

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.

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JANUARY 26, 2006

MONETARY POLICY ALTERNATIVES

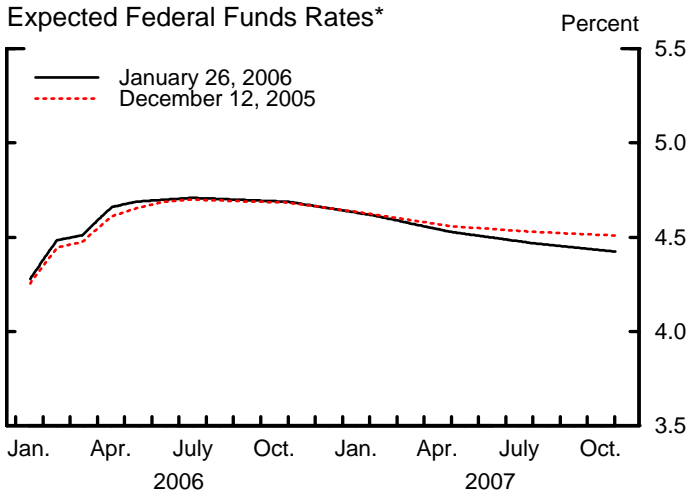
PREPARED FOR THE FEDERAL OPEN MARKET COMMITTEE
BY THE STAFF OF THE BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

MONETARY POLICY ALTERNATIVES**Recent Developments**

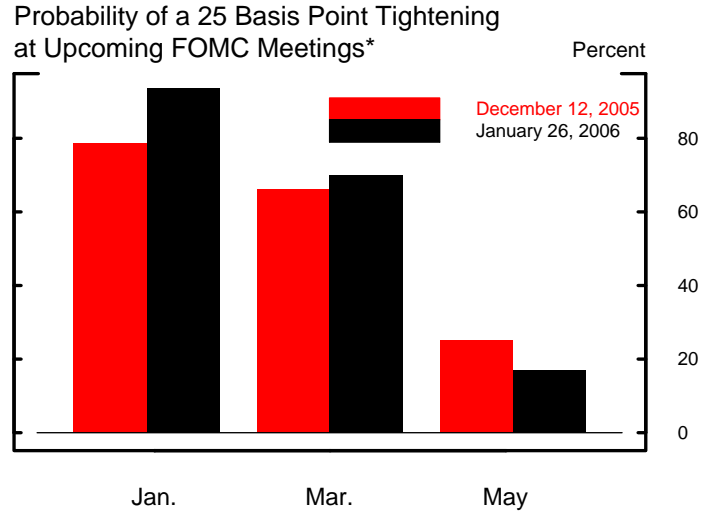
(1) Investors had largely anticipated the FOMC's decision at the December meeting to raise the target federal funds rate 25 basis points, to 4¼ percent.¹ Although market participants had expected a change in the portions of the statement characterizing policy as accommodative, the complete removal of the reference pushed down expectations of the path of monetary policy from the middle of 2006 onward. These expectations dropped further in response to the publication of the minutes of the December meeting, readings on economic activity that were on the soft side of market forecasts, and benign inflation data. In recent days, some of the drop in expectations has been rolled back, partly in response to stronger-than-expected economic data releases and reports that the Committee was likely to firm policy in March. Money market futures rates for the end of next year declined about 10 basis points over the intermeeting period and imply the expectation of modest policy easing by then (Chart 1). In contrast, near-term expectations of policy were unchanged over the intermeeting period. Judging from futures quotes and responses to the Desk's latest dealer survey, market participants are virtually certain of a 25 basis point hike in the federal funds target at the upcoming meeting and put roughly two-thirds odds on a similar increase at the March meeting. Against the backdrop of the

¹ Over most of the intermeeting period, the effective federal funds rate held close to the new target. Late in the period, however, the funds rate traded on the firm side despite the sizable provision of reserves by the Desk, as reserve managers at banks once again shifted their demand earlier in the maintenance period given the widespread anticipation of policy firming by the Committee. The Desk purchased \$3.3 billion of Treasury coupon securities in the market and \$1.6 billion of Treasury bills from foreign customers. It also redeemed \$1.3 billion of Treasury coupon securities. The volume of outstanding long-term RPs decreased \$2 billion, to \$18 billion.

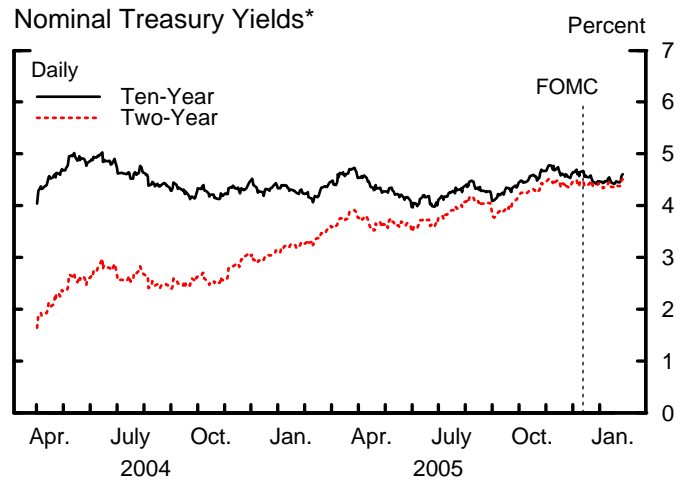
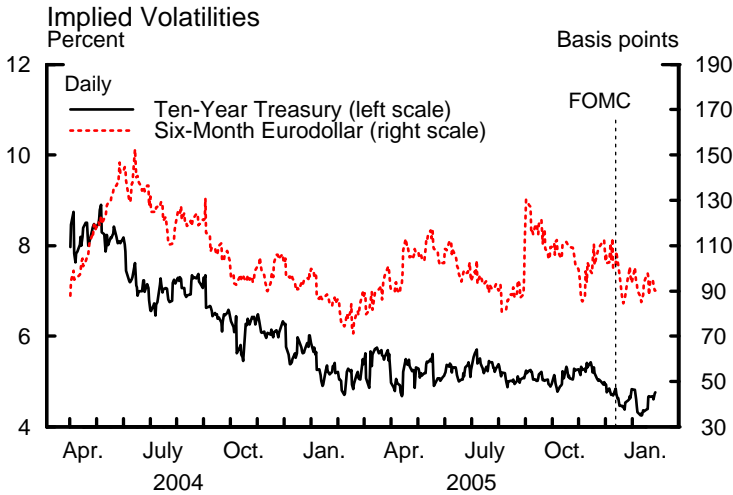
Chart 1 Interest Rate Developments



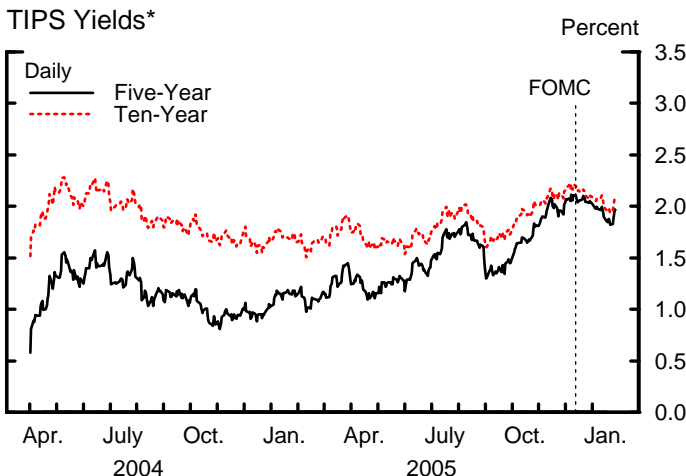
*Estimates from federal funds and Eurodollar futures, with an allowance for term premia and other adjustments.



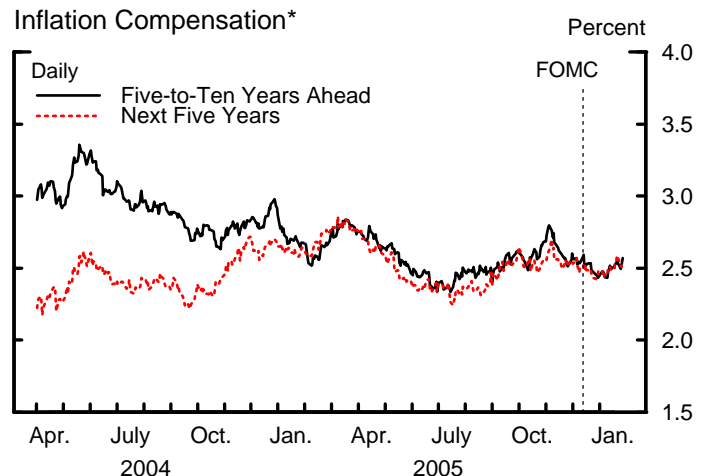
*Estimated from federal funds futures.



*Par yields from a smoothed nominal off-the-run Treasury yield curve.



*Estimates are from a smoothed inflation-indexed Treasury yield curve.



*Estimates based on smoothed nominal and inflation-indexed Treasury yield curves, and adjusted for the indexation-lag (carry) effect.

Note: Vertical lines indicate December 12, 2005. Last daily observations are for January 26, 2006.

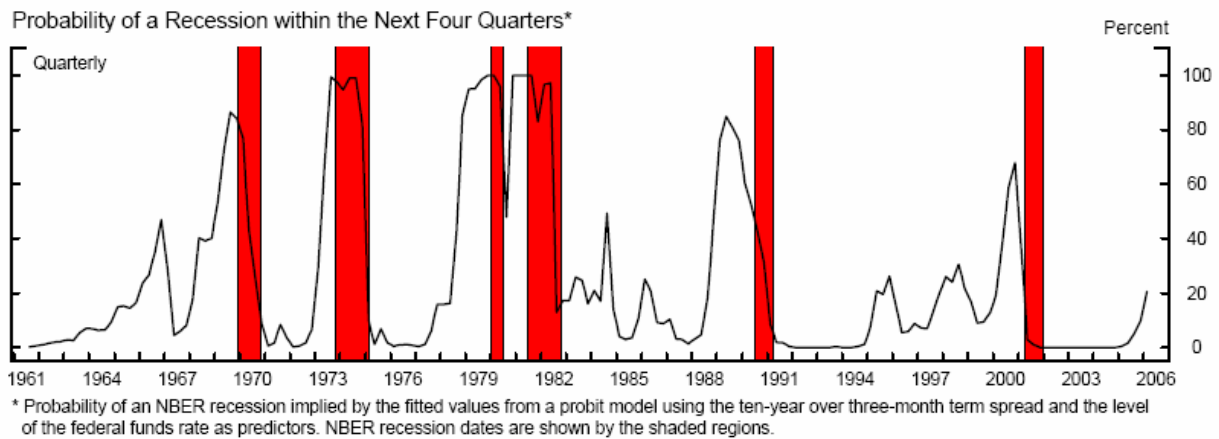
growing belief that the tightening cycle is drawing to a close and that policy might ease soon thereafter, option-implied uncertainty about the path for policy edged a bit lower over the period.

(2) Over the intermeeting period, yields on nominal Treasury coupon securities were little changed to down slightly. The declines occurred at longer maturities, serving to invert slightly the yield curve between one and five years and resulting in a 20 basis point drop in the one-year forward rate ten years hence (see box entitled “The Flat Yield Curve, the Level of Short-Term Rates, and Growth Prospects”). Some of the fall at longer maturities may have reflected a further decline in term premiums, consistent with the edging lower of implied volatilities on options on Eurodollar futures. After adjusting for carry effects, TIPS-based inflation compensation at maturities of five and ten years was about unchanged over the period, as the effects of the subdued inflation data were apparently offset by the step-up in oil prices.

(3) The rise in oil prices, along with weaker-than-expected earnings reports and downbeat guidance from corporations about future earnings, weighed on equities, and broad stock price indexes rose slightly on balance (Chart 2). Implied volatilities on major equity indexes increased notably, albeit to levels that are still low by historical standards. Nonetheless, staff estimates of the equity premium moved sideways. The credit quality of nonfinancial firms generally remained solid. While the six-month trailing bond default rate has been boosted by the bankruptcy filings of a few large firms that had long been recognized as being in weak financial condition, forward-looking measures of default risk stayed low. Yields on investment- and speculative-grade corporate debt moved about in line with those on comparable Treasury securities, leaving risk spreads about unchanged.

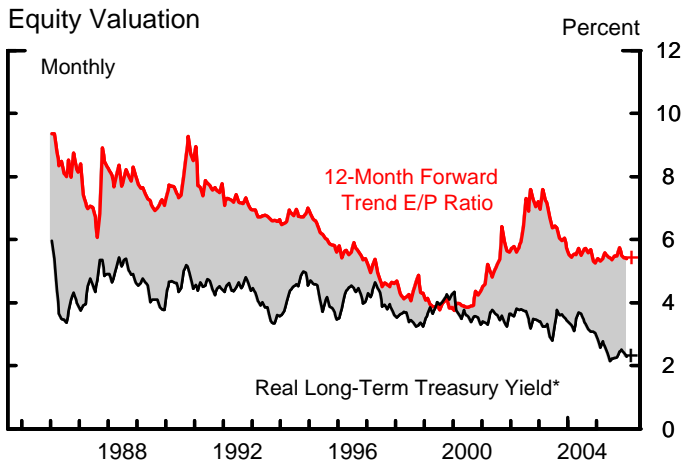
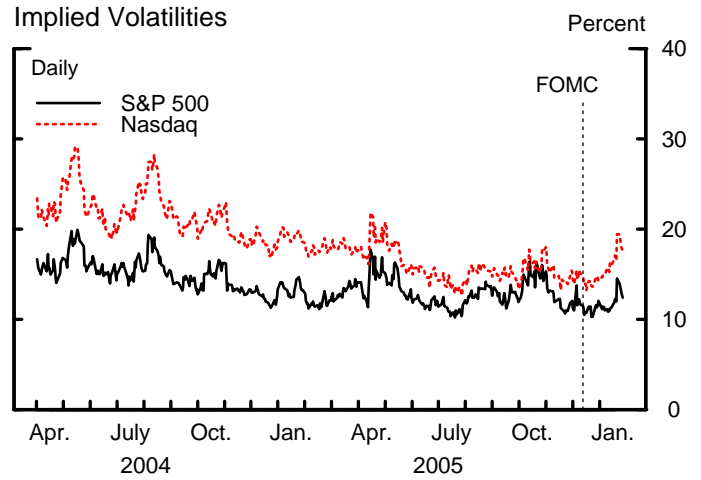
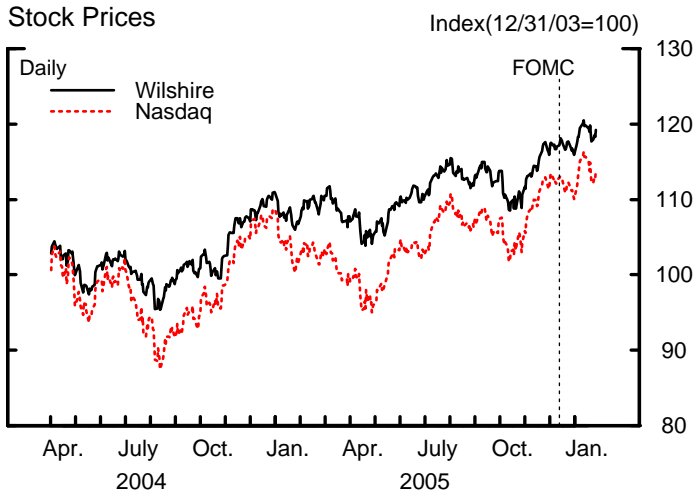
The Flat Yield Curve, the Level of Short-Term Rates, and Growth Prospects

The Treasury yield curve flattened further over the intermeeting period and is now slightly inverted between about one and five years. Some commentators have pointed to the tendency of the yield curve to invert before business cycle peaks to argue that the current term structure could be a harbinger of a pronounced slowdown in growth or even a recession. Historically, flat or inverted yield curves owing to unusually high short-term interest rates have tended to be followed by slowdowns, but at present short-term rates are not unusually high. An econometric model estimated with data over the past forty-five years, using the level of the federal funds rate as well as the ten-year over three-month term spread, has substantially better predictive power for recessions than an alternative model based on the term spread alone. The chart below shows the probability of a recession at any time in the next four quarters implied by this econometric model. As can be seen, the odds of a recession in the next year implied by the model remain low. In that regard, it is worth noting that yield curves in Australia and the United Kingdom have been inverted for some time, and their economies have continued to expand robustly.

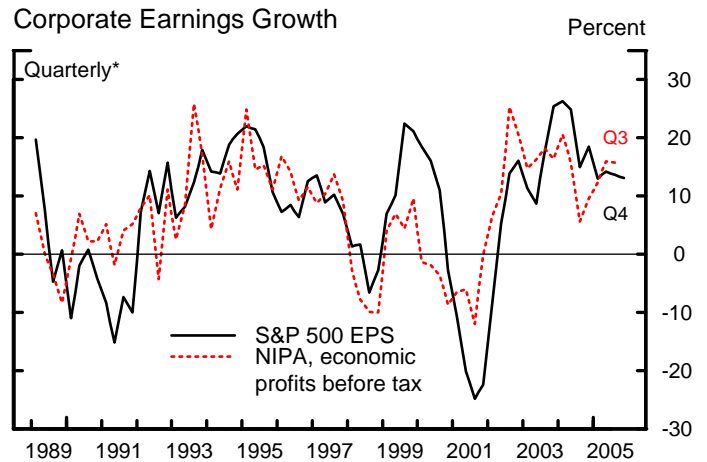


(4) The dollar's foreign exchange value against other major currencies dropped about 1¾ percent on balance over the intermeeting period (Chart 3). Downward pressure on the dollar was prompted in part by softer-than-expected U.S. economic data early in the period and the slight decline in U.S. long-term interest rates. The

Chart 2 Asset Market Developments



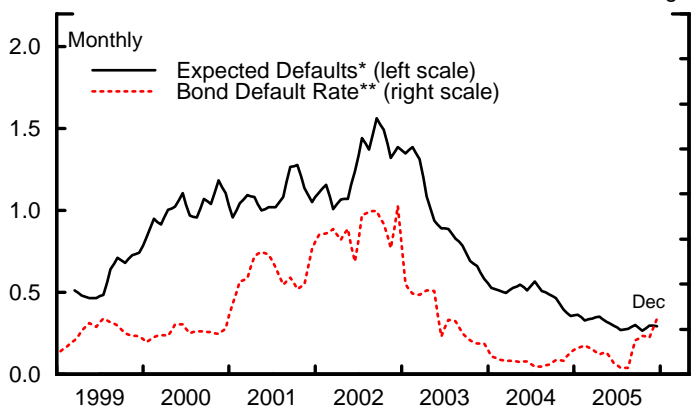
*Perpetuity Treasury yield minus Philadelphia Fed 10-year expected inflation.
Note. + Denotes the latest observation using daily interest rates and stock prices and latest earnings data from I/B/E/S.



