Prefatory Note

The attached document represents the most complete and accurate version available based on original files from the FOMC Secretariat at the Board of Governors of the Federal Reserve System.

Please note that some material may have been redacted from this document if that material was received on a confidential basis. Redacted material is indicated by occasional gaps in the text or by gray boxes around non-text content. All redacted passages are exempt from disclosure under applicable provisions of the Freedom of Information Act.

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CLASS I FOMC – RESTRICTED CONTROLLED (FR)

MARCH 17, 2005

MONETARY POLICY ALTERNATIVES

PREPARED FOR THE FEDERAL OPEN MARKET COMMITTEE
BY THE STAFF OF THE BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

MONETARY POLICY ALTERNATIVES

Recent Developments

(1) Market participants universally anticipated the FOMC's decision at its February meeting to increase the target federal funds rate 25 basis points to 2½ percent, to continue to assess the risks to sustainable economic growth and price stability as balanced, and to retain the "measured pace" language.[1] As a result, the market reaction to the announcement was quite muted, as was the case with the publication three weeks later of the minutes of the meeting. In the interim, however, Chairman Greenspan's monetary policy testimony, which was silent as to whether policy tightening would continue to be measured, led market participants to mark up their expected path for policy. Policy expectations were boosted further by heightened inflation concerns sparked by increases in the prices of energy and other commodities and incoming economic data, especially the higher-than-expected core readings on PPI and PCE inflation. Judging from federal funds futures quotes and the Desk's most recent survey of primary dealers, investors once again are virtually certain of a 25 basis point increase in the target federal funds rate at the upcoming meeting and generally expect only minor changes to the statement (Chart 1). Futures prices indicate a mean expectation for the federal funds rate of 3¼ percent by July, about ¼ percentage point higher than expected at the time of the February meeting. Options prices imply that investors now see a pause as less likely than they did in

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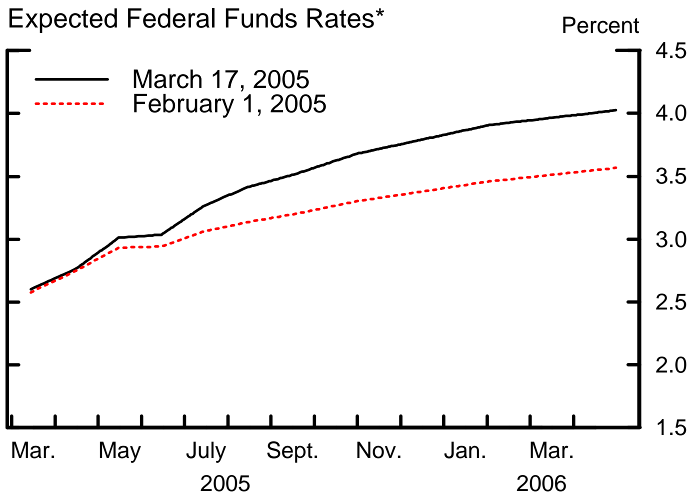
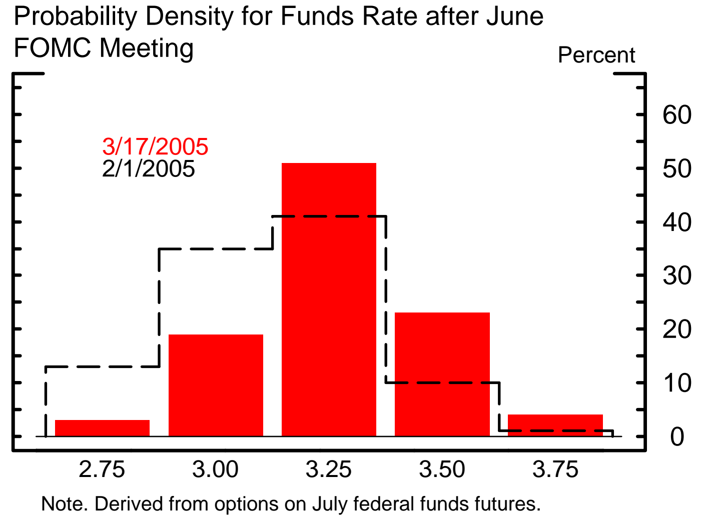
[1] The average effective federal funds rate was very close to the target over most of the intermeeting period. Late in the period, the funds rate averaged somewhat above target in response to the anticipation of another tightening move by the FOMC at this meeting. The Desk redeemed $333 million of Treasury coupons and purchased no bills or coupon securities. The volume of outstanding long-term RPs increased $1 billion, to $17 billion.

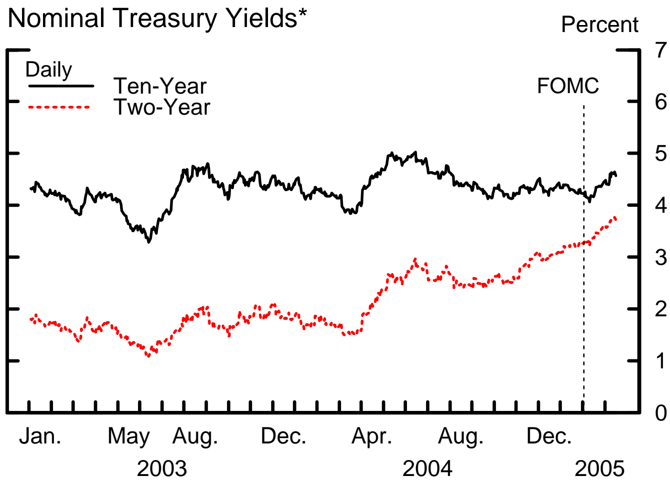
Chart 1
Interest Rate Developments



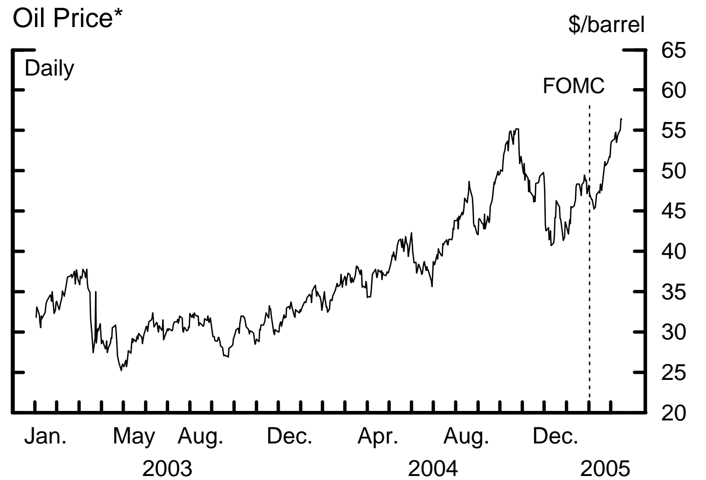
*Estimates from federal funds and eurodollar futures, with an allowance for term premia and other adjustments.



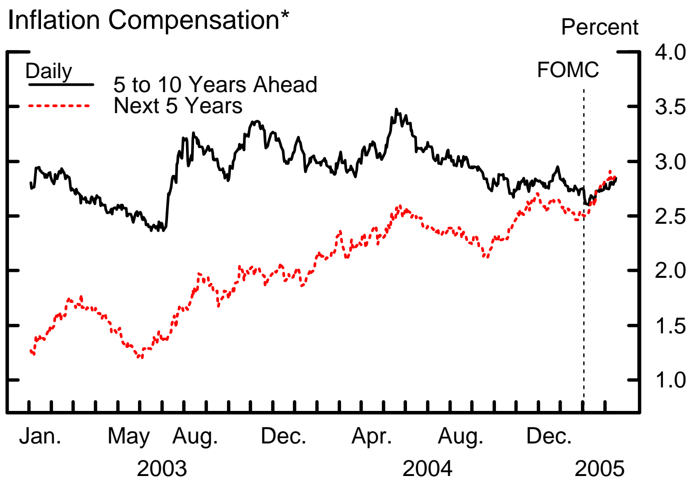
Note. Derived from options on July federal funds futures.



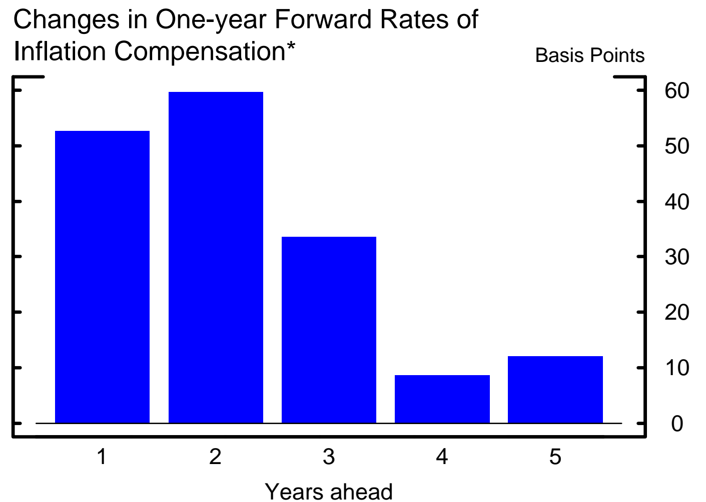
*Par yields from an estimated off-the-run Treasury yield curve.



*Spot WTI price.



*Based on a comparison of an estimated TIPS yield curve to an estimated nominal off-the-run Treasury yield curve.



*Changes since Feb. 1, 2005, based on inflation swap quotes. Adjusted for indexation lag and seasonality effects. One-year forward rates mature at the end of the year shown.

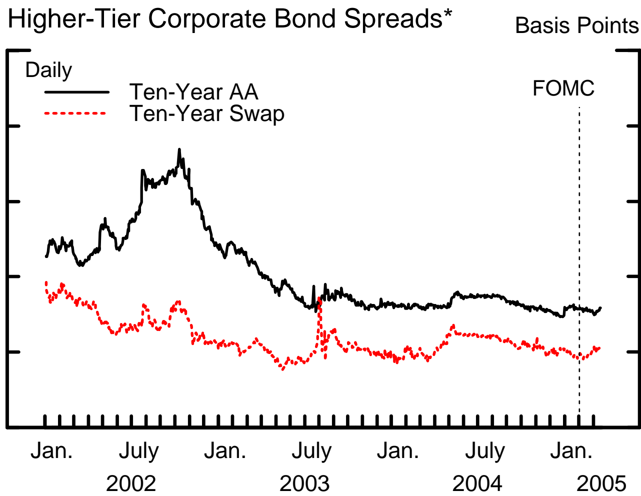
Note: Vertical lines indicate February 1, 2005. Last daily observations are for March 17, 2005.

February and a 50 basis point move at one of the next three meetings as somewhat more likely. Current futures quotes suggest an expected federal funds rate of about 4¼ percent at the end of 2006, 50 basis points higher than at the time of the last meeting.

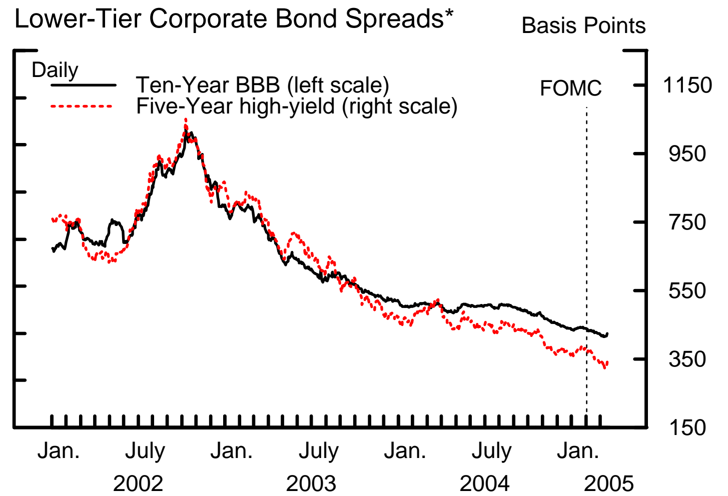
(2) Consistent with this upward revision to policy expectations, the two-year nominal Treasury yield gained 45 basis points over the intermeeting period. Ten-year yields rose almost as much—and probably more than can be accounted for solely by the revision to policy expectations—perhaps as investors reevaluated fixed-income pricing in light of the Chairman's characterization of the low level of long-rates prevailing in mid-February as a "conundrum" and as doubts surfaced about the continued willingness of foreign investors to add to their holdings of dollar assets. Concerns about inflation seemed to increase as well, with ten-year inflation compensation measured from TIPS rising about 25 basis points. However, the forward-rate structure of inflation compensation indicates that this increase was concentrated over the next two years. Inflation compensation five to ten years ahead rose only 10 basis points over the intermeeting period, and survey measures of longer-term expectations were about unchanged.

(3) Investment-grade private yields increased a bit less than comparable-maturity Treasury yields, leaving spreads a few basis points lower (Chart 2). Yields on speculative-grade bonds, in contrast, moved up only a little, implying that their spread over Treasuries fell about 35 basis points. Corporate balance sheets are generally healthy, and indicators of business credit quality are favorable; still, current yield spreads seem to provide very little compensation for risk relative to historical norms. In recent days, profit warnings by General Motors and accompanying debt downgrades pushed up GM credit default swap premiums and sent GM stock prices lower. Despite GM's troubles and increases in bond yields and energy prices, broad stock indexes edged up over the intermeeting period, although the Nasdaq index

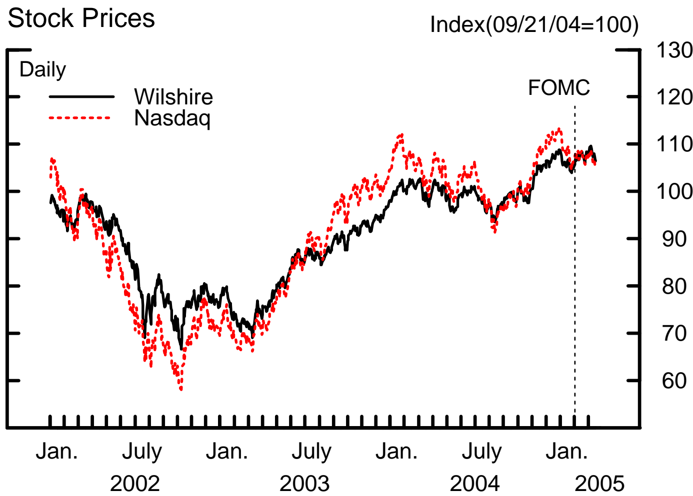
Chart 2
Capital Market Developments

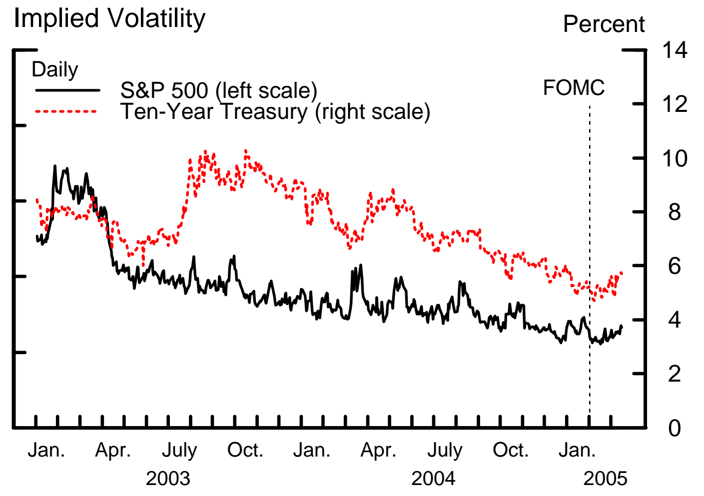


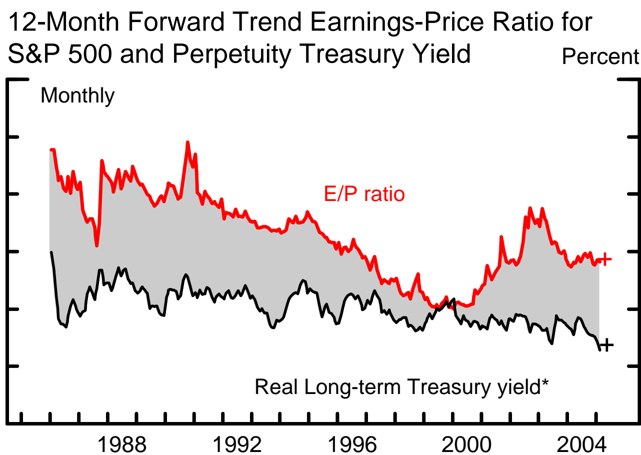
*AA spread measured relative to an estimated off-the-run Treasury yield curve. Swap spread measured relative to the on-the-run Treasury security.



