

## **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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NOVEMBER 4, 2004

# MONETARY POLICY ALTERNATIVES

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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

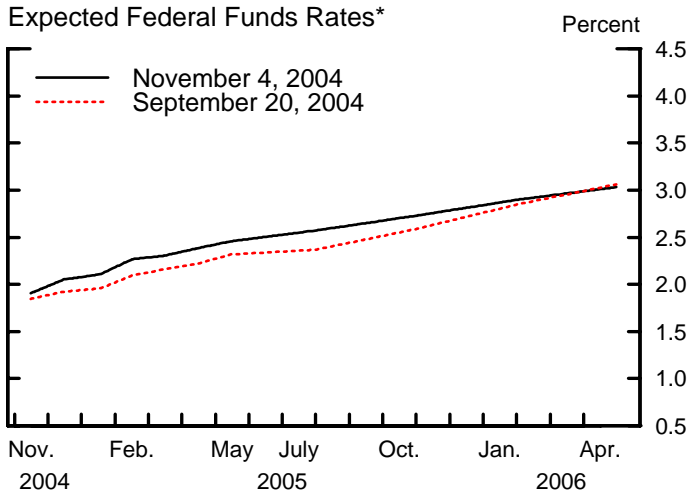
(1) The FOMC's decision at its September meeting to increase the target federal funds rate 25 basis points to 1¾ percent, to assess the risks to sustainable economic growth and price stability as balanced, and to retain the "measured pace" language was widely expected and elicited only a muted reaction in financial markets.<sup>1</sup> Despite mixed economic reports subsequently, the near-term expected path of monetary policy moved higher (Chart 1). Market participants apparently inferred an increased likelihood of continued policy firming from both the minutes of the August FOMC meeting, which noted the need for "significant cumulative policy tightening," and comments by the Chairman and other Federal Reserve officials, which were read as downplaying the economic drag from elevated oil prices. Futures market quotes indicate that investors now place sizable odds on a quarter-point tightening at this meeting, but expect a pause sometime soon. The Desk's survey of primary dealers reveals that they uniformly expect firming at this meeting, most anticipate retention of the measured pace language, and some see a modification of the statement to signal a possible pause in the process of firming. Futures quotes suggest that investors expect the funds rate to rise to about 2¾ percent by the end of 2005.

(2) The shift in near-term policy expectations contributed to a flattening of the term structure of interest rates, with the yield on the two-year Treasury note rising

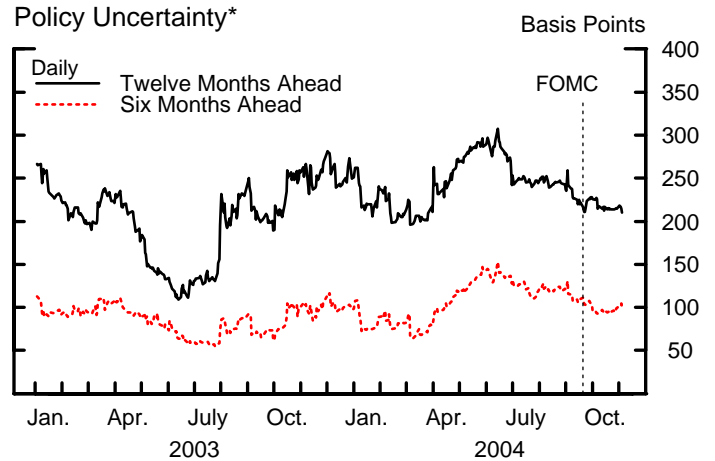
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<sup>1</sup> The effective federal funds rate averaged 1.76 percent over the intermeeting period. The Desk expanded the System's outright holdings of securities by about \$11.0 billion, with purchases of \$0.6 billion of Treasury bills from foreign official customers and \$3.2 billion of Treasury bills and \$7.2 billion of Treasury coupon securities from the market. The volume of outstanding long-term RPs decreased \$7.0 billion, to \$15.0 billion.

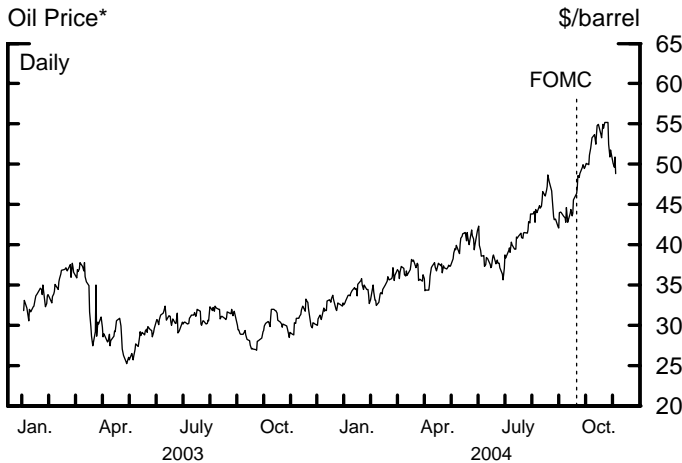
# Chart 1 Interest Rate Developments



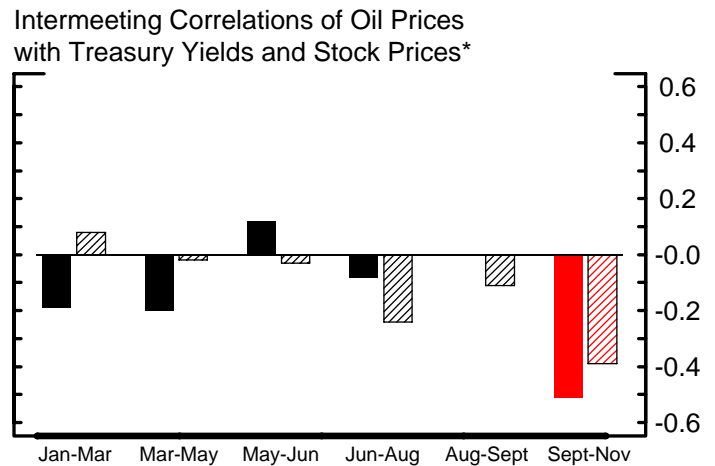
\*Estimates from federal funds and eurodollar futures, with an allowance for term premia and other adjustments.



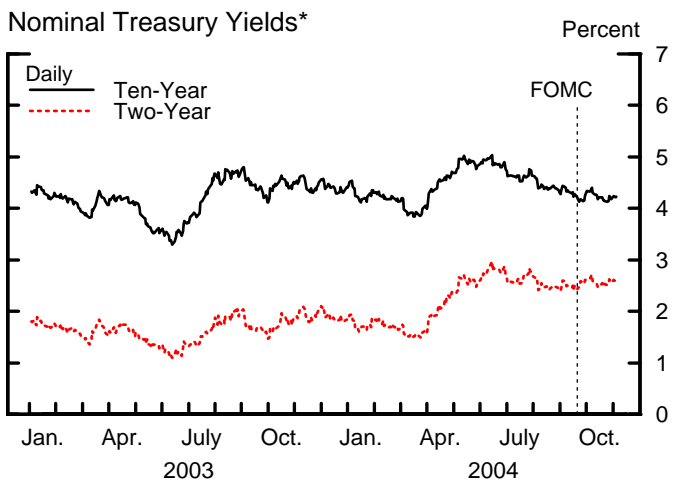
\*Width of a 90 percent confidence interval for the federal funds rate computed from the term structures for both the expected federal funds rate and implied volatility.



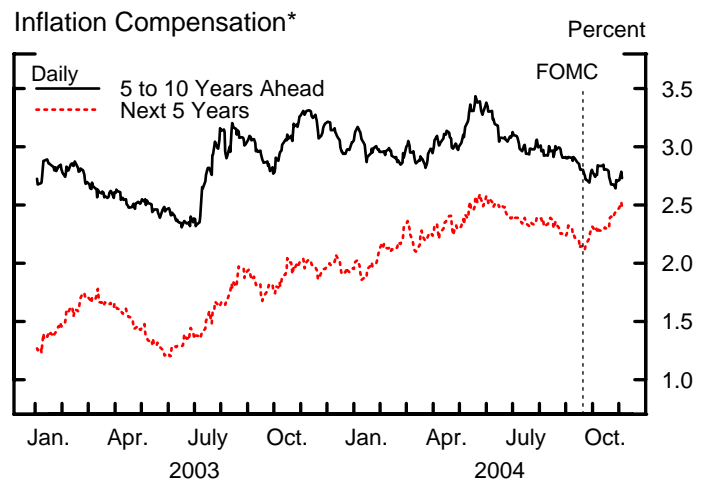
\*Spot WTI price.



\*Correlation of daily changes in the log WTI spot oil price and the ten-year Treasury yield (solid) and correlation of daily changes in the log WTI spot price and in the log S&P 500 index (shaded). Red denotes statistically significantly different from zero.



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



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

Note: Vertical lines indicate September 20, 2004. Last daily observations are for November 4, 2004

20 basis points while the yield on the ten-year note was about unchanged.<sup>2</sup> Increasing oil prices seemed to heighten concerns about the near-term prospects for inflation and, at least at times, for output growth; both stock prices and bond yields often moved closely and inversely with oil prices from day to day. Treasury inflation-indexed yields fell substantially, leaving inflation compensation over the next five years 35 basis points higher and at the upper end of its range over the past few years. Five-year inflation compensation five years ahead, however, edged down, and survey measures of long-term inflation expectations remained well contained.

(3) Yields on investment-grade corporate bonds moved roughly in line with those on nominal Treasury securities of comparable maturity, keeping risk spreads on these securities about unchanged (Chart 2).<sup>3</sup> In contrast, spreads on speculative-grade debt narrowed 45 basis points. Third-quarter corporate earnings reports ran slightly ahead of expectations, but the rise in energy prices and news of investigations of insurance industry practices weighed on equity prices. In recent days, equity markets rallied as the presidential election reached a decisive conclusion, and broad share price indexes ended the period up 3½ to 4 percent on net.

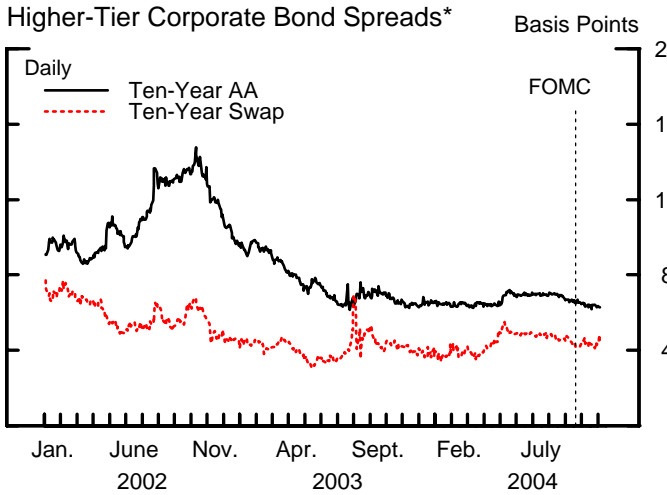
(4) The exchange value of the dollar fell almost 5 percent on balance against a basket of other major currencies over the intermeeting period, amid heightened concerns about financing the deepening U.S. current account deficit (Chart 3). At times, market participants pointed to statements of Federal Reserve officials about international financial developments as a factor contributing to such worries. The

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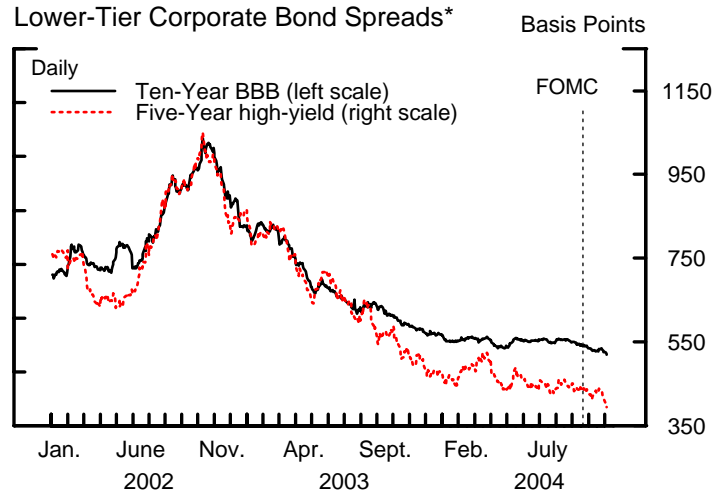
<sup>2</sup> Under the expectations approach to the term structure, a long-term yield represents a weighted average of the current and expected future short-term rates over the life of the instrument plus, potentially, a term premium. During periods when policy is expected to tighten, the average of expected future short rates will tend to rise over time. The result can be a sizable expected increase in yields on short- and intermediate-term securities. About half of the rise in the two-year yield over this intermeeting period can be attributed solely to this effect.

<sup>3</sup> Judging from spreads on ninety-day commercial paper, year-end pressures in money markets seem to be rather subdued this year.

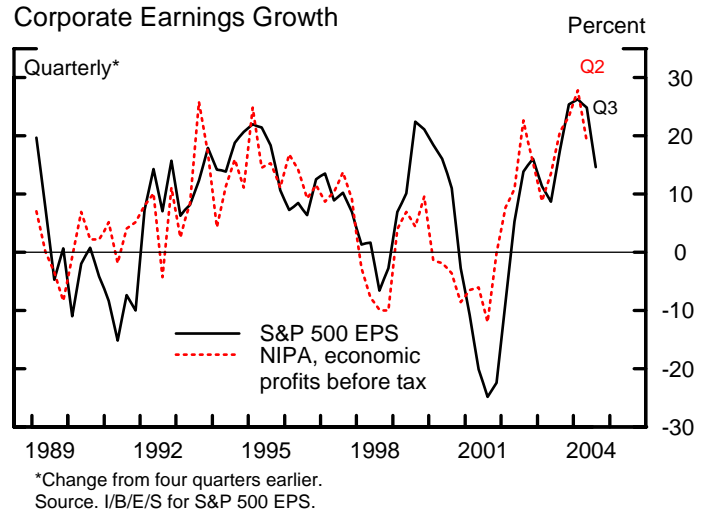
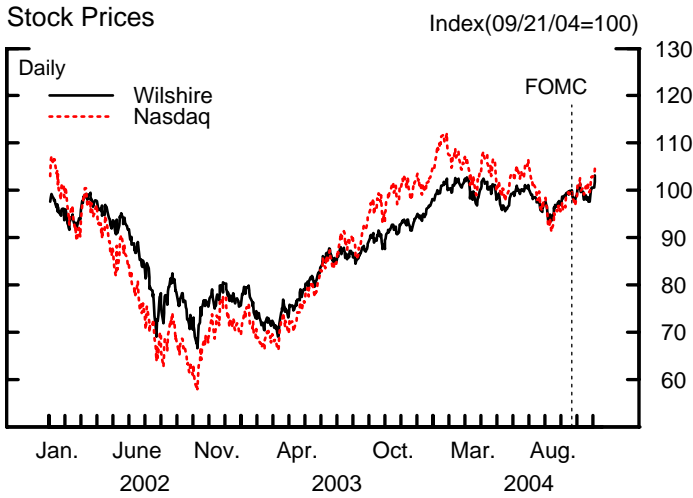
## Chart 2 Capital Market Developments



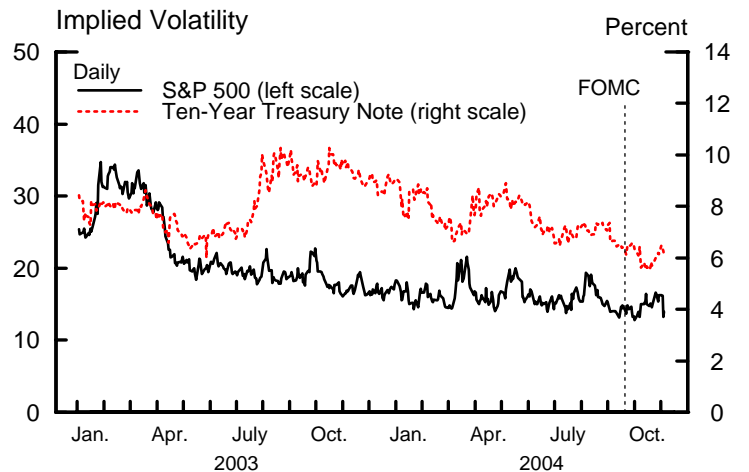
\*AA spread measured relative to an estimated off-the-run Treasury yield curve. Swap spread measured relative to the on-the-run Treasury security.