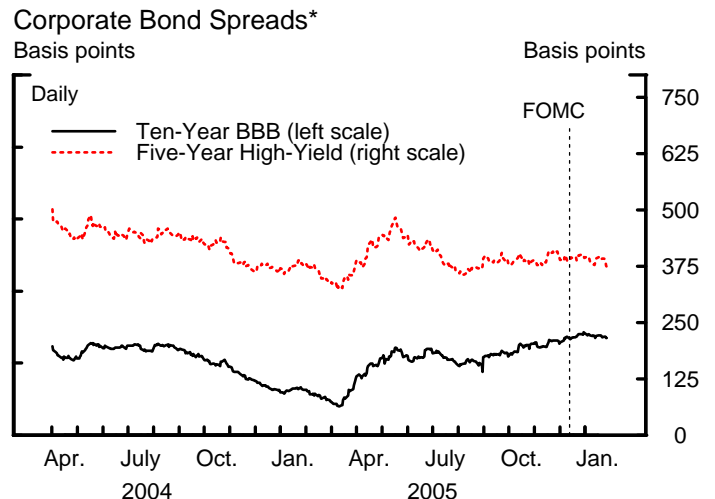
*Change from four quarters earlier.
Source: I/B/E/S for S&P 500 EPS.

Expected Defaults of Nonfinancial Companies and Bond Default Rate

Percent of Liabilities Percent of Outstandings



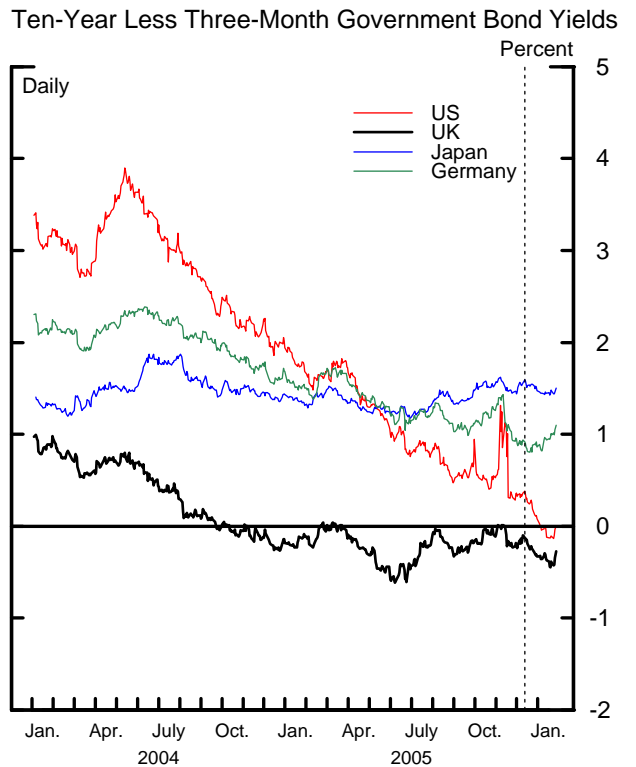
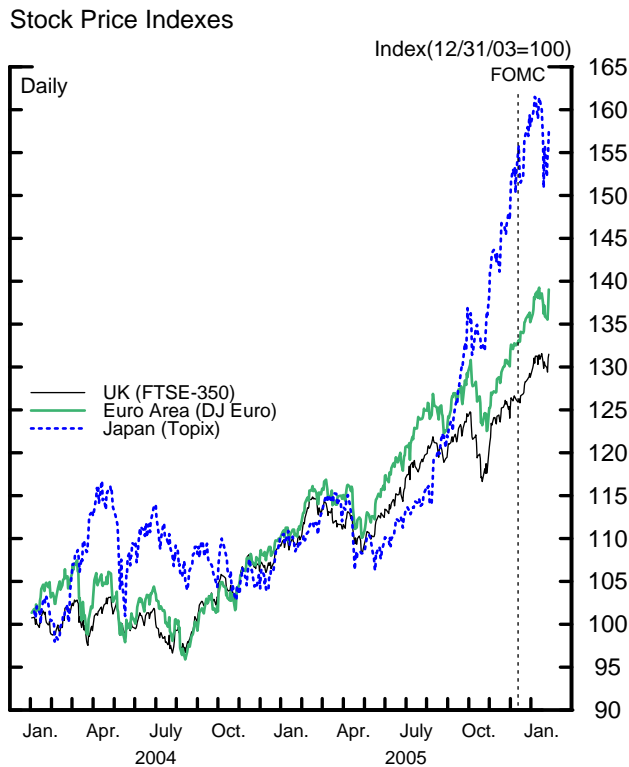
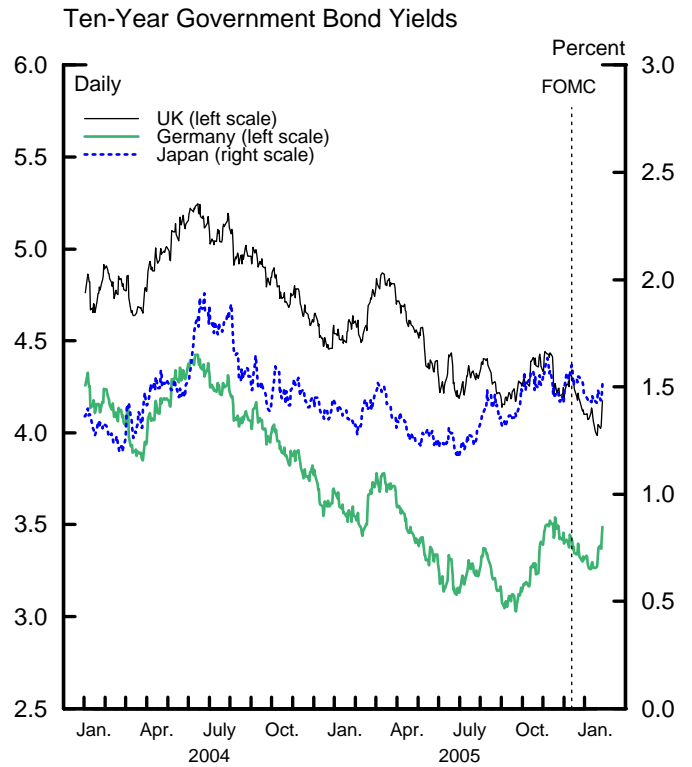
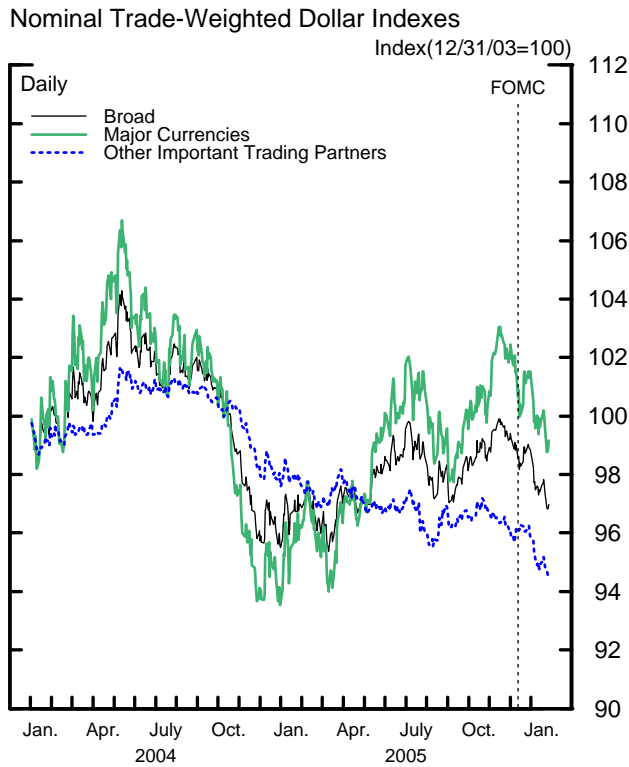
*Firm-level estimates of year-ahead defaults from KMV corporation, weighted by firm liabilities as a percent of total liabilities, excluding defaulted firms.
**Six-month moving average, from Moody's Investors Service



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

Note: Vertical lines indicate December 12, 2005. Last daily observations are for January 26, 2006.

Chart 3 International Financial Indicators



Note: Vertical lines indicate December 12, 2005. Last daily observations are for January 26, 2006.

dollar fell nearly 3¼ percent against the yen, as readings on the Japanese economy continued to confirm solid growth. Remarks by ECB officials suggesting that more tightening will be needed to combat inflation helped drive the dollar about 2½ percent lower versus the euro. In contrast, the dollar posted only a slight loss against the Canadian dollar; the Bank of Canada raised its policy rate 25 basis points during the intermeeting period. Yields on long-term government securities were up slightly on net in most foreign industrial countries. On balance, most foreign stock markets rose modestly. Japanese markets had outperformed until mid-January, when news of a corporate accounting scandal and concerns about softer earnings in the global high-tech sector caused a brief selling binge. The downdraft left Japanese stock prices close to unchanged on balance.

(5) The dollar fell about 1¾ percent over the intermeeting period against an index of currencies of our other important trading partners. The drop included 3 to 5 percent declines against the currencies of Korea, Singapore, Thailand, and Taiwan amid perceptions that the region's growth prospects were continuing to improve.

.² Signs of greater flexibility in Chinese foreign exchange markets, including the start early this month of over-the-counter trading of the renminbi, as well as the strengthening of the yen, may have added to the upward pressure on other Asian currencies. Most stock markets in the region recorded solid increases over the period, but they were rattled—particularly in Korea—by the events shaking the Tokyo market. Equity prices recorded quite strong increases in Latin America as well, where financial conditions for major U.S. trading partners continued to be favorable, and the Brazilian central bank cut its policy rate 75 basis points in mid-January. Both Brazil and Argentina surprised financial markets

by announcing repayment of all their remaining obligations to the International Monetary Fund.

(6) Domestic nonfinancial sector debt is estimated to have grown at an annual rate of $7\frac{3}{4}$ percent in the fourth quarter, down from the rapid 9 percent pace seen in the third quarter (Chart 4). Household debt growth appears to have moderated, given hints of a downshift in mortgage borrowing from its robust third-quarter pace and an outright decline in consumer credit in October and November. Consumer credit was likely set back in part by increased charge-offs following October's spike in bankruptcy filings. Filings since then have remained quite low. Business sector debt slowed somewhat in the fourth quarter, mainly reflecting a run-off of commercial paper by multinational firms that were reported to have repatriated foreign earnings. At the same time, firms raised a moderate amount of funds in the bond market, and business lending at commercial banks continued to be vigorous. The January Senior Loan Officer Opinion Survey confirmed that demand for C&I loans strengthened in the fourth quarter and indicated some further easing of lending standards and terms for those loans. Surveyed banks, however, reported somewhat weaker demand for household loans. Federal debt is estimated to have grown at a $7\frac{3}{4}$ percent annual rate in the fourth quarter. The Treasury recently stated publicly that its debt will likely hit the current statutory limit in mid-February (see box entitled "Treasury Debt Subject to Limit").

(7) M2 growth rose to 5 percent at an annual rate in December, bringing fourth-quarter growth to $5\frac{1}{4}$ percent.³ That monetary aggregate appears to be accelerating to an 8 percent rate in January. The December increase in M2 was driven mainly by the expansion of liquid deposits, with about half of the increase in that component estimated to reflect continued effects of Hurricane Katrina. Stronger foreign demand for dollars apparently boosted currency growth, and the expansion of

³ These data incorporate the results of the annual seasonal factor review.

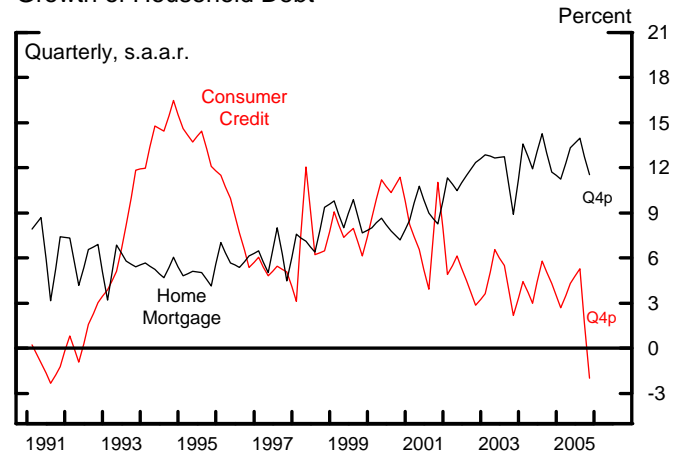
Chart 4 Debt and Money

Growth of Nonfinancial Debt

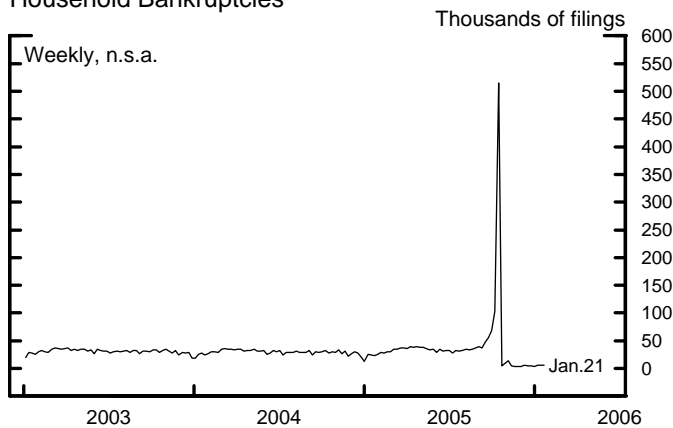
Percent, s.a.a.r.		Total	Household
2004		8.7	11.1
2005	Q1	9.6	9.1
	Q2	8.1	11.2
	Q3	9.1	11.5
	Q4 p	7.8	8.6

p Projected.

Growth of Household Debt

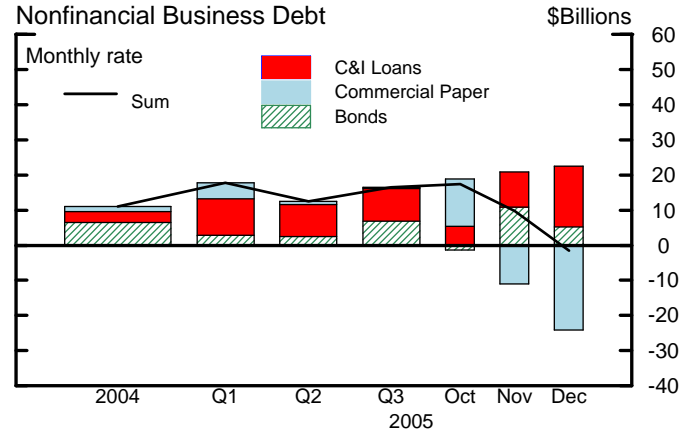


Household Bankruptcies



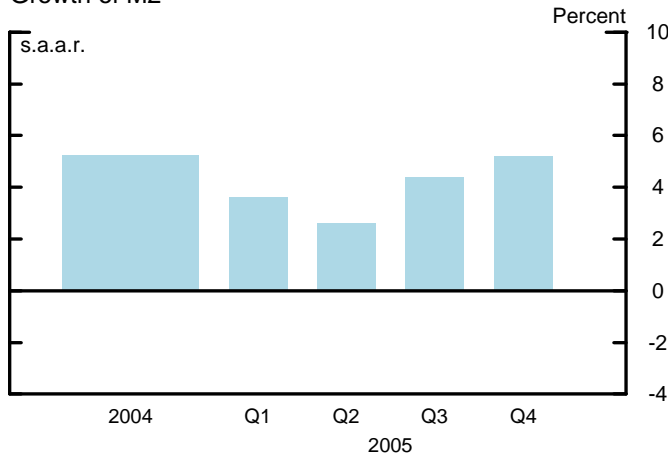
*Source. Visa Bankruptcy Notification Service.

Changes in Selected Components of Nonfinancial Business Debt

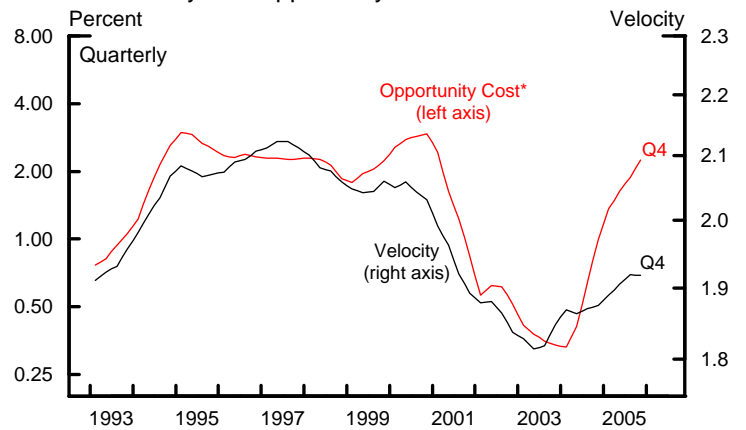


Note. Commercial paper and C&I loans are seasonally adjusted, bonds are not.

