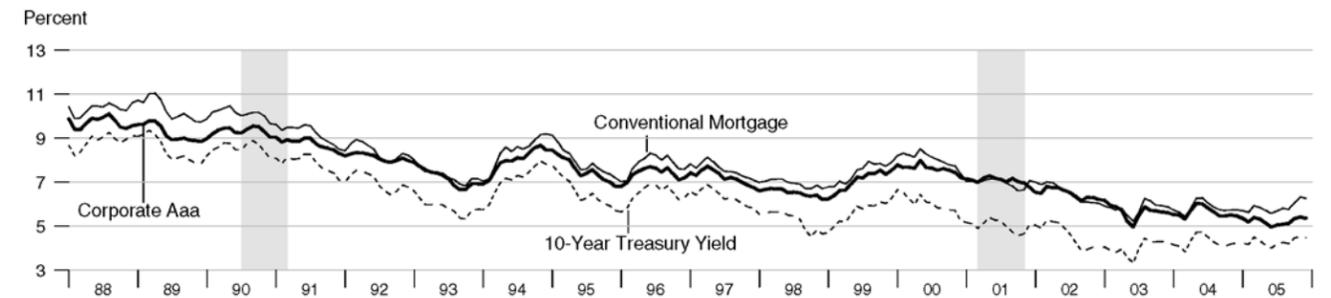
M2 Velocity and Interest Rate Spread



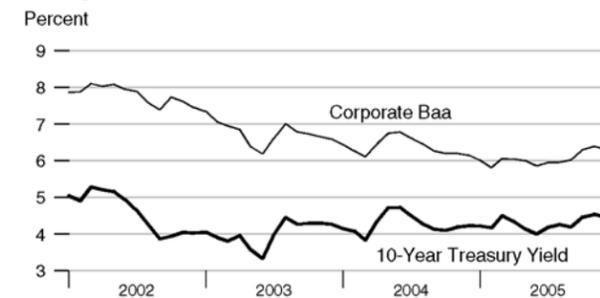
Short-Term Interest Rates



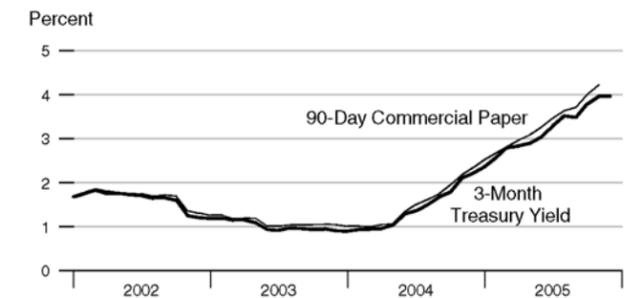
Long-Term Interest Rates



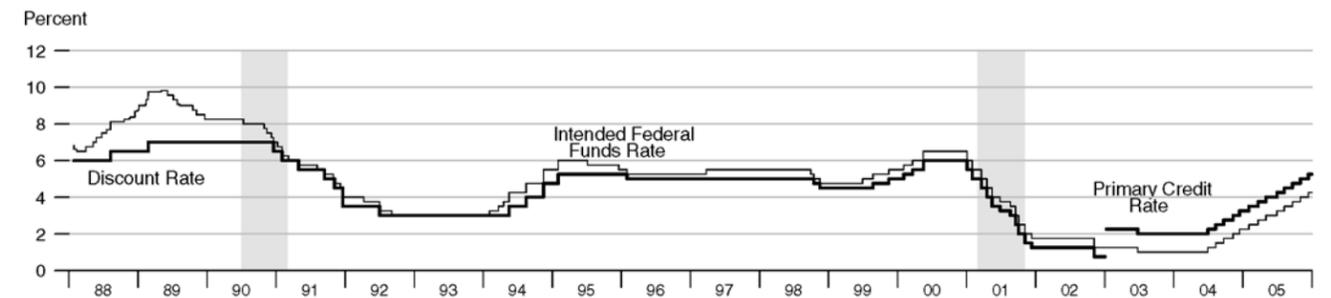
Long-Term Interest Rates



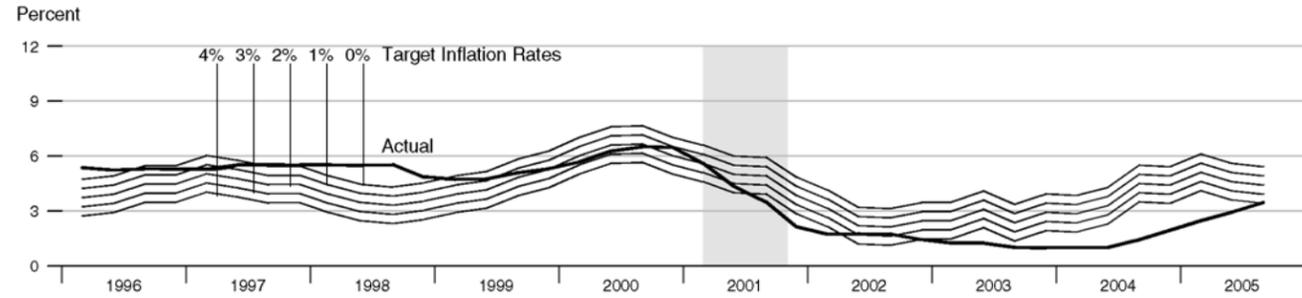
Short-Term Interest Rates



FOMC Intended Federal Funds Rate, Discount Rate, and Primary Credit Rate



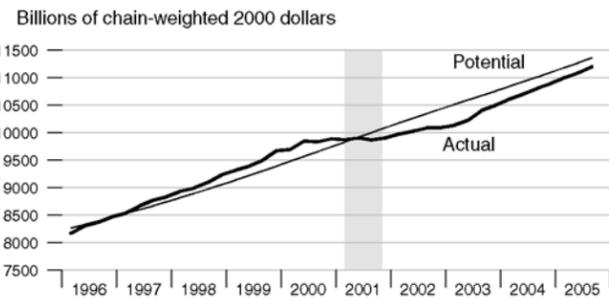
Federal Funds Rate and Inflation Targets