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

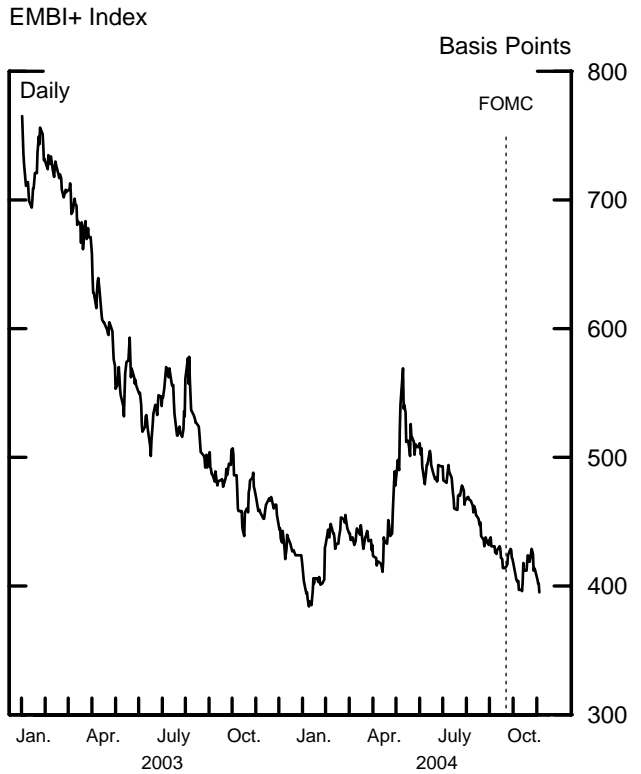
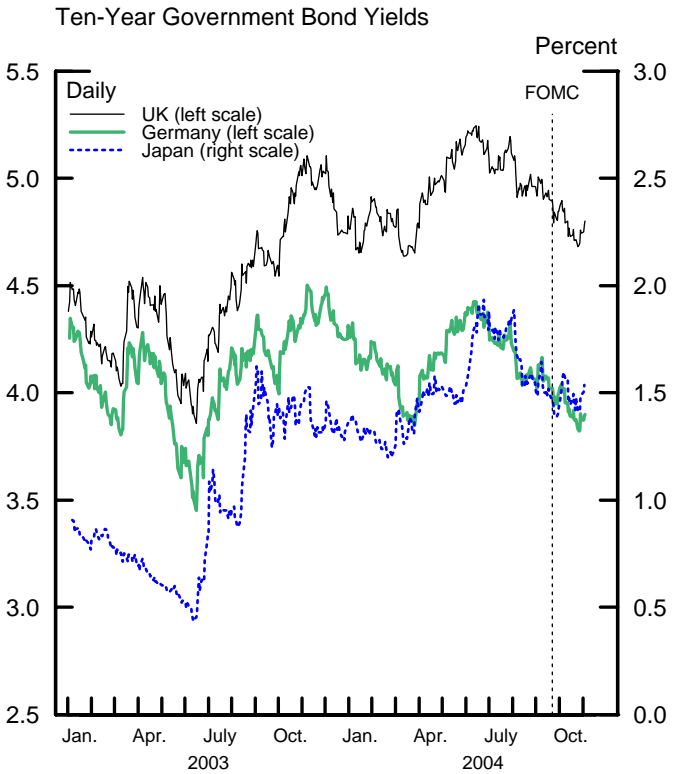
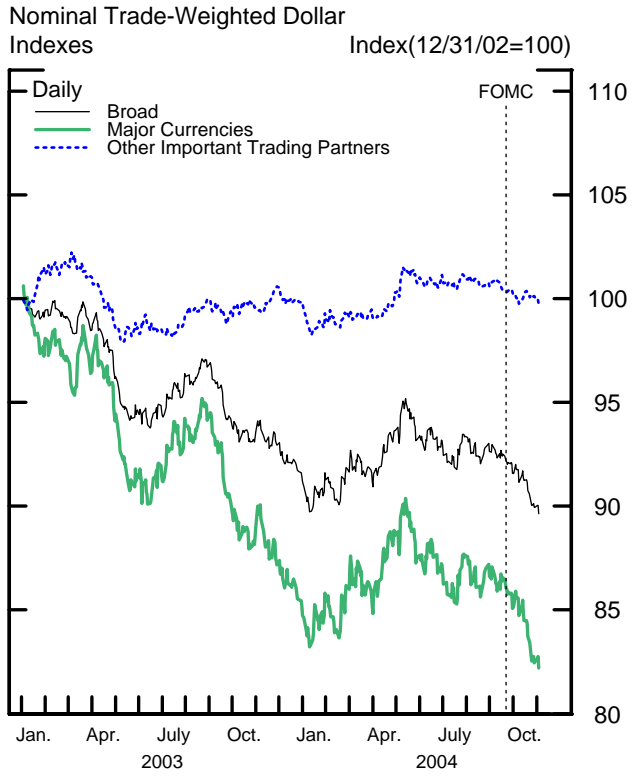
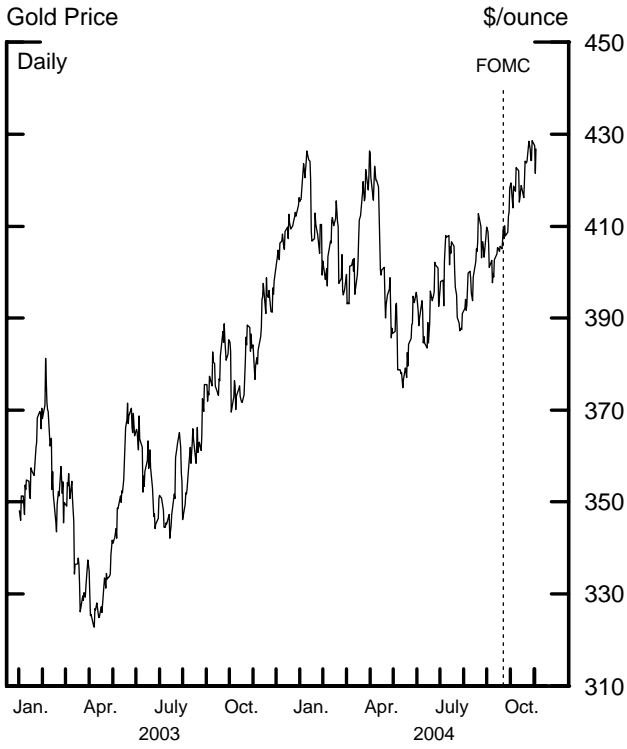


\* Yield on synthetic Treasury perpetuity minus Philadelphia Fed 10-year expected inflation.  
 + Denotes the latest observation using daily interest rates and stock prices and latest earnings data from I/B/E/S.



Note: Vertical lines indicate September 20, 2004. Last daily observations are for November 4, 2004.

### Chart 3 International Financial Indicators



dollar dropped most steeply against the Canadian dollar—about 6½ percent. With signs of further strengthening of Canadian domestic demand and concerns building about inflation pressures, the Bank of Canada raised its official rate 25 basis points on October 19. Canada’s position as a net exporter of oil also seemed to provide support to its currency. The dollar declined 4¾ percent vis-à-vis the euro, moving close to a record low, and depreciated 3½ percent against the yen. Japanese authorities referred publicly to taking action in the event that the yen continues to appreciate, but no intervention occurred during the intermeeting period.<sup>4</sup> Yields on long-term government bonds edged up in Japan but fell about 10 to 20 basis points in Europe and Canada over the intermeeting period. Share prices in Japan dropped slightly, but those in most other major industrial countries moved up about 2 to 3 percent on balance. The dollar depreciated slightly against currencies of our other important trading partners. In late October, the People’s Bank of China surprised markets by increasing a benchmark one-year lending rate 27 basis points. The move raised uncertainties about the future pace of China’s economic expansion and prompted speculation about possible changes in China’s fixed-exchange-rate regime.

(5) Domestic nonfinancial debt grew at a robust annual rate of about 7 percent in the third quarter. In the nonfinancial business sector, debt growth stepped up to 5¼ percent last quarter. Available data point to even faster growth in October, owing in part to the financing of a large merger transaction in the bond and commercial paper markets (Chart 4). Business loans at commercial banks continued to advance last month, and results from the October Senior Loan Officer Opinion Survey indicate that banks have continued to ease standards and terms on these loans. Household debt appears to have decelerated a little in the third quarter as mortgage borrowing, although remaining quite brisk, slowed somewhat while consumer debt

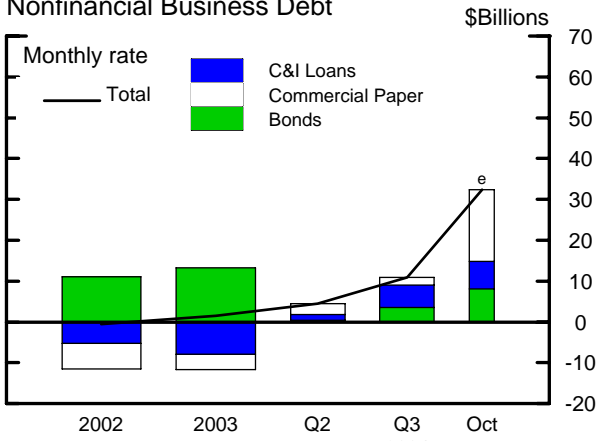
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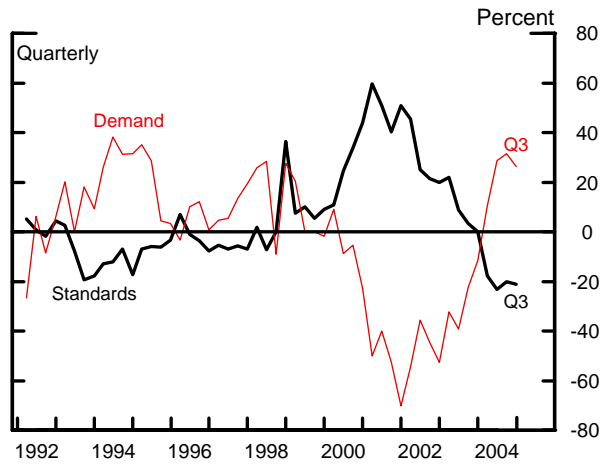
## Chart 4 Debt and Money

Changes in Selected Components of Nonfinancial Business Debt



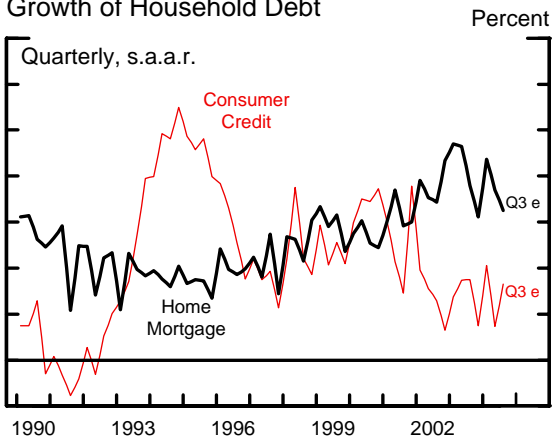
Note. Commercial paper and C&I loans are seasonally adjusted, bonds are not.  
e Estimated.

Changes in C&I Loan Standards and Demand\*



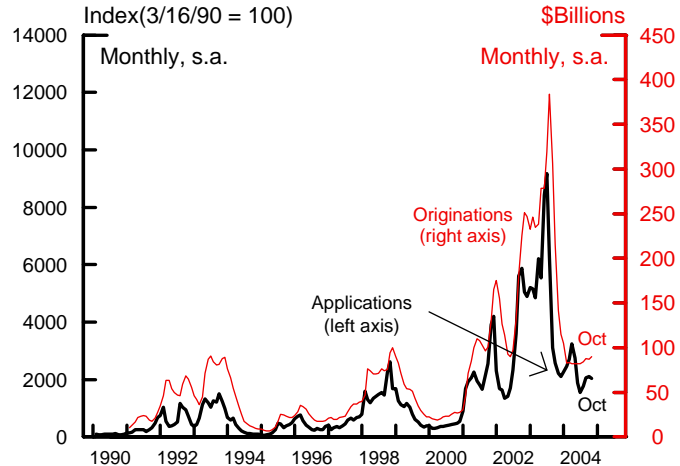
\*Fraction of respondents reporting (tighter standards / increased demand) less fraction reporting (looser standards / decreased demand) for large and medium-sized firms.  
Source. Senior Loan Officer Opinion Survey.

Growth of Household Debt



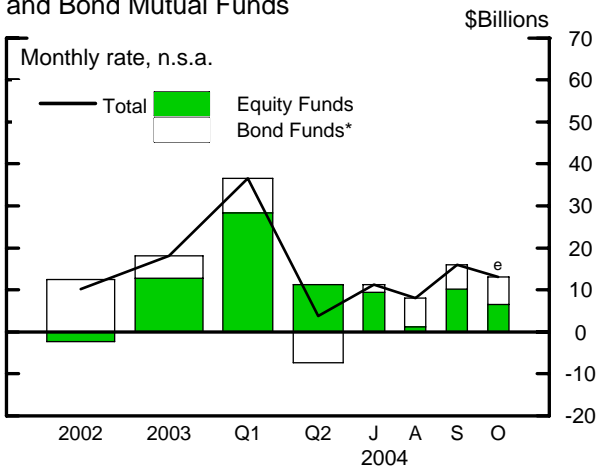
e Estimated.