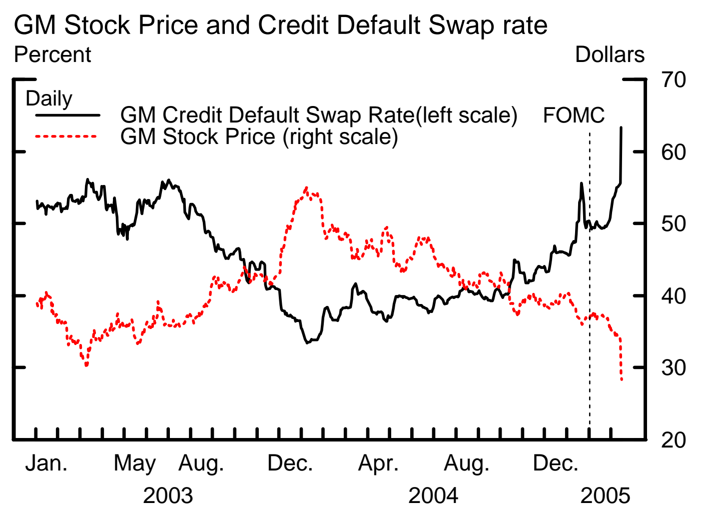
*Measured relative to an estimated off-the-run Treasury yield curve.







* Perpetuity Treasury yield minus Philadelphia Fed 10-year expected inflation.
Note. + Denotes the latest observation using daily interest rates and stock prices and latest earnings data from I/B/E/S.



Note: Vertical lines indicate February 1, 2005. Last daily observations are for March 17, 2005.

declined 2½ percent. Implied volatility of stock prices, as well as of interest rates, remained low (see box).

(4) The trade-weighted foreign exchange value of the dollar against major currencies declined 2¼ percent on balance over the intermeeting period (Chart 3). The dollar appreciated for several days following the Chairman's speech on the current account on February 4, which many analysts interpreted as expressing diminished concern about the adjustment of the U.S. external deficit. However, that move proved short-lived; sometimes-contradictory news stories and reports about possible diversification away from dollar assets—including statements by authorities in Japan, Taiwan, and Korea—seemed to contribute to the dollar's subsequent decline.[2] Late in the period, the release of trade data for January renewed investor concerns about the financing of the U.S. current account deficit and apparently weighed on the dollar. On a bilateral basis, the dollar depreciated against most other major currencies over the period, including a 3 percent decline posted against the Canadian dollar and a 2¾ percent drop vis-à-vis the euro. The dollar rose slightly versus the yen, however, amid signs of continued economic sluggishness in Japan. Ten-year sovereign yields increased 15 to 20 basis points in most major foreign industrial countries, reflecting in some cases moves up in expected future inflation, and major equity indexes registered modest gains. Both the Reserve Bank of Australia and the Reserve Bank of New Zealand raised their main policy rates 25 basis points earlier this month, citing concerns about inflationary pressures.

(5) The dollar was about unchanged on net over the intermeeting period against the currencies of our other important trading partners. The dollar depreciated more than 2½ percent against the Korean won and by smaller amounts versus several other

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Factors Affecting the Volatility of Financial Variables

As noted by the black line in the chart below, realized volatility for the ten-year Treasury yield has fallen over the past year to its lowest point in several years. In part, FOMC communications may have contributed to this decline by providing clearer guidance to market participants about the likely future course of monetary policy. In addition, volatility associated with market reactions to macro data releases (the red line) seems to have moved lower over recent months. (Treasury yield volatility associated with reactions to macro data releases is measured here as the moving six-month standard deviation of changes in the ten-year Treasury yield over narrow time intervals bracketing each economic data release.) Clearly, many factors other than macro data releases influence yields, and the effect of these other factors is especially pronounced during periods of market turmoil such as the fall of 1998, the aftermath of the September 11 attacks, and the period following major corporate accounting scandals. Since last June, however, the decline in yield volatility seems to be attributable largely to the decline in the volatility associated with market reactions to macro data releases. Following this decline, the latter measure of volatility has remained in the middle of its historical range. The blue line displays the volatility in yields attributable to the *predicted* market reactions to macro data releases based on a simple event study regression relating changes in ten-year yields to the unexpected or surprise component of economic data releases estimated over the period from 1991 to present. This volatility series also has moved lower over recent months, suggesting that the drop in ten-year yield volatility has been associated both with a decline in the average magnitude of economic data surprises and a more muted market response to surprises.

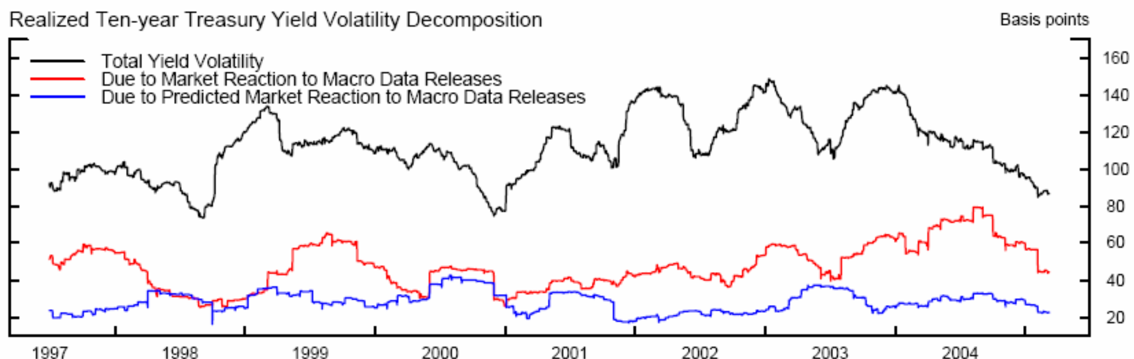
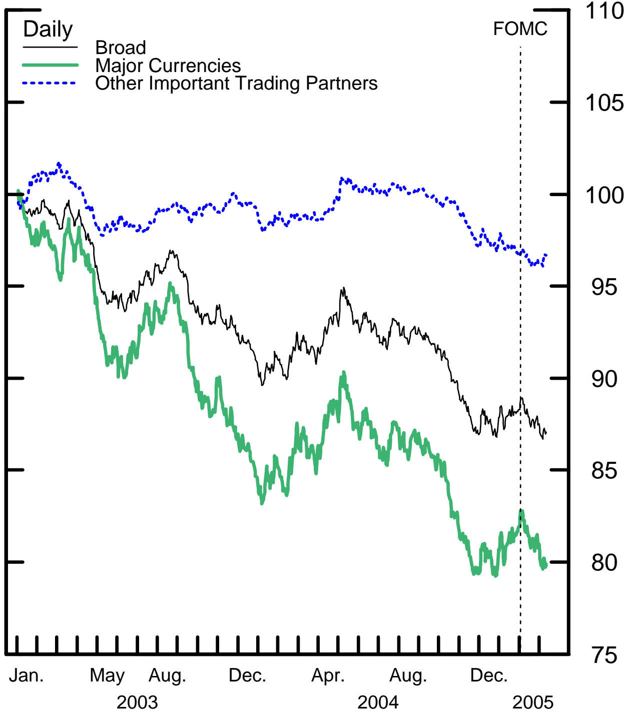
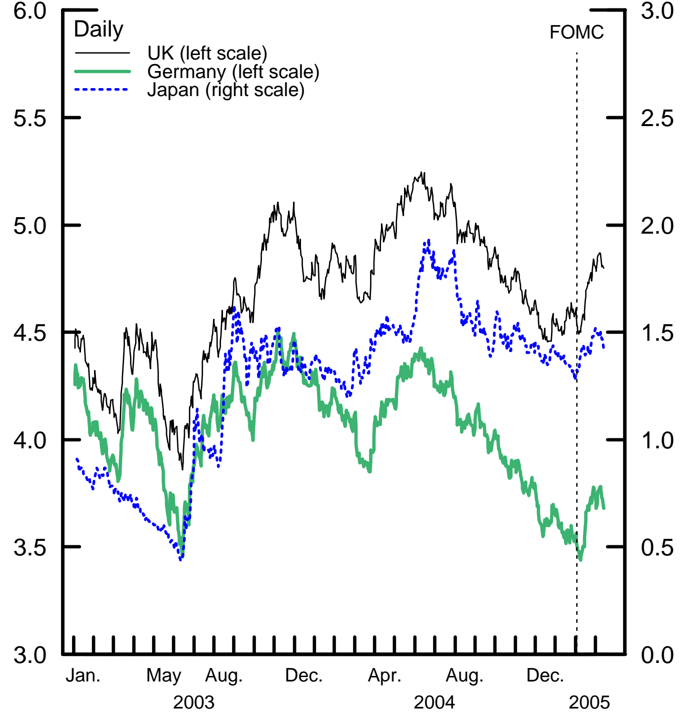
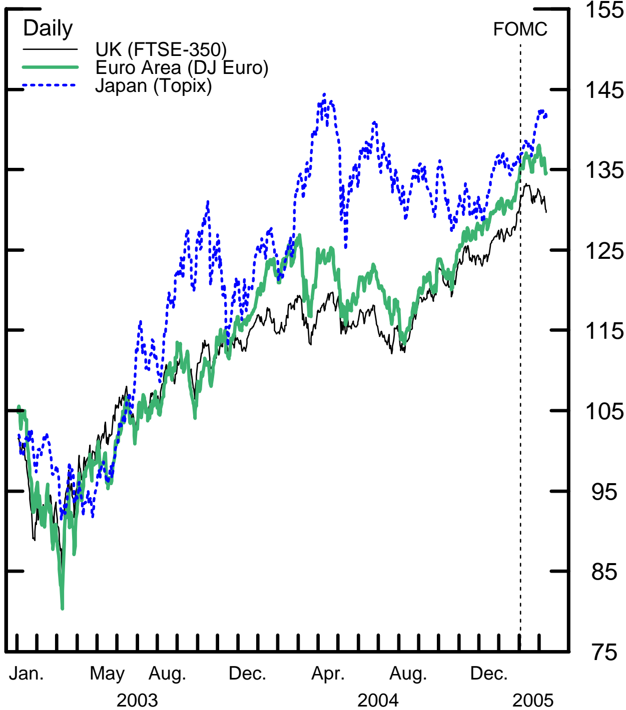
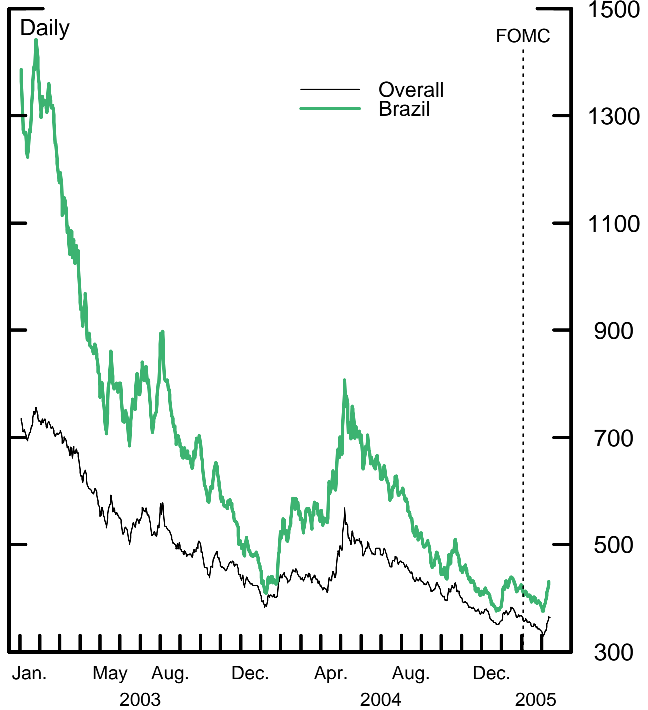


Chart 3
International Financial Indicators









Asian currencies. In contrast, the dollar appreciated about 4½ percent against the Brazilian *real*, amid reports of official sales of *real* by the Brazilian central bank. During the intermeeting period, Brazil's main equity index was boosted to record highs by large capital inflows from foreign private investors. Although higher dollar interest rates raised concerns in Latin American financial markets toward the end of the intermeeting period, equity prices in the region were generally strong, owing in part to perceptions of improving economic conditions. Dollar-denominated bond spreads narrowed to record low levels earlier this month, but they widened abruptly in the past week.

(6) Growth in nonfinancial sector debt has remained robust of late. Domestic nonfinancial business sector debt grew at an 8 percent annual rate in the final quarter of last year and appears to be rising nearly as fast in the current quarter (Chart 4). Business borrowing has likely been boosted by faster inventory accumulation and a pickup in merger and acquisition activity. With the housing market still hot and mortgage debt expanding at a double-digit clip, household debt again grew robustly in the final quarter of 2004 and appears to be on track for another sizable increase this quarter. The growth of federal debt remains brisk.

(7) M2 growth slowed to a 2½ percent pace over the first two months of 2005, evidently in response to widening opportunity costs. Rates on liquid deposits have changed little in the face of rising short-term market rates, while those on small time deposits have kept better pace with market yields. As a result, liquid deposit growth was anemic in January and February while small time deposits grew substantially. In addition, the attractiveness of M2 assets has apparently dimmed relative to capital market instruments, as flows into longer-term mutual funds have increased this year.

Chart 4
Debt and Money

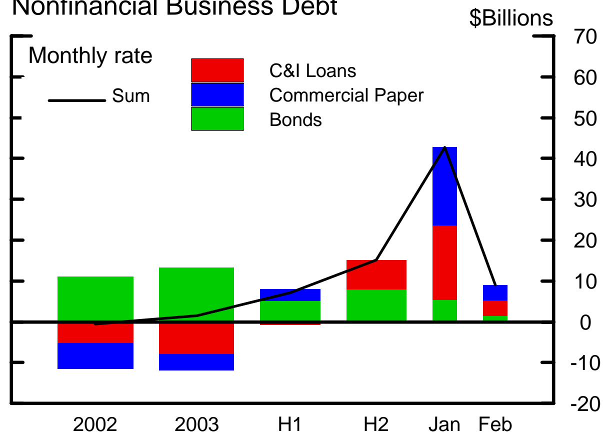
Growth of Nonfinancial Debt

Percent, s.a.a.r.

		Total	Nonfederal
2003		8.1	7.5
2004	Q1	9.3	8.7
	Q2	7.4	6.7
	Q3	8.3	9.1
	Q4	8.3	8.5
2005	Q1p	9.2	8.4

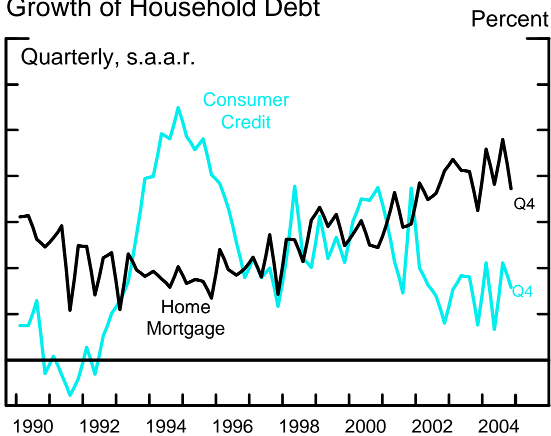
p Projected.

Changes in Selected Components of Nonfinancial Business Debt

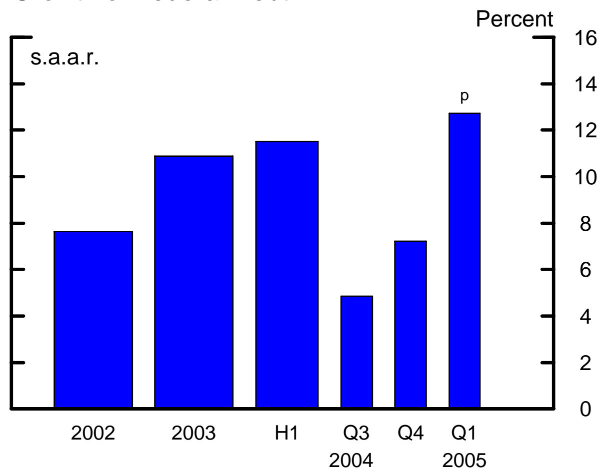


Note. Commercial paper and C&I loans are seasonally adjusted, bonds are not.