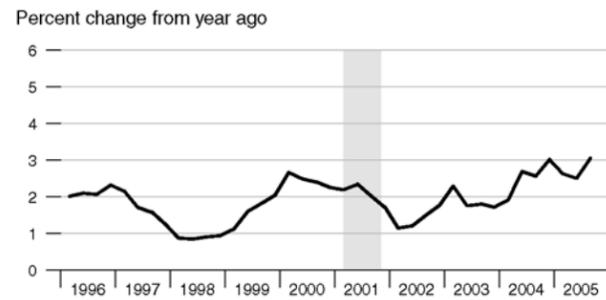
Calculated federal funds rate is based on Taylor's rule. See notes on page 19.

Components of Taylor's Rule

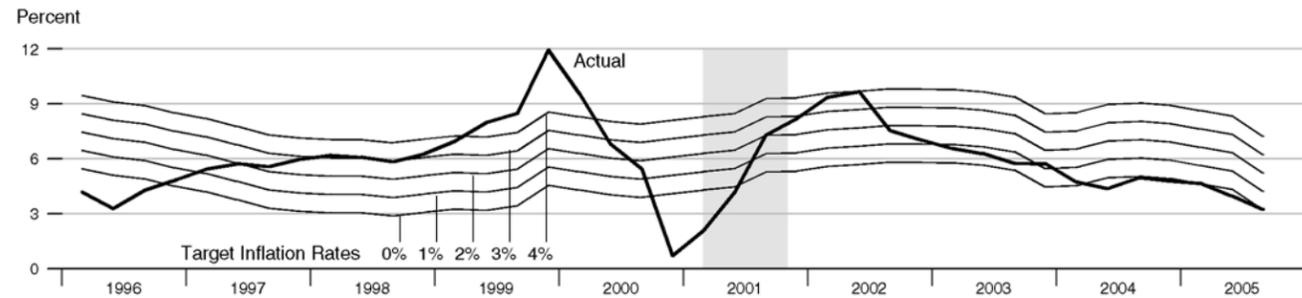
Actual and Potential Real GDP



PCE Inflation



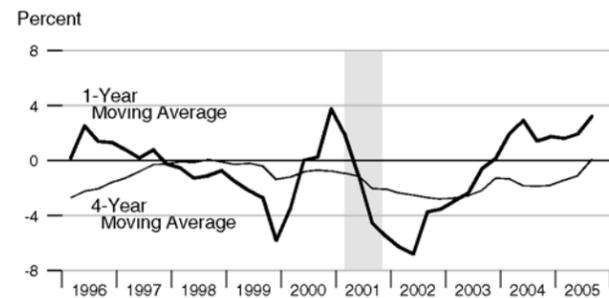
Monetary Base Growth* and Inflation Targets



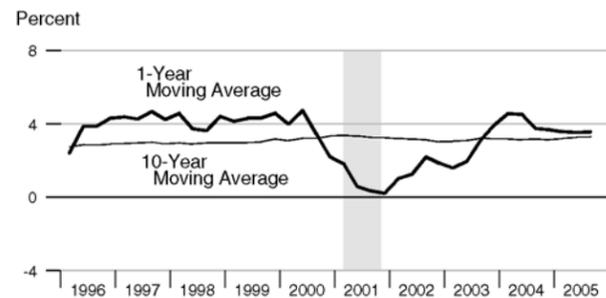
*Modified for the effects of sweeps programs on reserve demand. Calculated base growth is based on McCallum's rule. Actual base growth is percent change from year ago. See notes on page 19.