Mortgage Refinancing Activity



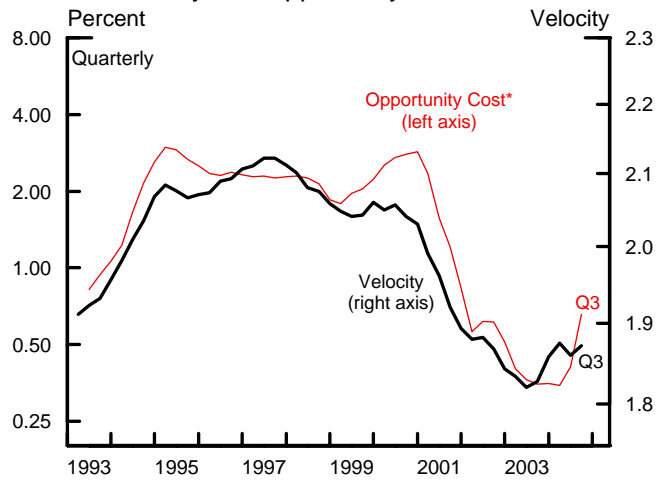
Source. Staff estimates.

Net Inflows to Equity and Bond Mutual Funds



\* Includes hybrid funds but excludes reinvested dividends.  
e Estimated.

M2 Velocity and Opportunity Cost



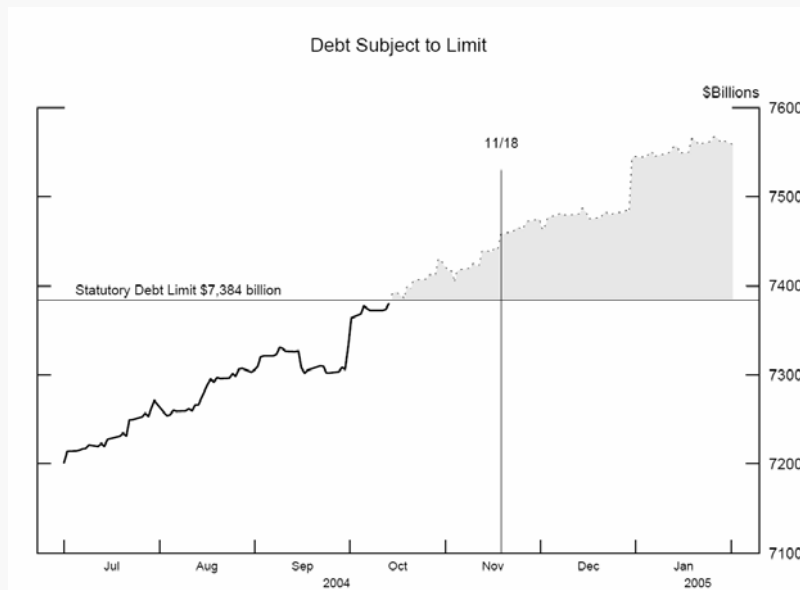
\*Two-quarter moving average.

continued to expand at a moderate pace. After surging in the first half, federal sector debt advanced moderately in the third quarter. In October, the Treasury reached the statutory debt limit and began using extraordinary accounting devices to continue funding government activity (see box).

(6) M2 grew at a moderate pace in September but slowed in October. Money growth was likely damped by a further rise in the opportunity cost of holding M2 assets, as yields paid on deposits have lagged the increases in open market rates that accompanied monetary policy tightening. Thus far, the increase in the opportunity cost of holding M2 about matches the experience of recent policy tightening periods. M2 velocity edged higher in the third quarter, roughly in line with historical relationships among money, nominal income, and opportunity costs.

## Treasury Debt Subject to Limit

On October 14, 2004, the Treasury reached its statutory debt limit of \$7,384 billion. As in previous debt limit episodes, the Treasury resorted to a set of extraordinary accounting devices to avoid violating the statute, denoted by the shaded area in the chart below. So far, the Treasury has begun to underinvest the Government Securities Investment Fund (the so-called G-fund), part of the federal employees' thrift savings plan. In the past, the Treasury also increased debt issued by the Federal Financing Bank—debt which is not subject to the limit—to extinguish other Treasury debt and tapped both the Exchange Stabilization Fund and the Civil Service Retirement and Disability Fund. While the total room for borrowing made available by these accounting devices will depend on the Secretary's declaration of the likely duration of the debt limit emergency period, staff estimates suggest that the Treasury will be able to maintain normal cash and debt management practices at least through late November; however, on November 3, the Treasury announced that it may need to postpone the November 18 settlement of the four-week bill if the limit has not been raised. The Congress is scheduled to reconvene the week of November 15 in order to pass appropriations legislation for the fiscal year, and Congressional leadership has signaled an intention to raise the debt limit then. In order to make its debt issuance more predictable, the Treasury suspended issuance of SLGS—securities purchased by municipal governments to comply with rules surrounding advance refunding. To date, there has been no evidence that concerns about the debt limit have affected financial markets.



## Policy Alternatives

(7) The staff has marked down its outlook for economic activity through the first quarter of next year, but the broad outline of the forecast through 2006 is otherwise similar to that prepared for the September FOMC meeting. The staff forecast assumes that the Committee will raise the target federal funds rate to 2 percent before year-end, hold it steady at that level for much of the next year, and tighten in late 2005 and into 2006. This trajectory for the federal funds rate runs well below the path embedded in market yields. In the Greenbook projection, the outlook of investors is assumed to align gradually with that of the staff, and the resultant downward revisions to policy expectations lead to a modest decline in long-term yields. The projected path for stock prices is almost identical to that of the last round and, as in prior Greenbooks, provides investors a risk-adjusted return comparable to that on fixed-income securities. The staff continues to assume about a 2 percent rate of depreciation in the foreign exchange value of the dollar, albeit from its current lower level. Against this financial backdrop, real GDP growth averages about 3¼ percent this quarter and next, in line with the growth rate of potential output, and about 4 percent thereafter. Accordingly, resource slack is gradually taken up after the first quarter of next year, bringing the unemployment rate close to the staff's estimated NAIRU of 5 percent by the end of the forecast period. Although diminishing, resource slack should continue to put downward pressure on core consumer price inflation. But these pressures are expected to be offset by a slowing in the pace of structural productivity growth and, for a time, by the delayed effects of past increases in the prices of oil and core imports. Core PCE inflation is forecast at about 1½ percent in 2005 and 2006.

(8) Table 1 presents three alternatives for near-term policy, together with draft language for the Committee's announcement. The rationale paragraph has been updated to reflect recent readings on the economy as well as the passage of time,

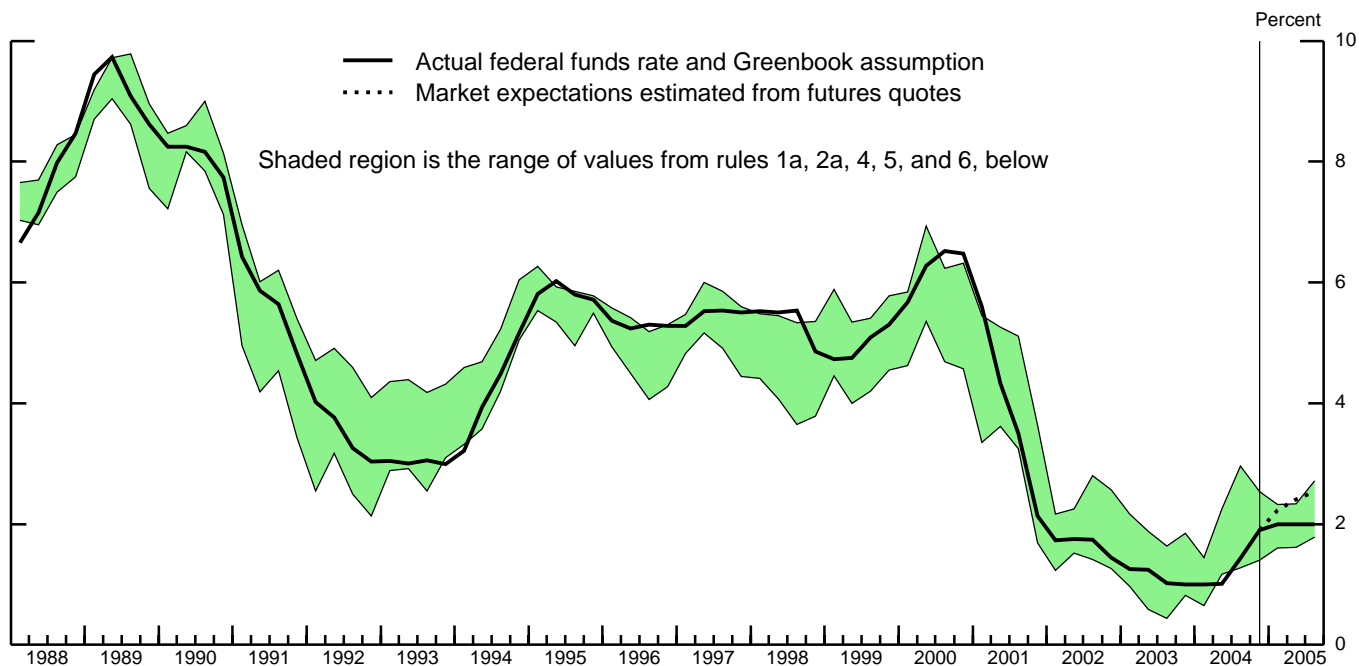
**Table 1: Alternative Language for the November FOMC Announcement**

	<b>September FOMC</b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>
<b>Policy Decision</b>	1. The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 1¾ percent.	The Federal Open Market Committee decided today to keep its target for the federal funds rate at 1¾ percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to <b>2 percent, bringing the cumulative increase in the target rate over the past several months to 1 percentage point.</b>	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to <b>2 percent.</b>
<b>Rationale</b>	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 the stance of monetary policy remains <b>somewhat</b> accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	The Committee believes that the stance of monetary policy remains <b>somewhat</b> accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	[Unchanged from September statement]
	3. After moderating earlier this year partly in response to the substantial rise in energy prices, output growth appears to have regained some traction, and labor market conditions have improved modestly.	<b>Output appears to be growing at a moderate pace,</b> and labor market conditions have improved modestly.	<b>Output appears to be growing at a moderate pace,</b> and labor market conditions have improved modestly.	<b>Output appears to be growing at a moderate pace,</b> and labor market conditions have improved modestly.
	4. Despite the rise in energy prices, inflation and inflation expectations have eased in recent months.	Despite the rise in energy prices, inflation and longer-term inflation expectations <b>remain well contained.</b>	Despite the rise in energy prices, inflation and longer-term inflation expectations <b>seem to remain well contained.</b>	<b>Although longer-term inflation expectations seem to remain well contained, rising energy prices and an escalation of business costs have the potential to contribute to upward pressure on prices.</b>
<b>Assessment of Risk</b>	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.	[Unchanged from September statement]	[Unchanged from September statement]	[Unchanged from September statement]
	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 <b>to promote price stability and sustainable growth.</b>	[Unchanged from September statement]	[Unchanged from September statement]

which makes mention of developments earlier this year less relevant. The description of the labor market will depend importantly on the employment report released tomorrow, but, as a placeholder, the entry in the table describes conditions as having improved modestly. If economic circumstances diverge significantly from this characterization, staff will circulate alternative language in advance of Wednesday's meeting. Under Alternative A, the federal funds rate target would be maintained at  $1\frac{3}{4}$  percent at this meeting. Alternative B would raise the target 25 basis points to 2 percent, but the language of the announcement would signal that the Committee might now be more inclined to pause in the process of removing policy accommodation. Under Alternative C, the funds rate would also be raised to 2 percent, but the language of the announcement would be consistent with a firming of policy at least as rapid as currently embodied in market expectations. Under all three alternatives, it seems likely that the Committee would view the risks to growth and price stability as about balanced after the policy announcement.

(9) The current degree of stimulus provided by financial market prices embodies the expectation of tightening at this meeting followed by a brief pause. If the Committee regarded the outlook for economic activity and inflation given these financial conditions as striking an appropriate balance between reducing slack and limiting inflation risks, it might wish to validate those expectations by tightening 25 basis points and issuing a statement similar to that of **Alternative B** in the table, which includes language intended to signal a possible pause in the removal of policy accommodation. The Committee might view a further quarter-point tightening at this meeting as an appropriate step in the direction suggested by standard policy benchmarks: Such a tightening would be consonant with the prescriptions from a battery of interest rate rules (Chart 5) and would boost the real federal funds rate nearer to the middle of the range of various measures of the equilibrium real interest rate (Chart 6). The Committee's desire to align the stance of policy more closely with

**Chart 5**  
**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		
	Q3	Q4	Q1	Q2	Q3
<b>Rules with Imposed Coefficients</b>					
1. Baseline Taylor Rule: a) $\pi^*=2$	2.96	2.54	2.32	2.33	2.71
b) $\pi^*=1.5$	3.21	2.79	2.57	2.58	2.96
2. Aggressive Taylor Rule: a) $\pi^*=2$	2.30	1.83	1.61	1.69	2.17
b) $\pi^*=1.5$	2.55	2.08	1.86	1.94	2.42
3. First-difference Rule: a) $\pi^*=2$	1.11	1.35	1.35	1.41	1.47
b) $\pi^*=1.5$	1.36	1.60	1.85	2.16	2.47
<b>Rules with Estimated Coefficients</b>					
4. Outcome-based Rule	1.45	1.69	1.71	1.76	2.01
5. Greenbook Forecast-based Rule	1.28	1.56	1.68	1.79	1.91
6. FOMC Forecast-based Rule	1.40	1.40	1.63	1.62	1.78
7. TIPS-based Rule	1.29	1.74 **			
<b>Memo</b>					
Expected federal funds rate derived from futures		1.91	2.22	2.41	2.53
Actual federal funds rate and Greenbook assumption	1.43	1.90	2.00	2.00	2.00

\*\* Computed using average TIPS and nominal Treasury yields to date.

Note: Rule prescriptions for 2004Q4 through 2005Q3 are calculated using 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 2005Q1 through 2005Q3. It is assumed that there is no feedback from the rule prescriptions to the Greenbook projections through 2005Q3.

## Rules Chart: Explanatory Notes

In all of the rules below,  $i_t$  denotes the federal funds rate,  $\pi_t$  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,  $\pi^*$  policymakers' long-run objective for inflation,  $i_{t-1}$  the lagged federal funds rate,  $\varepsilon_{t-1}$  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.