Growth of Household Debt

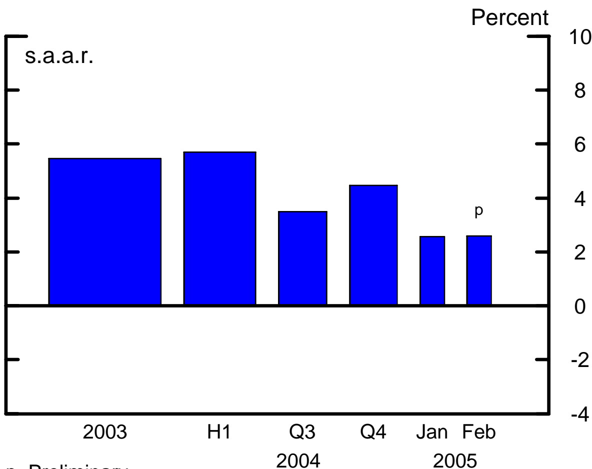


Growth of Federal Debt



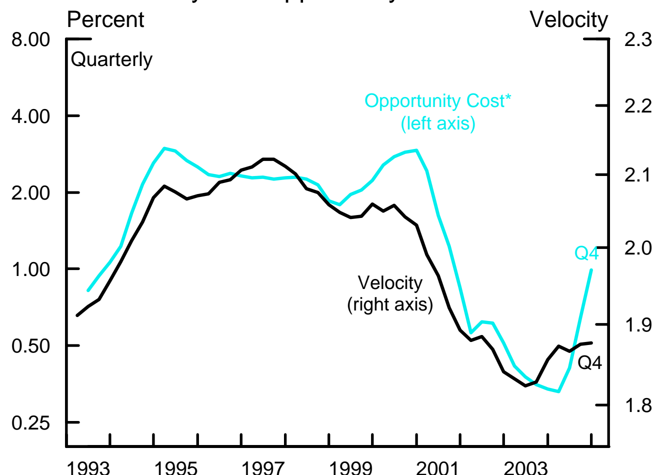
Note. Treasury debt held by the public at period-end.
p Projected.

Growth of M2



p Preliminary.

M2 Velocity and Opportunity Cost



*Two-quarter moving average.

Policy Alternatives

(8) Incoming information over the intermeeting period led the staff to mark up its assessments of the underlying strength of aggregate demand and the inflation outlook as well as its assumption for the path of the federal funds rate. The staff has read the smaller-than-expected moderation in spending on capital goods thus far this year as implying that the strength in capital spending over the latter half of 2004 did not owe materially to a pulling forward of spending to take advantage of the partial-expensing tax provision that expired at the end of the year. As a consequence, the staff now interprets a larger portion of last year's pickup in investment as the product of factors that are likely to support such spending into this year. The drag associated with an upward revision to the projected path of oil prices in light of the sharp and unexpected rise in spot and future oil prices over the intermeeting period only partially offsets this additional strength in aggregate demand. Real GDP is now projected to expand 4 and 3½ percent, respectively, in 2005 and 2006, placing the level of output only a touch below that of its potential at the end of the forecast. Recent readings on inflation, higher prices for oil and other commodities, and some further depreciation in the exchange value of the dollar induced the staff to raise its inflation projection a bit. Core PCE inflation is now anticipated to tick up this year to about 1¾ percent before falling back to about 1½ percent in 2006. Total consumer price inflation is projected to slow appreciably this year and next as oil prices retrace some of their recent gains, non-oil import prices decelerate, and productivity growth remains solid. The Greenbook forecast is now conditioned on an assumption that the target federal funds rate will reach 3½ percent by the end of this year and 4 percent by the end of 2006—a trajectory that is 50 basis points higher than assumed in January and only a bit below the market's anticipated path for the funds rate. Longer-term yields are expected to change little over the forecast period: The effects of rising short-term rates are counterbalanced by some marking down of forward rates at

longer horizons as market participants' policy expectations come into better alignment with the staff outlook. Equity prices are projected to rise at a pace sufficient to yield risk-adjusted returns in line with those on fixed-income securities, and the foreign exchange value of the dollar is anticipated to edge lower over the forecast period.

(9) This Bluebook presents three alternatives for the Committee's consideration that are summarized in Table 1, together with associated wording. Under Alternative B, the funds rate would be raised 25 basis points at this meeting. The accompanying statement would be quite similar to that issued following the February meeting but would note that output continues to grow at a solid pace, that inflation pressures had picked up, and that the rise in energy prices had not notably fed through to wages or core consumer prices. Alternative B makes the balance-of-risks assessment explicitly conditional on "appropriate policy" and uses a more forceful verb phrase, "should be kept," to underscore that it may take policy action to preserve balance.[3] As explained in the box on the next page, several of the characterizations in that statement may now or in the not-too-distant future be seen as needing revision in light of economic developments. As a case in point, the Committee may regard the current measured-pace language as limiting its flexibility at this and subsequent meetings. To allow for a broader range of policy options, under Alternatives A and C, the measured-pace language is replaced with a sentence emphasizing economic prospects as the principal factor that will determine the pace at which policy accommodation is removed. The statement could point to upside risks to sustainable growth and price stability conditional on an unchanged target federal funds rate for the next few quarters as an additional way of signaling the likely direction of the path for policy. Under Alternative A, the funds rate also would be raised 25 basis points, but the

[3] The Committee has accompanied its six prior tightenings with assessments that the risks to both of its goals were balanced, which indicates that those assessments have implicitly been conditioned on an appropriate path of policy. However, explicitly stating that conditionality, as in Alternative B, will probably limit the usefulness of this form of the risk assessment in signaling the likely direction of future policy moves.

Table 1: Alternative Language for the March FOMC Announcement

	February FOMC	Alternative A	Alternative B	Alternative C
Policy Decision	1. The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 2-1/2 percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to **2-3/4** percent. **This action brings the cumulative increase since June 2004 to 1-3/4 percentage points.**	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to **2-3/4** percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by **50** basis points to **3** percent.
Rationale	2. The Committee believes that, even after this action, the stance of monetary policy remains accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	The Committee believes that, ~~even~~ after this action, the stance of monetary policy remains **somewhat** accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	[no change]	[no change]
	3. Output appears to be growing at a moderate pace despite the rise in energy prices, and labor market conditions continue to improve gradually.	[no change]	Output appears to **continue to** be growing at a **solid** ~~moderate~~ pace despite the rise in energy prices, and labor market conditions continue to improve gradually.	Output ~~appears to be growing at a moderate pace despite the rise in energy prices, and labor market conditions continue to improve gradually.~~ **continues to grow at a pace sufficient to eliminate any remaining resource slack.**
	4. Inflation and longer-term inflation expectations remain well contained.	**Although month-to-month movements in inflation have been volatile of late, underlying** inflation and longer-term inflation expectations remain well contained.	~~Inflation and~~ **L**onger-term inflation expectations remain well contained**, though pressures on inflation have picked up modestly in recent months. The rise in energy prices, however, has not notably fed through to wages or core consumer prices.**	**While** ~~Inflation and~~ longer-term inflation expectations remain ~~well~~ contained, **pressures on inflation have intensified in recent months.**
Assessment of Risk	5. The Committee perceives the upside and downside risks to the attainment of both sustainable growth and price stability for the next few quarters to be roughly equal.	The Committee perceives ~~the upside and downside risks to the attainment of both sustainable growth and price stability for the next few quarters to be roughly equal~~ **that, if the current target for the federal funds rate were maintained for the next few quarters, it is more likely than not that output would grow at a pace faster than is sustainable and that inflation pressures would pick up.**	The Committee perceives **that, with appropriate policy action,** the upside and downside risks to the attainment of both sustainable growth and price stability ~~for the next few quarters to be~~ **should be kept** roughly equal.	The Committee perceives ~~the upside and downside risks to the attainment of both sustainable growth and price stability for the next few quarters to be roughly equal~~ **that, if the current target for the federal funds rate were maintained for the next few quarters, it is more likely than not that output would grow at a pace faster than is sustainable and that inflation pressures would pick up.**
	6. With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.	~~With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.~~ **However, the pace at which policy accommodation will be removed to contain those risks will depend on economic prospects.**	With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured~~.~~**; n**onetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.	~~With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.~~ **However, the pace at which policy accommodation will be removed to contain those risks will depend on economic prospects.**

Issues Associated with the FOMC Statement Language

The Committee will likely face five key issues concerning its statement language over upcoming meetings. First, as noted in the markup of the February FOMC statement at the right, the Committee will need to determine whether its characterization of the stance of policy—marked in red—should be modified in some way. Second, as noted in blue, the FOMC may need to revise its assessment of the pace of underlying productivity growth in light of the realized and anticipated slowing in actual productivity growth. Third, the assessment of inflation and inflation expectations—noted in green—may need to be revisited. Fourth, as marked in purple, the Committee may wish to alter the "measured pace" language. This might be the case if the Committee judged that a pause in the process of removing policy accommodation might be called for or, alternatively, if it determined that economic circumstances warranted a more rapid policy adjustment. However, eliminating the measured-pace language without a replacement would leave the risk assessment paragraph without a signal about the future direction of policy. That omission raises the fifth issue—noted in orange—regarding the balance-of-risks assessment.

Is policy still accommodative?

Is productivity growth still robust?

Is inflation well-contained and expected to be relatively low?

Are the risks still balanced?

Will the pace of firming remain 'measured'?

February 2005 FOMC Statement

The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 2-1/2 percent.

The Committee believes that, even after this action, **the stance of monetary policy remains accommodative** and, coupled with **robust underlying growth in productivity**, is providing ongoing support to economic activity. Output appears to be growing at a moderate pace despite the rise in energy prices, and labor market conditions continue to improve gradually. **Inflation and longer-term inflation expectations remain well contained.**

The Committee perceives the upside and downside risks to the attainment of both sustainable growth and price stability for the next few quarters to be roughly equal. With underlying inflation expected to be relatively low, the Committee believes that **policy accommodation** can be removed at a pace that is likely to be **measured.** Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.

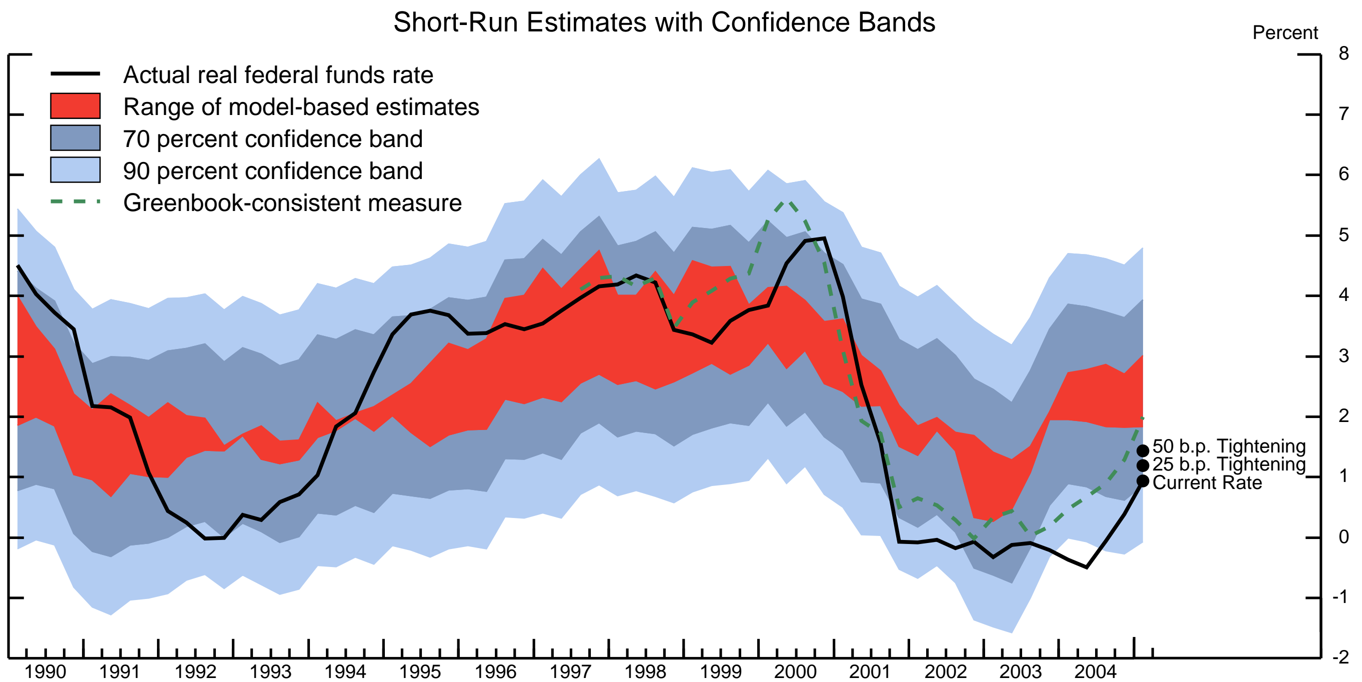
accompanying statement would suggest less concern about underlying inflation prospects. Under Alternative C, the funds rate would be boosted 50 basis points, and the accompanying statement would give more emphasis to the perception of upside inflation risks. These alternatives may contain elements of statement language that the Committee might find more appealing than the wording of Alternative B or may be helpful in informing potential changes in the policy announcement over the next few meetings.

(10) All three alternatives envisage some policy tightening at this meeting, which might be seen as necessary to contain the apparent momentum of spending and heightened inflation pressures. During the discussion in February, members universally viewed themselves as likely to favor firming in March, and the data released since then would not seem likely to have discouraged that sentiment. In that regard, investors appear unanimous in their expectation of a quarter-point hike at this meeting. While considerable uncertainty surrounds estimates of the equilibrium real rate, standard models put it well above the current level of the real federal funds rate (Chart 5). Additional tightening would also be called for by a range of standard policy prescriptions (Chart 6).

(11) If the Committee found the Greenbook forecast for output and inflation conditional on continued gradual removal of policy accommodation both plausible and acceptable, it might choose to raise the target federal funds rate ¼ percentage point at this meeting and issue a statement like that shown for **Alternative B** in Table 1. The Committee might view this action as consistent with the measured-pace language of the February statement and appropriately validating current market expectations of continued gradual firming. While there are some signs of greater pressures on inflation—as evidenced by more rapid growth in producer and commodity prices and a possible further increase in near-term inflation expectations—resource slack lingers, labor costs have only edged up, and firms

Chart 5
Equilibrium Real Federal Funds Rate

Short-Run Estimates with Confidence Bands



Notes: The real federal funds rate is constructed as the difference between the quarterly average of the actual nominal funds rate and the log difference of the core PCE price index over the previous four quarters. For the current quarter, the nominal funds rate used is the target federal funds rate as of the Bluebook publication date.