Growth of M2



M2 Velocity and Opportunity Cost

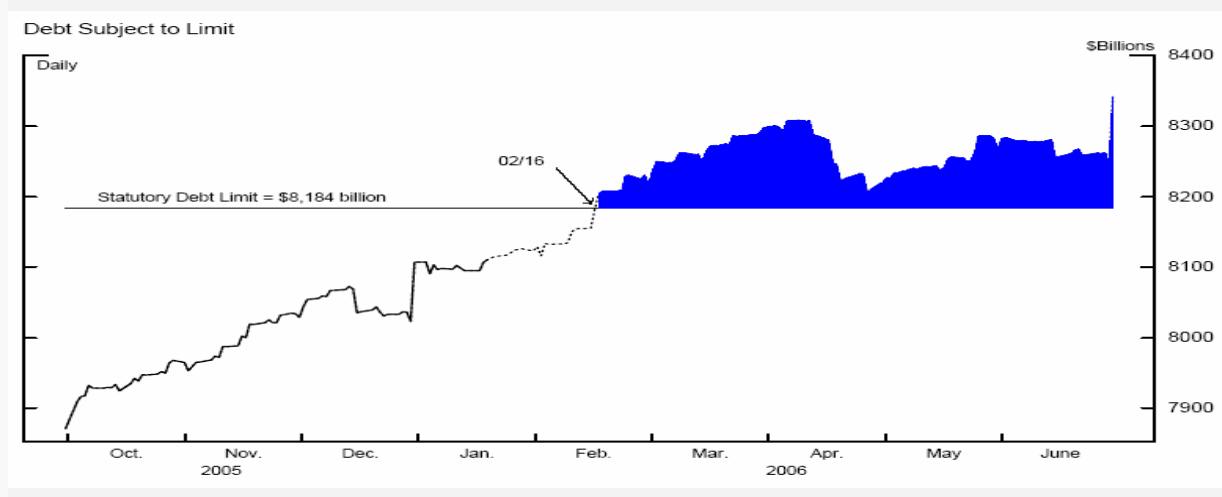


*Two-quarter moving average.

retail money market funds and small time deposits remained robust. On the eve of tomorrow’s NIPA release, the expansion of M2 in the fourth quarter nearly matches the staff estimate of nominal GDP growth despite the rise in opportunity costs.

Treasury Debt Subject to Limit

According to staff estimates, on or around February 16, 2006, the Treasury will likely reach the statutory ceiling of \$8,184 billion on the public debt in the absence of Congressional action to lift the limit. As has been the case in previous episodes, the Treasury probably would use extraordinary accounting devices to avoid breaching the limit. The Treasury would first likely begin to underinvest the Government Securities Investment Fund (the so-called G-fund, which is part of the federal employees’ thrift savings plan) and tap the Exchange Stabilization Fund and possibly the Civil Service Retirement and Disability Fund. Two of the previously used accounting devices, however, are no longer available: Debt of the Federal Financing Bank, which is not subject to the limit, was swapped with other Treasury debt to avoid the last debt limit crisis, and the Treasury eliminated its holdings of compensating balances at depository institutions. While the room afforded by the available accounting devices depends on the duration of the debt limit emergency period declared by the Secretary of the Treasury, staff estimates suggest that the Treasury will be able to maintain normal cash and debt management practices through the end of March—but not much longer—without Congress raising the limit.



Economic Outlook

(8) The economic outlook has changed little since the December Greenbook. The staff responded to the news over the intermeeting period—including weaker-than-expected exports, federal spending, and inventory investment—by marking down real GDP growth in the fourth quarter, but that revision is expected to be largely reversed by faster growth over the first half of this year. Inflationary pressures are seen as a tad more intense in the near term, and the staff now assumes that the federal funds rate will rise to $4\frac{3}{4}$ percent this spring and edge back to $4\frac{1}{2}$ percent only after mid-year 2007. Longer-term interest rates are projected to remain around their current low levels, the stock market is, as usual, expected to generate a risk-adjusted yield similar to those on fixed-income investments, and house prices are anticipated to decelerate sharply. The foreign exchange value of the dollar is assumed to extend its recent declines by depreciating at a gradual pace over the rest of this year and next. Guided by quotes from futures markets, the staff assumes that spot oil prices will remain close to their present elevated levels over the forecast interval. Given these underlying conditions, real GDP is expected to expand $3\frac{3}{4}$ percent this year, boosted by hurricane-related spending, before moderating to a 3 percent pace in 2007—slightly below the growth rate of potential output. Over the forecast period, the unemployment rate hovers around the estimated NAIRU of 5 percent. Total and core PCE inflation are both about $2\frac{1}{4}$ percent this year, a touch higher than in the last forecast owing largely to the pass-through of higher energy and core import prices. As those effects diminish, both inflation measures drop back to $1\frac{3}{4}$ percent in 2007.

Longer-Run Scenarios

(9) Longer-run aspects of monetary policy choice—including the selection of an inflation objective—can be informed by simulations of the FRB/US model. The model was first used (with judgmental adjustments) to extend the staff's forecast for a decade beyond the Greenbook horizon. In that extension, the natural rate of unemployment is assumed to hold steady at 5 percent, while labor force growth slows markedly because of demographic factors, and the pace of structural labor productivity growth declines gradually towards its long-run historical average. As a result, potential output growth slows to just above 2¼ percent by 2015, nearly a percentage point lower than the rate projected for the current year. As for aggregate demand, the personal saving rate rises gradually while the unified federal budget deficit is projected to widen from about 2¾ percent of GDP this year to slightly more than 3¼ percent of GDP in 2015. The foreign exchange value of the dollar is assumed to decline in real terms at an annual rate of 5 percent from 2008 onward, which helps to keep the current account deficit within a range of about 6½ to 8 percent of GDP through 2015.

(10) The first set of simulations depicts optimal policy paths conditional on a long-term inflation objective of either 1½ or 2 percent (expressed in terms of core PCE inflation). In each simulation, policymakers are assumed to assign equal priority to minimizing deviations in inflation from the long-run objective, deviations in the unemployment rate from its natural rate, and changes in the federal funds rate, subject to the constraint that inflation settles down to its long-run objective over the next seven years.⁴ The optimal path of the funds rate is conditioned on the structure of

⁴ More precisely, the federal funds rate path is chosen to minimize the equally weighted sum of three components—the squared deviations of core PCE inflation from its target, the squared deviations of the unemployment rate from its natural rate, and squared changes in the federal funds rate—subject to the constraint that core PCE inflation must be close to its target by 2012 and remain on target thereafter. It should be noted that the latter constraint

the macroeconomy as captured in the FRB/US model as well as on the longer-term outlook embedded in the extended Greenbook baseline. Participants in financial markets—including those in the equity, bond, and foreign exchange markets—are assumed to understand fully the economy and the policy formulation process, whereas households and firms are assumed to form their expectations using more limited information.⁵

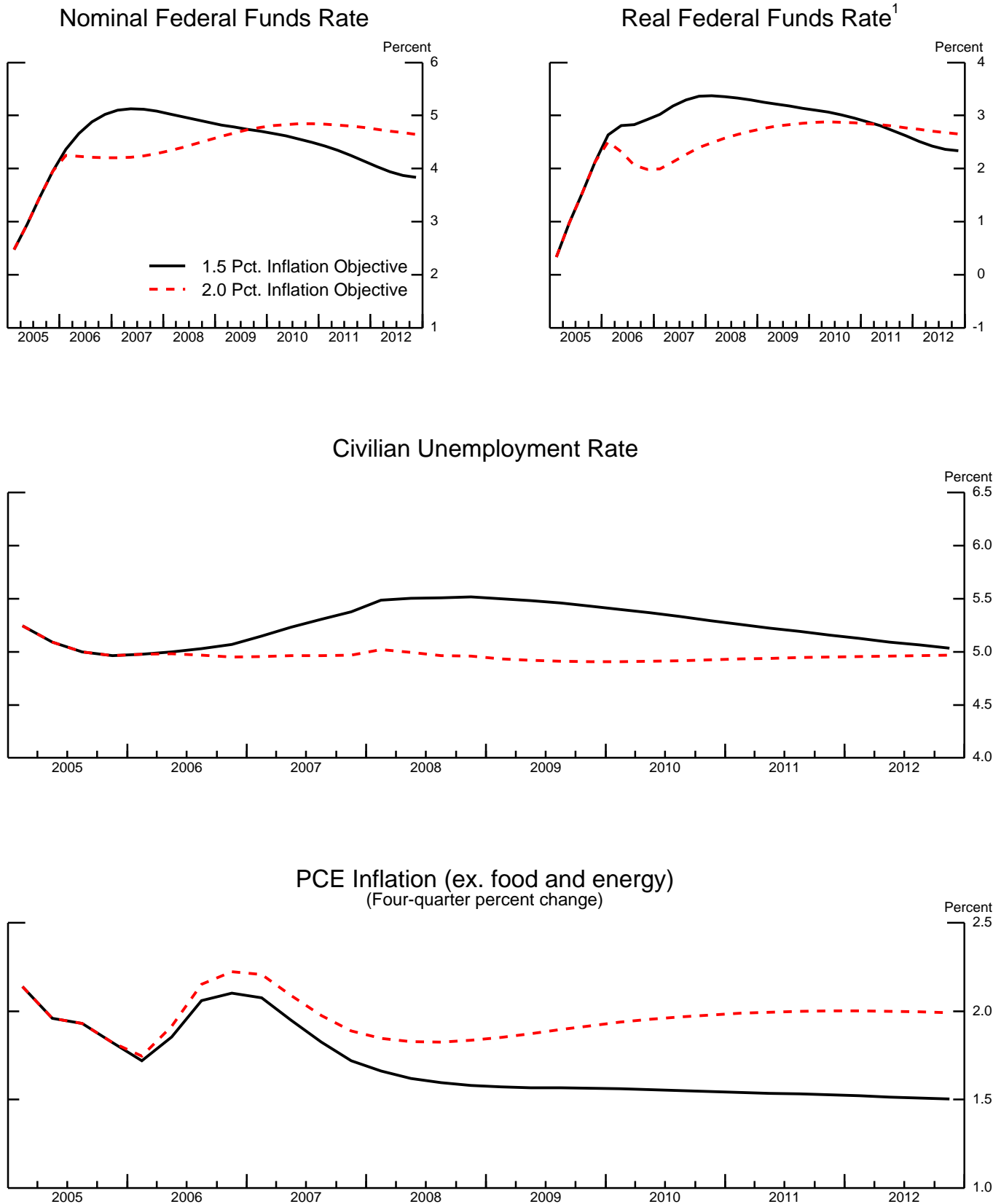
(11) In each panel of Chart 5, the solid line depicts the scenario in which the optimal path of policy is directed toward an inflation objective of 1½ percent. In this case, the nominal federal funds rate rises a bit above 5 percent by late 2006 and then declines gradually to just below 4 percent by 2012. With this backdrop of moderately tight financial conditions, the unemployment rate rises gradually to about 5½ percent at the end of 2007 before returning to its natural rate over the following five years. This economic slack helps to ensure that this year's projected pickup in core PCE inflation is only transitory. The adjustment of inflation is restrained somewhat by long-term inflation expectations of households and firms (not shown), which are currently estimated at about 2 percent and lag a bit behind actual inflation in converging to the long-run objective.⁶ The dashed line in each panel corresponds to the optimal policy scenario with a long-run inflation objective of 2 percent. In this case, the funds rate remains at about 4¼ percent through mid-2007 and then gradually rises to about 4¾ percent in subsequent years to check the inflationary effects of faster dollar depreciation. With the funds rate essentially on hold for an extended period, some of this year's projected rise in core PCE inflation becomes permanent.

was not imposed in constructing the longer-run scenarios considered in prior Bluebooks (most recently in June 2005).

⁵ In these simulations, it is assumed that monetary policy has achieved a degree of credibility that causes the adjustment of long-run inflation expectations to be somewhat more rapid than the average pace over the past several decades.

⁶ The FRB/US estimate of long-run inflation expectations is constructed by adjusting the readings of the Philadelphia Fed survey of professional forecasters to account for the average difference between CPI and PCE inflation.

Chart 5 Optimal Policy with Alternative Inflation Objectives



1. The real federal funds rate is calculated as the quarterly average nominal funds rate minus the four-quarter lagged core PCE inflation rate as a proxy for inflation expectations.

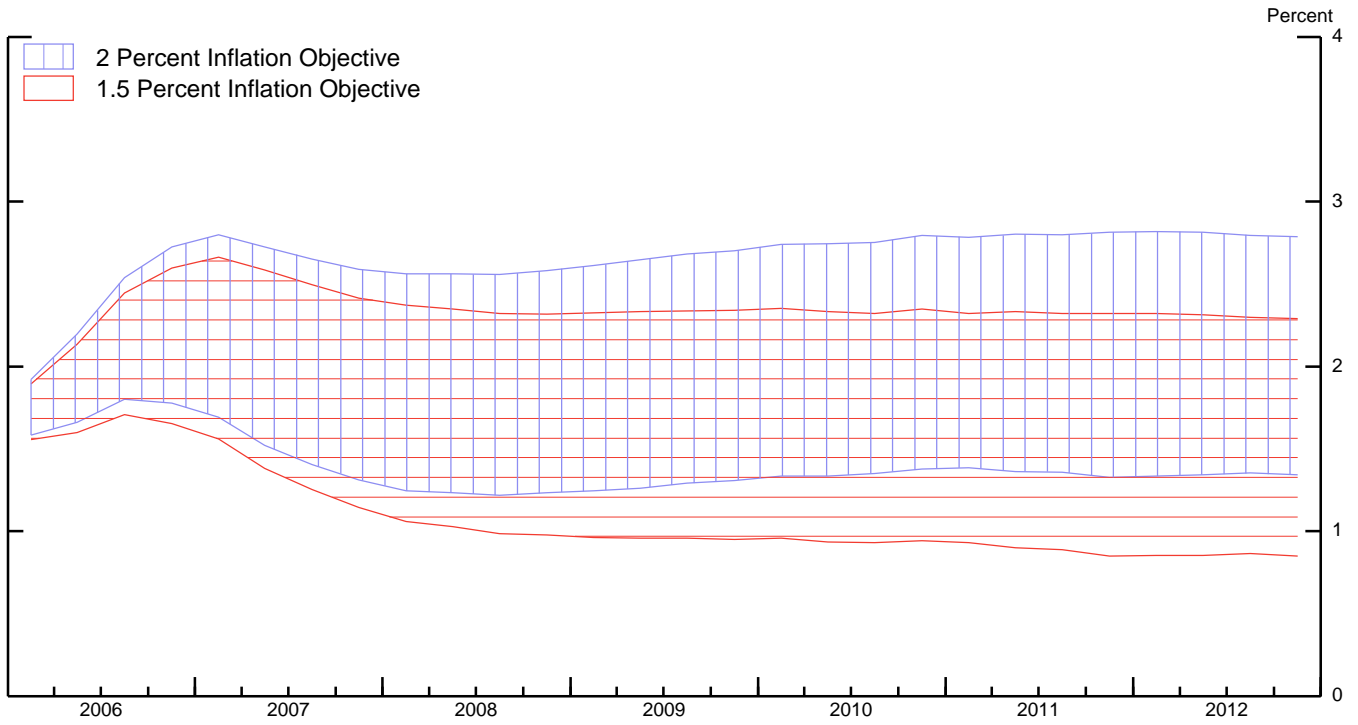
Inflation rises a bit further after 2007 and settles in around 2 percent by the end of the decade. Because the realized path of inflation is fairly close to the long-run inflation expectations that households and firms currently hold, this scenario does not involve sizable resource slack.

(12) The second set of simulations examines the range of inflation outcomes that might occur over the next seven years under the two alternative long-run inflation objectives. These simulations were performed using the standard version of the FRB/US model, starting from each optimal policy scenario described above and assuming that the U.S. economy is subject to the same distribution of exogenous shocks seen over the past two decades (roughly corresponding to the “Great Moderation” period).⁷ The upper panel of Chart 6 depicts the 70 percent confidence interval around the baseline core PCE inflation projection under each long-run objective, while the lower panel depicts the corresponding 90 percent confidence intervals. The distributions of inflation outcomes under the alternative objectives are fairly similar over the period covered by the Greenbook but become more distinct in subsequent years. As indicated by the horizontally hatched region in each panel, the long-run objective of 1½ percent implies that nearly two-thirds of the inflation outcomes from 2008 to 2012 fall in the range of 1 to 2 percent. In contrast, with a long-run objective of 2 percent, the lower panel indicates that nearly 90 percent of the inflation outcomes fall in the interval from 1 to 3 percent.

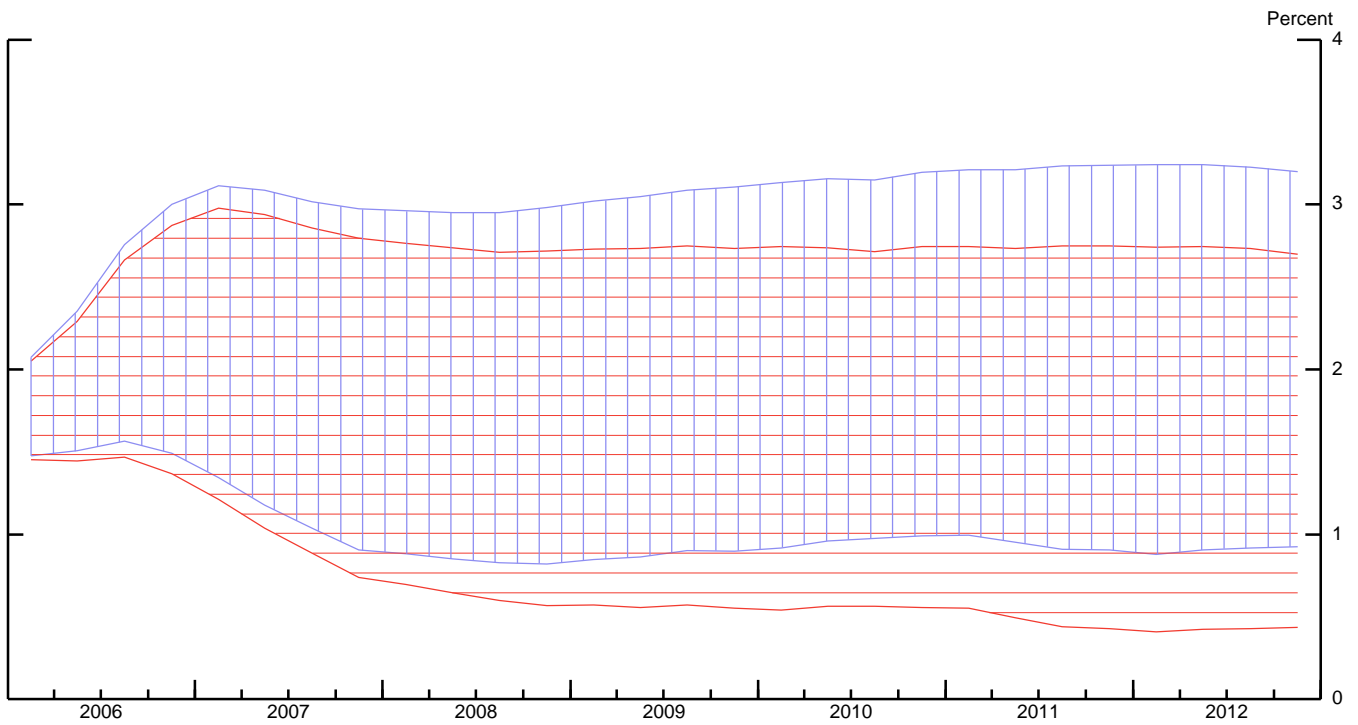
⁷ Specifically, the exogenous shocks are drawn from the estimated FRB/US residuals over the period 1987Q1 through 2004Q4. Because stochastic simulations with fully optimal policy are not computationally feasible if investor expectations are fully model consistent, these simulations have been conducted using the standard version of the model in which all expectations are based on more limited information. The policy response to exogenous shocks is determined by the version of Taylor’s rule with coefficients of 1.0 on the output gap and 0.5 on the inflation gap.