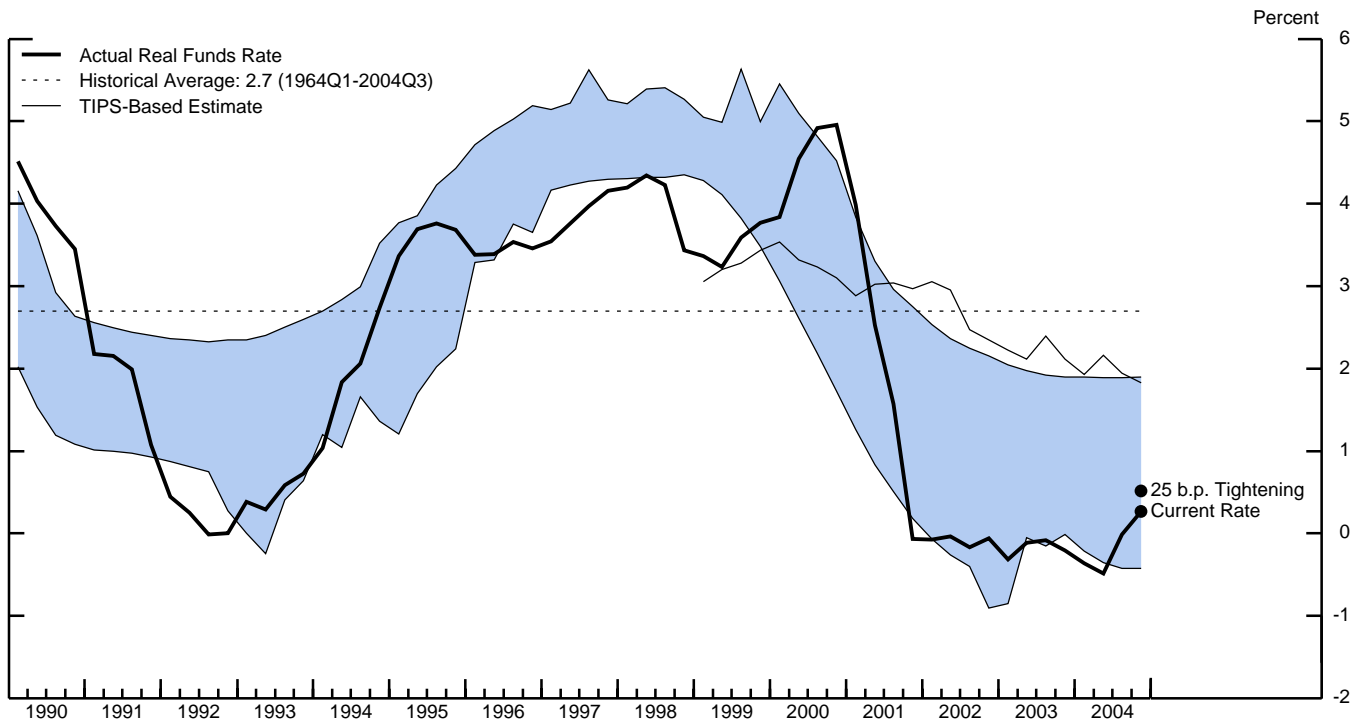
Rule	Specification	Root-mean-square error	
		1988:1-2004:3	2001:1-2004:3
<b>Rules with Imposed Coefficients</b>			
<b>1. Baseline Taylor Rule</b>	$i_t = 2 + \pi_t + 0.5(y_t - y_t^*) + 0.5(\pi_t - \pi^*)$	.95 <sup>a</sup>	1.00 <sup>a</sup>
<b>2. Aggressive Taylor Rule</b>	$i_t = 2 + \pi_t + (y_t - y_t^*) + 0.5(\pi_t - \pi^*)$	.72 <sup>a</sup>	.74 <sup>a</sup>
<b>3. First-difference Rule</b>	$i_t = i_{t-1} + 0.5(\Delta y_{t+3/t} - \Delta y_{t+3/t}^*) + 0.5(\pi_{t+3/t} - \pi^*)$	.83 <sup>a</sup>	.32 <sup>a</sup>
<b>Rules with Estimated Coefficients</b>			
<b>4. Estimated Outcome-based Rule</b> Rule includes both lagged interest rate and serial correlation in residual.	$i_t = .53i_{t-1} + 0.47 [1.07 + 0.97(y_t - y_t^*) + 1.51\pi_t] + 0.48\varepsilon_{t-1}$	.23	.25
<b>5. Estimated Greenbook Forecast-based Rule</b> Rule includes both lagged interest rate and serial correlation in residual.	$i_t = .72i_{t-1} + 0.28 [0.46 + 1.07(y_{t+3/t} - y_{t+3/t}^*) + 1.66\pi_{t+3/t}] + 0.32\varepsilon_{t-1}$	.25	.26
<b>6. Estimated FOMC Forecast-based Rule</b> 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.	$i_t = 0.49i_{t-2} + 0.51 [0.27 - 2.10(u_{t+3/t} - u_{t+3/t}^*) + 1.60\pi_{t+3/t}]$	.45	.61
<b>7. Estimated TIPS-based Rule</b> $\pi_{comp5/t}$ denotes the time- $t$ difference between 5-yr nominal Treasury yields and TIPS. Sample begins in 1999 due to TIPS volatility in 1997-8.	$i_t = 0.97i_{t-1} + [-1.21 + 0.66\pi_{comp5/t}]$	.43 <sup>b</sup>	.46

<sup>a</sup> RMSE for rules with imposed coefficients is calculated setting  $\pi^*=2$ .

<sup>b</sup> RMSE for TIPS-based rule is calculated for 1999:1-2004:3.



**Chart 6**  
**Actual Real Federal Funds Rate and**  
**Range of Estimated Equilibrium Real Rates**



Note: The shaded range represents the maximum and the minimum values each quarter of four estimates of the equilibrium real federal funds rate based on a statistical filter and the FRB/US model. Real federal funds rates employ the log difference of the core PCE price index over the previous four quarters as a proxy for inflation expectations, with the staff projection used for 2004Q4. The nominal funds rate used for the current quarter is the target federal funds rate as of the close of the Bluebook; the points plotted for all previous quarters are based upon quarterly-average target federal funds rates.

**Equilibrium Real Funds Rate Estimates (Percent)**

	2003	2004H1	2004Q3	2004Q4
<b>Statistical Filter</b>				
- Two-sided:				
Based on historical data and the staff forecast	-0.0	0.1	0.2	0.4
<i>September Bluebook</i>	0.0	0.1	0.3	--
- One-sided:				
Based on historical data*	-0.3	-0.3	-0.4	-0.4
<i>September Bluebook</i>	-0.3	-0.3	-0.2	--
<b>FRB/US Model</b>				
- Two-sided:				
Based on historical data and the staff forecast	2.0	1.9	1.9	1.9
<i>September Bluebook</i>	2.1	2.1	2.1	--
- One-sided:				
Based on historical data**	0.8	1.0	1.0	0.9
<i>September Bluebook</i>	0.8	1.1	1.2	--
<b>Treasury Inflation-Protected Securities***</b>	2.2	2.0	1.9	1.8

\* Also employs the staff projection for the current and next quarters.  
 \*\* Also employs the staff projection for the current quarter.  
 \*\*\* Adjusts the five-year forward, five-year real rate by an assumed term premium of 75 basis points.

such benchmarks might be heightened by the perceived need to be vigilant in response to the decline in the foreign exchange value of the dollar and the jump in some short-term measures of inflation compensation. Looking forward, though, the Committee might regard a pause following this firming action as potentially prudent given the uncertainties attending the macroeconomic outlook. Such a pause would allow the Committee time to assess the underlying strength of aggregate demand and, given relatively anchored longer-term inflation expectations, might be viewed as imposing little cost.

(10) Regarding the announcement of Alternative B, the Committee might signal the possibility of a pause by noting that the firming brings *“the cumulative increase in the target rate over the past several months to 1 percentage point.”* A mention of the cumulative policy tightening would convey the sense that the Committee was reflecting upon the extent to which accommodation had been removed. Citing cumulative changes is a device last employed in the FOMC statements of June and August 2001. The sense that the Committee was inclined to pause for a time might be reinforced by characterizing the stance of policy as remaining *“somewhat accommodative,”* rather than “accommodative” as in the September announcement, and would seem to parallel the Committee’s decision in January 2002 when it first characterized policy as accommodative when the funds rate was at 1-3/4 percent.

(11) The market reaction to the announcement for Alternative B is difficult to gauge precisely. Futures quotes indicate that market prices have largely, but not completely, built in a quarter-point tightening at Wednesday’s meeting, suggesting that such an action would probably impart a bit of upward pressure to near-term yields. In addition, options data indicate that investors attach some probability to scenarios in which the funds rate remains at 2 percent for a few meetings. Nonetheless, the signal of a possible pause might cause investors to mark down the odds they currently seem

to attach to tightening over the next several months. In such circumstances, longer-term yields could edge lower and stock prices might tick up.

(12) Against the backdrop of higher oil prices and a weaker dollar, the Committee might believe that inflation pressures under the Greenbook policy assumption are unlikely to be as well-contained as in the staff forecast. Indeed, both market- and survey-based measures of near-term inflation expectations moved higher over the intermeeting period. Faced with these developments, the Committee might wish to tighten policy a quarter-point and adopt the firmer statement language shown for **Alternative C**. Even if the Committee found the staff forecast of a gradual decline in inflation to be both likely and generally acceptable as a modal assessment, it might be concerned about upside risks to the outlook. In particular, as discussed in the “more inflation” scenario in the Greenbook, inflation could pick up markedly if the rise in oil prices were to trigger a significant increase in long-term inflation expectations. Moreover, the Committee might harbor some concerns that inflation pressures could build if—as envisioned in the “slower productivity” Greenbook simulation—the favorable productivity growth trends witnessed in recent years fade over time. In such circumstances, policy might need to be tightened relatively briskly at coming meetings, perhaps inclining the Committee to be reluctant to hint now that it might pause in the process of firming.

(13) The announcement of Alternative C could cite the increase in the target rate to 2 percent with no intimation of a pause any time soon. The stance of policy might still be characterized simply as “*accommodative*” and the rationale paragraph might note that “*rising energy prices and an escalation of business costs have the potential to contribute to upward pressure on prices*” so as to highlight concerns about inflation. The Committee could retain the measured pace language and might also continue to assess the risks to growth and price stability as balanced, particularly if it viewed that assessment as conditioned on an assumption of appropriate policy.

(14) Such an announcement would probably be read as suggesting that the FOMC is placing somewhat greater weight on inflation risks than the market currently perceives. It seems likely then that both real and nominal interest rates would edge higher, and stock prices would fall. The market reaction might be more muted if the references to mounting inflation pressures were not as explicit. That said, it is also possible that, without the hint of a pause, investors would be more likely to build in expectations of tightening at each of the next several meetings given the experience of four consecutive firmings. In that event, the rise in interest rates and the drop in stock prices could be more substantial.

(15) Given the disappointing data on employment and industrial production in recent months, along with the mixed signals from other economic indicators, the Committee's assessment of the near-term prospects for spending and employment might be less optimistic than in the staff forecast. In particular, members might read the meager pace of hiring since the spring and weak high-tech spending as evidence of continued reluctance on the part of firms to make significant commitments in the current environment. The still-weak tone in labor markets also might be viewed as a factor depressing consumer confidence and so weighing on household spending. In that circumstance, the Committee might see less need to continue removing policy accommodation at this meeting and choose to keep the funds rate at  $1\frac{3}{4}$  percent and issue a statement like that shown in **Alternative A**. Even if the Committee judged the staff forecast as likely, it might consider the projected progress in working down slack as too slow to be acceptable, especially given that core PCE inflation runs at  $1\frac{1}{2}$  percent—only a shade above the level prevailing in the summer of 2003 when concerns about disinflation were acute. The Committee might also be concerned about possible downside risks to the forecast from high oil prices and the potential for a deceleration in consumer spending similar to that in the “faltering expansion” scenario in the Greenbook.

(16) The announcement of Alternative A would indicate an unchanged target federal funds rate but otherwise might look fairly similar to the announcement for the September meeting. The statement might characterize policy as “*somewhat*” accommodative while the final sentence would underscore the Committee’s commitment to both its price stability and sustainable growth objectives. Given the actual pause in policy adjustment, the “cumulative increase” wording employed in Alternative B would not seem necessary. Such an announcement would come as a surprise to market participants. Both real and nominal yields would likely decline and stock prices could increase. However, if investors interpreted the announcement as portending weaker-than-expected economic activity, the rise in stock prices might be muted while the drop in yields could be more pronounced.

### **Money and Debt Forecasts**

(17) Growth of M2 from the fourth quarter of last year to the fourth quarter of this year is currently projected at about 5 percent. Under the staff forecast, M2 growth steps down to about 2½ percent next year, owing largely to the lagged effects of the policy tightening undertaken in recent months on opportunity costs. Stronger nominal income growth in 2006 contributes to a projected acceleration in M2 to a 3½ percent pace that year. Domestic nonfinancial debt is expected to decelerate over the forecast period, primarily reflecting a decline in household debt growth as slowing home price appreciation trims the pace of mortgage borrowing. Growth of the debt of nonfinancial businesses is anticipated to pick up over the forecast period as capital spending begins to outstrip internal funds by a wider margin. Stronger income growth is projected to bolster federal tax revenues and reduce federal deficits, but federal debt is projected to advance at a pace exceeding that of nominal GDP.

		M2	
		No change	Raise 25 bp*
Monthly Growth Rates			
	Sep 2004	5.6	5.6
	Oct 2004	2.6	2.6
	Nov 2004	4.5	4.3
	Dec 2004	3.8	3.2
	Jan 2005	3.8	3.0
	Feb 2005	3.7	3.0
	Mar 2005	3.3	2.7
Quarterly Growth Rates			
	2004 Q1	3.5	3.5
	2004 Q2	9.7	9.7
	2004 Q3	2.5	2.5
	2004 Q4	3.7	3.6
	2005 Q1	3.8	3.2
Annual Growth Rates			
	2003	5.3	5.3
	2004	5.0	4.9
	2005	2.9	2.5
Growth From	To		
Oct 2004	Dec 2004	4.2	3.8
Oct 2004	Mar 2005	3.9	3.3
Nov 2004	Mar 2005	3.7	3.0

\* This forecast is consistent with the Greenbook nominal GDP and interest rate path.

## Directive and Balance-of-Risks Statement

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

### *(1) 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 \_\_\_\_\_  $4\frac{3}{4}$ .

### *(2) Risk Assessments*

- A. 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 this is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to promote price stability and sustainable growth.
- B. 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.