Short-Run and Medium-Run Measures

	Current Estimate	*Previous Bluebook*
Short-Run Measures		
Greenbook-consistent measure	2.0	*1.8*
Single-equation model	1.8	*1.8*
Small structural model	3.0	*2.9*
Large model (FRB/US)	2.4	*2.1*
Confidence intervals for three model-based estimates		
70 percent confidence interval	0.9 - 3.9	
90 percent confidence interval	-0.1 - 4.8	
Medium-Run Measures		
TIPS-consistent measure	1.6	*1.6*
Single-equation model	2.2	*2.2*
Small structural model	3.0	*2.8*
Confidence intervals for two model-based estimates		
70 percent confidence interval	1.6 - 3.6	
90 percent confidence interval	0.7 - 4.1	
Memo		
Actual real federal funds rate	0.94	*0.92*

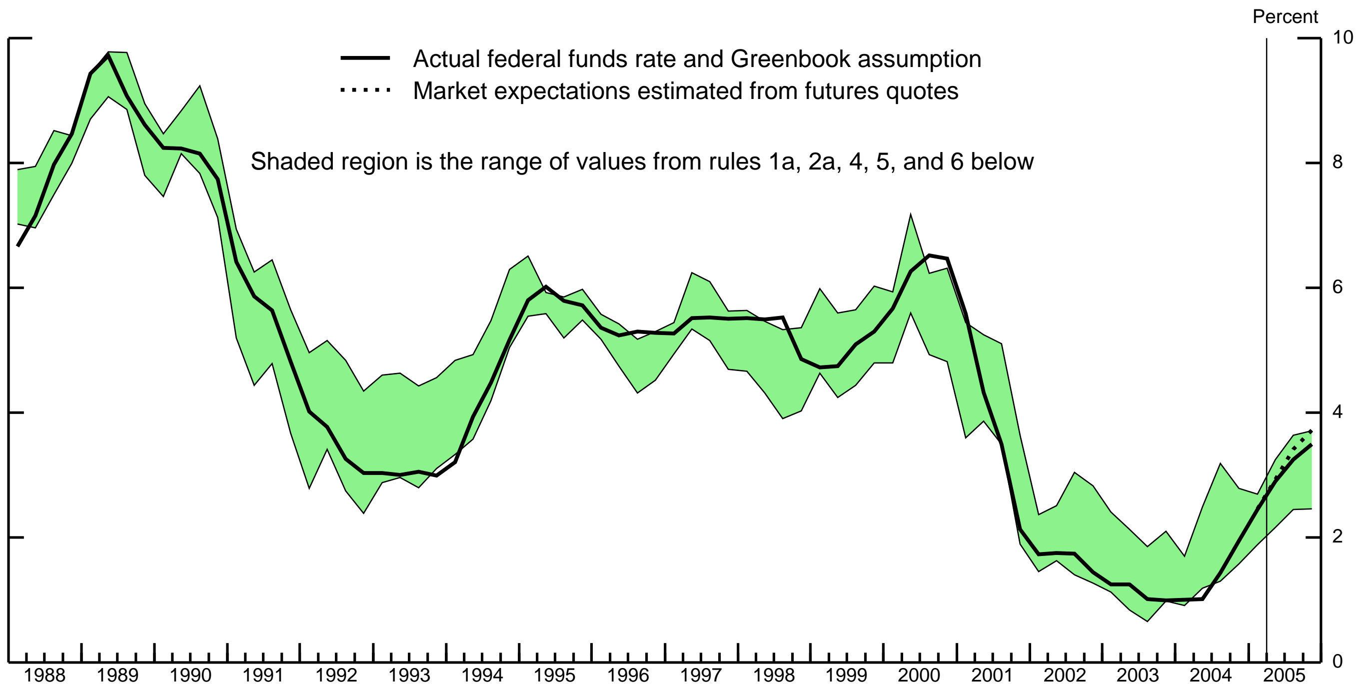
Notes: Confidence intervals and bands reflect uncertainties about model specification, coefficients, and the level of potential output. The final column indicates the values for the current quarter based on the estimation for the previous Bluebook, except that the TIPS-consistent measure and the actual real funds rate are the values published in the previous Bluebook.

Equilibrium Real Rate Chart: Explanatory Notes

The equilibrium real rate is the real federal funds rate that, if maintained, would be projected to return output to its potential level over time. The short-run equilibrium rate is defined as the rate that would close the output gap in twelve quarters given a model's projection of the economy, and the medium-run concept is the value of the real funds rate projected to keep output at potential in seven years under the assumption that monetary policy acts to bring actual and potential output into line in the short run and then keep them equal thereafter. With the exception of the TIPS-consistent measure, the real federal funds rates employ the log difference of the core PCE price index over the previous four quarters as a proxy for expected inflation, with the staff projection used for the current quarter. TIPS indexation is based on the total CPI.

Measure	Description
Single-Equation Model	The measure of the equilibrium real rate in the single-equation model is based on an estimated aggregate-demand relationship between the current value of the output gap and its lagged values as well as the lagged values of the real federal funds rate. In light of this model's simple structure, the short-run measure of the equilibrium real rate depends only on the recent position of output relative to potential, and the medium-run measure is virtually constant.
Small Structural Model	The small-scale model of the economy consists of equations for five variables: the output gap, the equity premium, the federal budget surplus, the trend growth rate of output, and the real bond yield. Unlike the estimates from the single-equation model, values of the equilibrium real rate also depend directly on conditions associated with output growth, fiscal policy, and capital markets.
Large Model (FRB/US)	Estimates of the equilibrium real rate using FRB/US—the staff's large-scale econometric model of the U.S. economy—depend on a very broad array of economic factors, some of which take the form of projected values of the model's exogenous variables. These projections make use of several simple forecasting rules which are appropriate for the three-year horizon relevant for the short-run concept but are less sensible over longer horizons. Thus, we report only the short-run measure for the FRB/US model.
Greenbook-consistent	Measures of the equilibrium real rate cannot be directly obtained from the Greenbook forecast, because the Greenbook is not based on a formal model. Rather, we use the FRB/US model in conjunction with an extended version of the Greenbook forecast to derive a Greenbook-consistent measure. FRB/US is first add-factored so that its simulation matches the extended Greenbook forecast, and then a second simulation is run off this baseline to determine the value of the real federal funds rate that closes the output gap. The medium-run concept of the equilibrium real rate is not computed because it requires a relatively long extension of the Greenbook forecast.
TIPS-consistent	Yields on TIPS (Treasury Inflation-Protected Securities) incorporate investors' expectations of the future path of real interest rates. The seven-year instantaneous real forward rate derived from TIPS yields reflects the short-term real interest rate expected to prevail in seven years as well as any applicable term premium on the Bluebook publication date. The term premium is assumed to be 70 basis points.

Chart 6
Actual and Assumed Federal Funds Rate and Range of Values from Policy Rules and Futures Markets



Values of the Federal Funds Rate from Policy Rules and Futures Markets

	2004	2005			
	Q4	Q1	Q2	Q3	Q4
Rules with Imposed Coefficients					
1. Baseline Taylor Rule: a) $\pi^*=1.5$	2.79	2.70	3.26	3.64	3.71
b) $\pi^*=2$	2.54	2.45	3.01	3.39	3.46
2. Aggressive Taylor Rule: a) $\pi^*=1.5$	2.08	2.12	2.87	3.33	3.46
b) $\pi^*=2$	1.83	1.87	2.62	3.08	3.21
3. First-difference Rule: a) $\pi^*=1.5$	1.60	2.31	2.81	3.08	3.31
b) $\pi^*=2$	1.35	2.06	2.56	2.58	2.56
Rules with Estimated Coefficients					
4. Outcome-based Rule	1.71	2.08	2.71	3.01	3.20
5. Greenbook Forecast-based Rule	1.58	2.22	2.69	2.78	2.83
6. FOMC Forecast-based Rule	1.64	1.89	2.17	2.45	2.46
7. TIPS-based Rule	1.87	2.45			
Memo					
Expected federal funds rate derived from futures		2.46	2.94	3.41	3.72
Actual federal funds rate and Greenbook assumption	1.95	2.45	2.90	3.25	3.50

Note: Rule prescriptions for 2005Q2 through 2005Q4 are calculated using current Greenbook projections for inflation and the output gap (or unemployment gap). For rules that contain the lagged funds rate, the rule's previous prescription for the funds rate is used to compute prescriptions for 2005Q3 and 2005Q4. It is assumed that there is no feedback from the rule prescriptions to the Greenbook projections through 2005Q4. The TIPS-based rule is computed using average TIPS and nominal Treasury yields to date.

Policy Rules Chart: Explanatory Notes

In all of the rules below, i_t denotes the federal funds rate, π_t the staff estimate at date t of trailing four-quarter core PCE inflation, $(y_t - y_t^*)$ the staff estimate (at date t) of the output gap, π^* policymakers' long-run objective for inflation, i_{t-1} the lagged federal funds rate, ε_{t-1} the residual from the rule's prescription the previous quarter, $(y_{t+3|t} - y_{t+3|t}^*)$ the staff's three-quarter-ahead forecast of the output gap, $(\Delta y_{t+3|t} - \Delta y_{t+3|t}^*)$ the staff's forecast of output growth less potential output growth three quarters ahead, $\pi_{t+3|t}$ a three-quarter-ahead forecast of inflation, and $(u_{t+3|t} - u_{t+3|t}^*)$ a three-quarter-ahead forecast of the unemployment gap. Data are quarterly averages taken from the Greenbook and staff memoranda closest to the middle of each quarter, unless otherwise noted.

Rule	Specification	Root-mean-square error	
		1988:1-2004:4	2001:1-2004:4
Rules with Imposed Coefficients			
1. Baseline Taylor Rule	$i_t = 2 + \pi_t + 0.5(y_t - y_t^*) + 0.5(\pi_t - \pi^*)$	.98[a]	1.11[a]
2. Aggressive Taylor Rule	$i_t = 2 + \pi_t + (y_t - y_t^*) + 0.5(\pi_t - \pi^*)$	.68[a]	.65[a]
3. First-difference Rule	$i_t = i_{t-1} + 0.5(\Delta y_{t+3\|t} - \Delta y_{t+3\|t}^*) + 0.5(\pi_{t+3\|t} - \pi^*)$	.98[a]	.44[a]
Rules with Estimated Coefficients			
4. Estimated Outcome-based Rule Rule includes both lagged interest rate and serial correlation in residual.	$i_t = .52 i_{t-1} + 0.48\,[1.14 + 0.96(y_t - y_t^*) + 1.49\pi_t] + 0.49\varepsilon_{t-1}$	.23	.24
5. Estimated Greenbook Forecast-based Rule Rule includes both lagged interest rate and serial correlation in residual.	$i_t = .71 i_{t-1} + 0.29\,[0.59 + 1.06(y_{t+3\|t} - y_{t+3\|t}^*) + 1.62\pi_{t+3\|t}] + 0.33\varepsilon_{t-1}$	.25	.27
6. Estimated FOMC Forecast-based Rule Unemployment and inflation forecasts are from semiannual "central tendency" of FOMC forecasts, interpolated if necessary to yield 3-qtr-ahead values; u_t^* forecast is from staff memoranda. Inflation forecasts are adjusted to core PCE deflator basis. Rule is estimated at semiannual frequency, and projected forward using Greenbook forecasts.	$i_t = 0.49 i_{t-2} + 0.51\,[0.27 - 2.10(u_{t+3\|t} - u_{t+3\|t}^*) + 1.60\pi_{t+3\|t}]$	.45	.61
7. Estimated TIPS-based Rule $\pi_{comp5\|t}$ denotes the time-t difference between 5-yr nominal Treasury yields and TIPS. Sample begins in 1999 due to TIPS volatility in 1997-8.	$i_t = 0.97 i_{t-1} + [-1.24 + 0.68\pi_{comp5\|t}]$	.42[b]	.44

[a] RMSE for rules with imposed coefficients is calculated setting $\pi^*=1.5$.

[b] RMSE for TIPS-based rule is calculated for 1999:1-2004:4.

probably have scope to absorb some increase in costs by reducing profit margins. A quarter-point firming at this meeting presumably to be followed by further increases over time could be seen as sufficient to cut off the inflation pressures already in the pipeline, especially so if the Committee harbors doubts about the continued vigor of the expansion given the sharp rise in oil prices and the backup in long-term rates.

(12) According to the Desk's survey of primary dealers and anecdotal reports, market participants universally anticipate a quarter-point firming in policy at this meeting and generally expect only relatively minor changes to the statement language. As a result, it seems likely that the market reaction to Alternative B would be fairly muted. However, investors would take note of the reference to the pickup of inflation pressures and would conclude that the Committee believed that "appropriate policy" would most likely entail more policy firming than previously expected. Consequently, yields would probably tick up a few basis points following the announcement while stock prices could fall back a bit.

(13) The Committee might view recent elevated readings on some price measures as providing a stronger signal of heightened inflation pressures than does the staff. In this case, the Committee may wish to raise the target federal funds rate by 50 basis points and issue a statement like that described for **Alternative C**. This option might be viewed as particularly appealing if the Committee thought that underlying productivity growth had slowed substantially or that output was already approaching, or had even outstripped, potential. Even if the Committee generally believes that inflation and inflation expectations are likely to remain well-contained under the gradual trajectory of policy tightening assumed in the Greenbook, it may view the upside risks to that forecast—which are explored in the "spending boom with rising inflation expectations" scenario in the Greenbook—as sufficiently worrisome to justify a half-point move at this meeting. In light of the apparent momentum of aggregate demand, the Committee may perceive the risk that market

participants come to view it as wavering in its commitment to keep inflation in check as more serious than the risk that market participants begin to build in an inappropriately tight path for monetary policy.

(14) If the Committee instead views recent higher inflation readings as largely transitory, it may wish to firm policy by a quarter point at this meeting and issue a statement like that described under **Alternative A**. With longer-term inflation expectations well-contained and resource slack apparently being worked down slowly, the Committee may see relatively little cost in continuing along a path of gradual removal of policy accommodation. Indeed, the Committee may want to choose the words of its statement so as to keep market participants from marking up their expected path of tightening. This might be so even if the Committee anticipates that resource slack is likely to be eliminated fairly soon, if it also saw downside risks to that forecast—such as are discussed in the "higher bond premiums" scenario in the Greenbook—as significant given the recent run-up in interest rates and rise in oil prices.

(15) Under either Alternative A or C, the Committee may judge that the measured-pace language is no longer consistent with the likely future course of policy. Some might view this wording—at least as it has come to be interpreted in the markets after six quarter-point firmings with unchanged language—as ruling out a potential pause in policy at upcoming meetings. At the same time, that wording might be regarded as potentially constraining on the upside if the Committee saw a significant likelihood that it might need to accelerate the process of removing policy accommodation. Indeed, members might not choose to firm 50 basis points at this meeting because of the force of such a constraint. As a result, the Committee might wish to strike the measured-pace language from its statement at this meeting. To accomplish this while still providing a general signal about the probable future direction of policy, the Committee could make its risk assessments conditional on an

unchanged target federal funds rate for the next few quarters. For Alternatives A and C, the Committee could then indicate that it is "more likely than not" that the growth of output would exceed its sustainable pace and that inflation pressures would pick up. The last sentence of the paragraph could underscore the importance of "economic prospects" as a guide for policymakers in judging the pace at which policy accommodation should be removed.

(16) Although the risk assessment paragraphs in Alternatives A and C are similar, the characterizations of the economy and prices in the rationale paragraphs are quite different. Under Alternative A, the rationale paragraph would suggest that the Committee sees the stance of monetary policy as "somewhat" accommodative and regards the recent uptick in inflation readings as transitory, with underlying inflation and inflation expectations remaining well-contained. Such sentiments, along with the observation that the firming of policy had cumulated to 175 basis points, would seem to signal a pause sometime soon. In contrast, the language for Alternative C would suggest that output growth is proceeding at a pace that seems likely to eliminate resource slack in the near term and would note that inflation pressures have intensified, signaling a pickup in the pace of firming. Such language may be favored in order to indicate that the Committee could begin to tighten more forcefully sometime soon even if it moves 25 basis points at this meeting.

(17) Market participants would be caught off guard by the 50 basis point tightening of Alternative C. Moreover, investors could infer from the concerns expressed about inflation and the removal of the measured-pace language that further half-point policy tightenings could well be forthcoming. Interest rates would likely rise sharply across the yield curve, while stock prices would decline in response to both the rise in rates and an associated marking down of prospects for earnings growth. The rise in longer-term yields would be tempered to the extent that investors scaled down their longer-term inflation expectations. The market reaction to the

language of Alternative C would be somewhat attenuated if the Committee boosted rates at this meeting by only a quarter point. Even in this case, however, the language would presumably be read as suggesting that a more rapid removal of policy accommodation was likely in the future—that is, 50 basis point moves could well be in the cards. The market reaction to adoption of Alternative A is more difficult to gauge, but the mention of cumulative firming, upbeat assessment of inflation prospects, and the characterization of the stance of policy as only "somewhat" accommodative in the rationale paragraph should tend to put some downward pressure on yields. Some observers might interpret the absence of the measured-pace language as an indication of increased odds of a pause at upcoming meetings. On net, interest rates would probably drop and stock prices would likely move up following the announcement.

Money and Debt Forecasts

(18) Widening opportunity costs and perceptions of favorable returns in bond and equity markets are expected to damp money growth this year and next. With short-term money market rates increasing, the composition of M2 is expected to continue to shift toward components such as small time deposits that offer more competitive yields. M2 is projected to rise 3 and 4 percent, respectively, in 2005 and 2006—roughly in line with the historical relationships among money, income, and opportunity costs. Borrowing by domestic nonfinancial corporations is anticipated to pick up over the forecast horizon as rising capital expenditures and mergers and acquisition activity spur financing needs, which increasingly exceed internal funds. By contrast, the pace of borrowing in other sectors, while still brisk, is projected to step down from that of last year. In the household sector, consumers are expected to take steps to reverse some of the decline in the saving rate registered in recent years. Moreover, mortgage debt is projected to decelerate appreciably in response to higher

Alternative Growth Rates for M2

(percent, annual rate)

		Raise 25 bp*	Raise 50 bp**	Greenbook***
Monthly Growth Rates				
	Jan-05	2.6	2.6	2.6
	Feb-05	2.6	2.6	2.6
	Mar-05	3.3	3.3	3.3
	Apr-05	5.0	4.6	5.0
	May-05	3.3	2.5	3.0
	Jun-05	3.7	2.9	3.0
Quarterly Growth Rates				
	2004 Q3	3.5	3.5	3.5
	2004 Q4	5.7	5.7	5.7
	2005 Q1	3.6	3.6	3.6
	2005 Q2	3.8	3.4	3.7
	2005 Q3	3.4	2.7	2.3
	2005 Q4	3.6	3.2	2.4
Annual Growth Rates				
	2004	5.2	5.2	5.2
	2005	3.6	3.3	3.0
	2006	4.2	4.1	4.0
Growth From	To			
Feb-05	Jun-05	3.8	3.3	3.6
Mar-05	Jun-05	4.0	3.3	3.7

* Increase of 25 basis points in the targeted federal funds rate at this meeting and no change thereafter.