Chart 6 Range of Inflation Outcomes

70 Percent Confidence Interval



90 Percent Confidence Interval



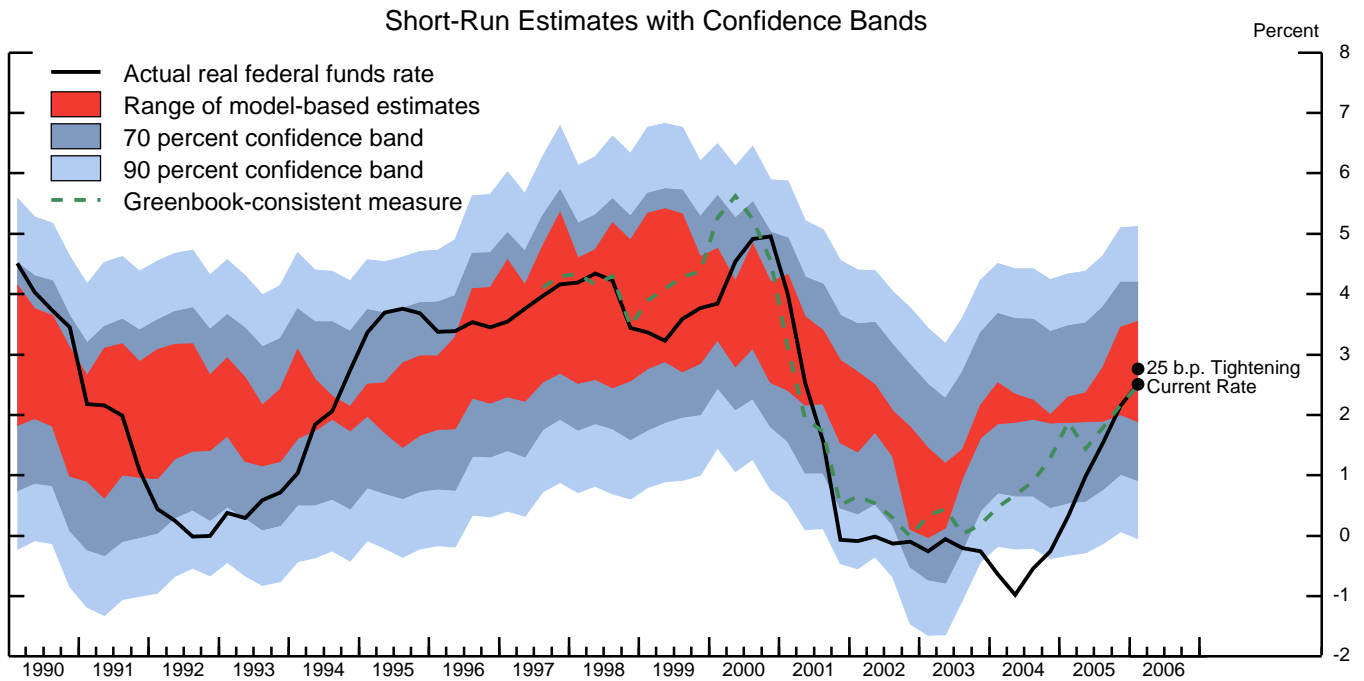
Short-Run Policy Alternatives

(13) This Bluebook discusses three short-run policy alternatives that are presented in Table 1. The target funds rate would be raised 25 basis points under Alternatives B and C but left unchanged under Alternative A. Alternative C retains risk assessment language identical to that used in the December statement on the notion that this will convey to markets a high likelihood of further firming in March. The assessment of risks under both Alternatives A and B is intended to soften that sense by suggesting that policy is likely—but not certain—to tighten in the future. Because the slowing in economic growth in the fourth quarter owed importantly to swings in federal spending and exports that are thought to be temporary, the description of the economy in the sentence in row 2 of the table begins with “Smoothing through near-term volatility in spending and production” rather than “Despite elevated energy prices and hurricane-related disruptions” for each alternative. The sentence then continues by reiterating that “the expansion in economic activity appears solid.”

(14) If the Committee believes that a 25 basis point tightening at this meeting may be sufficient, at least for a time, to keep both inflation and inflation expectations contained in the face of increased energy prices and diminishing resource slack, it may prefer **Alternative B**. While the staff has penciled in an assumed additional tightening after this meeting, it also assumes that the move will be reversed next year. The Committee might believe that the relatively benign macroeconomic outcomes of the Greenbook could be achieved by validating current market expectations of both a $\frac{1}{4}$ percentage point firming on Tuesday and two-thirds odds on a like-sized move in March. As shown in Chart 7, this policy move would place the real funds rate about at the center of the range of staff estimates of its equilibrium value. While the Greenbook projections for economic growth and inflation have been revised up for this year, the current level of the output gap is slightly wider owing to a greater-than-

Table 1: Alternative Language for the January FOMC Announcement				
	December 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 4¼ percent.	The Federal Open Market Committee decided today to keep raise its target for the federal funds rate unchanged by 25 basis points to at 4¼ percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 4½ ¼ percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 4½ ¼ percent.
Rationale	2. Despite elevated energy prices and hurricane-related disruptions, the expansion in economic activity appears solid.	Smoothing through near-term volatility in spending and production Despite elevated energy prices and hurricane-related disruptions, the expansion in economic activity appears solid.	Smoothing through near-term volatility in spending and production Despite elevated energy prices and hurricane-related disruptions, the expansion in economic activity appears solid.	Smoothing through near-term volatility in spending and production Despite elevated energy prices and hurricane-related disruptions, the expansion in economic activity appears solid.
	3. Core inflation has stayed relatively low in recent months and longer-term inflation expectations remain contained. Nevertheless, possible increases in resource utilization as well as elevated energy prices have the potential to add to inflation pressures.	While possible increases in resource utilization as well as elevated energy prices have the potential to add to inflation pressures, core inflation has stayed relatively low in recent months. Moreover, longer-term inflation expectations remain contained.	[Unchanged]	While cCore inflation has stayed relatively low in recent months and longer-term inflation expectations remain contained, Nevertheless, possible increases in resource utilization as well as elevated energy and other cost pressures prices have the potential to add to boost underlying inflation pressures.
Assessment of Risk	4. The Committee judges that some further measured policy firming is likely to be needed to keep the risks to the attainment of both sustainable economic growth and price stability roughly in balance.	The Committee judges that some further measured policy firming may well-is likely to be needed to keep the risks to the attainment of both sustainable economic growth and price stability roughly in balance.	The Committee judges that some further measured policy firming may well-is likely to be needed to keep the risks to the attainment of both sustainable economic growth and price stability roughly in balance.	[Unchanged]
	5. In any event, the Committee will respond to changes in economic prospects as needed to foster these objectives.	[Unchanged]	[Unchanged]	[Unchanged]

Chart 7 Equilibrium Real Federal Funds Rate



Notes: The actual real federal funds rate is constructed as the difference between the quarterly average of the observed 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	<i>Previous Bluebook</i>
Short-Run Measures		
Single-equation model	1.9	2.1
Small structural model	2.3	2.4
Large model (FRB/US)	3.5	3.7
Confidence intervals for three model-based estimates		
70 percent confidence interval	0.9 - 4.2	
90 percent confidence interval	0.0 - 5.1	
Greenbook-consistent measure	2.5	2.4
Medium-Run Measures		
Single-equation model	2.1	2.2
Small structural model	2.5	2.5
Confidence intervals for two model-based estimates		
70 percent confidence interval	1.4 - 3.2	
90 percent confidence interval	0.7 - 3.8	
TIPS-based factor model	2.1	2.1
Memo		
Actual real federal funds rate	2.51	2.17

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. For the first three measures listed below, the short-run equilibrium rate is defined as the rate that would close the output gap in twelve quarters given the corresponding model's projection of the economy. For the first two measures, 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. The TIPS-based factor model measure provides an estimate of market expectations for the real federal funds rate seven years ahead. The actual real federal funds rate shown in the chart employs 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.

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-based Factor Model	Yields on TIPS (Treasury Inflation-Protected Securities) reflect investors' expectations of the future path of real interest rates, but also include term and liquidity premiums. The TIPS-based measure of the equilibrium real rate is constructed using the seven-year-ahead instantaneous real forward rate derived from TIPS yields as of the Bluebook publication date. This forward rate is adjusted to remove estimates of the term and liquidity premiums based on a three-factor arbitrage-free term-structure model applied to TIPS yields, nominal yields, and inflation. Because TIPS indexation is based on the total CPI, this measure is also adjusted for the medium-term difference—projected at 40 basis points—between total CPI inflation and core PCE inflation.

anticipated deceleration of production in the fourth quarter of last year. In consequence, Committee members may view the need for further policy firming after this meeting to be about as they had expected in December. Even if members are fairly confident that an additional firming step will be necessary at the March meeting, they may view this as an appropriate time to begin to wean market participants from explicit characterizations of future interest rate action in the statement as a matter of routine. On that score, the attendant increase in expected interest rate volatility might be seen as engendering a more healthy respect for risk in financial markets.

(15) Although the proposed wording for Alternative B suggests greater uncertainty about future policy moves, it continues to indicate that the risks are tilted toward the possibility of further policy firming. It would state that “some further policy firming may well be needed” to keep risks in balance, replacing “is likely to” with “may well” in that phrase. The proposed wording would also drop the word “measured,” as some may believe that the phrase may imply more than one future move. The minutes of the December meeting likely helped prepare markets not to interpret the dropping of the word “measured” as a signal that the Committee expected to move policy in larger increments going forward. If the Committee wanted to stress the role incoming data will play in its deliberations on further action, it may want to reverse the order of rows 4 and 5 and delete “In any event.” The wording in Table 1 does not do so on the thought that the Committee would prefer to make relatively few changes to the statement at this time. Some members may be uncomfortable with the language of Table 1 either because they believe that further firming will be unnecessary or that the Committee should get out of the business of signaling its policy intent. In either case, it might be appropriate to strike row 4 and rely on a revised version of row 5 to underscore the uncertainties surrounding policy and the necessity of being responsive to economic data. In particular, row 5 could

read, “The Committee will respond to changes in economic prospects as needed to foster the attainment of sustainable economic growth and price stability.”

(16) Futures markets and surveys suggest that investors are sure of a 25 basis point policy firming at this meeting and place greater than even odds on another such move in March. Therefore, selection of this policy move coupled with the language of Alternative B likely would not result in substantial changes in financial market prices. Short-term interest rates might edge lower and stocks could rally a bit as market participants strengthen their expectations that the tightening phase may be drawing to a close. Offsetting this effect somewhat, implied volatilities on options on money market futures may step up as the Committee sends a less confident signal about its future action.

(17) If the Committee believes that appreciable further policy firming will likely be needed to address upside risks to inflation—which include the potential pass-through of higher prices of oil and other commodities and a lower foreign exchange value of the dollar—it may prefer to associate a $\frac{1}{4}$ percentage point increase in the target funds rate at this meeting with the language in **Alternative C**. A firmer tone might also seem appropriate in light of the longer-run scenarios discussed earlier. To achieve a $1\frac{1}{2}$ percent objective for core PCE inflation, model-based optimal policy paths, along with several policy rules shown in Charts 8 and 9, point to a need to raise the funds rate above $4\frac{1}{2}$ percent fairly soon.⁸ Even if a target funds rate above $4\frac{1}{2}$ percent needs to be reversed before too long, it might be required to offset near-term pressures on inflation. In addition, the moderation in spending growth in the staff forecast depends in part on some cooling of house price appreciation, which is not yet a foregone conclusion, and projecting a more restrictive stance of policy may be appropriate until such a trend is better established.

⁸ Chart 8 presents two new estimated rules, along with confidence bands reflecting uncertainty about the policy path obtained from model-based simulations of future economic shocks and on options quotes, as discussed in the box.

New Analysis of Monetary Policy Rules

This Bluebook introduces two new exhibits related to policy rules. First, Chart 8 depicts the implications of estimated policy rules, together with information from futures and options prices. In the top left panel, the dashed line denotes the path implied by a rule that relates the federal funds rate to its own lagged values, to the current four-quarter average core PCE inflation rate, and to the current and lagged output gap (known as an outcome-based rule because it relies on observed macroeconomic variables). This empirical specification was chosen using a formal statistical procedure that balances simplicity of the specification with goodness-of-fit over the sample period 1988Q1 through 2005Q4. Dynamic simulation of the FRB/US model was then used to determine the predicted funds rate path that this rule implies over the Greenbook horizon.¹

The chart also depicts the range of uncertainty for the outcome-based rule associated with the incidence of shocks that might occur over the forecast period. For that purpose, stochastic simulations of the FRB/US model were performed using the estimated distribution of shocks over the post-1987 period to every equation of the model, except the policy rule. The dark green region shows the 70 percent confidence interval while the light green region denotes the 90 percent confidence interval.

The dotted line in the left panel portrays the path prescribed by a forecast-based rule, estimated using Greenbook forecasts for the two-quarter-ahead four-quarter-average core PCE inflation rate and the one-quarter-ahead and one-quarter lag of the output gap, along with two lags of the funds rate. This specification was chosen by a procedure similar to that for the outcome-based rule. Relative to the outcome-based rule, this rule prescribes a path that is tighter by about $\frac{1}{4}$ percentage point during 2006 and easier by a similar amount during 2007.²

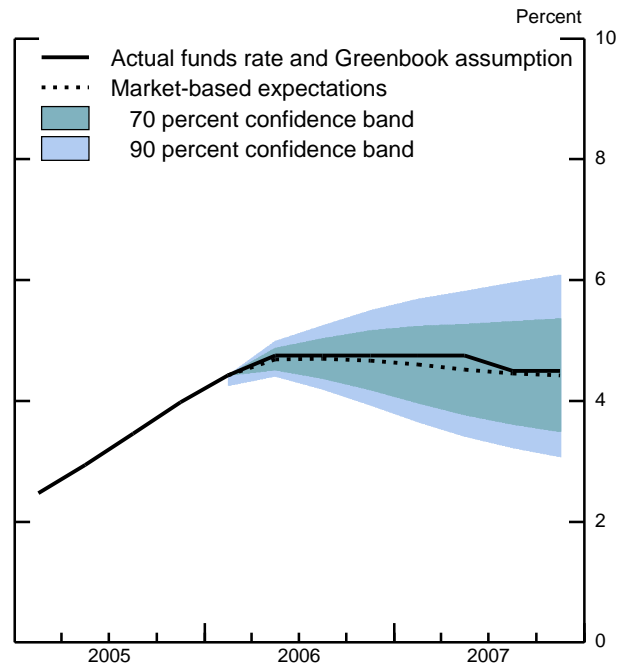
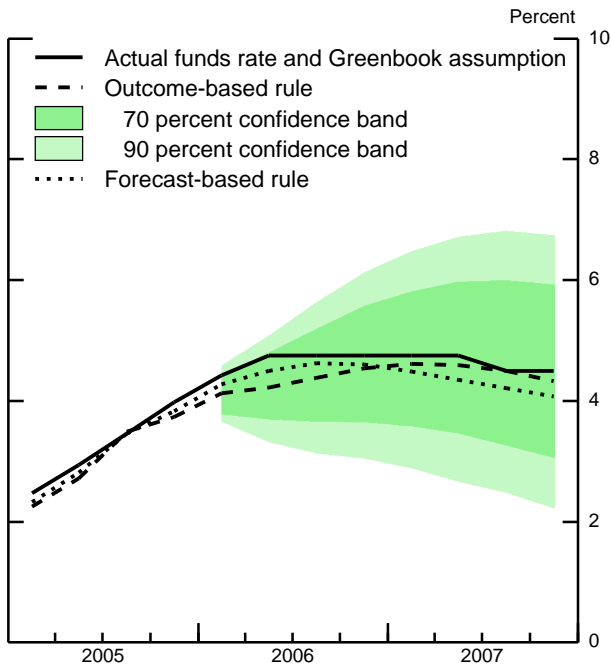
The right panel of Chart 8 provides information from futures and options markets. Expectations for the federal funds rate derived from quotes on federal funds and Eurodollar futures are shown as a dotted line in the right panel. The expected funds rate has a mild humped shape over the next two years. The confidence bands reflect uncertainty as computed from options prices. Note that financial markets have built in somewhat less uncertainty than is suggested by the stochastic simulations of the outcome-based rule.

Finally, Chart 9 reports on prescriptions from simple policy rules that have been included in Bluebooks since January 2004. Using dynamic simulations of the FRB/US model, these rule prescriptions are now shown for the entire Greenbook horizon. With an inflation objective of $1\frac{1}{2}$ percent, the baseline and aggressive Taylor rules prescribe funds rate paths that are lower than the Greenbook assumption, whereas the first-difference rule implies a markedly tighter path during 2007.

¹ Further explanatory notes are given on the page following these charts.

² Confidence intervals for this rule are not available.