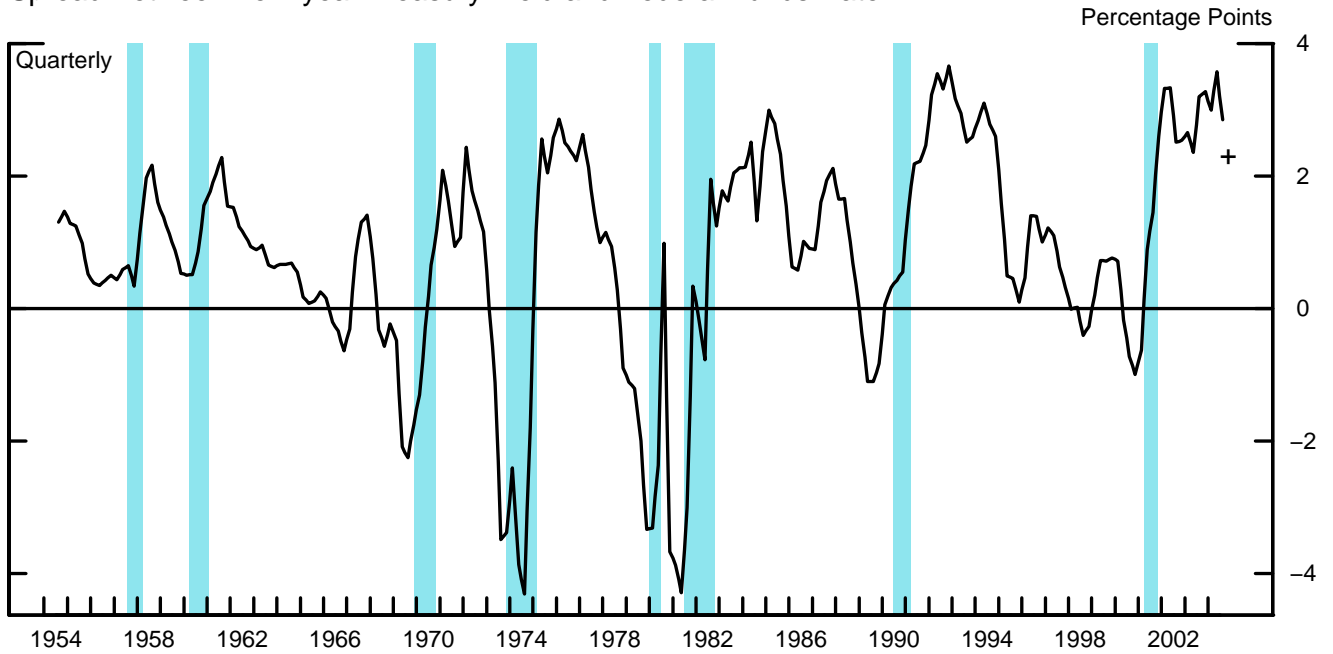
C. The Committee perceives the upside and downside risks to the attainment of both sustainable growth and price stability for the next few quarters to be roughly equal. With underlying inflation expected to be relatively low, the Committee believes that policy accommodation can be removed at a pace that 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.



Appendix Chart 1  
**The Yield Curve**

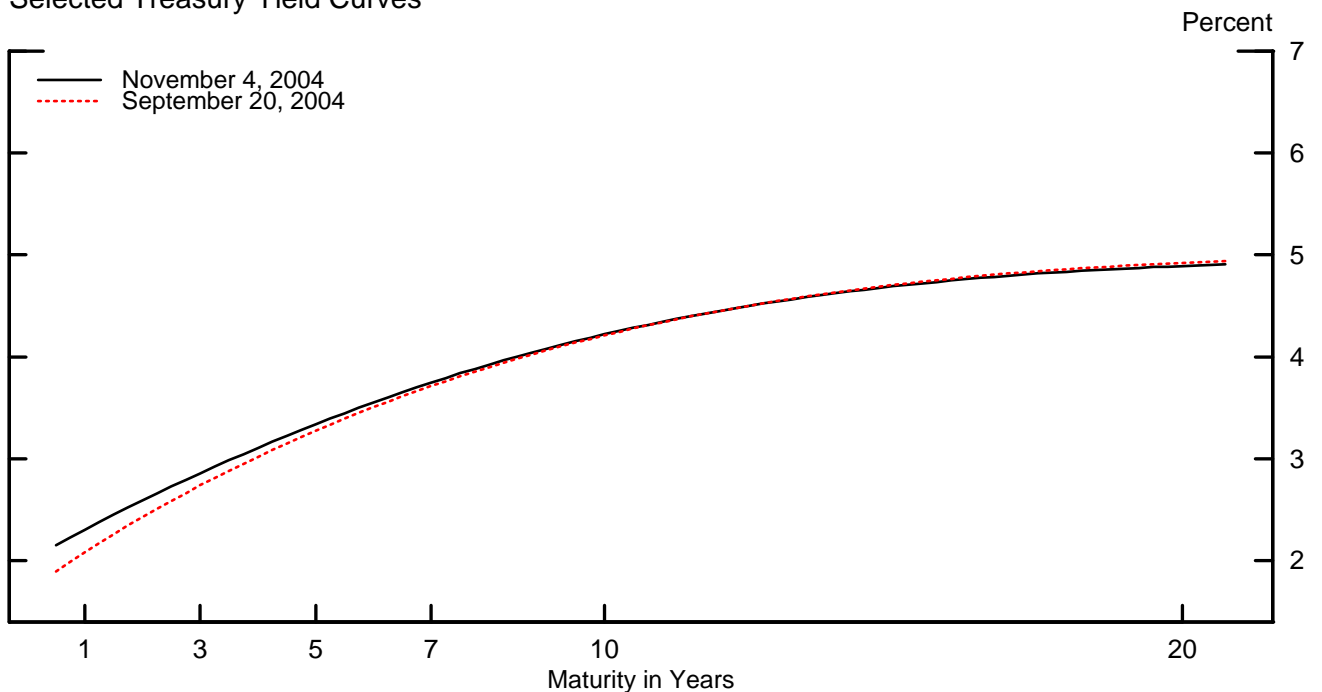
11/04/04

Spread Between Ten-year Treasury Yield and Federal Funds Rate



+ Denotes most recent weekly value.

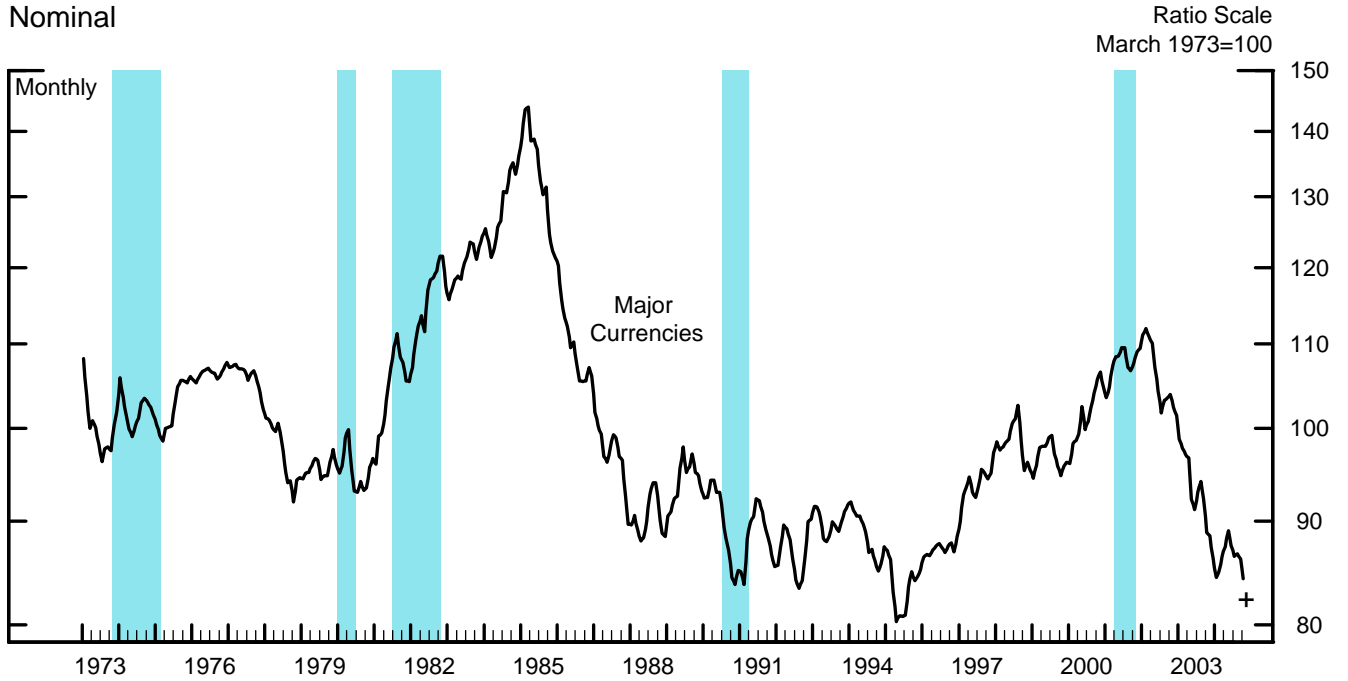
Selected Treasury Yield Curves\*



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

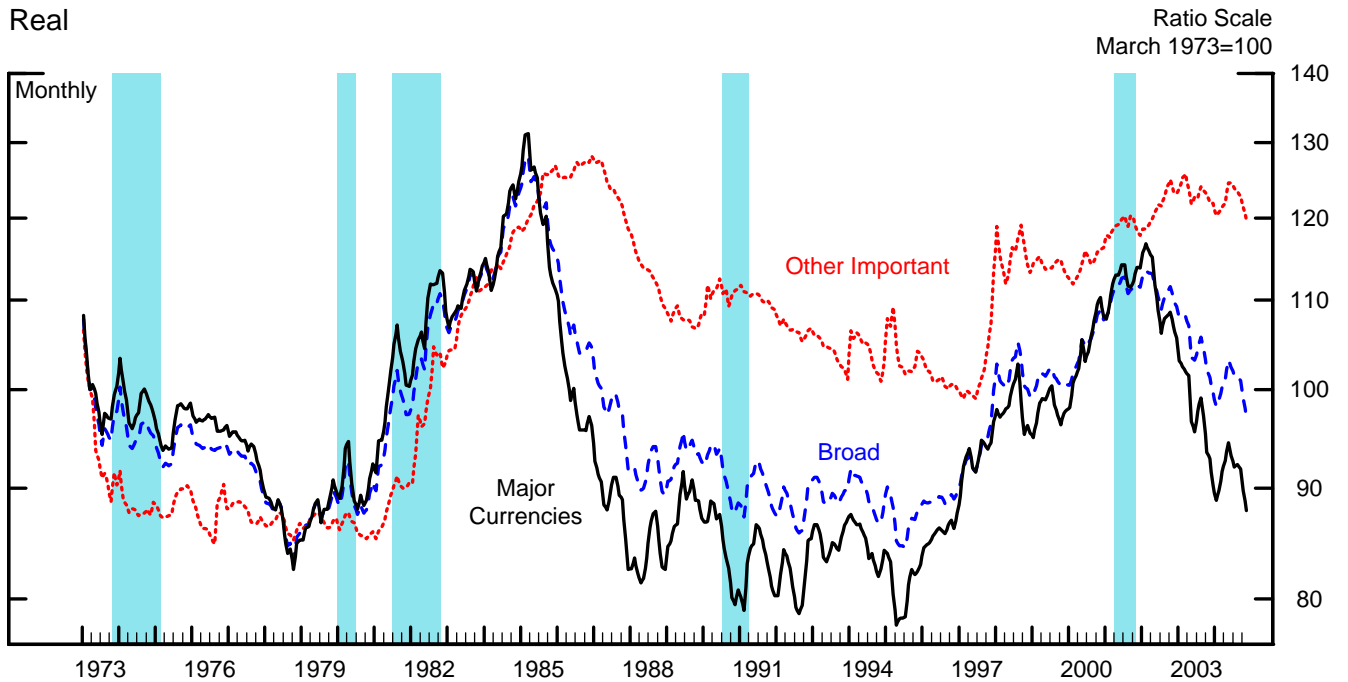
# Dollar Exchange Rate Indexes

Nominal



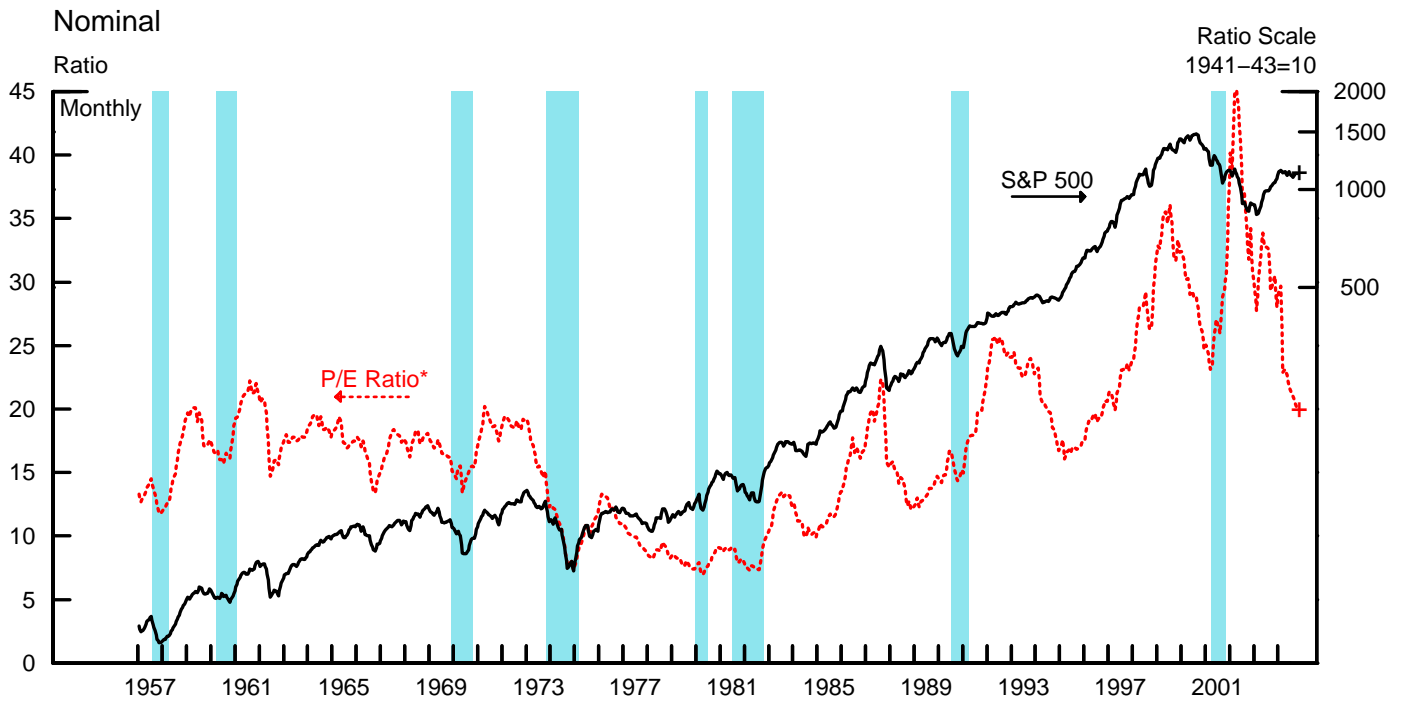
+ Denotes most recent weekly value.