** Increase of 50 basis points in the targeted federal funds rate at this meeting and no change thereafter.

*** This forecast is consistent with nominal GDP and interest rates in the Greenbook forecast.

mortgage rates and a leveling out in home prices. Federal debt growth is forecast to moderate as Congress and the Administration act to restore a measure of fiscal restraint. All told, total domestic nonfinancial debt growth is expected to slow to 7½ percent and 7 percent, respectively, in 2005 and 2006.

Directive and Balance of Risks Statement

(19) Draft language for the directive and draft risk assessments identical to those presented in Table 1 are provided below.

Directive Wording

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with MAINTAINING/increasing/REDUCING the federal funds rate AT/to an average of around ____________ ~~2-1/2~~ percent.

Risk Assessments

A. The Committee perceives that, if the current target for the federal funds rate were maintained for the next few quarters, it is more likely than not that output would grow at a pace faster than is sustainable and inflation pressures would pick up. However, the pace at which policy accommodation will be removed to contain those risks will depend on economic prospects.

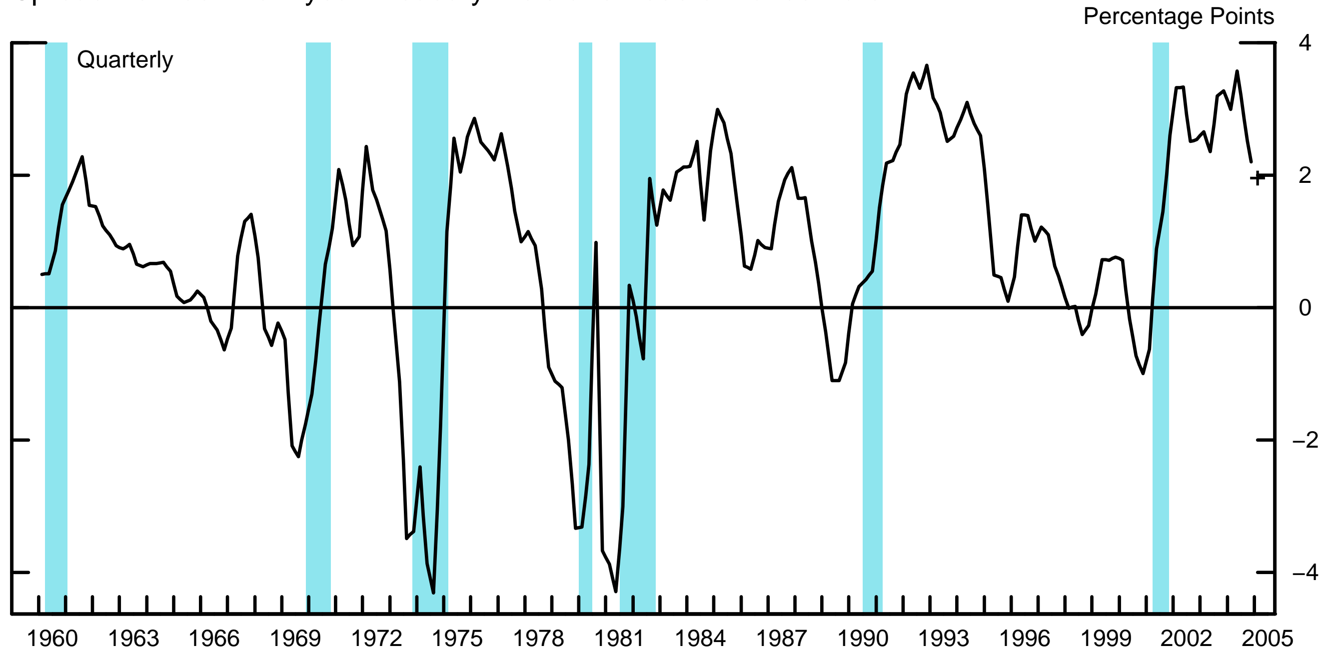
B. The Committee perceives that, with appropriate policy action, the upside and downside risks to the attainment of both sustainable growth and price stability should be kept roughly equal. With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured; nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.

C. The Committee perceives that, if the current target for the federal funds rate were maintained for the next few quarters, it is more likely than not

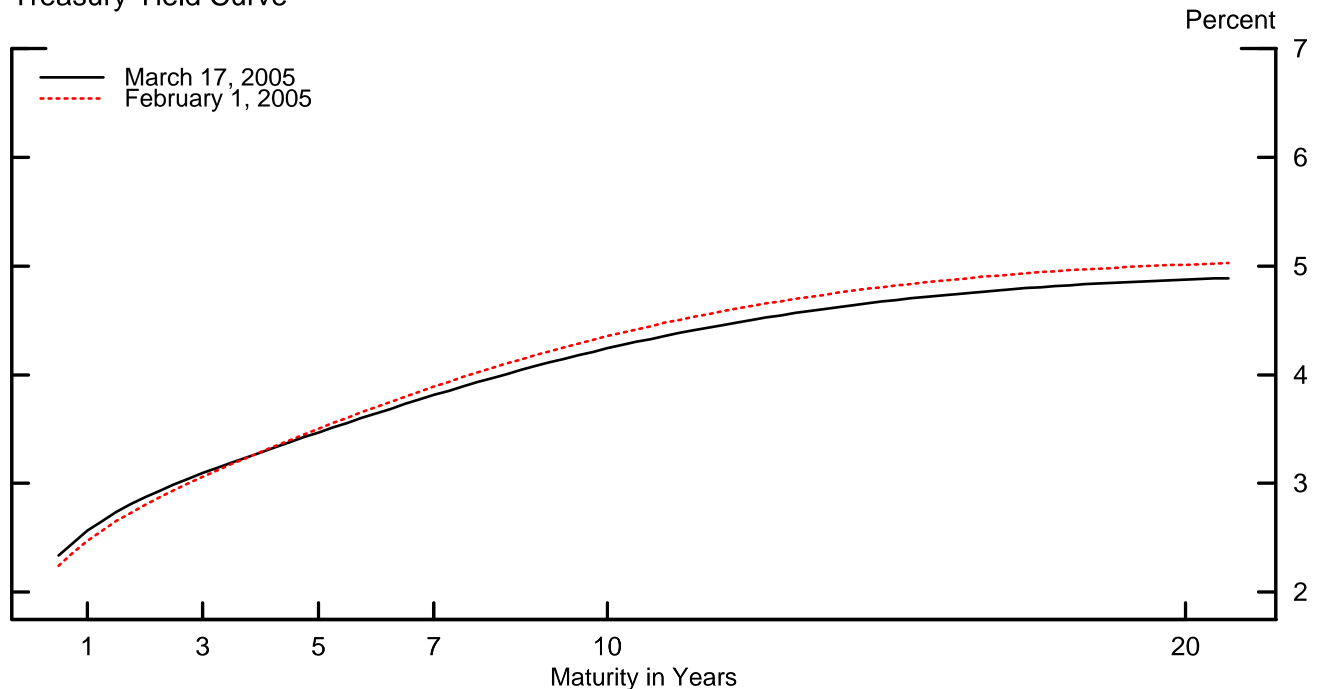
that output would grow at a pace faster than is sustainable and inflation pressures would pick up. However, the pace at which policy accommodation will be removed to contain those risks will depend on economic prospects.

Appendix Chart 1

Treasury Yield Curve



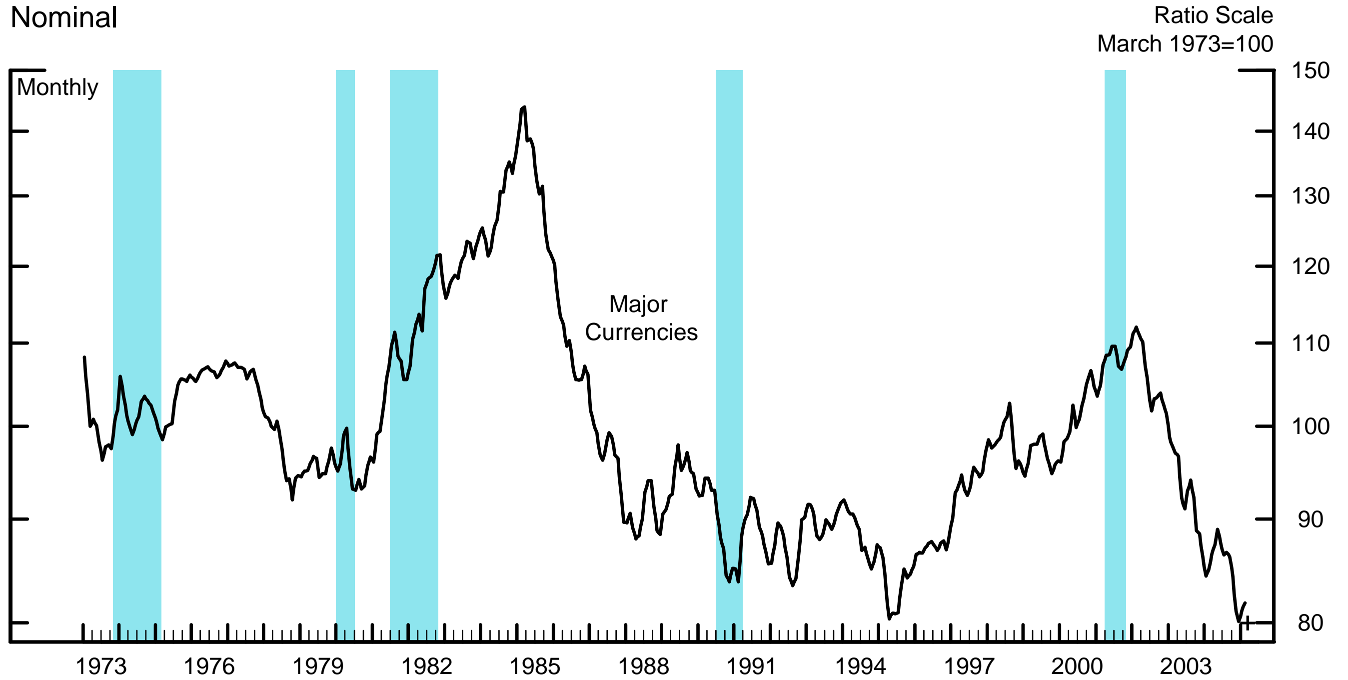
+ Denotes most recent weekly value.
Note. Blue shaded regions denote NBER−dated recessions.



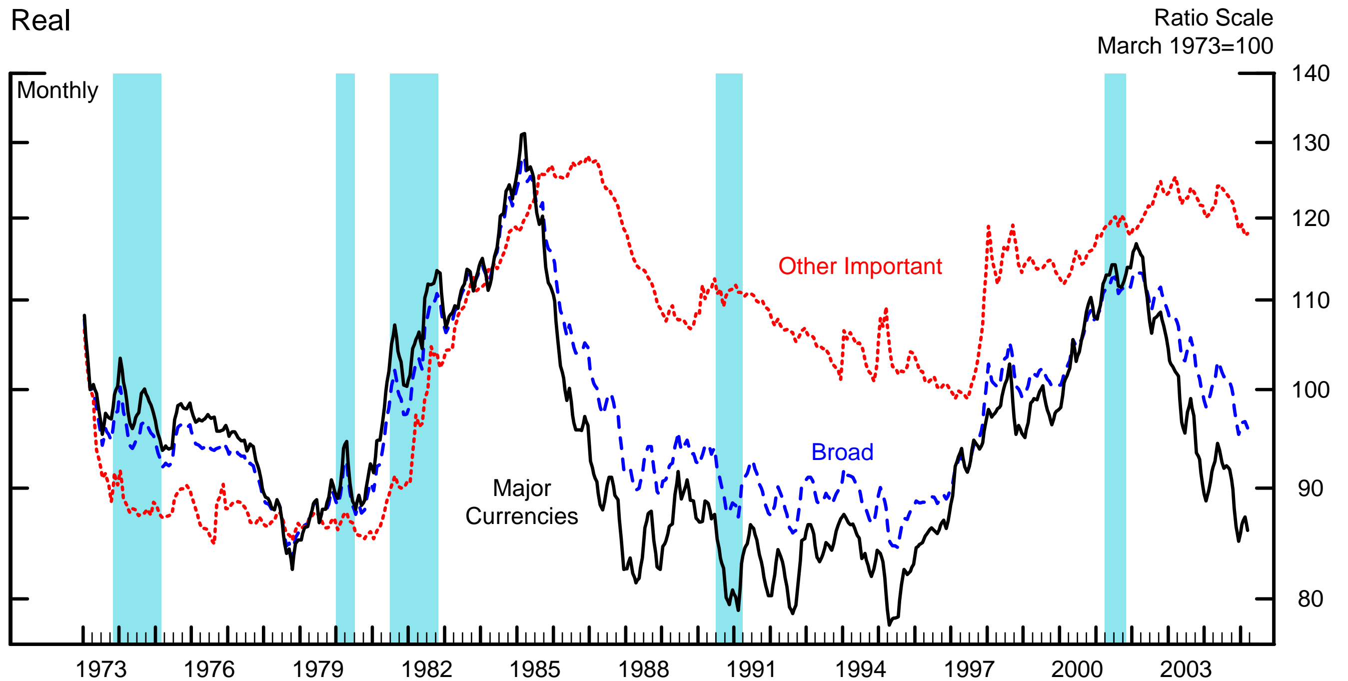
*Smoothed yield curve estimated from off−the−run Treasury coupon securities. Yields shown are those on notional par Treasury securities with semi−annual coupons.

Appendix Chart 2

Dollar Exchange Rate Indexes

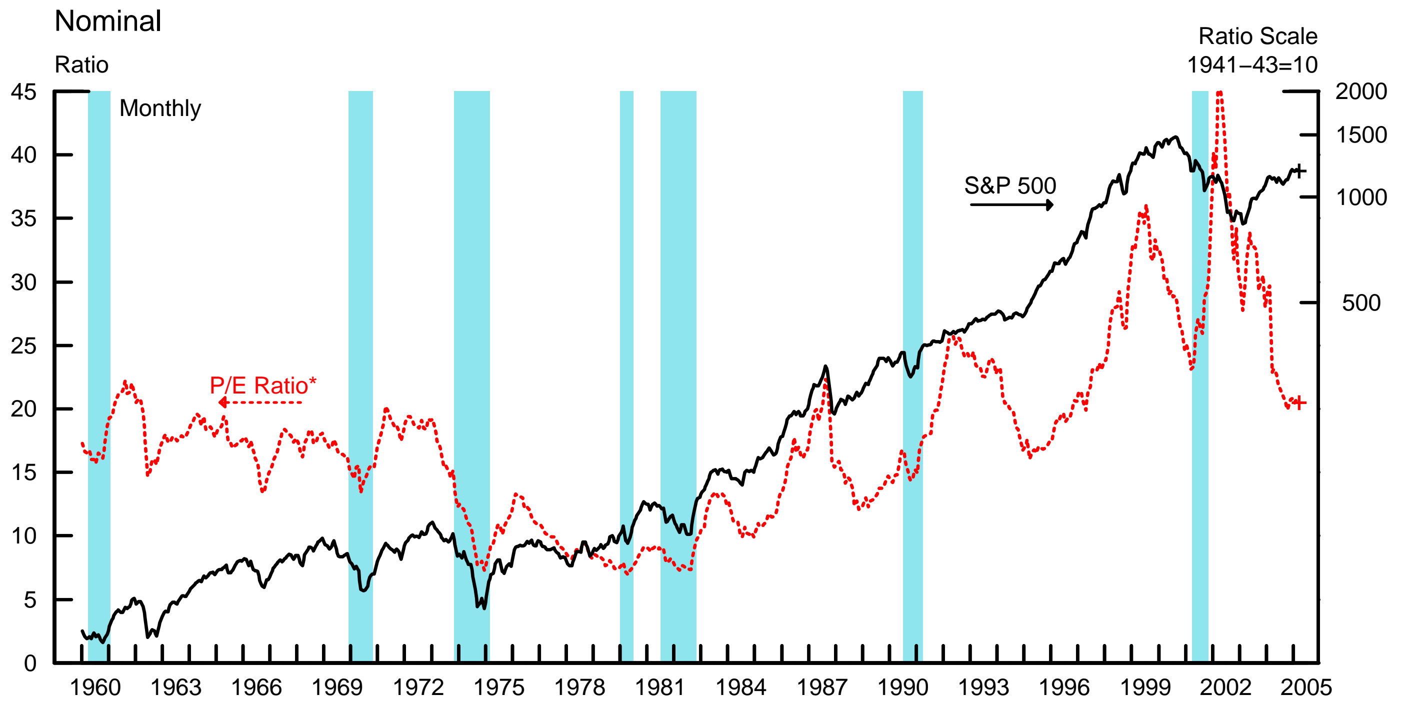


+ Denotes most recent weekly value.