Components of McCallum's Rule

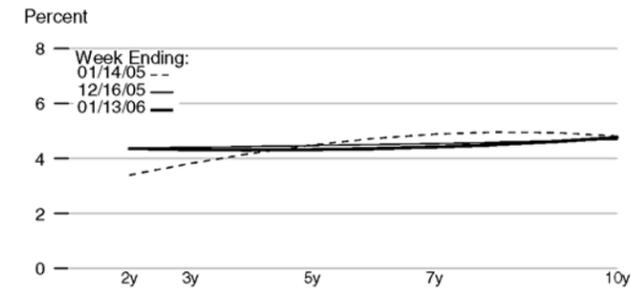
Monetary Base Velocity Growth



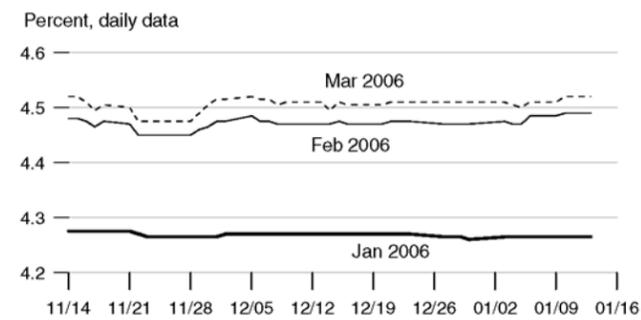
Real Output Growth



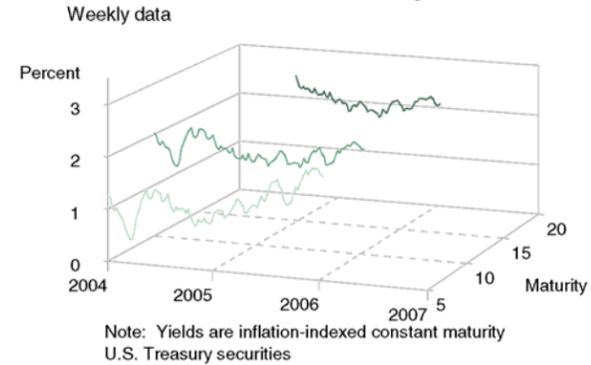
Implied One-Year Forward Rates



Rates on Selected Federal Funds Futures Contracts



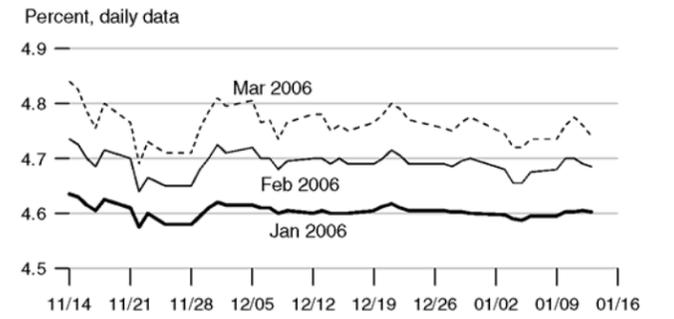
Inflation-Indexed Treasury Securities



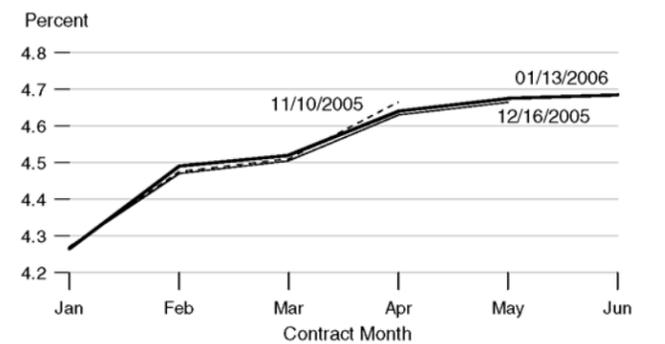
Inflation-Indexed 10-Year Government Notes



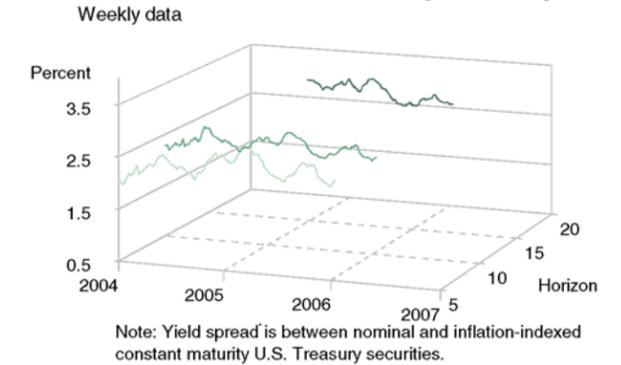
Rates on 3-Month Eurodollar Futures



Rates on Federal Funds Futures on Selected Dates



Inflation-Indexed Treasury Yield Spreads



Inflation-Indexed 10-Year Government Yield Spreads