Real

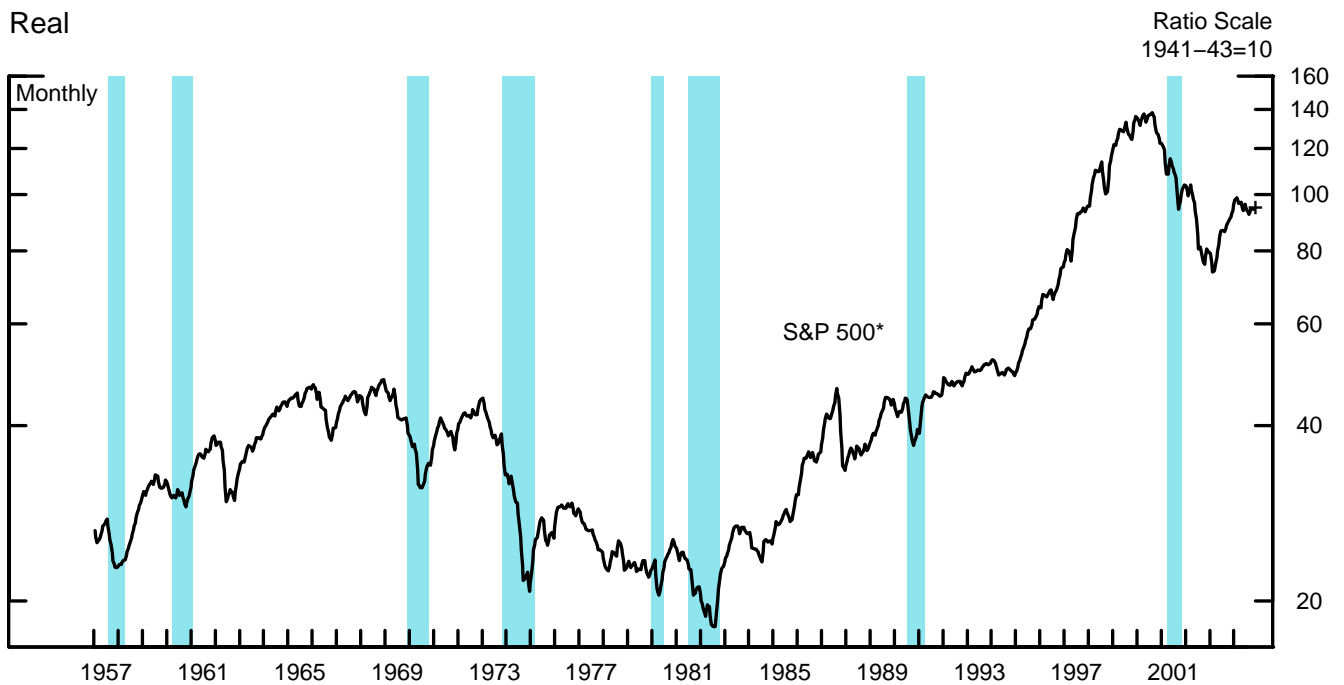


Note. The major currencies index is the trade-weighted average of currencies of the Euro area, Canada, Japan, the U.K., Switzerland, Australia, and Sweden. The other important trading partners index is the trade-weighted average of currencies of 19 other important trading partners. The Broad index is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

Appendix Chart 3  
**Stock Indexes**



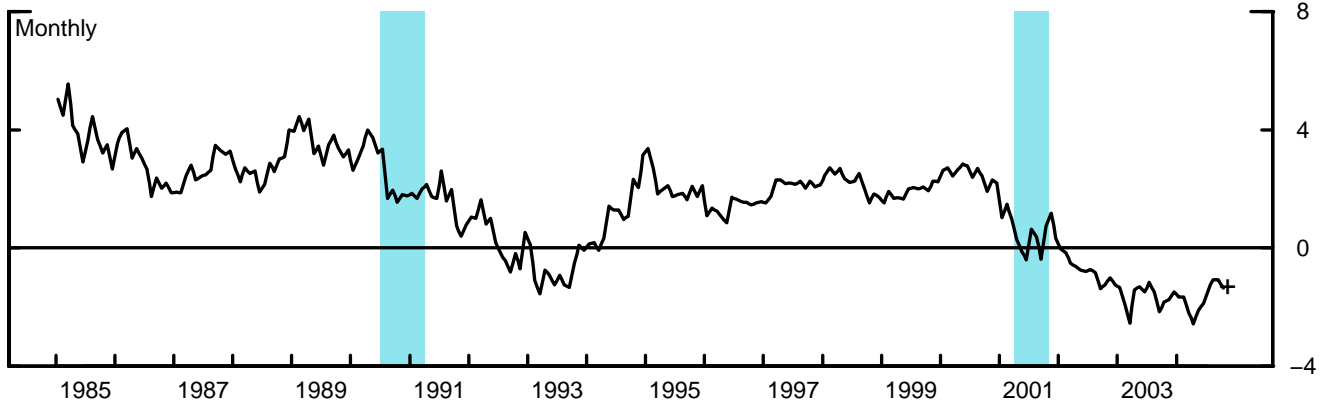
\* Based on trailing four-quarter earnings.  
 + Denotes most recent weekly value.



\* Deflated by the CPI.  
 + Denotes most recent weekly value.

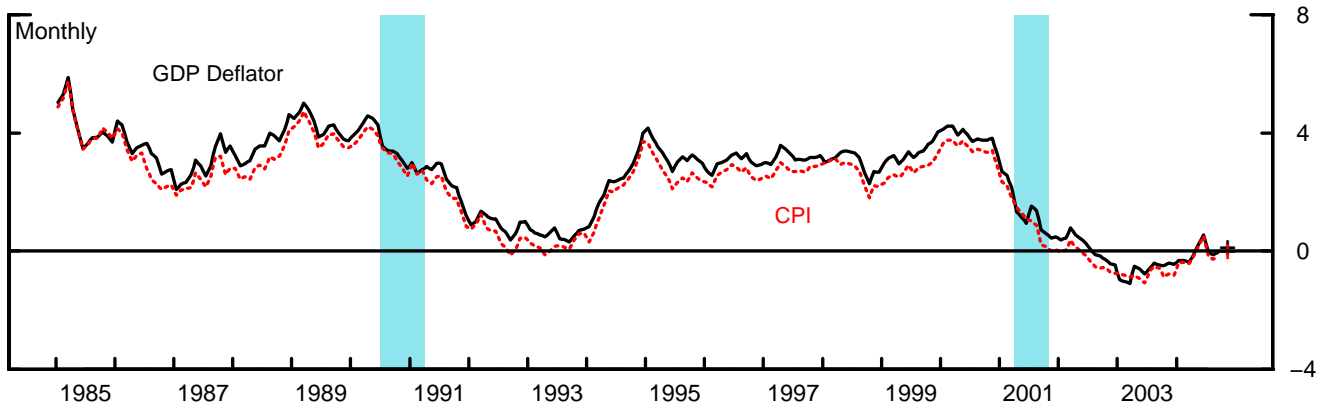
# One-Year Real Interest Rates

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



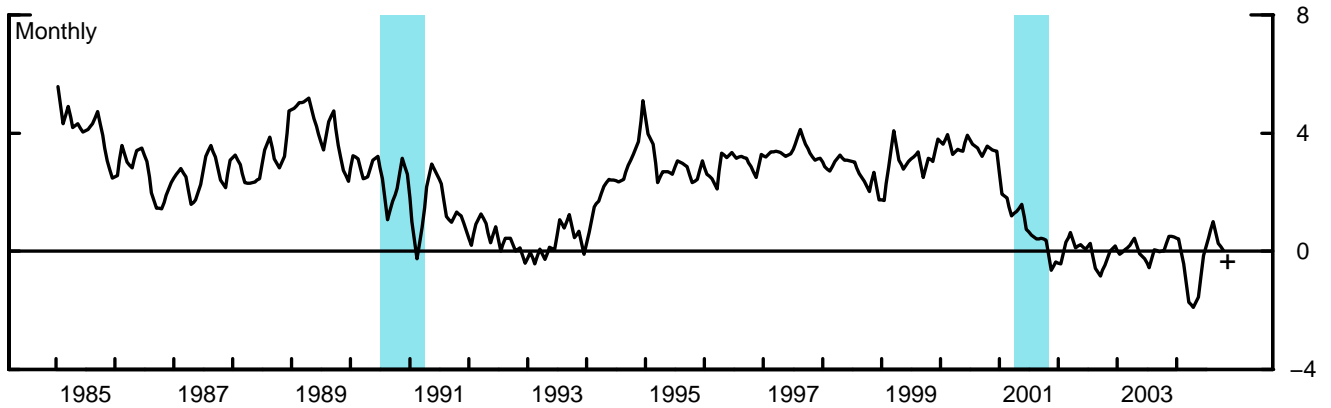
\* Mean value of respondents.

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.

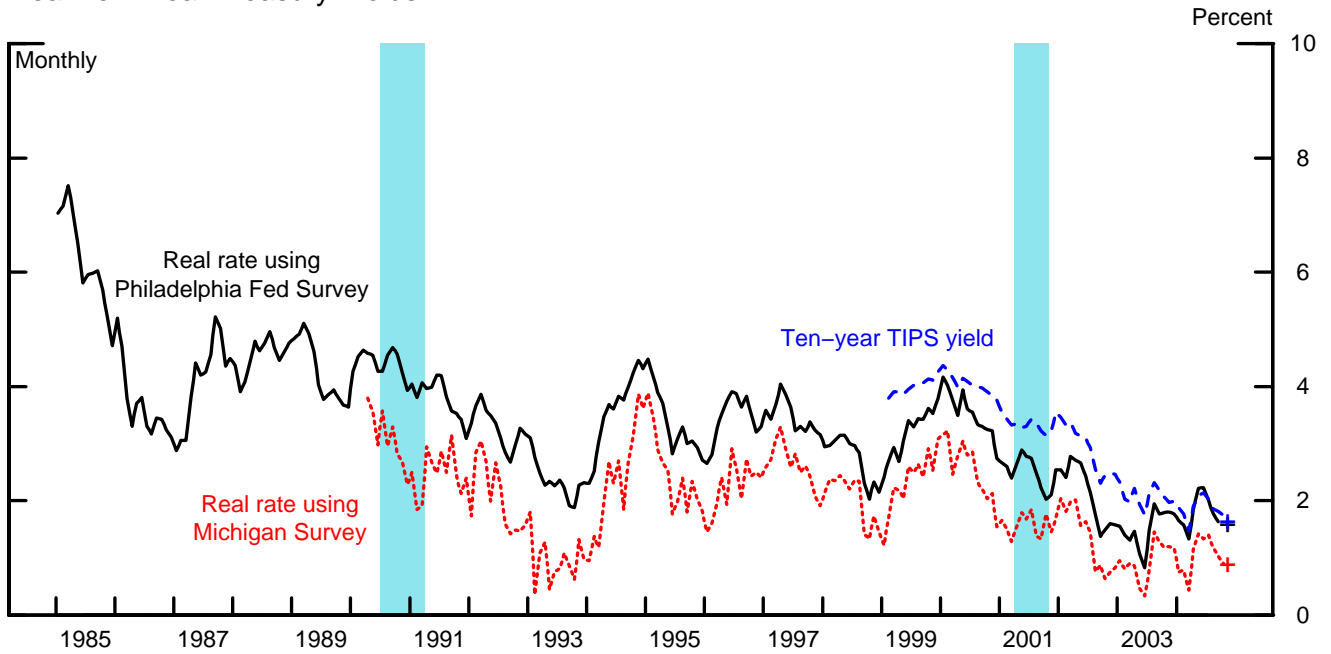
One-Year Treasury Constant Maturity Yield Less Change in the Core CPI from Three Months Prior



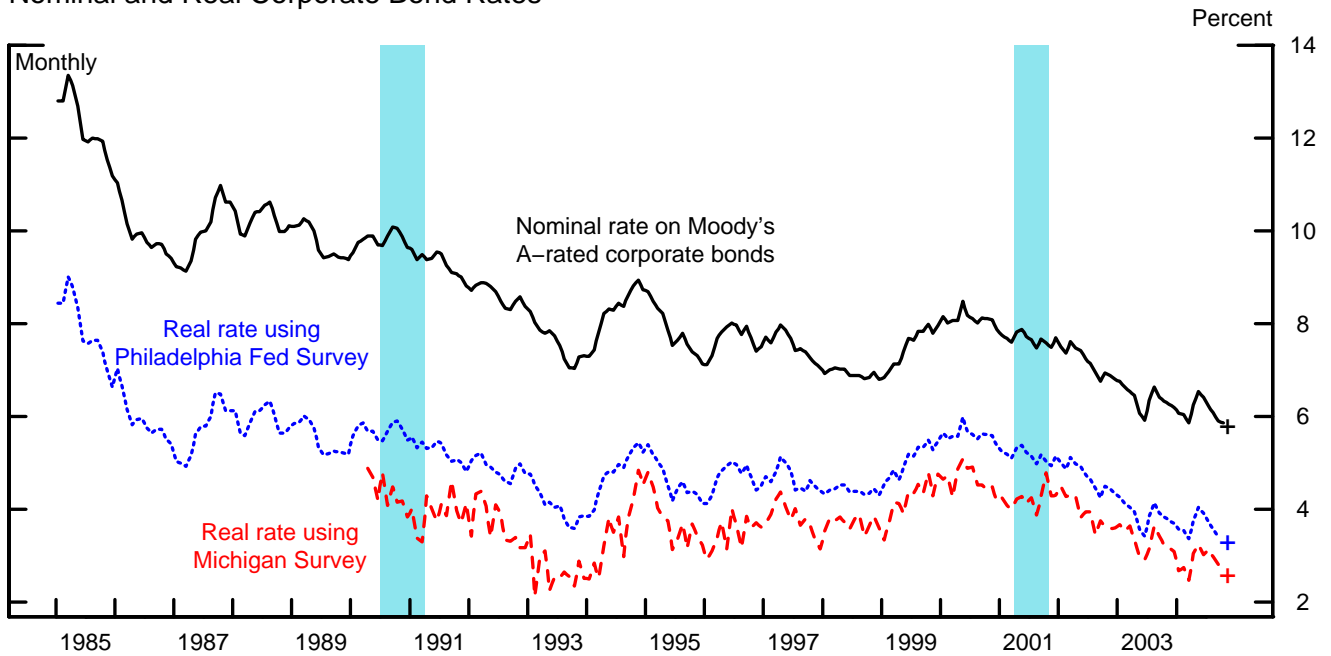
+ Denotes most recent weekly Treasury constant maturity yield less most recent inflation expectation.