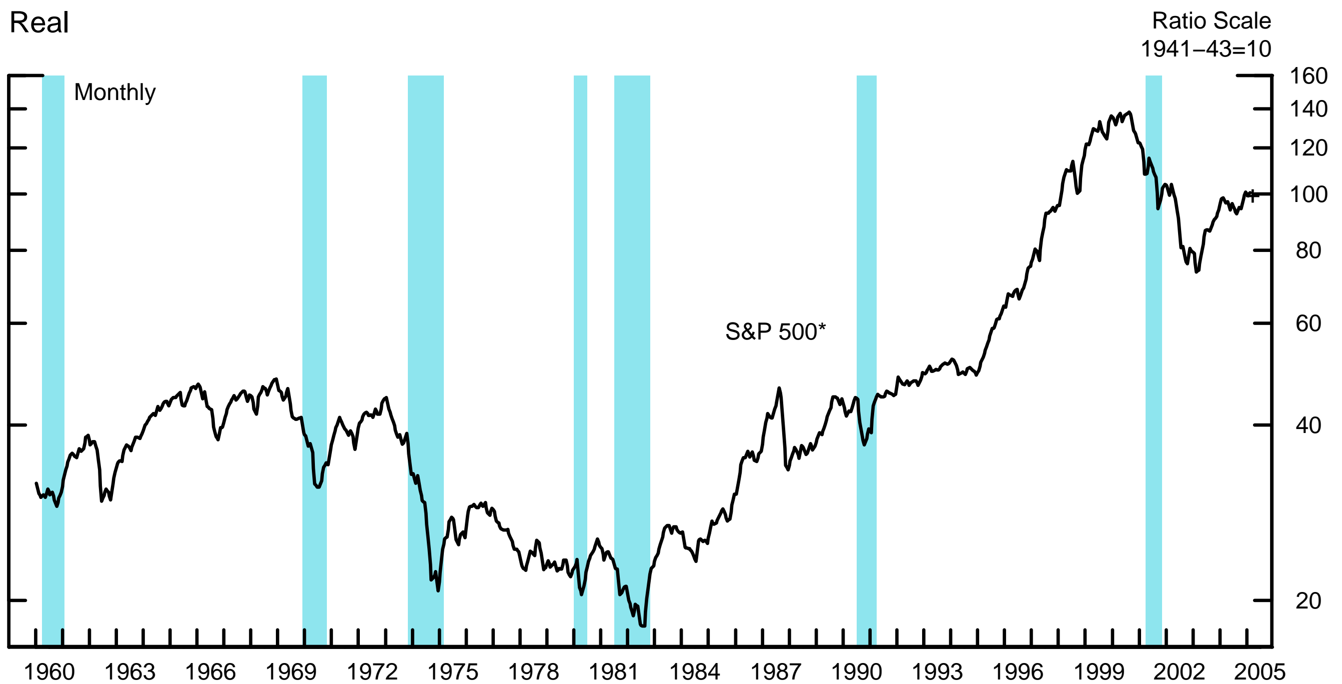


Note. The major currencies index is the trade−weighted average of currencies of the Euro area, Canada, Japan, the U.K., Switzerland, Australia, and Sweden. The other important trading partners index is the trade−weighted average of currencies of 19 other important trading partners. The Broad index is the trade−weighted average of currencies of all important trading partners. Real indexes have been adjusted for relative changes in U.S. and foreign consumer prices. Blue shaded regions denote NBER−dated recessions.

Stock Indexes



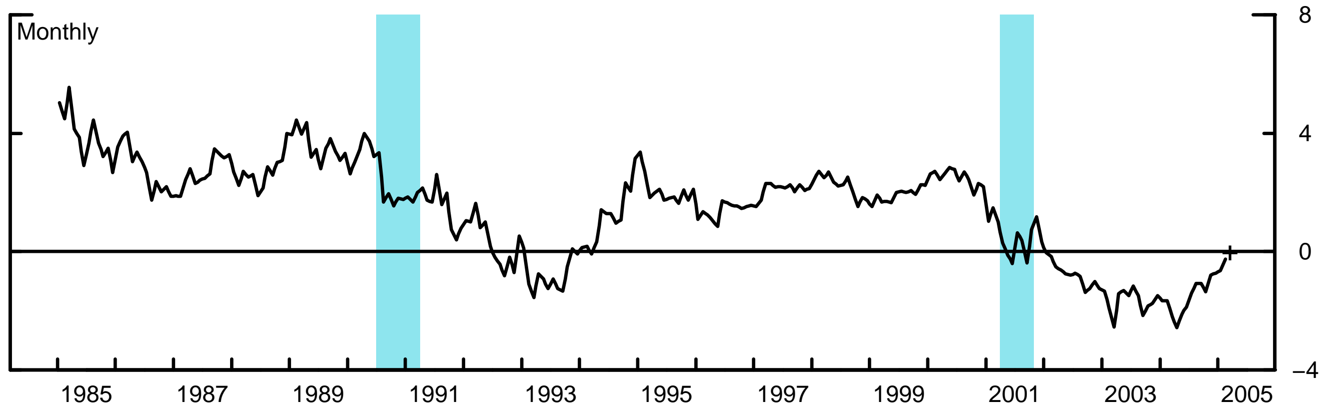
* Based on trailing four–quarter earnings.
+ Denotes most recent weekly value.



* Deflated by the CPI.
+ Denotes most recent weekly value.
Note. Blue shaded regions denote NBER–dated recessions.

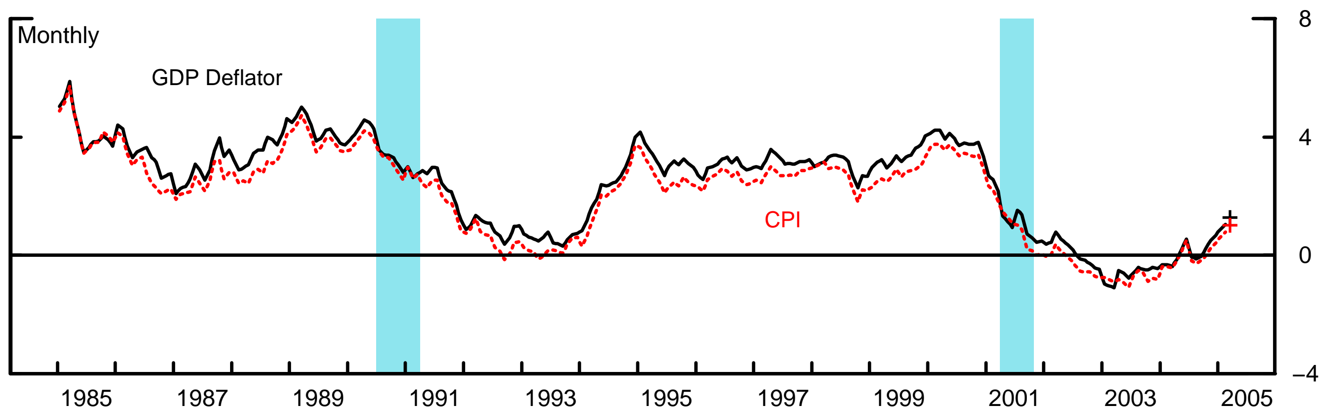
One–Year Real Interest Rates

One–Year Treasury Constant Maturity Yield Less One–Year Inflation Expectations (Michigan Survey)*



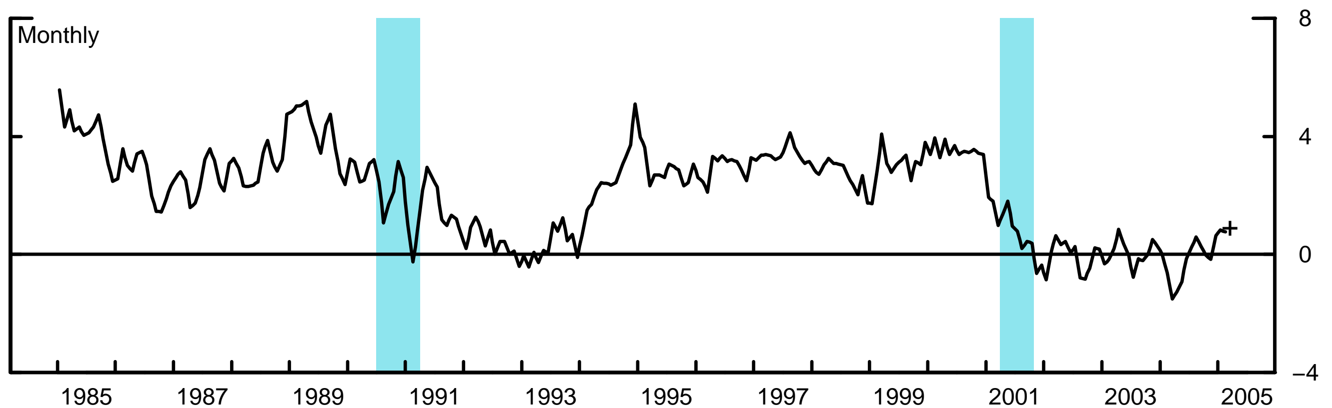
* Mean value of respondents.

One–Year Treasury Constant Maturity Yield Less One–Year Inflation Expectations (Philadelphia Fed)*



* ASA/NBER quarterly survey until 1990:Q1; Philadelphia Federal Reserve Bank Survey of Professional Forecasters thereafter. Median value of respondents.

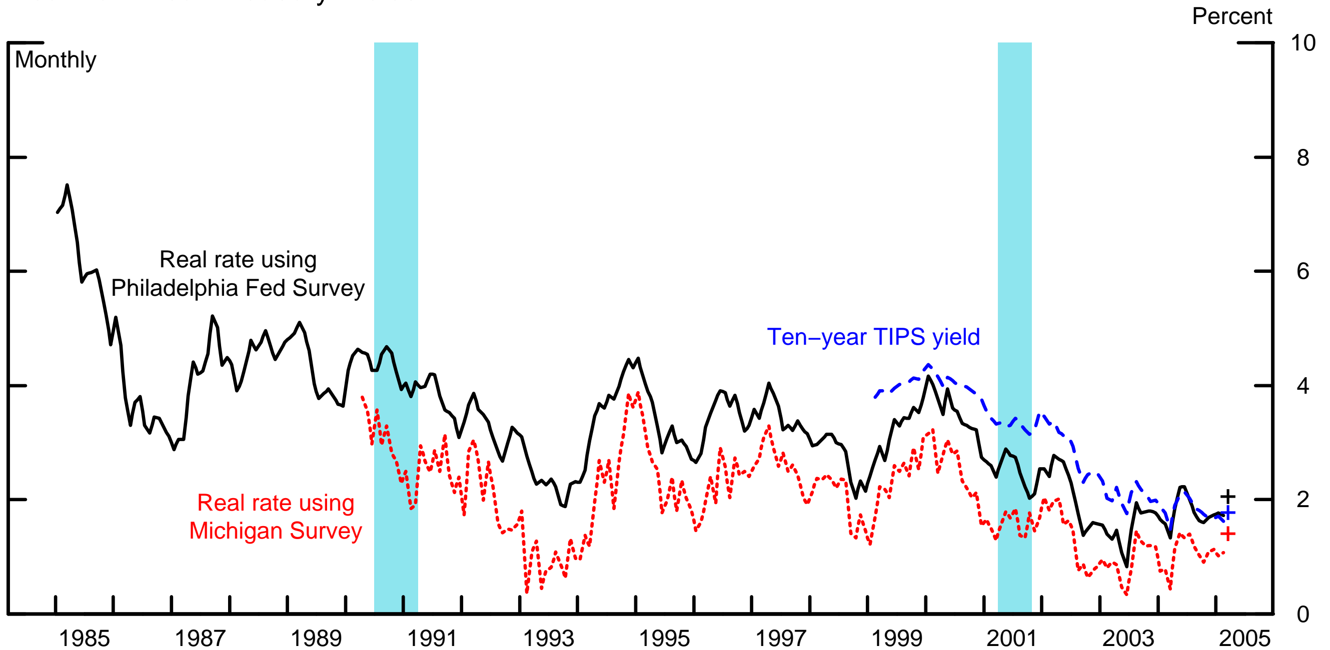
One–Year Treasury Constant Maturity Yield Less Change in the Core CPI from Three Months Prior



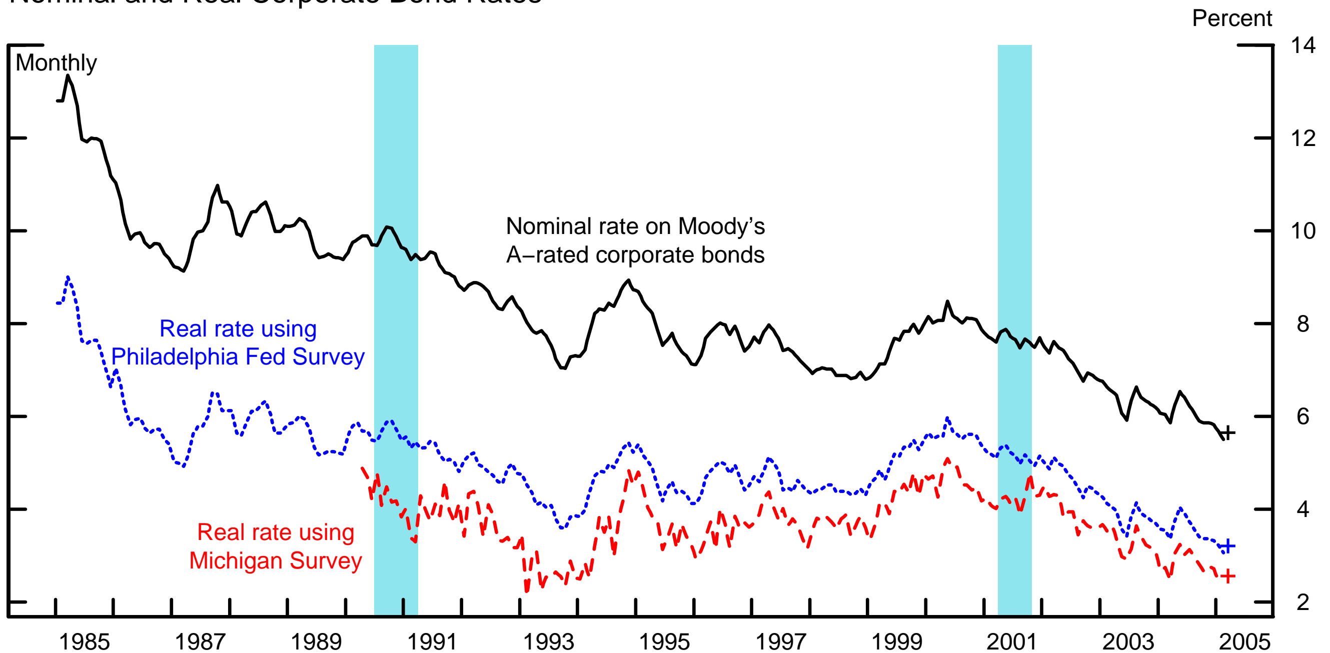
+ Denotes most recent weekly Treasury constant maturity yield less most recent inflation expectation.
Note. Blue shaded regions denote NBER–dated recessions.