Chart 8
Information from Estimated Policy Rules and Financial Markets

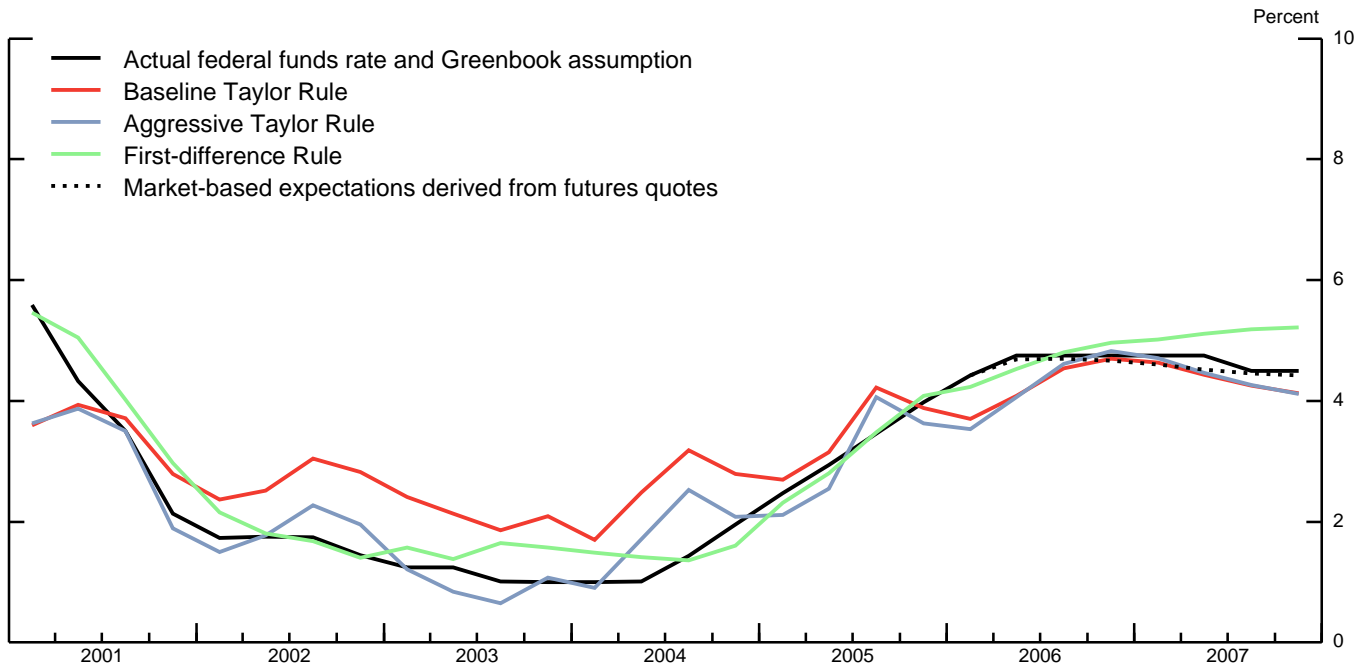


	2006				2007			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Estimated Policy Rules*								
Outcome-based policy rule	4.1	4.2	4.4	4.5	4.6	4.6	4.5	4.3
70 percent confidence band								
Lower bound	3.8	3.7	3.7	3.7	3.6	3.5	3.3	3.1
Upper bound	4.4	4.8	5.2	5.6	5.8	6.0	6.0	5.9
90 percent confidence band								
Lower bound	3.7	3.3	3.1	3.1	2.9	2.7	2.5	2.2
Upper bound	4.6	5.1	5.6	6.1	6.5	6.7	6.8	6.7
Forecast-based policy rule	4.3	4.5	4.6	4.6	4.5	4.3	4.2	4.1
Market Expectations**								
Expected funds rate path	4.4	4.7	4.7	4.7	4.6	4.5	4.5	4.4
70 percent confidence band								
Lower bound	4.4	4.5	4.4	4.2	4.0	3.8	3.6	3.5
Upper bound	4.4	4.9	5.0	5.2	5.2	5.3	5.3	5.4
90 percent confidence band								
Lower bound	4.3	4.4	4.2	3.9	3.6	3.4	3.2	3.1
Upper bound	4.4	5.0	5.3	5.5	5.7	5.8	6.0	6.1
Memo								
Greenbook assumption	4.4	4.8	4.8	4.8	4.8	4.8	4.5	4.5

* Predicted values are based on the dynamic simulation of the FRB/US model. Confidence bands, shown only for the outcome-based rule, are based on stochastic simulations of the FRB/US model, where the shocks are randomly drawn from 1988-2004 set of model equation residuals.

** Expected funds rate path is based on fed funds and Eurodollar futures quotes, and the confidence bands come from options on those futures.

Chart 9 Information from Simple Policy Rules



Note: Rules shown in chart assume a core PCE inflation objective of 1.5 percent.

	2006				2007			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Simple Policy Rules*								
Baseline Taylor Rule								
1.5 Percent Inflation Objective	3.7	4.1	4.5	4.7	4.6	4.4	4.3	4.1
2.0 Percent Inflation Objective	3.5	3.9	4.4	4.6	4.5	4.3	4.2	4.0
Aggressive Taylor Rule								
1.5 Percent Inflation Objective	3.5	4.1	4.6	4.8	4.7	4.5	4.3	4.1
2.0 Percent Inflation Objective	3.3	3.9	4.5	4.7	4.6	4.4	4.2	4.1
First-difference Rule								
1.5 Percent Inflation Objective	4.2	4.5	4.8	5.0	5.0	5.1	5.2	5.2
2.0 Percent Inflation Objective	4.0	4.2	4.3	4.4	4.3	4.3	4.4	4.3
Memo								
Expectations from futures quotes**	4.4	4.7	4.7	4.7	4.6	4.5	4.5	4.4
Greenbook assumption	4.4	4.8	4.8	4.8	4.8	4.8	4.5	4.5

* Predicted values are based on the dynamic simulation of the FRB/US model.

** Expected funds rate path is based on fed funds and Eurodollar futures quotes.

Policy Rule Charts: Explanatory Notes

In all of the rules below, i_t denotes the federal funds rate for quarter t , π_t the staff estimate (at quarter t) of trailing four-quarter core PCE inflation, $(y_t - y_t^*)$ the staff estimate of the output gap, $\pi_{t+2|t}$ and $\pi_{t+3|t}$ the staff's two- and three-quarter-ahead forecast of inflation, $(y_{t+1|t} - y_{t+1|t}^*)$ the staff's one-quarter-ahead forecast of the output gap, π^* policymakers' long-run objective for inflation, and $(\Delta y_{t+3|t} - \Delta y_{t+3|t}^*)$ the staff's three-quarter-ahead forecast of four-quarter output growth less potential output growth. Data are real-time quarterly averages taken from the Greenbook and staff memoranda closest to the middle of each quarter.

Chart on Estimated Policy Rules: The outcome-based rule is chosen according to the Bayesian information criterion over the sample period starting from 1988Q1. This criterion chooses the specific lag structure for the policy rule. The predicted values (the dashed line in the left panel) come from a dynamic simulation of this rule using the FRB/US model, with add-factors to match the Greenbook baseline. The forecast-based rule differs from the outcome-based rule in that it also permits staff forecasts of inflation and the output gap to be among the explanatory variables. Its predicted values (the dotted line in the left panel) involve the Greenbook extension due to its forward-looking feature.

Chart on Simple Policy Rules: The predicted values of three simple rules are based on dynamic simulations of these rules using the FRB/US model. The predicted values of the first-difference rule involve the Greenbook extension.

Rule	Specification	Root-mean-square error	
		1988:1-2005:4	2001:1-2005:4
Estimated Policy Rules			
1. Outcome-based Rule	$i_t = 0.27 + 1.14i_{t-1} - 0.36i_{t-2} + 0.32\pi_t + 0.60(y_t - y_t^*) - 0.40(y_{t-1} - y_{t-1}^*)$	.22	.23
2. Forecast-based Rule	$i_t = 0.24 + 1.14i_{t-1} - 0.35i_{t-2} + 0.31\pi_{t+2|t} + 0.42(y_{t+1|t} - y_{t+1|t}^*) - 0.23(y_{t-1} - y_{t-1}^*)$	.20	.23
Simple Policy Rules			
3. Baseline Taylor Rule	$i_t = 2 + \pi_t + 0.5(\pi_t - \pi^*) + 0.5(y_t - y_t^*)$	.95 ^a	1.01 ^a
4. Aggressive Taylor Rule	$i_t = 2 + \pi_t + 0.5(\pi_t - \pi^*) + (y_t - y_t^*)$	.67 ^a	.61 ^a
5. First-difference Rule	$i_t = i_{t-1} + 0.5(\pi_{t+3|t} - \pi^*) + 0.5(\Delta y_{t+3|t} - \Delta y_{t+3|t}^*)$	.95 ^a	.40 ^a

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

(18) Under Alternative C, the wording proposed for the inflation outlook, line 3, would indicate slightly greater concern about the potential for “increases in resource utilization as well as energy and other cost pressures” to “boost underlying inflation.” The assessment of risks could be quite similar to that announced following the December meeting, including a statement that “some further measured policy firming is likely to be needed” to maintain balanced risks to price stability and sustainable growth. Markets would probably see the language under Alternative C as indicating a greater probability of future policy tightening than they had expected. Short- and intermediate-term interest rates would likely rise with the revisions to the market’s expected path for the funds rate. The stock market might fall back a little, but longer-term interest rates and the foreign exchange value of the dollar probably would not change much.

(19) If members see sizable odds that the target funds rate has already been raised sufficiently to check inflationary pressures, the Committee would presumably choose to forego a policy move at this meeting, as in **Alternative A**. With the real funds rate now well within the range of estimates of its equilibrium, it might be desirable to pause at this meeting before deciding whether to move to a position that could entail policy restraint. Given the lags in the effects of policy changes on the economy and the already substantial cumulative increase in the target funds rate, the Committee may prefer to await further data to assess whether additional tightening steps would risk an undesirable overshooting. Indeed, given the deceleration in economic activity in the fourth quarter and the depressed level of longer-term interest rates, members may believe that the staff forecast is too optimistic about the prospects for continued solid growth. Moreover, the possibility that the saving rate might rise more rapidly toward historical norms, as discussed in an alternative simulation in the Greenbook, may be of sufficient concern to the Committee that it would require more evidence of inflationary pressures before firming policy further.

In addition, if the Committee preferred that the core PCE inflation rate remain near 2 percent, rather than drop back to 1½ percent, the long-run scenarios discussed earlier would suggest no need to raise the funds rate above 4¼ percent this year.

(20) The proposed wording of inflation concerns for Alternative A, in row 3 of Table 1, is basically a reordering of the sentences employed in the last announcement. The phrase regarding elevated energy prices and resource utilization is placed first to leave readers with the sense that such concerns have been somewhat assuaged by recent readings on core inflation and inflation expectations. Even if members believe that further tightening will likely be needed at some point, they may view those sentiments to be adequately communicated by the asymmetric risk assessment under Alternative A.

(21) Markets would be very surprised if the Committee chose to keep the target funds rate unchanged at this meeting. Short-term interest rates would likely fall by close to 25 basis points, although the expected funds rate path probably would not flatten out completely, as the statement would point to the possibility of additional tightening in the future. Long-term interest rates should decline much less, in part because financial markets have built in an expectation that the ¼ percentage point move predicted for this meeting would be unwound in the second half of next year. However, with an unchanged policy stance at this meeting, stock prices could move higher and the dollar fall, at least temporarily.

Money and Debt Forecasts

(22) Under the staff forecast, M2 is expected to expand about 5½ percent this year, about ½ percentage point slower than nominal GDP, owing to the lagged response of money demand to increases in opportunity costs. M2 growth should be supported somewhat by the flat yield curve, which implies that the returns on M2 instruments are more attractive than usual when compared with yields on notes and

bonds. As these interest rate effects subside in 2007, M2 is expected to expand 5 percent, equal to the rate of growth of nominal GDP. Domestic nonfinancial sector debt is anticipated to decelerate to a 7½ percent pace this year and 6½ percent in 2007, largely because a projected sharp decline in house price appreciation holds down home mortgage borrowing. Overall business borrowing is also expected to slow a bit, owing in part to a projected deceleration in commercial real estate prices. Federal debt is forecast to grow at an average 7½ percent pace over this year and next, while state and local borrowing throttles back with the completion of many advance refundings.

Table 2
Alternative Growth Rates for M2
(percent, annual rate)

		No change	Raise 25 bp*	Greenbook**
Monthly Growth Rates				
	Nov-05	4.1	4.1	4.1
	Dec-05	5.1	5.1	5.1
	Jan-06	7.9	7.9	7.9
	Feb-06	6.4	6.0	6.0
	Mar-06	6.3	5.5	5.5
	Apr-06	6.8	6.0	5.6
	May-06	6.7	6.0	5.2
	Jun-06	6.5	6.0	5.2
Quarterly Growth Rates				
	2005 Q1	3.6	3.6	3.6
	2005 Q2	2.6	2.6	2.6
	2005 Q3	4.4	4.4	4.4
	2005 Q4	5.2	5.2	5.2
	2006 Q1	6.4	6.2	6.2
	2006 Q2	6.6	5.9	5.5
Annual Growth Rates				
	2004	5.2	5.2	5.2
	2005	4.0	4.0	4.0
	2006	6.3	5.9	5.5
	2007	5.1	5.1	5.0
Growth From	To			
Jan-06	Jun-06	6.6	6.0	5.6

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

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

Directive and Balance-of-Risks Statement

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

Directive Wording

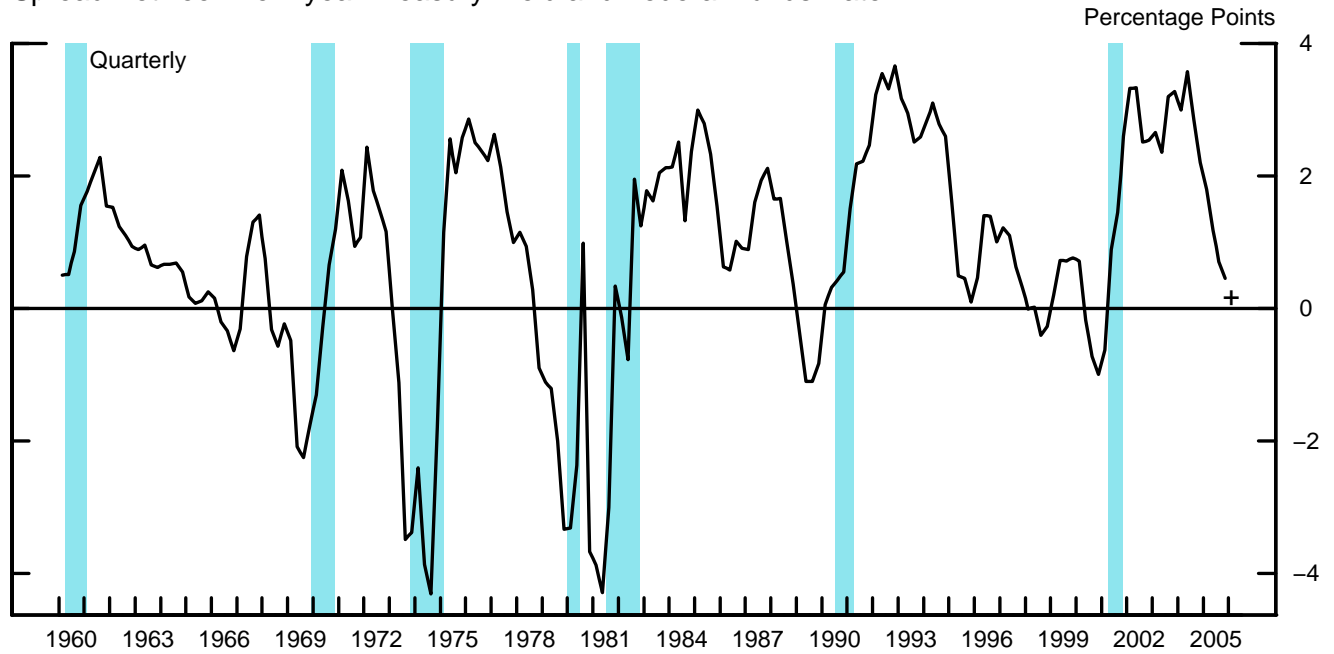
The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with MAINTAINING/increasing/REDUCING the federal funds rate AT/to an average of around _____ ~~4~~/₄ percent.

Risk Assessments

- A. or B.** The Committee judges that some further policy firming may well be needed to keep the risks to the attainment of both sustainable economic growth and price stability roughly in balance. In any event, the Committee will respond to changes in economic prospects as needed to foster these objectives.
- C.** The Committee judges that some further measured policy firming is likely to be needed to keep the risks to the attainment of both sustainable economic growth and price stability roughly in balance. In any event, the Committee will respond to changes in economic prospects as needed to foster these objectives.