# Long-Term Real Interest Rates\*

## Real Ten-Year Treasury Yields



## Nominal and Real Corporate Bond Rates

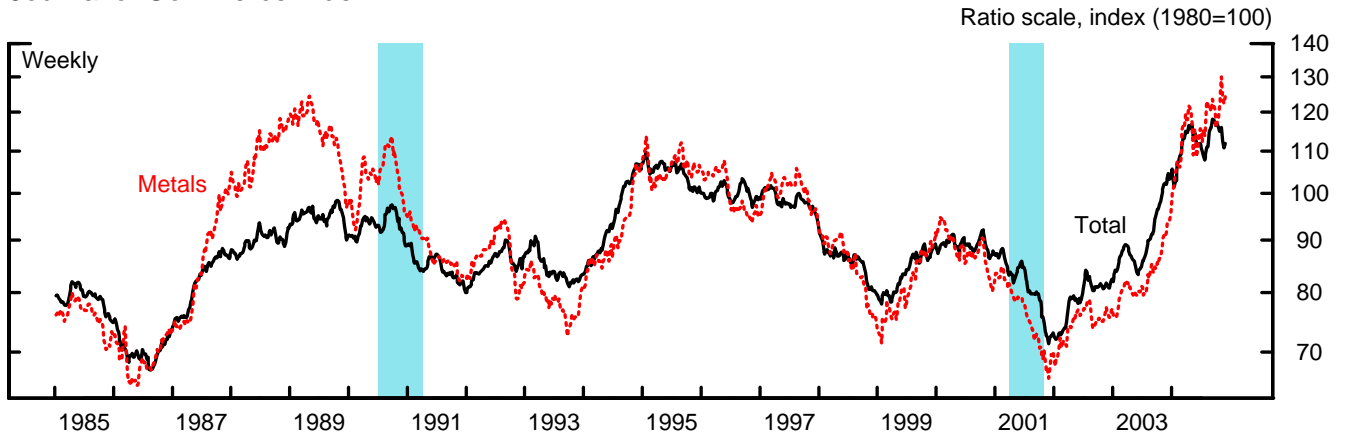


\* For real rates, measures using the Philadelphia Fed Survey employ the ten-year inflation expectations from the Blue Chip Survey until April 1991 and the Philadelphia Federal Reserve Bank Survey of Professional Forecasters thereafter (median value of respondents). Measures using the Michigan Survey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

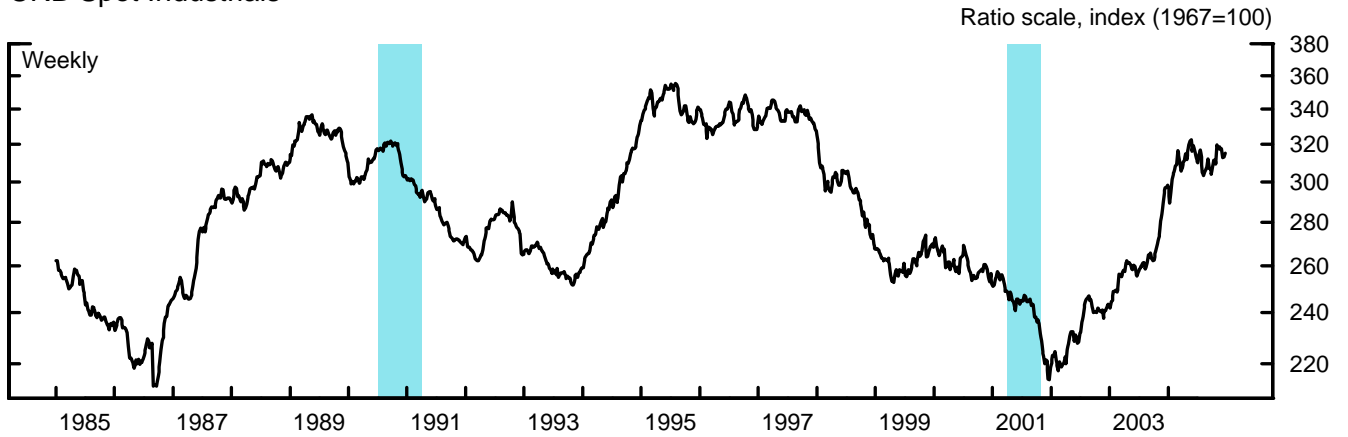
+ For TIPS and nominal corporate rate, denotes the most recent weekly value. For other real rate series, denotes the most recent weekly nominal yield less the most recent inflation expectation.