Long–Term Real Interest Rates*

Real Ten–Year Treasury Yields



Nominal and Real Corporate Bond Rates

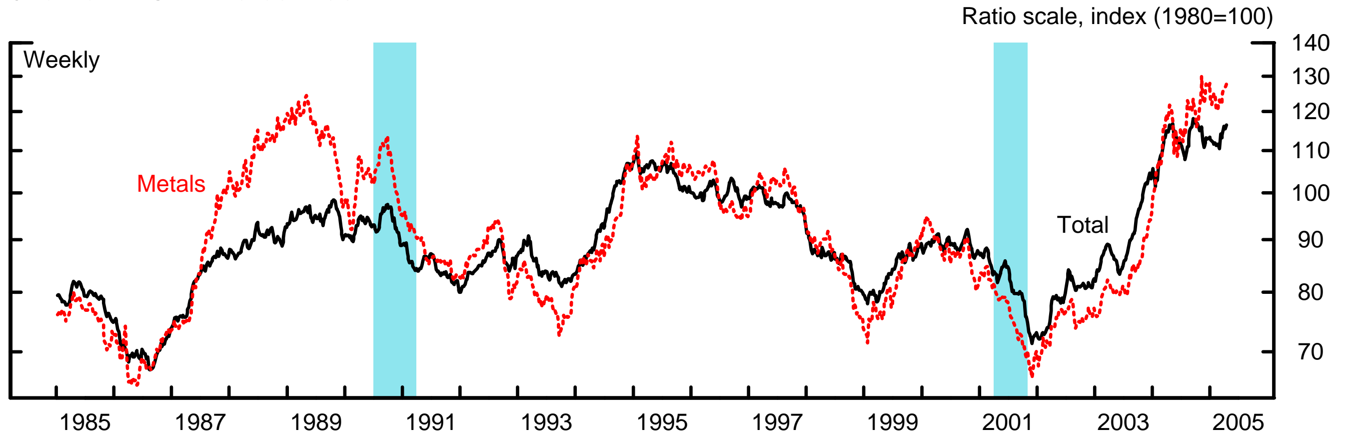


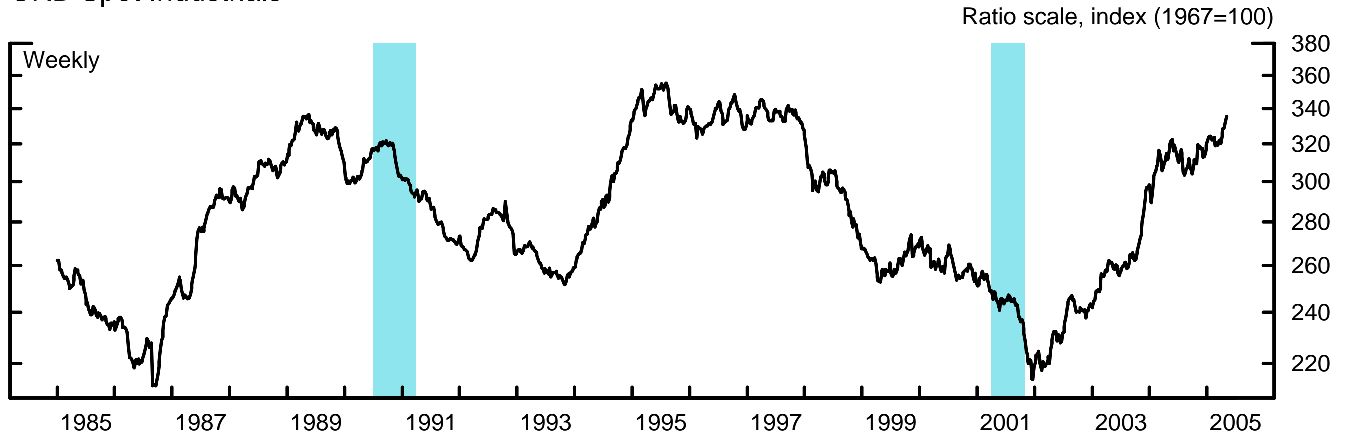
* For real rates, measures using the Philadelphia Fed Survey employ the ten–year inflation expectations from the Blue Chip Survey until April 1991 and the Philadelphia Federal Reserve Bank Survey of Professional Forecasters thereafter (median value of respondents). Measures using the Michigan Survey employ the five– to ten–year inflation expectations from that survey (mean value of respondents).

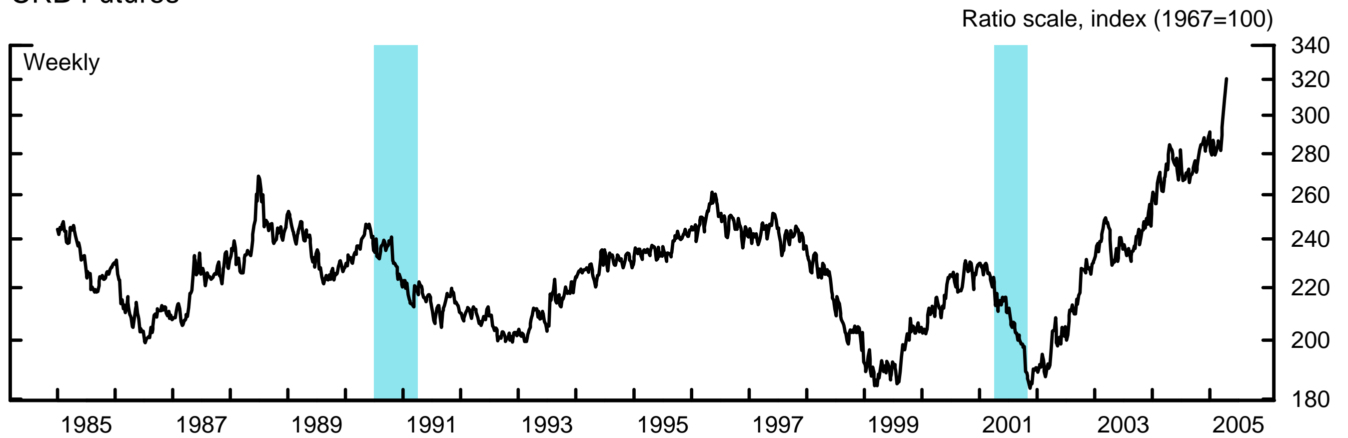
+ For TIPS and nominal corporate rate, denotes the most recent weekly value. For other real rate series, denotes the most recent weekly nominal yield less the most recent inflation expectation.

Note. Blue shaded regions denote NBER–dated recessions.

Commodity Price Measures

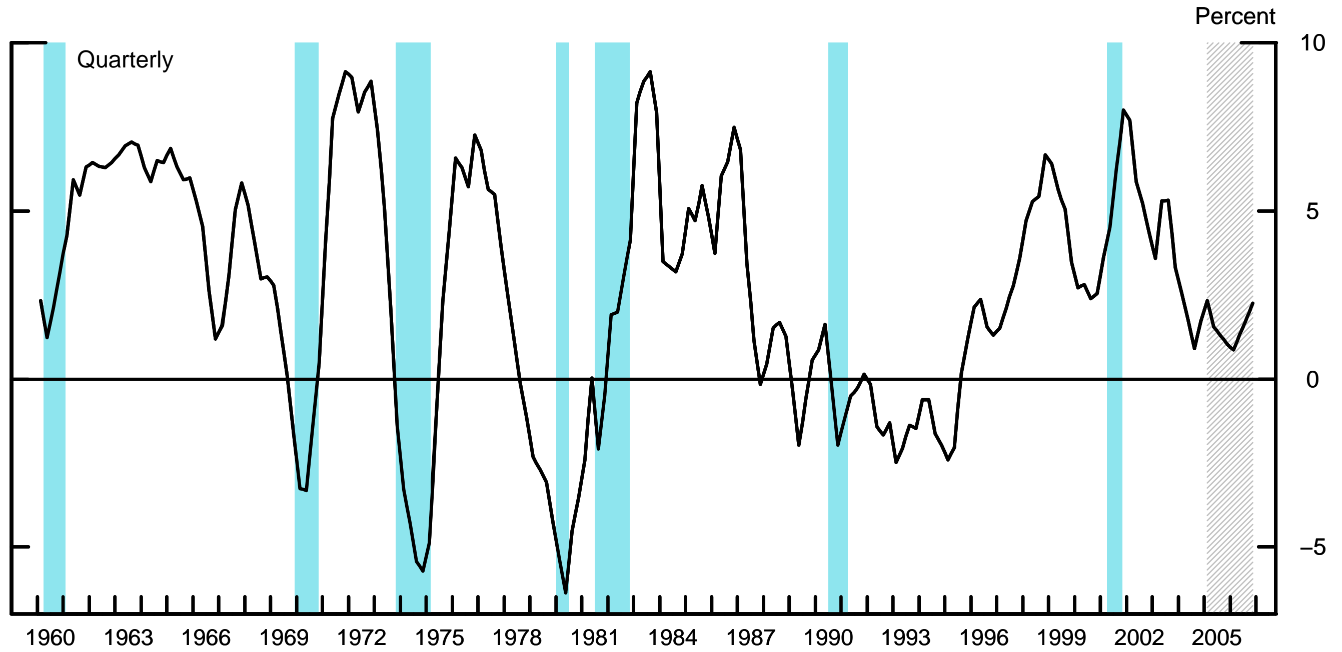


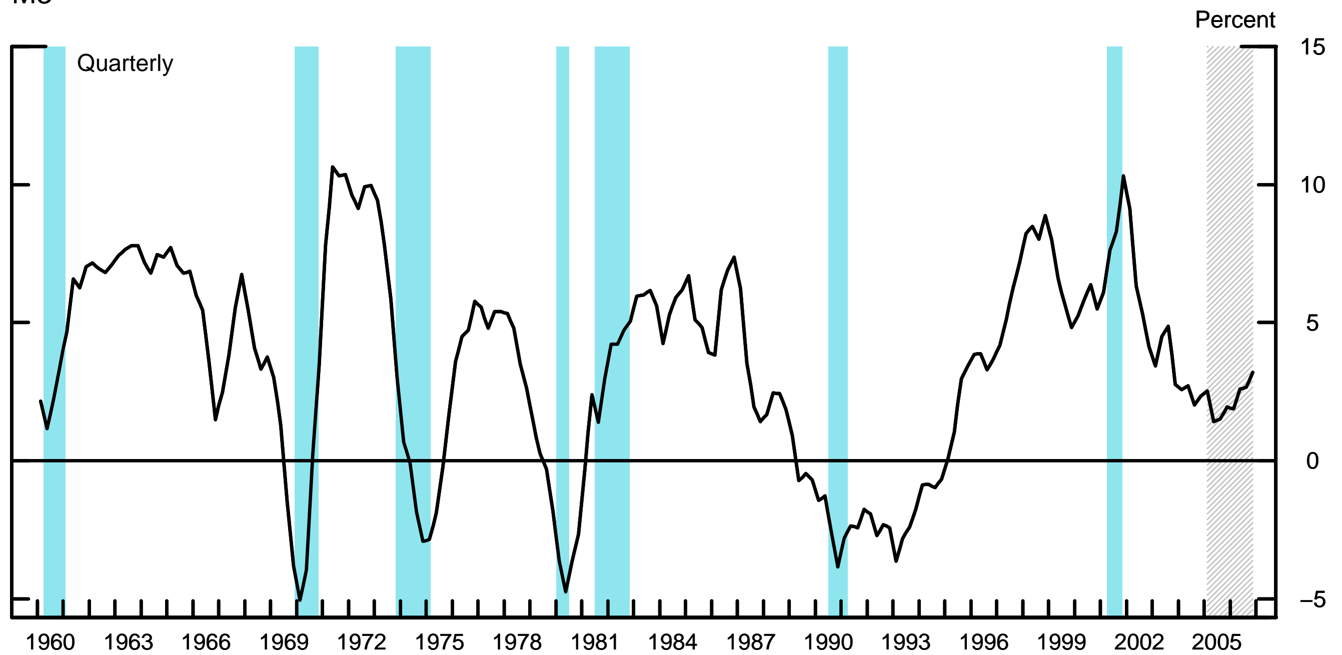




Note. Blue shaded regions denote NBER–dated recessions.

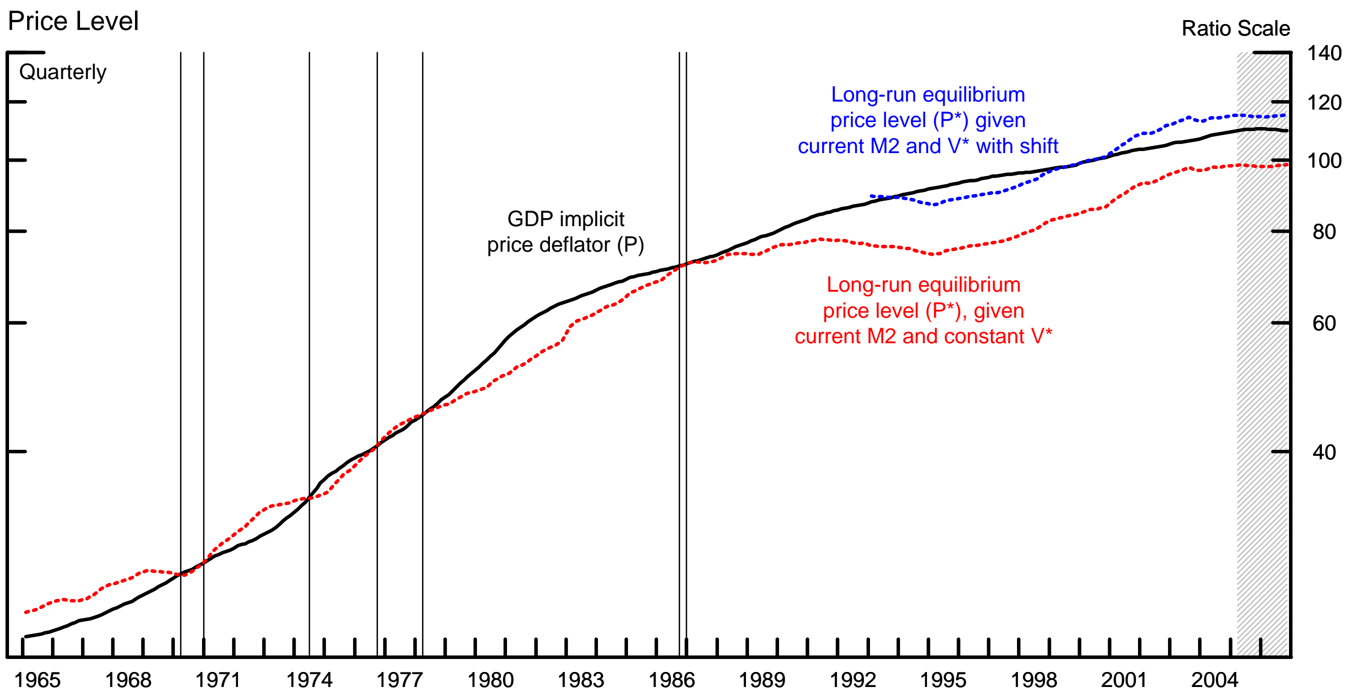
Growth of Real M2 and M3

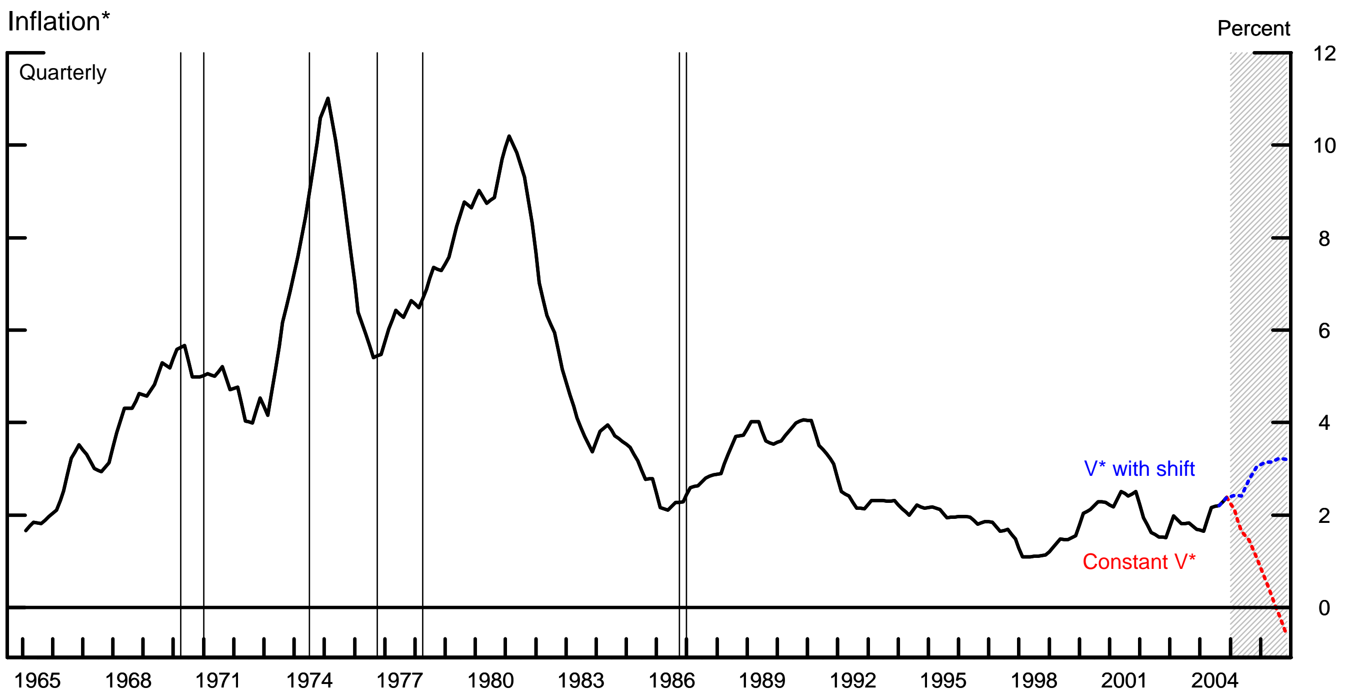




Note. Four−quarter moving average deflated by the CPI. Blue shaded regions denote NBER−dated recessions.
Dashed areas denote projection period.