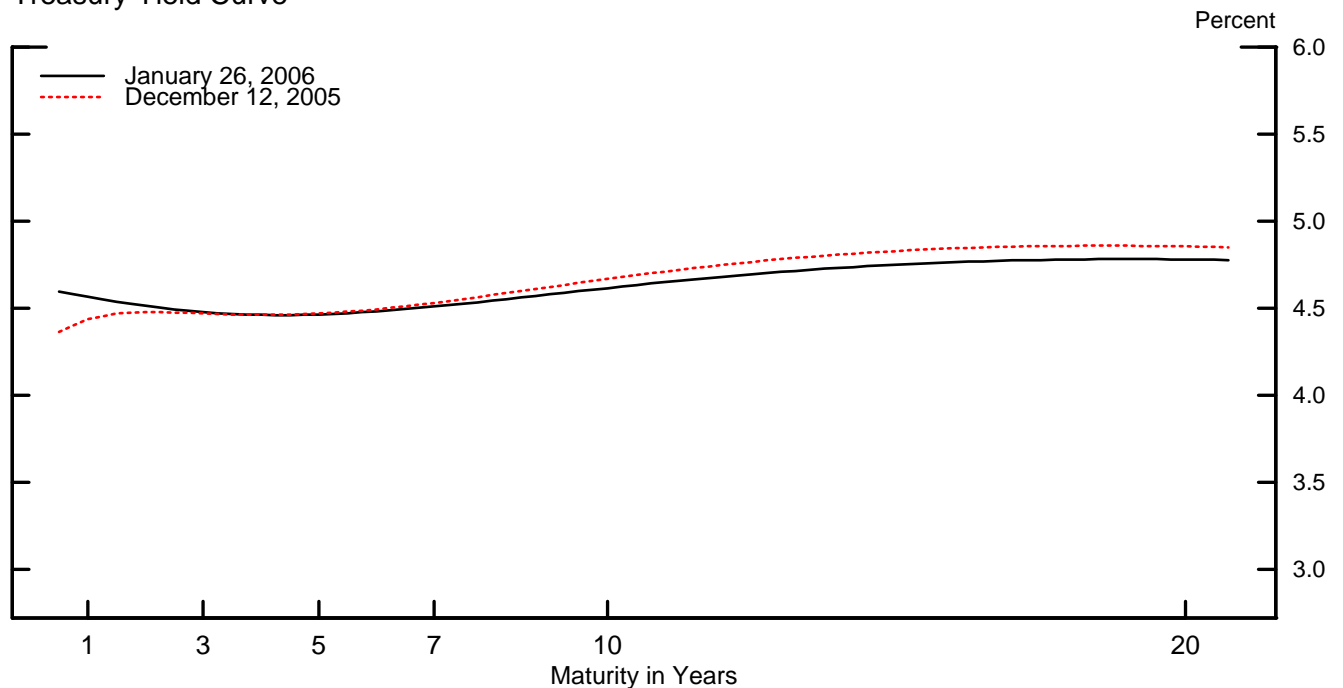
Treasury Yield Curve

Spread Between Ten-year Treasury Yield and Federal Funds Rate



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

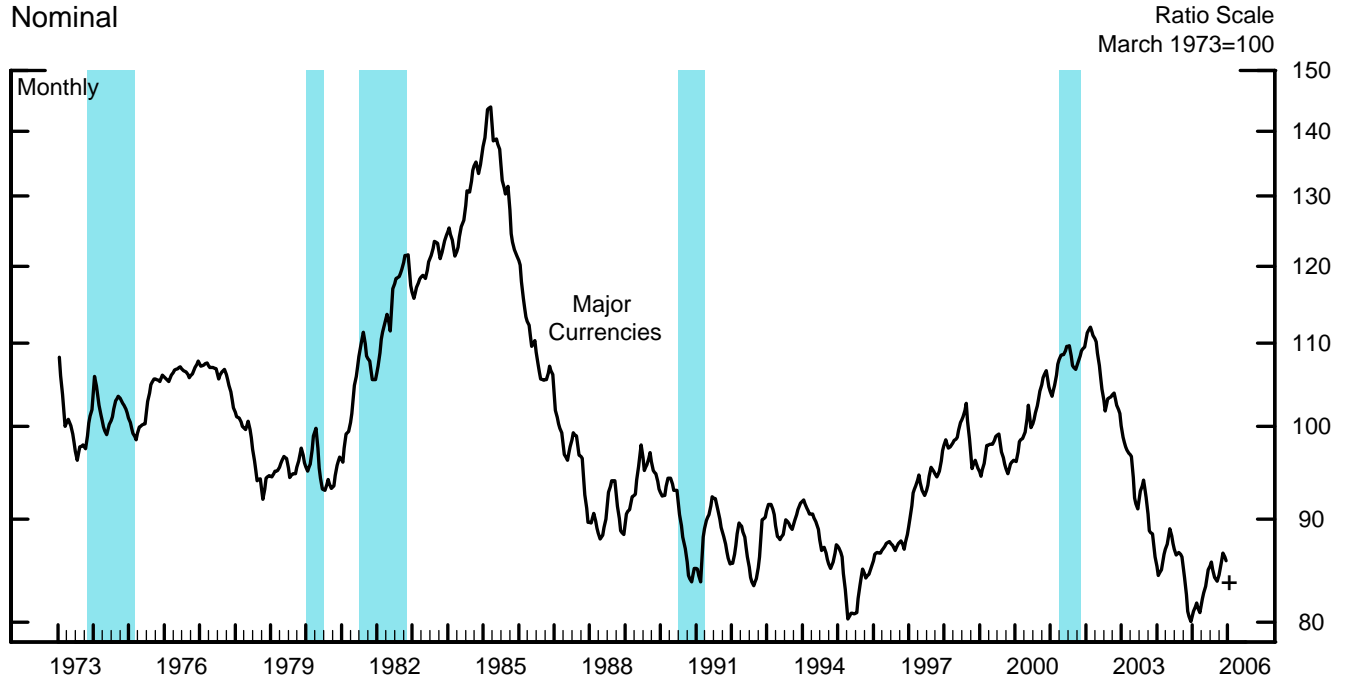
Treasury Yield Curve*



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

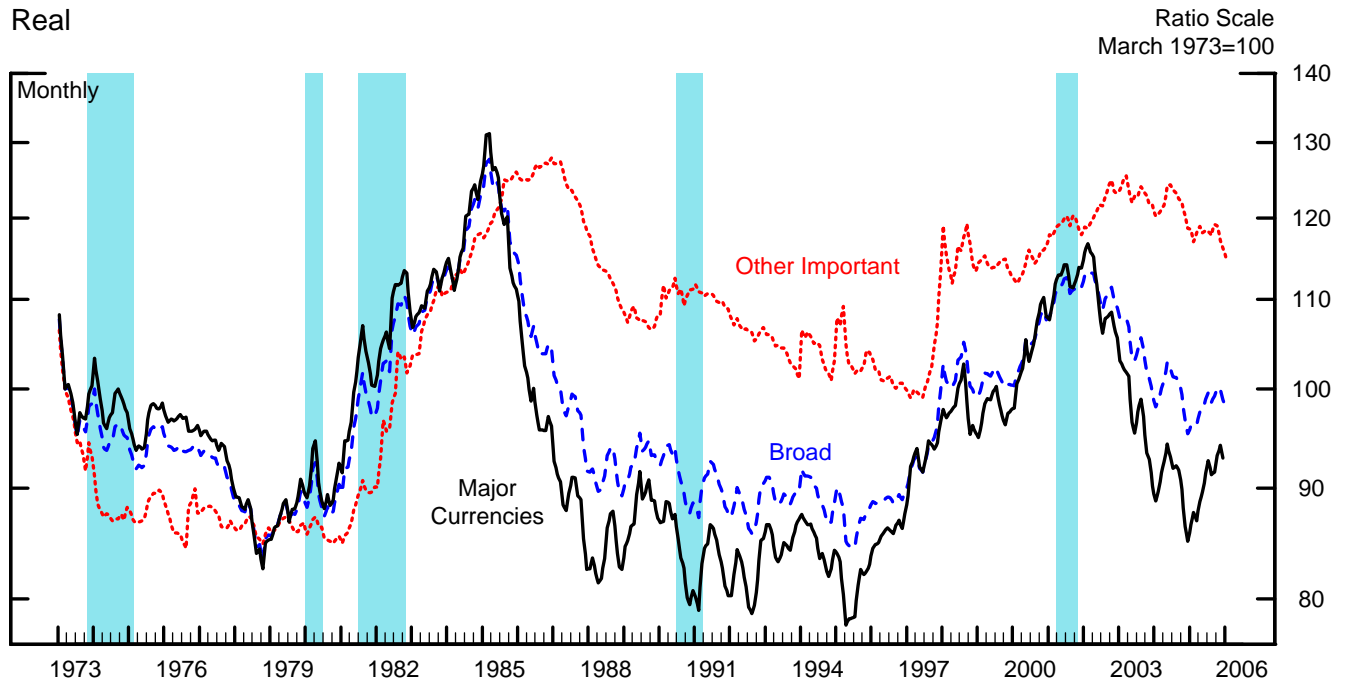
Dollar Exchange Rate Indexes

Nominal



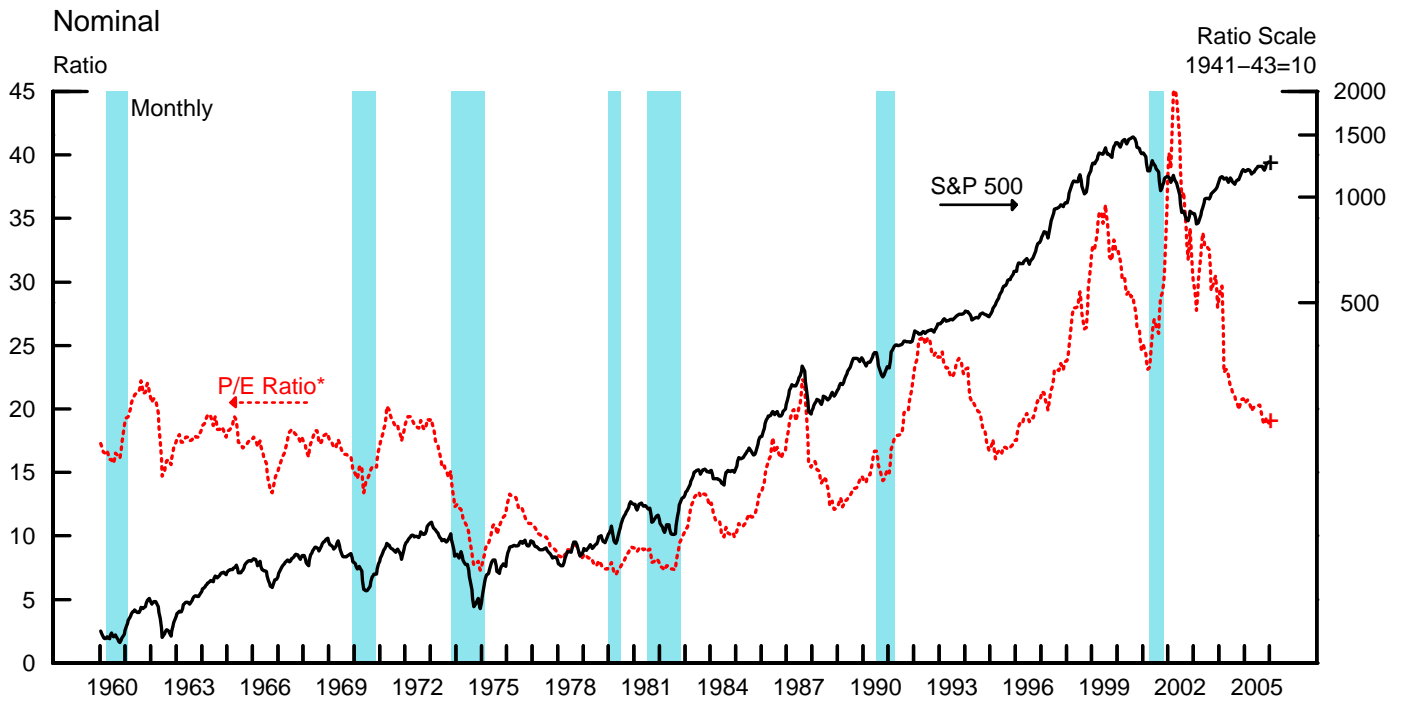
+ Denotes most recent weekly value.

Real

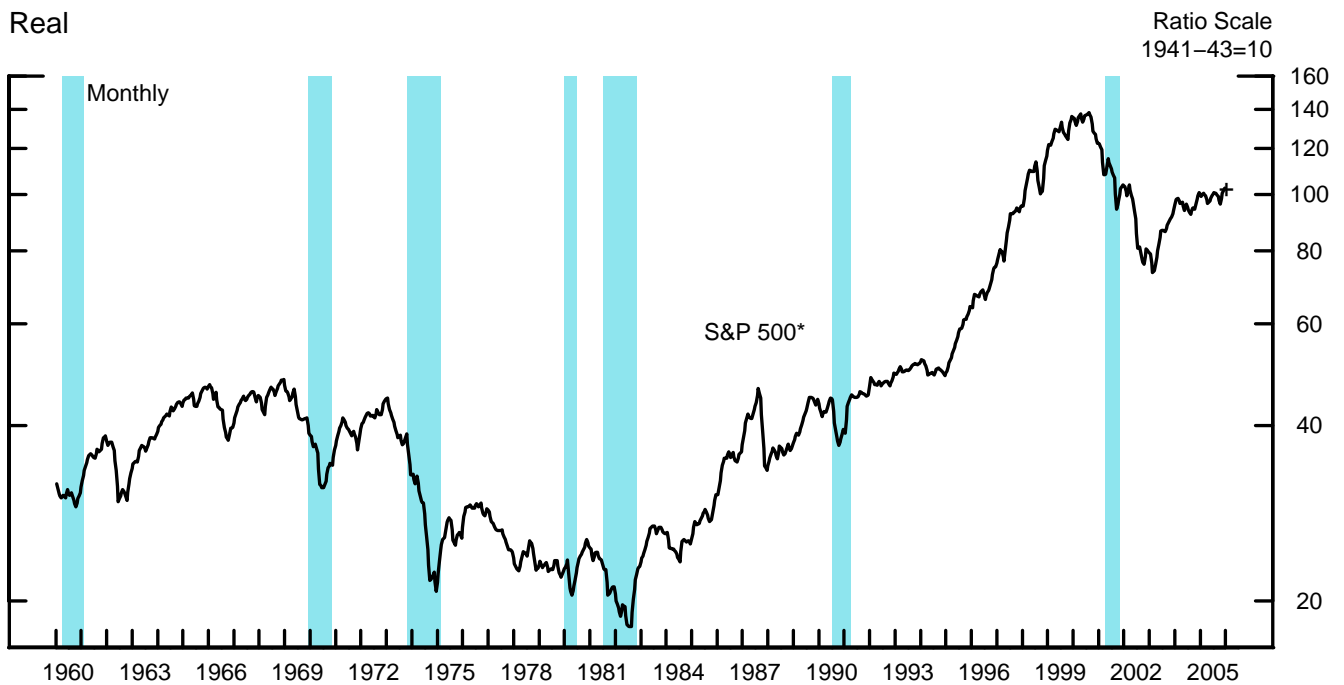


Note. The major currencies index is the trade-weighted average of currencies of the Euro area, Canada, Japan, the U.K., Switzerland, Australia, and Sweden. The other important trading partners index is the trade-weighted average of currencies of 19 other important trading partners. The Broad index is 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



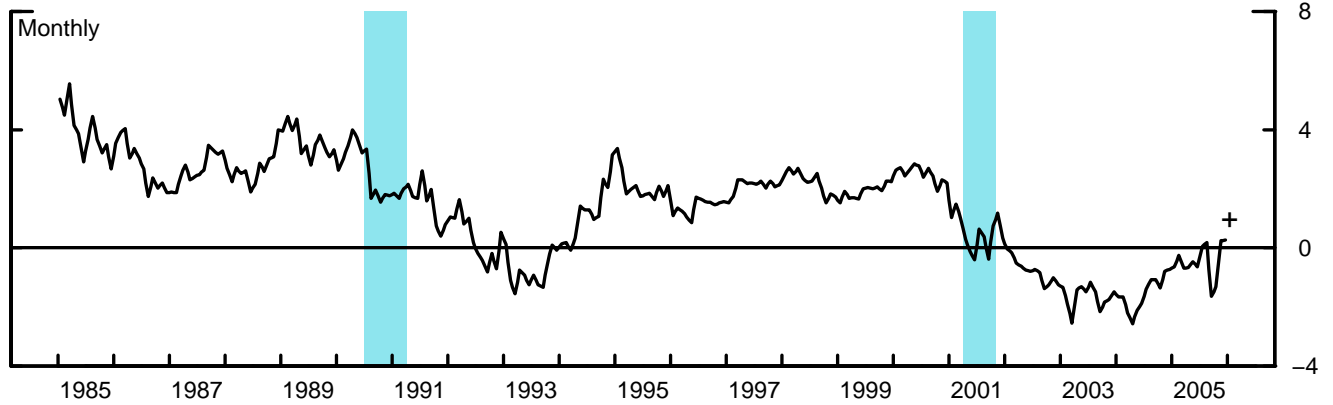
* Based on trailing four-quarter earnings.
+ Denotes most recent weekly value.



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

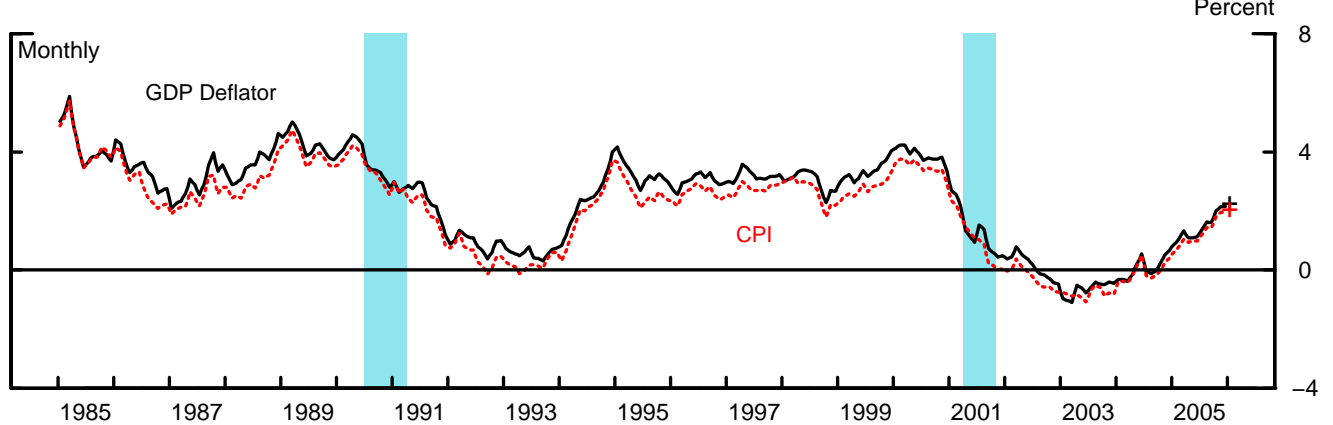
One-Year Real Interest Rates

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



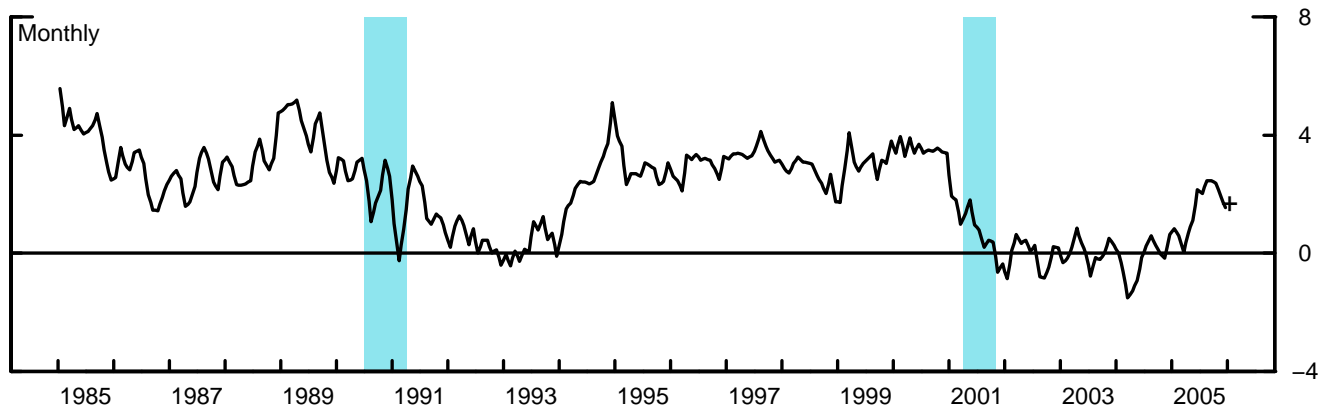
* Mean value of respondents.

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.

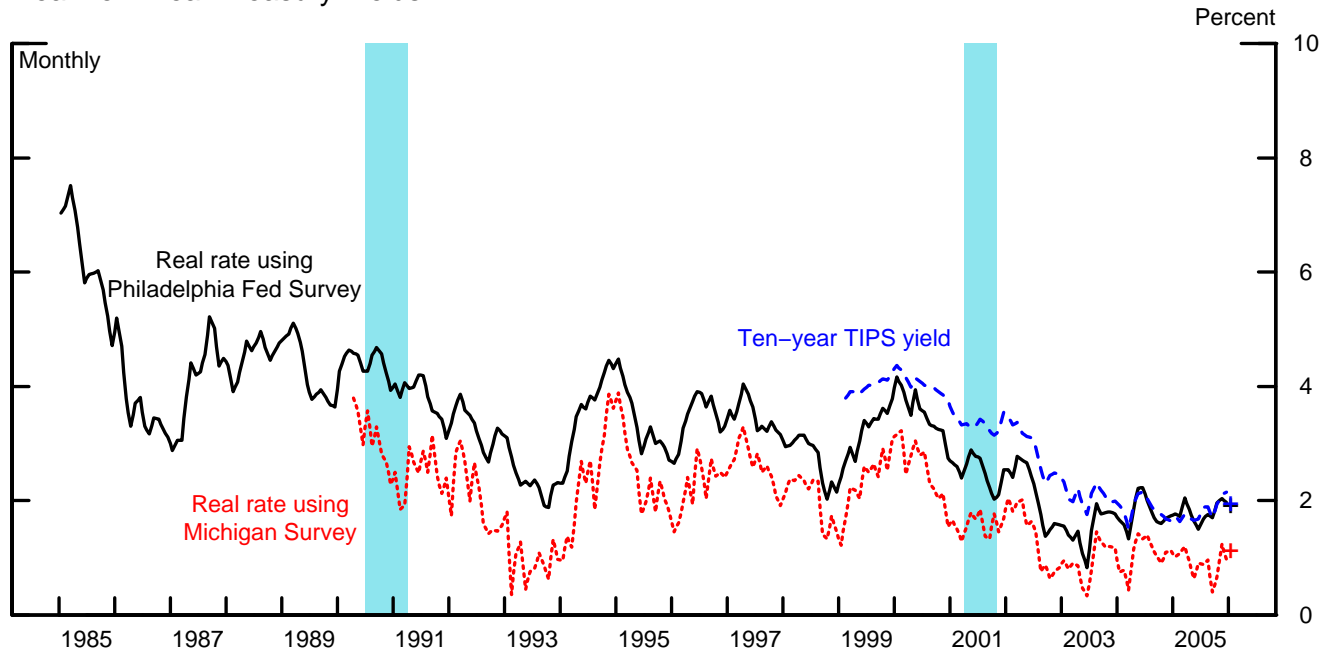
One-Year Treasury Constant Maturity Yield Less Change in the Core CPI from Three Months Prior



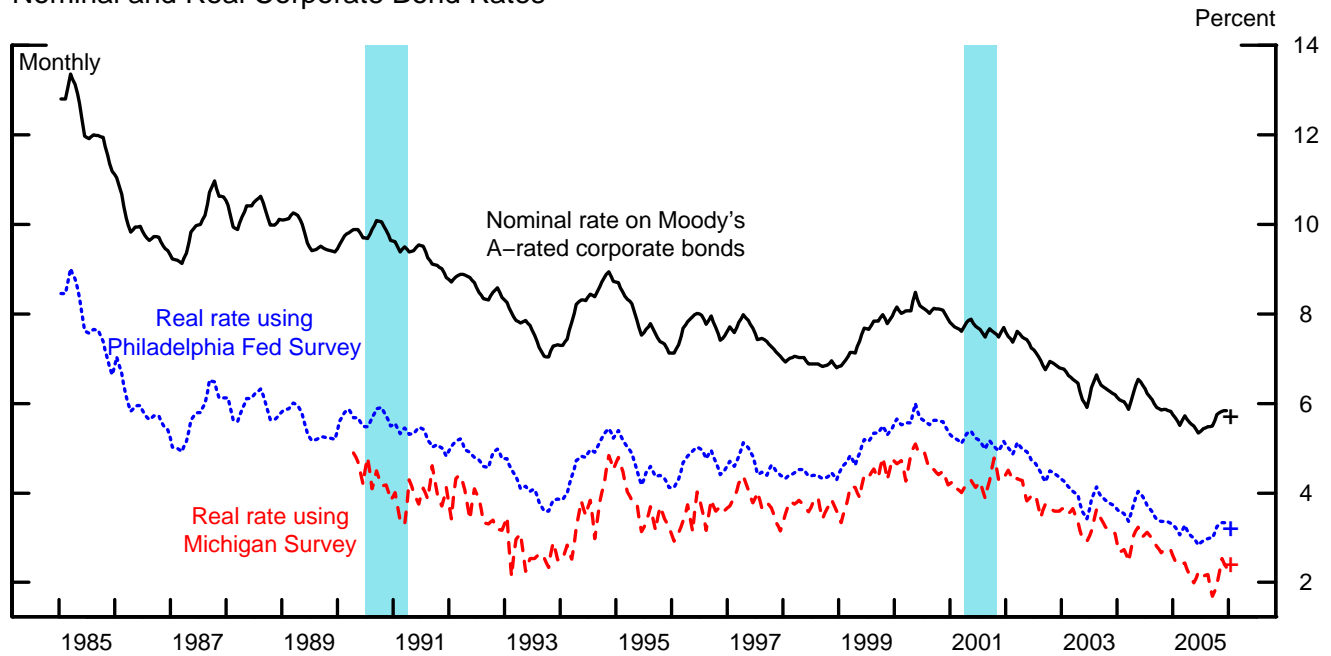
+ Denotes most recent weekly Treasury constant maturity yield less most recent inflation expectation.
Note. Blue shaded regions denote NBER-dated recessions.

Long-Term Real Interest Rates*

Real Ten-Year Treasury Yields



Nominal and Real Corporate Bond Rates



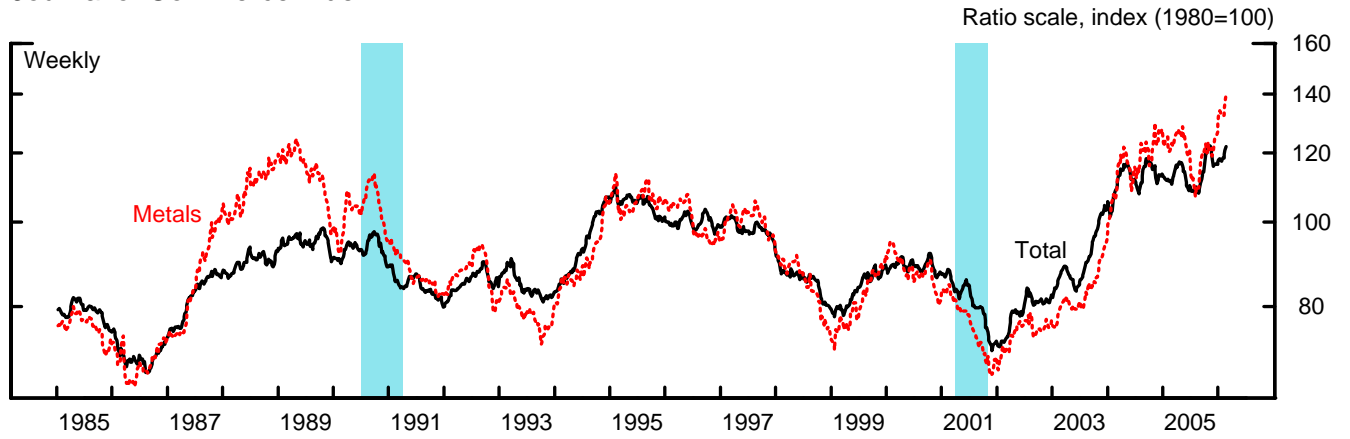
* For real rates, measures using the Philadelphia Fed Survey employ the ten-year inflation expectations from the Blue Chip Survey until April 1991 and the Philadelphia Federal Reserve Bank Survey of Professional Forecasters thereafter (median value of respondents). Measures using the Michigan Survey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

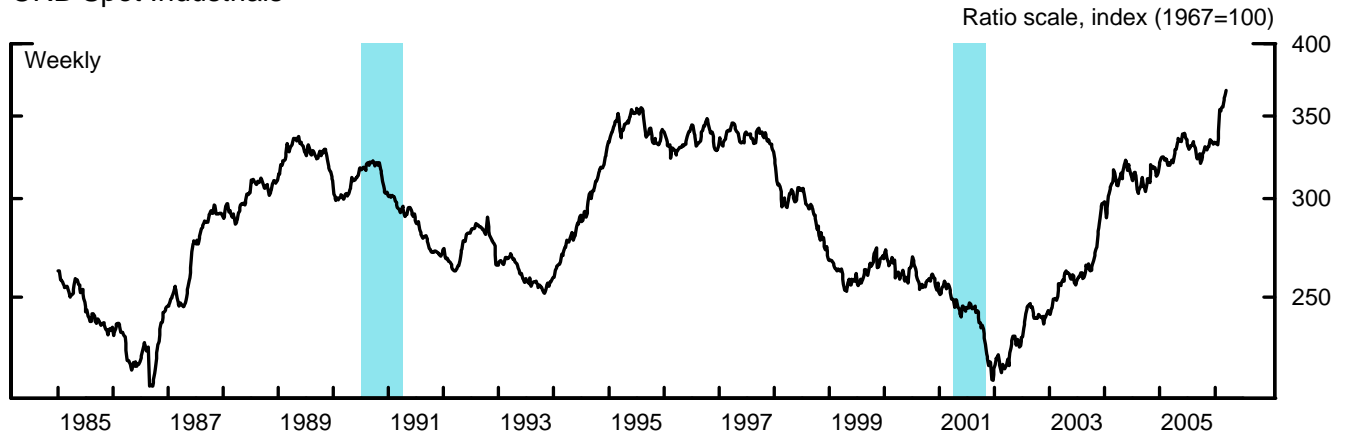
Note. Blue shaded regions denote NBER-dated recessions.

Commodity Price Measures

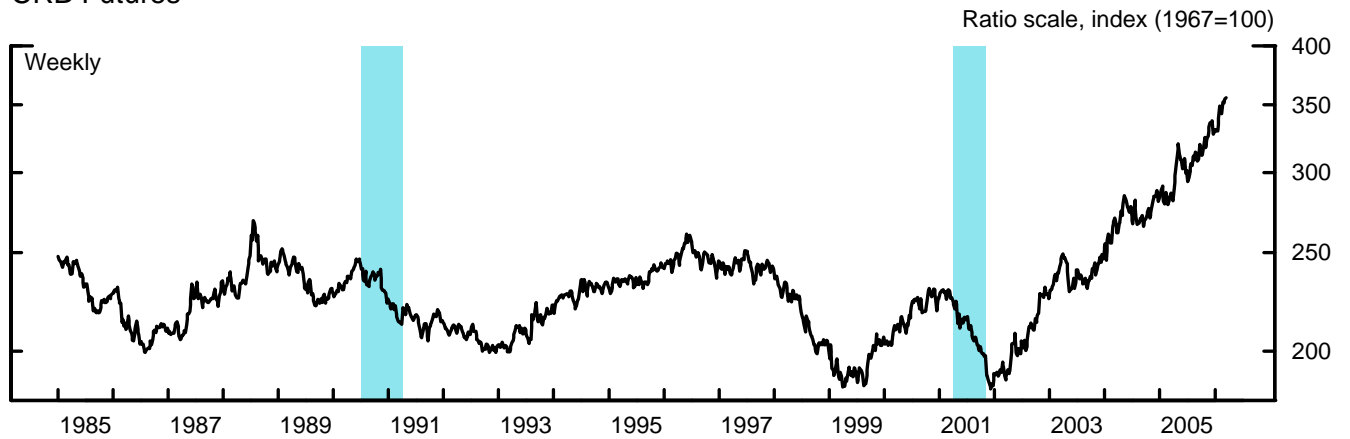
Journal of Commerce Index



CRB Spot Industrials



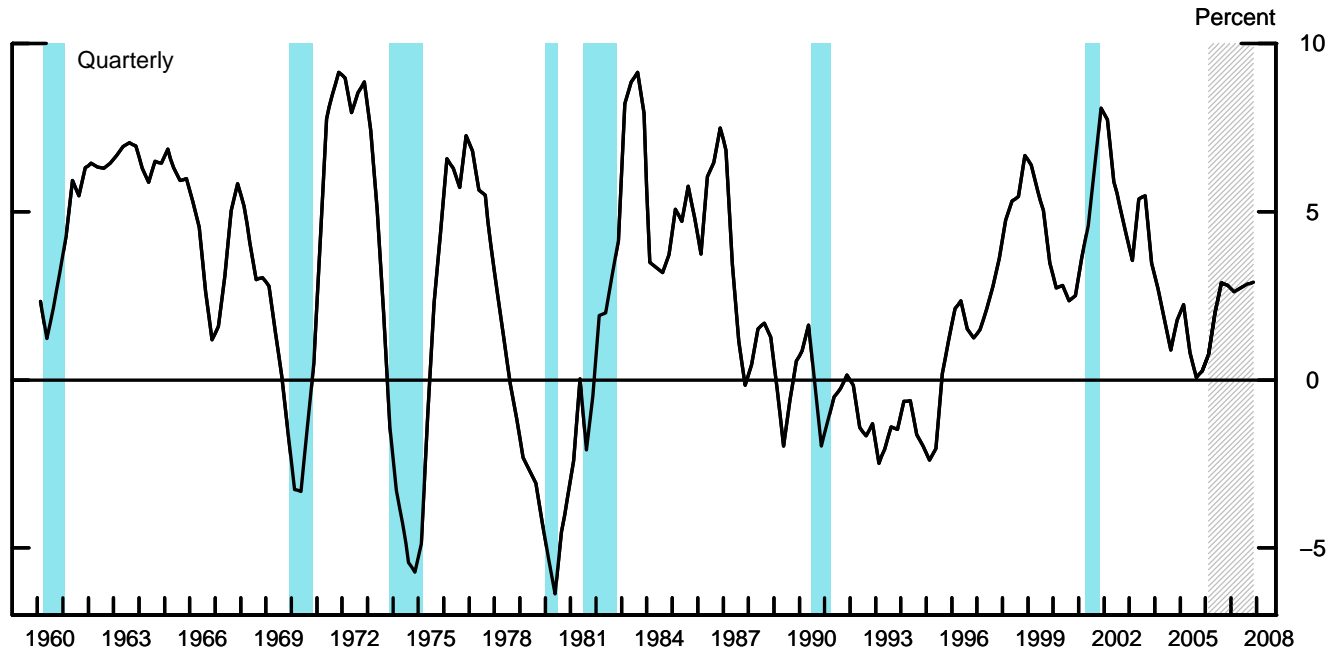
CRB Futures



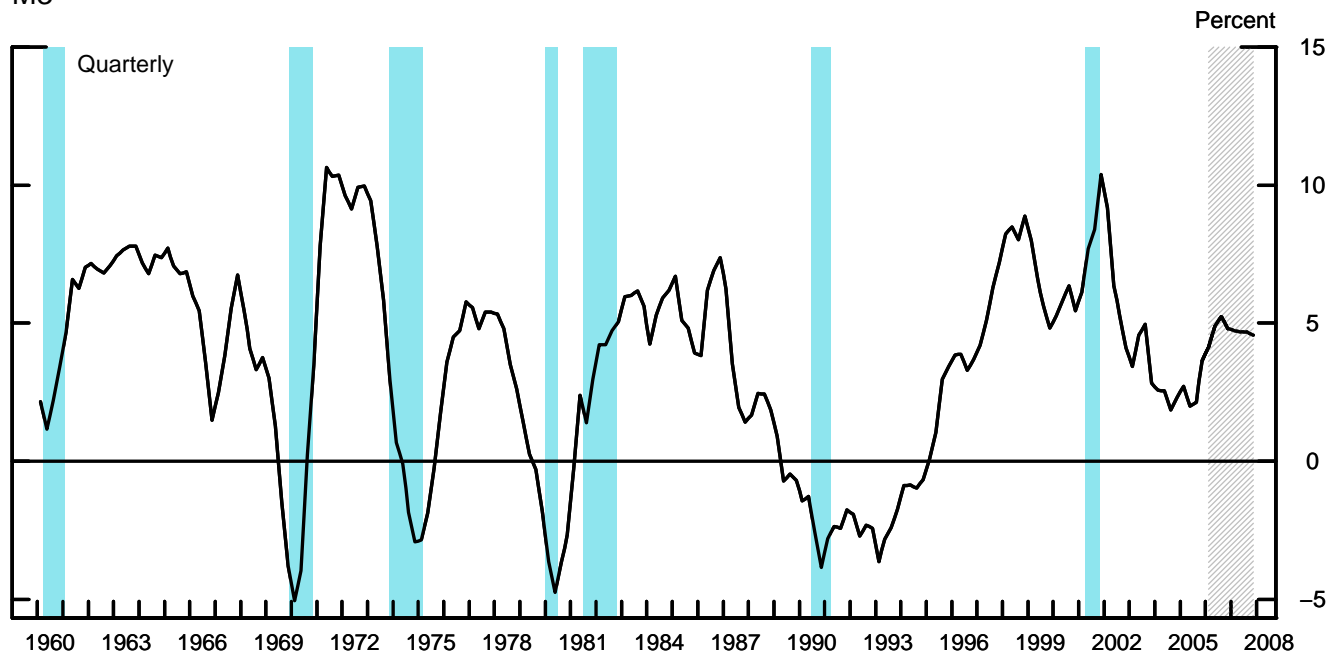
Note. Blue shaded regions denote NBER-dated recessions.