Inflation Indicator Based on M2 and Two Estimates of V*





* Change in GDP implicit price deflator over the previous four quarters.

Note. P* is defined to equal M2 times V* divided by potential GDP. Long-run velocity (V*) is estimated from 1959:Q1 to 1989:Q4. V* after 1992 is estimated from 1993:Q1 to present. For the forecast period, P* is based on staff M2 forecast and P is simulated using a short-run dynamic model relating P to P*. Vertical lines mark crossing of P and P*. Dashed areas denote projection period.

Appendix Table 1
Selected Interest Rates
(Percent)

	Short-term						Long-term									
	Federal funds	Treasury bills secondary market			CDs secondary market	Comm. paper	Off-the-run Treasury yields				Indexed yields		Moody's Baa	Municipal Bond Buyer	Conventional home mortgages primary market	
		4-week	3-month	6-month	3-month	1-month	2-year	5-year	10-year	20-year	5-year	10-year			Fixed-rate	ARM
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
04 -- High	2.34	2.08	2.28	2.63	2.51	2.29	3.13	4.10	5.03	5.64	1.57	2.25	6.90	5.45	6.34	4.27
-- Low	0.92	0.73	0.87	0.96	1.04	0.97	1.49	2.65	3.84	4.68	0.42	1.35	6.00	4.73	5.38	3.36
05 -- High	2.64	2.70	2.81	3.10	2.99	2.69	3.77	4.21	4.64	4.96	1.33	1.81	6.14	5.02	5.95	4.24
-- Low	2.19	1.86	2.31	2.63	2.50	2.24	3.11	3.58	4.07	4.47	1.00	1.48	5.64	4.79	5.57	4.10
Monthly																
Mar 04	1.00	0.96	0.95	1.01	1.05	0.99	1.57	2.78	3.96	4.78	0.55	1.48	6.11	4.78	5.45	3.41
Apr 04	1.00	0.90	0.96	1.11	1.08	1.00	2.09	3.38	4.50	5.22	1.05	1.90	6.46	5.13	5.83	3.65
May 04	1.00	0.90	1.04	1.33	1.20	1.00	2.56	3.86	4.88	5.51	1.37	2.09	6.75	5.39	6.27	3.88
Jun 04	1.03	1.04	1.29	1.64	1.46	1.13	2.78	3.93	4.88	5.49	1.43	2.14	6.78	5.40	6.29	4.10
Jul 04	1.26	1.18	1.35	1.69	1.57	1.29	2.64	3.70	4.64	5.29	1.32	2.02	6.62	5.29	6.06	4.11
Aug 04	1.43	1.37	1.51	1.76	1.68	1.48	2.50	3.49	4.43	5.12	1.15	1.86	6.46	5.18	5.87	4.06
Sep 04	1.61	1.54	1.68	1.91	1.86	1.67	2.51	3.35	4.26	4.96	1.12	1.81	6.27	5.04	5.75	3.99
Oct 04	1.76	1.62	1.79	2.05	2.04	1.79	2.57	3.35	4.24	4.92	1.00	1.74	6.21	4.99	5.72	4.02
Nov 04	1.93	1.91	2.11	2.33	2.26	2.01	2.86	3.52	4.32	4.95	0.93	1.69	6.20	5.06	5.73	4.15
Dec 04	2.16	1.95	2.23	2.50	2.45	2.22	3.02	3.59	4.34	4.94	0.96	1.67	6.15	5.03	5.75	4.18
Jan 05	2.28	2.02	2.38	2.68	2.61	2.33	3.23	3.70	4.32	4.82	1.16	1.71	6.02	4.92	5.71	4.12
Feb 05	2.50	2.36	2.59	2.85	2.77	2.49	3.39	3.76	4.25	4.65	1.12	1.62	5.82	4.87	5.63	4.16
Weekly																
Jan 14 05	2.26	2.02	2.36	2.66	2.59	2.29	3.23	3.72	4.34	4.85	1.15	1.73	6.05	4.92	5.74	4.10
Jan 21 05	2.27	1.94	2.38	2.68	2.64	2.35	3.23	3.69	4.27	4.75	1.18	1.69	5.97	4.89	5.67	4.11
Jan 28 05	2.32	2.10	2.43	2.71	2.67	2.42	3.25	3.70	4.27	4.74	1.18	1.70	5.95	4.90	5.66	4.18
Feb 4 05	2.45	2.17	2.51	2.77	2.72	2.48	3.30	3.71	4.23	4.66	1.19	1.67	5.86	4.89	5.63	4.23
Feb 11 05	2.50	2.33	2.53	2.80	2.74	2.48	3.30	3.65	4.13	4.53	1.06	1.55	5.71	4.79	5.57	4.11
Feb 18 05	2.50	2.39	2.59	2.86	2.77	2.48	3.41	3.76	4.24	4.64	1.10	1.61	5.79	4.88	5.62	4.15
Feb 25 05	2.53	2.47	2.70	2.94	2.83	2.50	3.50	3.89	4.37	4.77	1.11	1.64	5.91	4.93	5.69	4.16
Mar 4 05	2.50	2.53	2.76	3.00	2.89	2.58	3.59	3.99	4.46	4.82	1.16	1.68	5.95	4.96	5.79	4.14
Mar 11 05	2.50	2.59	2.76	3.04	2.93	2.61	3.67	4.10	4.53	4.87	1.22	1.72	5.97	5.02	5.85	4.24
Mar 18 05	--	2.66	2.80	3.09	2.98	2.67	3.75	4.17	4.61	4.93	1.31	1.81	--	--	5.95	4.20
Daily																
Mar 1 05	2.39	2.55	2.76	3.00	2.88	2.56	3.61	4.01	4.47	4.83	1.18	1.69	5.96	--	--	--
Mar 2 05	2.48	2.53	2.74	2.99	2.88	2.55	3.58	4.00	4.48	4.85	1.15	1.68	5.98	--	--	--
Mar 3 05	2.51	2.54	2.76	2.99	2.90	2.58	3.59	4.01	4.48	4.85	1.16	1.69	5.98	--	--	--
Mar 4 05	2.50	2.55	2.76	3.00	2.90	2.58	3.58	3.96	4.41	4.77	1.12	1.64	5.89	--	--	--
Mar 7 05	2.51	2.57	2.77	3.03	2.91	2.63	3.60	3.98	4.39	4.74	1.13	1.62	5.86	--	--	--
Mar 8 05	2.49	2.61	2.76	3.03	2.92	2.60	3.63	4.04	4.46	4.81	1.16	1.67	5.92	--	--	--
Mar 9 05	2.50	2.59	2.76	3.03	2.92	2.62	3.69	4.15	4.61	4.95	1.22	1.76	6.05	--	--	--
Mar 10 05	2.52	2.59	2.75	3.04	2.94	2.60	3.69	4.11	4.55	4.89	1.25	1.76	5.99	--	--	--
Mar 11 05	2.51	2.59	2.76	3.06	2.95	2.62	3.76	4.20	4.64	4.95	1.32	1.81	6.04	--	--	--
Mar 14 05	2.59	2.60	2.81	3.10	2.97	2.64	3.76	4.18	4.61	4.93	1.33	1.81	6.02	--	--	--
Mar 15 05	2.61	2.70	2.81	3.10	2.98	2.69	3.77	4.21	4.64	4.96	1.33	1.81	6.05	--	--	--
Mar 16 05	2.57	2.68	2.80	3.09	2.99	2.68	3.74	4.17	4.61	4.94	1.28	1.79	6.05	--	--	--
Mar 17 05	2.64 p	2.67	2.79	3.08	2.99	--	3.72	4.12	4.57	4.90	1.23	1.72	--	--	--	--

NOTE: Weekly data for columns 1 through 13 are week-ending averages. Columns 2 through 4 are on a coupon equivalent basis. Data in column 6 are interpolated from data on certain commercial paper trades settled by the Depository Trust Company. Column 14 is the Bond Buyer revenue index, which is a 1-day quote for Thursday. Column 15 is the average contract rate on new commitments for fixed-rate mortgages (FRMs) with 80 percent loan-to-value ratios at major institutional lenders. Column 16 is the average initial contract rate on new commitments for 1-year, adjustable-rate mortgages (ARMs) at major institutional lenders offering both FRMs and ARMs with the same number of discount points.

p - preliminary data

MFMA

Appendix Table 2

Money Aggregates

Seasonally Adjusted

Period	M1	M2	nontransactions components		M3
			in M2	in M3 only	
	1	2	3	4	5
Annual growth rates (%):					
Annually (Q4 to Q4)					
2002	3.3	6.7	7.7	6.0	6.5
2003	6.6	5.3	5.0	3.5	4.7
2004	5.5	5.2	5.1	7.0	5.7
Quarterly (average)					
2004-Q1	5.9	3.4	2.8	10.1	5.6
Q2	6.1	7.8	8.2	13.0	9.4
Q3	3.8	3.6	3.5	5.7	4.2
Q4	5.6	5.5	5.5	-1.3	3.3
Monthly					
2004-Feb.	16.6	7.6	5.3	10.8	8.6
Mar.	12.1	7.6	6.3	16.1	10.3
Apr.	0.4	7.3	9.2	11.9	8.8
May	3.2	11.3	13.5	12.7	11.7
June	7.1	2.3	1.1	11.5	5.3
July	-6.4	0.5	2.4	0.1	0.4
Aug.	16.2	3.9	0.6	4.8	4.2
Sep.	4.0	6.7	7.4	5.2	6.2
Oct.	-0.1	4.7	6.0	-7.9	0.6
Nov.	13.4	6.9	5.1	-5.2	3.0
Dec.	-0.7	4.3	5.6	7.3	5.3
2005-Jan.	-6.8	5.7	9.0	10.3	7.2
Feb. p	3.8	5.0	5.3	5.3	5.1
Levels ($billions):					
Monthly					
2004-Oct.	1347.8	6357.8	5010.1	3005.5	9363.3
Nov.	1362.8	6394.1	5031.4	2992.4	9386.5
Dec.	1362.0	6417.0	5055.0	3010.6	9427.6
2005-Jan.	1354.3	6447.4	5093.0	3036.5	9483.9
Feb. p	1358.6	6474.2	5115.6	3050.0	9524.2
Weekly					
2005-Feb. 7	1370.7	6490.9	5120.2	3041.9	9532.8
14	1359.2	6473.6	5114.4	3047.8	9521.4
21	1353.2	6465.9	5112.7	3052.9	9518.8
28p	1352.6	6467.7	5115.1	3057.3	9525.0
Mar. 7p	1357.4	6479.1	5121.7	3060.9	9540.0

p preliminary

Appendix Table 3

Changes in System Holdings of Securities [1]

(Millions of dollars, not seasonally adjusted)

March 17, 2005

	Treasury Bills			Treasury Coupons						Federal Agency	Net change total outright holdings [4]	Net RPs [5]		
	Net Purchases [2]	Redemptions (-)	Net Change	Net Purchases [3] < 1	Net Purchases [3] 1-5	Net Purchases [3] 5-10	Net Purchases [3] Over 10	Redemptions (-)	Net Change	Redemptions (-)		Short-Term [6]	Long-Term [7]	Net Change
2002	21,421	---	21,421	12,720	12,748	5,074	2,280	---	32,822	---	54,242	-5,366	517	-4,850
2003	18,150	---	18,150	6,565	7,814	4,107	220	---	18,706	10	36,846	2,223	1,036	3,259
2004	18,138	---	18,138	7,994	17,249	5,763	1,364	---	32,370	---	50,507	-2,522	-331	-2,853
2003 QIV	3,299	---	3,299	2,561	3,188	1,350	20	---	7,118	10	10,407	-561	2,750	2,189
2004 QI	1,707	---	1,707	1,311	2,848	1,251	275	---	5,685	---	7,391	-772	-3,515	-4,286
QII	7,756	---	7,756	1,693	2,543	988	84	---	5,307	---	13,063	1,133	418	1,550
QIII	4,508	---	4,508	1,898	4,406	1,507	434	---	8,244	---	12,753	-1,787	782	-1,005
QIV	4,167	---	4,167	3,092	7,453	2,018	571	---	13,134	---	17,301	-5,956	1,728	-4,227
2004 Jul	952	---	952	1,898	3,078	244	29	---	5,249	---	6,202	1,120	-2,372	-1,252
Aug	83	---	83	---	428	568	---	---	996	---	1,078	-750	-1,323	-2,072
Sep	3,473	---	3,473	---	899	695	405	---	1,999	---	5,473	-3,176	7,895	4,718
Oct	500	---	500	1,593	2,765	1,225	400	---	5,984	---	6,484	-2,121	-4,443	-6,564
Nov	3,155	---	3,155	---	2,284	453	86	---	2,822	---	5,977	-1,416	1,543	127
Dec	512	---	512	1,499	2,404	340	85	---	4,328	---	4,840	-1,492	812	-680
2005 Jan	---	---	---	---	---	---	---	---	---	---	---	1,100	-3,387	-2,287
Feb	35	---	35	---	---	---	---	333	-333	---	-298	2,163	-2,187	-24
2004 Dec 22	---	---	---	---	---	---	---	---	---	---	---	960	-1,000	-40
Dec 29	109	---	109	---	---	---	---	---	---	---	109	1,621	2,000	3,621
2005 Jan 5	---	---	---	---	---	---	---	---	---	---	---	2,373	---	2,373
Jan 12	---	---	---	---	---	---	---	---	---	---	---	-5,384	-5,000	-10,384
Jan 19	---	---	---	---	---	---	---	---	---	---	---	3,277	1,000	4,277
Jan 26	---	---	---	---	---	---	---	---	---	---	---	-2,766	---	-2,766
Feb 2	35	---	35	---	---	---	---	---	---	---	35	6,077	-1,000	5,077
Feb 9	---	---	---	---	---	---	---	---	---	---	---	-4,989	-5,000	-9,989
Feb 16	---	---	---	---	---	---	---	---	---	---	---	2,356	5,000	7,356
Feb 23	---	---	---	---	---	---	---	---	---	---	---	1,223	2,000	3,223
Mar 2	---	---	---	---	---	---	---	333	-333	---	-333	5,074	-3,000	2,074
Mar 9	---	---	---	---	---	---	---	---	---	---	---	-6,920	---	-6,920
Mar 16	---	---	---	---	---	---	---	---	---	---	---	4,480	3,000	7,480
2005 Mar 17	---	---	---	---	---	---	---	---	---	---	---	-244	-1,000	-1,244
Intermeeting Period														
Feb 2-Mar 17	---	---	---	---	---	---	---	333	-333	---	-333	4,202	1,000	5,202
Memo: LEVEL (bil. $)														
Mar 17			263.0	114.5	212.8	50.3	76.9		454.5	---	717.5	-12.9	17.0	4.1

1. Change from end-of-period to end-of-period. Excludes changes in compensation for the effects of inflation on the principal of inflation-indexed securities.
2. Outright purchases less outright sales (in market and with foreign accounts).
3. Outright purchases less outright sales (in market and with foreign accounts). Includes short-term notes acquired in exchange for maturing bills. Excludes maturity shifts and rollovers of maturing issues, except the rollover of inflation compensation.
4. Includes redemptions (-) of Treasury and agency securities.
5. RPs outstanding less reverse RPs.
6. Original maturity of 13 days or less.
7. Original maturity of 14 to 90 days.

MRA:BEW