Growth of Real M2 and M3

M2

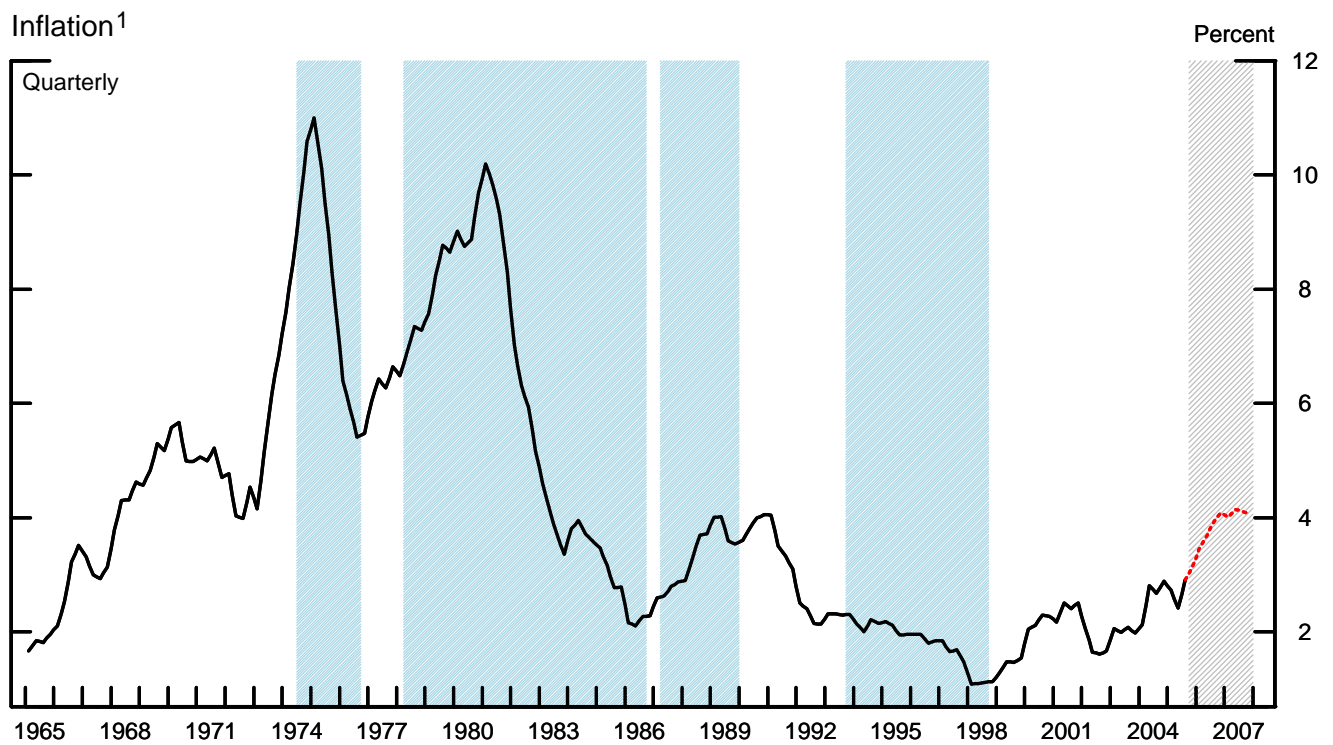
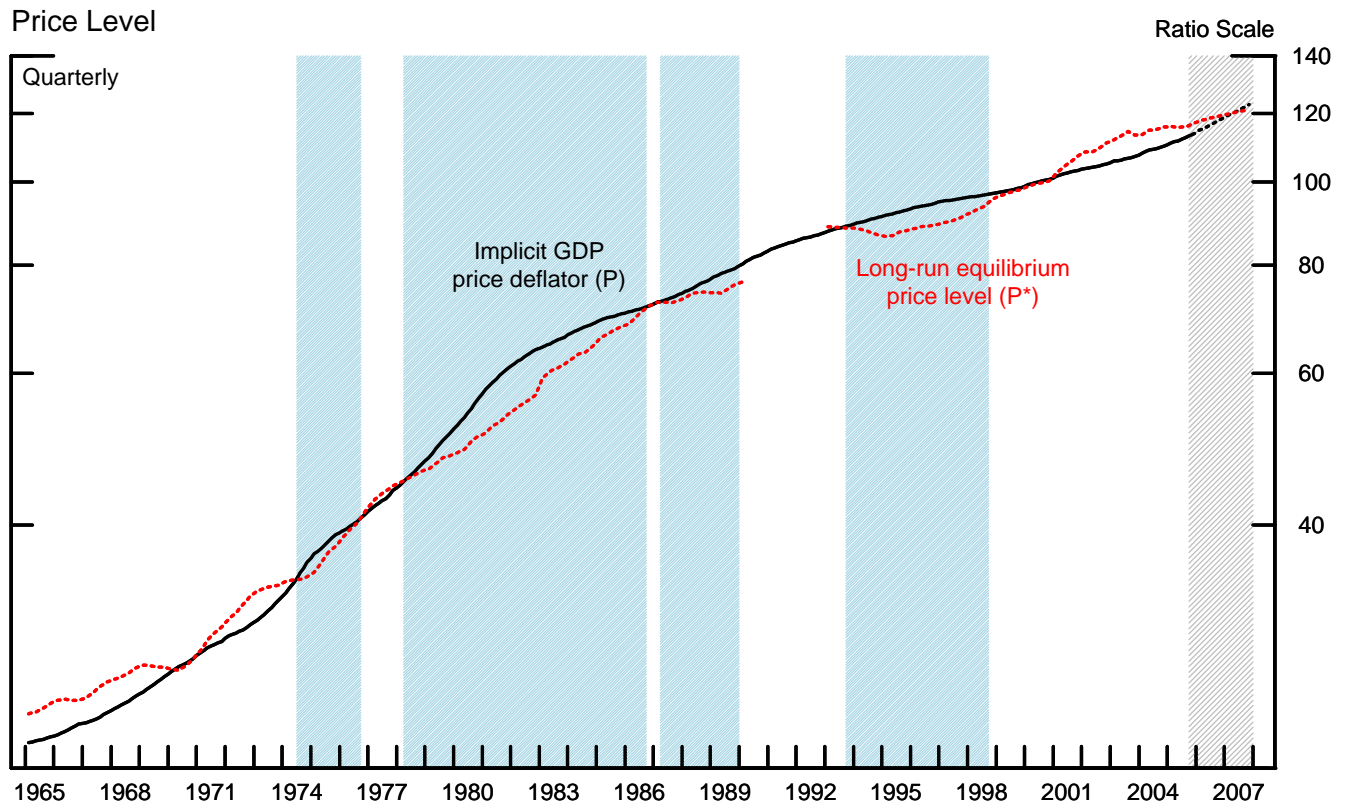


M3



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

Inflation Indicator Based on M2



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

Note: P* is defined to equal M2 times V* divided by potential GDP. V*, or long-run velocity, is estimated using average velocity over the 1959:Q1-to-1989:Q4 period and then, after a break, over the interval from 1993:Q1 to the present. For the forecast period, P* is based on the staff M2 forecast and P is simulated using a short-run dynamic model relating P to P*. Blue areas indicate periods in which P* is notably less than P. Gray areas denote the projection period.

**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	2.28	6.90	5.45	6.34	4.27
04 -- Low	0.92	0.73	0.87	0.96	1.04	0.97	1.49	2.65	3.84	4.68	0.40	1.38	6.00	4.73	5.38	3.36
05 -- High	4.30	4.01	4.08	4.37	4.49	4.30	4.52	4.59	4.79	5.04	2.11	2.22	6.48	5.24	6.37	5.22
05 -- Low	2.19	1.86	2.31	2.63	2.50	2.24	3.11	3.58	3.97	4.28	0.98	1.50	5.64	4.72	5.53	4.10
Monthly																
Jan 05	2.28	2.02	2.38	2.68	2.61	2.33	3.23	3.70	4.32	4.82	1.15	1.72	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	1.10	1.63	5.82	4.87	5.63	4.16
Mar 05	2.63	2.64	2.80	3.09	2.97	2.67	3.74	4.15	4.59	4.92	1.27	1.77	6.06	5.01	5.93	4.23
Apr 05	2.79	2.63	2.84	3.14	3.09	2.84	3.67	3.99	4.42	4.78	1.21	1.69	6.05	4.93	5.86	4.25
May 05	3.00	2.62	2.90	3.17	3.22	2.97	3.65	3.84	4.22	4.59	1.25	1.65	6.01	4.83	5.72	4.23
Jun 05	3.04	2.82	3.03	3.22	3.38	3.11	3.65	3.76	4.07	4.38	1.37	1.67	5.86	4.77	5.58	4.24
Jul 05	3.26	3.09	3.29	3.53	3.57	3.27	3.90	3.98	4.25	4.50	1.64	1.88	5.95	4.85	5.70	4.40
Aug 05	3.50	3.33	3.52	3.78	3.77	3.47	4.06	4.12	4.34	4.56	1.69	1.89	5.96	4.90	5.82	4.55
Sep 05	3.62	3.21	3.50	3.80	3.87	3.64	3.96	4.01	4.28	4.55	1.40	1.70	6.03	4.94	5.77	4.51
Oct 05	3.78	3.49	3.79	4.13	4.13	3.84	4.31	4.34	4.56	4.77	1.69	1.94	6.30	5.13	6.07	4.86
Nov 05	4.00	3.91	3.97	4.30	4.31	4.01	4.44	4.46	4.66	4.85	1.96	2.09	6.39	5.22	6.33	5.14
Dec 05	4.16	3.67	3.98	4.33	4.45	4.23	4.43	4.39	4.57	4.76	2.07	2.15	6.32	5.18	6.27	5.17
Weekly																
Nov 25 05	4.01	3.93	3.96	4.27	4.35	4.06	4.38	4.36	4.58	4.80	1.95	2.11	6.35	5.20	6.28	5.14
Dec 2 05	4.02	3.99	3.97	4.31	4.39	4.12	4.43	4.40	4.61	4.81	2.02	2.15	6.36	5.23	6.26	5.16
Dec 9 05	4.03	3.79	4.00	4.31	4.43	4.18	4.44	4.43	4.63	4.83	2.08	2.19	6.39	5.20	6.32	5.16
Dec 16 05	4.23	3.57	3.92	4.32	4.45	4.26	4.43	4.41	4.60	4.80	2.07	2.17	6.36	5.19	6.30	5.15
Dec 23 05	4.23	3.51	3.98	4.35	4.46	4.26	4.43	4.37	4.54	4.73	2.08	2.14	6.28	5.15	6.26	5.22
Dec 30 05	4.19	3.66	4.01	4.35	4.48	4.25	4.41	4.32	4.45	4.62	2.04	2.09	6.19	5.11	6.22	5.15
Jan 6 06	4.18	4.04	4.20	4.38	4.51	4.24	4.36	4.29	4.45	4.64	1.98	2.07	6.21	5.09	6.21	5.16
Jan 13 06	4.25	4.13	4.30	4.43	4.54	4.31	4.41	4.34	4.50	4.67	1.96	2.07	6.24	5.11	6.15	5.15
Jan 20 06	4.28	3.99	4.37	4.47	4.57	4.36	4.38	4.30	4.44	4.61	1.85	1.96	6.19	5.08	6.10	5.18
Jan 27 06	--	4.13	4.42	4.52	4.60	4.43	4.45	4.38	4.53	4.69	1.86	1.98	--	--	6.12	5.20
Daily																
Jan 10 06	4.24	4.15	4.29	4.42	4.52	4.30	4.42	4.36	4.52	4.70	1.98	2.10	6.27	--	--	--
Jan 11 06	4.24	4.15	4.30	4.45	4.54	4.30	4.46	4.39	4.55	4.73	2.00	2.11	6.30	--	--	--
Jan 12 06	4.28	4.15	4.32	4.43	4.55	4.31	4.41	4.35	4.51	4.68	1.94	2.05	6.25	--	--	--
Jan 13 06	4.30	4.11	4.33	4.43	4.55	--	4.36	4.29	4.44	4.61	1.90	2.00	6.18	--	--	--
Jan 16 06	4.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Jan 17 06	4.32	4.06	4.39	4.47	4.56	4.36	4.36	4.28	4.42	4.59	1.85	1.95	6.17	--	--	--
Jan 18 06	4.24	4.03	4.36	4.46	4.56	4.38	4.36	4.28	4.43	4.60	1.87	1.96	6.18	--	--	--
Jan 19 06	4.23	3.96	4.36	4.47	4.58	4.35	4.40	4.32	4.47	4.63	1.88	1.98	6.21	--	--	--
Jan 20 06	4.24	3.91	4.35	4.48	4.58	4.36	4.39	4.32	4.46	4.61	1.82	1.94	6.18	--	--	--
Jan 23 06	4.26	3.91	4.39	4.50	4.58	4.38	4.38	4.31	4.45	4.61	1.83	1.95	6.18	--	--	--
Jan 24 06	4.28	4.23	4.41	4.51	4.59	4.49	4.40	4.34	4.48	4.65	1.88	2.00	6.21	--	--	--
Jan 25 06	4.36	4.21	4.43	4.54	4.60	4.41	4.49	4.43	4.57	4.74	1.97	2.08	6.29	--	--	--
Jan 26 06	4.41 ^p	4.15	4.45	4.54	4.62	--	4.51	4.46	4.61	4.78	1.97	2.08	--	--	--	--

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

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)					
2003	7.4	5.5	5.0	3.3	4.8
2004	5.4	5.2	5.2	7.0	5.8
2005	0.0	4.0	5.1	14.8	7.5
Quarterly (average)					
2005-Q1	0.2	3.6	4.5	10.3	5.7
Q2	-0.4	2.6	3.4	13.0	6.0
Q3	-0.5	4.4	5.7	14.8	7.8
Q4	0.8	5.2	6.3	18.2	9.5
Monthly					
2005-Jan.	-4.5	2.7	4.6	16.7	7.2
Feb.	2.2	3.6	4.0	9.9	5.6
Mar.	3.1	3.7	3.9	5.3	4.2
Apr.	-6.4	1.3	3.3	18.8	6.9
May	4.4	1.7	1.0	13.2	5.5
June	-1.1	4.8	6.4	12.6	7.4
July	-6.1	3.7	6.3	6.2	4.5
Aug.	7.0	5.6	5.2	26.9	12.6
Sep.	-2.6	5.7	7.9	20.3	10.6
Oct.	1.6	5.4	6.4	18.7	9.9
Nov.	0.7	4.1	4.9	9.9	6.0
Dec.	-1.0	5.1	6.7	18.3	9.6
2006-Jan. e	4.4	7.9	8.9	8.7	8.2
Levels (\$billions):					
Monthly					
2005-Aug.	1370.4	6568.9	5198.5	3299.9	9868.8
Sep.	1367.4	6600.0	5232.6	3355.7	9955.7
Oct.	1369.2	6629.6	5260.4	3408.1	10037.7
Nov.	1370.0	6652.0	5281.9	3436.3	10088.3
Dec.	1368.9	6680.5	5311.6	3488.8	10169.3
Weekly					
2005-Dec. 5	1369.7	6659.7	5290.0	3451.3	10111.0
12	1363.5	6668.5	5305.0	3468.4	10136.9
19	1366.7	6677.2	5310.5	3480.2	10157.4
26	1377.1	6694.7	5317.5	3515.3	10209.9
2006-Jan. 2	1366.7	6704.6	5338.0	3526.5	10231.2
9p	1367.6	6743.2	5375.6	3508.9	10252.1
16p	1369.1	6739.3	5370.2	3514.8	10254.1

p preliminary
 e estimated

Appendix Table 3
Changes in System Holdings of Securities ¹
(Millions of dollars, not seasonally adjusted)

January 26, 2006

	Treasury Bills			Treasury Coupons						Federal Agency Redemptions (-)	Net change total outright holdings ⁴	Net RPs ⁵			
	Net Purchases ²	Redemptions (-)	Net Change	Net Purchases ³				Redemptions (-)	Net Change			Short-Term ⁶	Long-Term ⁷	Net Change	
				< 1	1-5	5-10	Over 10								
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
2005	8,300	---	8,300	2,894	11,309	3,626	2,007	2,795	17,041	---	---	25,341	-2,415	-192	-2,607
2004 QIV	4,167	---	4,167	3,092	7,453	2,018	571	---	13,134	---	---	17,301	-5,956	1,728	-4,227
2005 QI	35	---	35	---	---	---	---	544	-544	---	---	-509	1,653	-3,454	-1,801
QII	2,010	---	2,010	---	3,495	1,708	1,015	1,305	4,914	---	---	6,923	1,082	1,361	2,443
QIII	4,743	---	4,743	1,298	5,025	1,118	90	757	6,774	---	---	11,517	964	1,538	2,502
QIV	1,512	---	1,512	1,596	2,789	800	902	189	5,897	---	---	7,410	-1,202	-1,293	-2,496
2005 May	1,760	---	1,760	---	2,295	898	---	---	3,193	---	---	4,953	-2,453	340	-2,113
Jun	250	---	250	---	---	340	785	1,305	-180	---	---	70	1,371	-606	764
Jul	---	---	---	---	---	---	---	---	---	---	---	---	671	2,413	3,084
Aug	2,751	---	2,751	1,298	1,390	988	---	757	2,919	---	---	5,670	136	-581	-445
Sep	1,992	---	1,992	---	3,635	130	90	---	3,855	---	---	5,847	283	-599	-316
Oct	1,023	---	1,023	500	1,693	---	902	---	3,095	---	---	4,118	-1,468	-5,369	-6,837
Nov	489	---	489	1,096	1,096	800	---	189	2,802	---	---	3,292	-627	3,635	3,008
Dec	---	---	---	---	---	---	---	---	---	---	---	---	1,322	6,719	8,042
2005 Nov 2	132	---	132	---	---	---	902	---	902	---	---	1,034	1,336	-1,000	336
Nov 9	237	---	237	---	---	800	---	---	800	---	---	1,037	-2,291	---	-2,291
Nov 16	---	---	---	1,096	---	---	---	---	1,096	---	---	1,096	2,153	5,000	7,153
Nov 23	252	---	252	---	1,096	---	---	---	1,096	---	---	1,348	-3,835	3,429	-407
Nov 30	---	---	---	---	---	---	---	189	-189	---	---	-189	1,825	2,571	4,396
Dec 7	---	---	---	---	---	---	---	---	---	---	---	---	-947	-1,000	-1,947
Dec 14	---	---	---	---	---	---	---	---	---	---	---	---	914	-1,000	-86
Dec 21	---	---	---	---	---	---	---	---	---	---	---	---	2,120	1,000	3,120
Dec 28	---	---	---	---	---	---	---	---	---	---	---	---	1,474	7,000	8,474
2006 Jan 4	---	---	---	---	---	---	---	1,321	-1,321	---	---	-1,321	717	4,000	4,717
Jan 11	314	---	314	---	606	606	80	---	1,292	---	---	1,606	-6,074	-7,000	-13,074
Jan 18	1,249	---	1,249	---	---	---	---	---	---	---	---	1,249	3,757	-4,000	-243
Jan 25	---	---	---	---	---	822	125	---	947	---	---	947	64	-3,000	-2,936
2006 Jan 26	---	---	---	---	1,013	77	---	---	1,090	---	---	1,090	1,654	---	1,654
Intermeeting Period															
Dec 13-Jan 26	1,563	---	1,563	---	1,619	1,505	205	1,321	2,008	---	---	3,571	683	-2,000	-1,317
Memo: LEVEL (bil. \$)															
Jan 26			272.8	131.5	209.3	56.7	77.4		474.9			747.6	-13.0	18.0	5.0

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.