# Commodity Price Measures

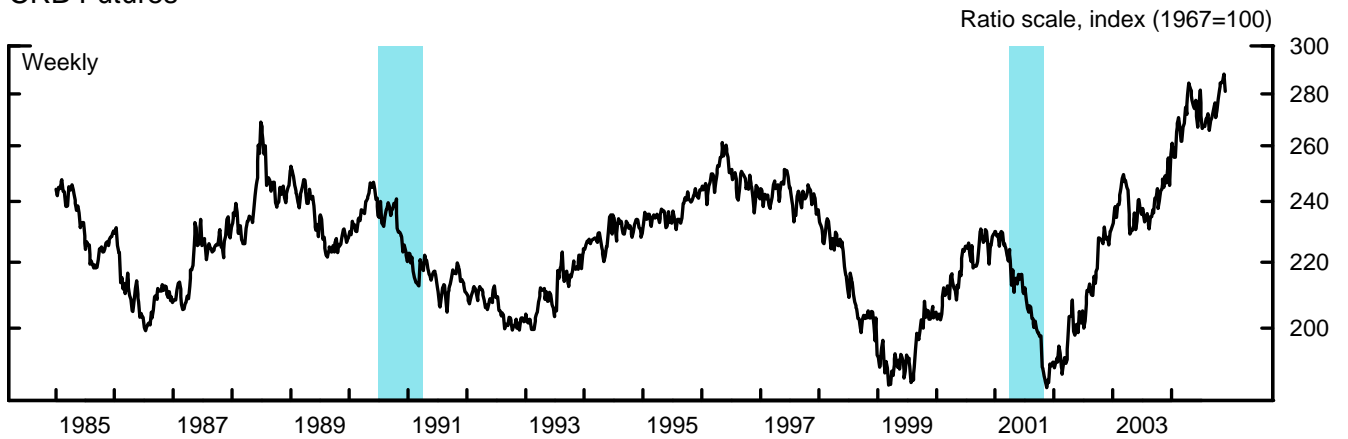
### Journal of Commerce Index



### CRB Spot Industrials

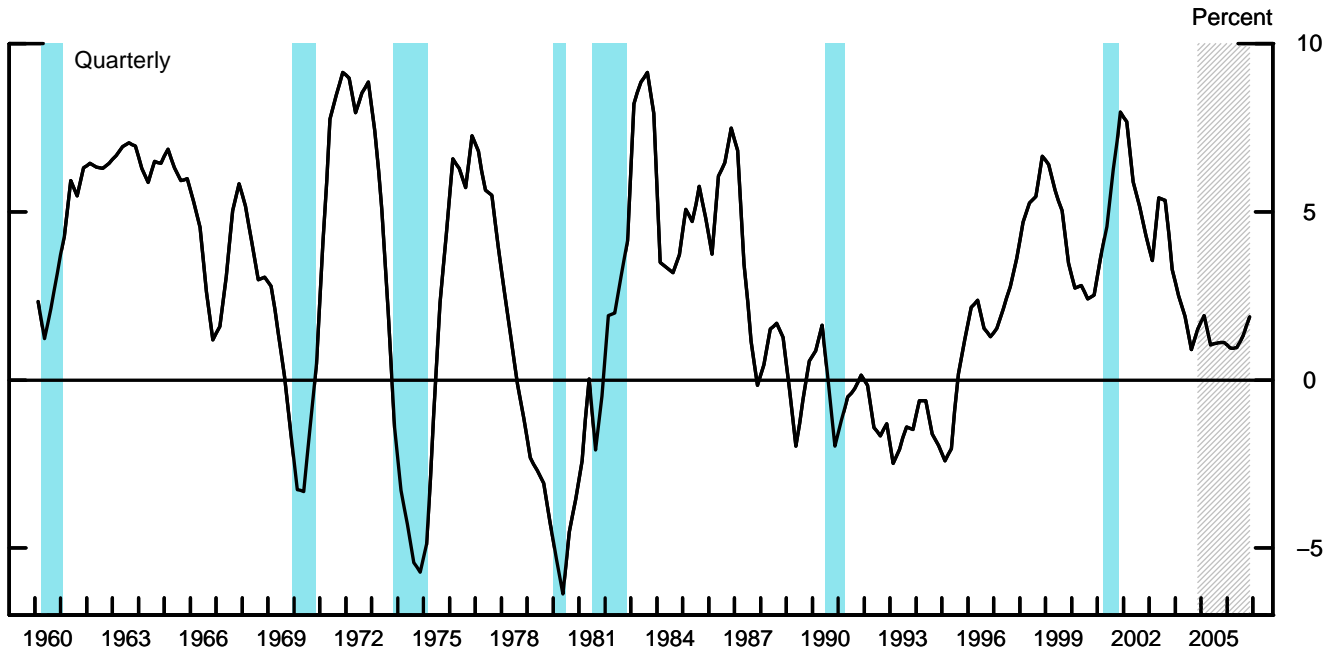


### CRB Futures

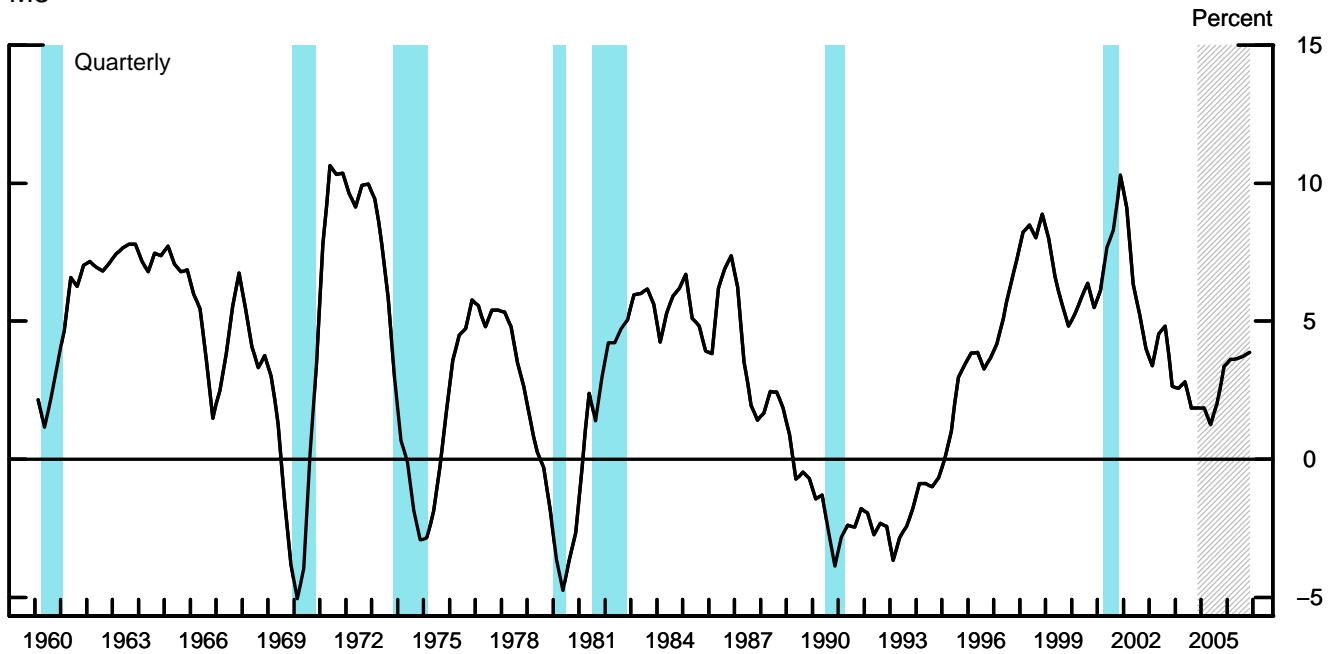


# Growth of Real M2 and M3

M2

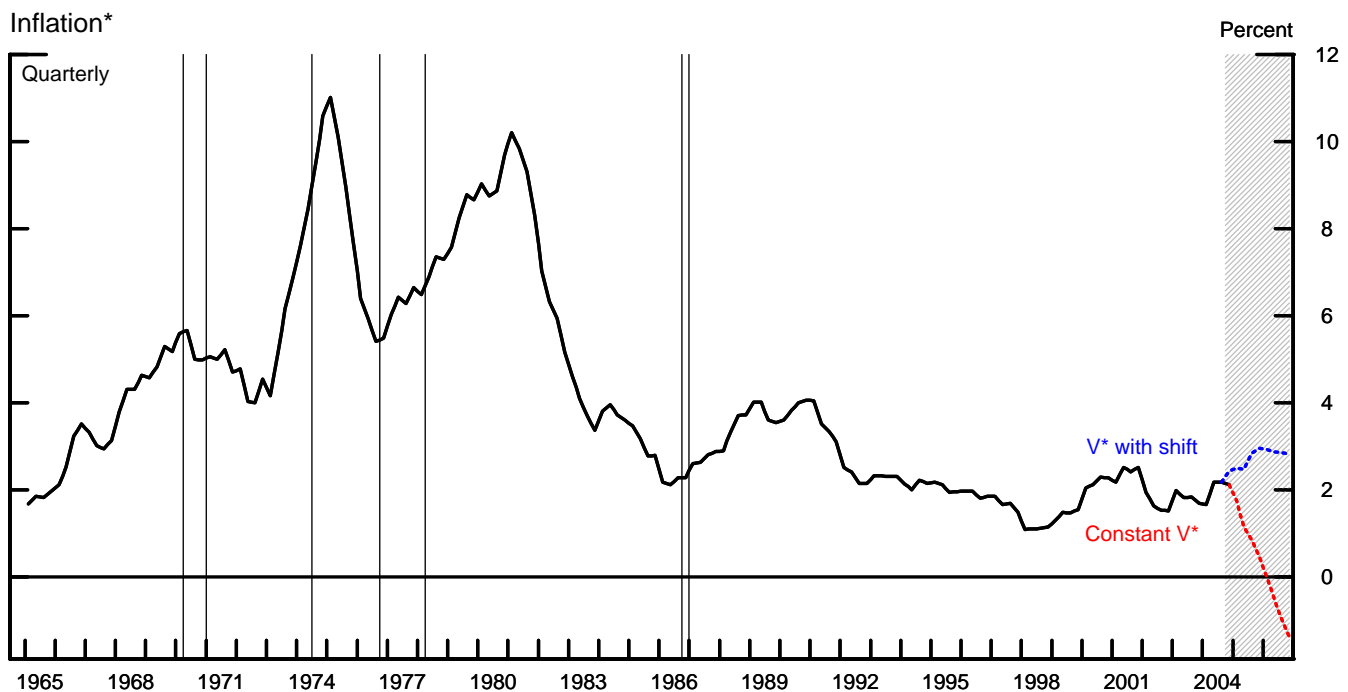
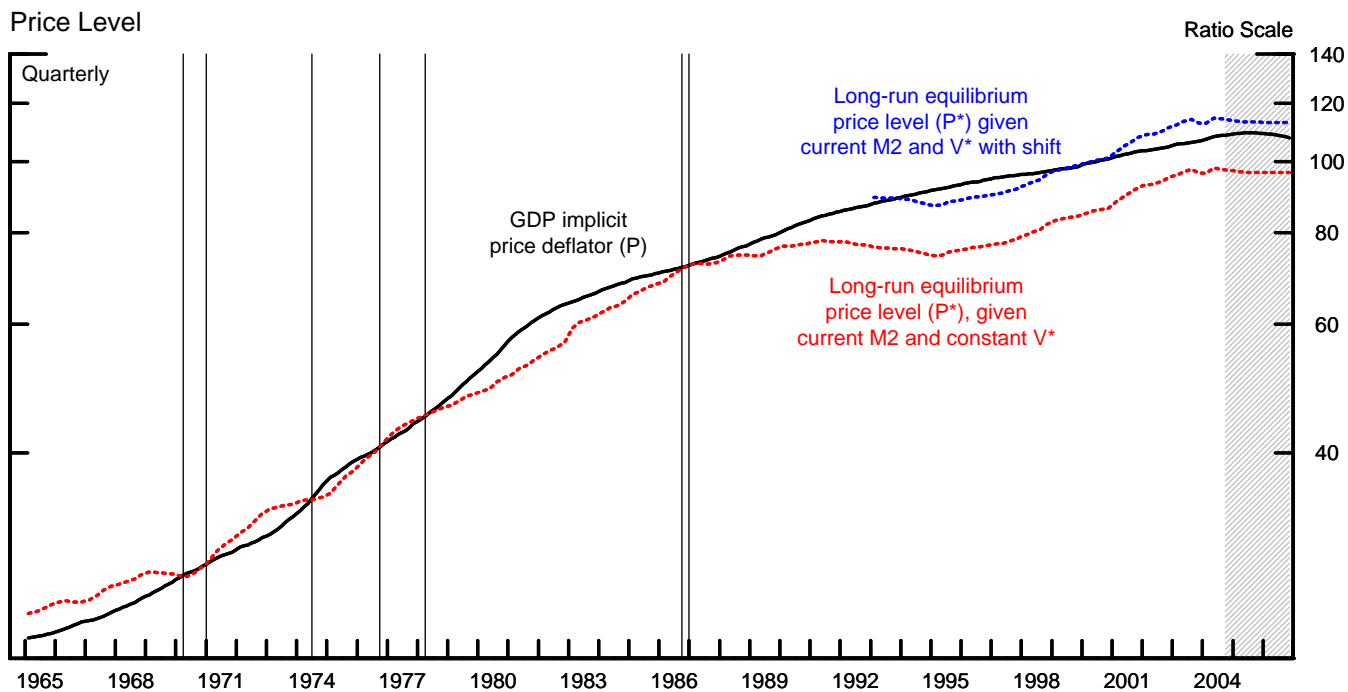


M3



Note. Four-quarter moving average deflated by the CPI. Shaded 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  $P^*$ . Shaded 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
03 -- High	1.45	1.26	1.22	1.28	1.32	1.28	2.11	3.60	4.80	5.58	1.84	2.48	7.48	5.50	6.44	4.06
03 -- Low	0.86	0.75	0.81	0.82	0.93	0.91	1.09	2.06	3.29	4.21	0.77	1.56	6.01	4.78	5.21	3.45
04 -- High	1.94	1.86	2.00	2.20	2.17	1.93	2.97	4.10	5.03	5.64	1.57	2.25	6.90	5.45	6.34	4.19
04 -- 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	6.03	4.73	5.38	3.36
Monthly																
Nov 03	1.00	0.94	0.95	1.04	1.11	1.02	1.92	3.27	4.45	5.21	1.29	1.97	6.66	5.15	5.93	3.75
Dec 03	0.98	0.89	0.92	1.01	1.10	1.03	1.90	3.25	4.41	5.16	1.26	1.99	6.60	5.11	5.88	3.76
Jan 04	1.00	0.84	0.90	0.99	1.06	0.99	1.75	3.10	4.28	5.06	1.11	1.88	6.44	4.99	5.71	3.63
Feb 04	1.01	0.92	0.95	1.01	1.05	0.99	1.73	3.05	4.22	4.99	0.88	1.77	6.27	4.86	5.64	3.55
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
Weekly																
Sep 3 04	1.52	1.45	1.61	1.82	1.77	1.53	2.46	3.39	4.34	5.04	1.11	1.82	6.37	5.09	5.77	3.97
Sep 10 04	1.49	1.56	1.66	1.89	1.80	1.61	2.52	3.41	4.35	5.05	1.14	1.84	6.36	5.07	5.83	4.00
Sep 17 04	1.52	1.56	1.68	1.88	1.85	1.67	2.47	3.35	4.28	4.98	1.15	1.83	6.29	5.03	5.75	4.03
Sep 24 04	1.69	1.55	1.72	1.95	1.90	1.72	2.49	3.29	4.17	4.87	1.14	1.79	6.17	4.97	5.70	4.00
Oct 1 04	1.79	1.53	1.72	2.00	1.96	1.74	2.59	3.36	4.23	4.91	1.07	1.77	6.21	5.02	5.72	3.97
Oct 8 04	1.78	1.55	1.71	2.03	2.01	1.74	2.65	3.46	4.34	5.01	1.16	1.86	6.30	5.08	5.82	4.08
Oct 15 04	1.74	1.58	1.73	2.00	2.02	1.76	2.51	3.32	4.22	4.92	1.01	1.73	6.20	4.99	5.74	4.01
Oct 22 04	1.75	1.61	1.83	2.05	2.04	1.80	2.53	3.30	4.18	4.86	0.95	1.69	6.15	4.93	5.69	4.02
Oct 29 04	1.75	1.75	1.90	2.12	2.08	1.85	2.56	3.31	4.18	4.86	0.87	1.67	6.15	4.97	5.64	3.96
Nov 5 04	--	1.83	1.98	2.19	2.15	1.89	2.61	3.35	4.23	4.90	0.84	1.65	--	--	5.70	4.00
Daily																
Oct 19 04	1.72	1.62	1.82	2.05	2.03	1.79	2.55	3.33	4.21	4.90	1.02	1.72	6.17	--	--	--
Oct 20 04	1.74	1.61	1.82	2.04	2.04	1.78	2.50	3.27	4.15	4.84	0.94	1.68	6.14	--	--	--
Oct 21 04	1.76	1.62	1.84	2.06	2.05	1.78	2.54	3.30	4.16	4.83	0.89	1.65	6.13	--	--	--
Oct 22 04	1.72	1.63	1.84	2.07	2.07	1.84	2.52	3.28	4.14	4.82	0.86	1.65	6.12	--	--	--
Oct 25 04	1.76	1.71	1.90	2.10	2.05	1.83	2.51	3.25	4.13	4.81	0.85	1.64	6.12	--	--	--
Oct 26 04	1.72	1.82	1.89	2.10	2.06	1.85	2.53	3.27	4.14	4.82	0.84	1.65	6.12	--	--	--
Oct 27 04	1.77	1.78	1.92	2.13	2.08	1.84	2.62	3.38	4.24	4.91	0.93	1.74	6.19	--	--	--
Oct 28 04	1.79	1.71	1.90	2.14	2.11	1.87	2.58	3.35	4.23	4.90	0.88	1.69	6.19	--	--	--
Oct 29 04	1.79	1.73	1.90	2.13	2.12	1.87	2.56	3.31	4.18	4.86	0.84	1.65	6.14	--	--	--
Nov 1 04	1.83	1.77	2.00	2.20	2.14	1.89	2.61	3.37	4.24	4.91	0.88	1.69	6.20	--	--	--
Nov 2 04	1.74	1.86	1.98	2.19	2.14	1.85	2.60	3.35	4.23	4.90	0.82	1.64	6.19	--	--	--
Nov 3 04	1.73	1.83	1.96	2.18	2.15	1.93	2.59	3.34	4.22	4.89	0.80	1.62	6.17	--	--	--
Nov 4 04	1.73 <sup>p</sup>	1.85	1.98	2.19	2.17	--	2.63	3.36	4.22	4.88	0.87	1.66	--	--	--	--

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**

Strictly Confidential (FR)-  
 Class II FOMC

Seasonally adjusted

Period	M1	M2	nontransactions components		M3
			In M2	In M3 only	
	1	2	3	4	5
<b>Annual growth rates(%) :</b>					
<b>Annually (Q4 to Q4)</b>					
2001	7.0	10.2	11.1	18.5	12.7
2002	3.3	6.7	7.6	5.8	6.4
2003	6.6	5.3	4.9	3.1	4.6
<b>Quarterly (average)</b>					
2003-Q4	2.6	-1.3	-2.3	-0.5	-1.1
2004-Q1	6.2	3.5	2.8	11.7	6.1
Q2	6.2	9.7	10.7	12.9	10.8
Q3	2.8	2.5	2.4	2.5	2.5
<b>Monthly</b>					
2003-Oct.	2.5	-2.9	-4.4	-3.4	-3.1
Nov.	-0.7	-0.7	-0.7	-4.0	-1.7
Dec.	9.4	-0.7	-3.3	1.9	0.2
2004-Jan.	-5.5	1.5	3.4	22.5	8.1
Feb.	18.2	9.9	7.7	9.5	9.8
Mar.	17.7	9.3	7.1	18.1	12.1
Apr.	-2.5	9.5	12.8	12.7	10.5
May	-0.8	14.0	18.1	11.5	13.2
June	12.0	1.8	-0.9	8.3	3.9
July	-10.6	-1.4	1.1	-5.9	-2.8
Aug.	15.5	1.7	-2.0	5.9	3.0
Sep.	3.0	5.6	6.3	0.6	4.0
Oct. e	-0.9	2.6	3.5	-14.7	-2.9
<b>Levels (\$billions) :</b>					
<b>Monthly</b>					
2004-May	1322.6	6289.6	4967.1	2959.4	9249.0
June	1335.8	6299.1	4963.3	2979.9	9279.0
July	1324.0	6292.0	4968.0	2965.3	9257.3
Aug.	1341.1	6300.8	4959.6	2979.8	9280.6
Sep.	1344.5	6330.2	4985.7	2981.4	9311.7
<b>Weekly</b>					
2004-Sep. 6	1328.3	6303.8	4975.5	2977.3	9281.1
13	1322.4	6309.1	4986.6	2966.6	9275.7
20	1350.4	6339.4	4989.0	2981.2	9320.5
27	1356.6	6343.9	4987.3	2992.6	9336.5
Oct. 4	1361.2	6333.0	4971.8	2963.3	9296.2
11	1329.6	6327.2	4997.6	2933.8	9260.9
18p	1333.9	6349.7	5015.8	2931.9	9281.6
25p	1360.0	6354.6	4994.7	2944.9	9299.6

p preliminary  
 e estimated

## Appendix Table 3

Changes in System Holdings of Securities <sup>1</sup>  
(Millions of dollars, not seasonally adjusted)Strictly Confidential  
Class II FOMC

November 4, 2004

	Treasury Bills			Treasury Coupons				Federal Agency Redemptions (-)	Net change total outright holdings <sup>4</sup>	Net RPs <sup>5</sup>				
	Net Purchases <sup>2</sup>	Redemptions (-)	Net Change	Net Purchases <sup>3</sup>						Redemptions (-)	Net Change	Short-Term <sup>6</sup>	Long-Term <sup>7</sup>	Net Change
				< 1	1-5	5-10	Over 10							
2001	15,503	10,095	5,408	15,663	22,814	6,003	8,531	16,802	36,208	120	41,496	3,492	636	4,128
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
2003 QIII	2,568	---	2,568	---	---	1,232	150	---	1,382	---	3,950	1,712	-554	1,158
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
2004 Mar	341	---	341	---	1,293	741	40	---	2,074	---	2,414	1,949	-1,803	146
Apr	3,516	---	3,516	---	---	---	---	---	---	---	3,516	1,041	1,355	2,396
May	409	---	409	1,693	783	713	84	---	3,272	---	3,681	-637	710	73
Jun	3,831	---	3,831	---	1,760	275	---	---	2,035	---	5,866	-1,738	1,824	86
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
2004 Aug 11	---	---	---	---	---	---	---	---	---	---	---	-1,727	-1,000	-2,727
Aug 18	7	---	7	---	428	568	---	---	996	---	1,003	-1,806	1,000	-806
Aug 25	68	---	68	---	---	---	---	---	---	---	68	-990	4,000	3,010
Sep 1	8	---	8	---	---	---	---	---	---	---	8	4,740	2,000	6,740
Sep 8	18	---	18	---	---	---	---	---	---	---	18	-5,150	4,000	-1,150
Sep 15	41	---	41	---	799	---	---	---	799	---	840	385	1,000	1,385
Sep 22	1,664	---	1,664	---	---	400	400	---	800	---	2,464	-321	-2,000	-2,321
Sep 29	26	---	26	---	100	295	5	---	400	---	426	-4,192	1,000	-3,192
Oct 6	1,770	---	1,770	---	1,198	---	---	---	1,198	---	2,968	296	-4,000	-3,704
Oct 13	29	---	29	---	---	---	---	---	---	---	29	3,612	-1,000	2,612
Oct 20	200	---	200	---	171	823	---	---	994	---	1,195	-656	---	-656
Oct 27	123	---	123	1,593	1,396	402	400	---	3,791	---	3,914	-4,830	1,000	-3,830
Nov 3	192	---	192	---	1,086	118	---	---	1,204	---	1,396	1,739	-2,000	-261
2004 Nov 4	---	---	---	---	---	335	86	---	421	---	421	2,792	-2,000	792
Intermeeting Period														
Sep 21-Nov 4	3,841	---	3,841	1,593	3,951	1,973	491	---	8,009	---	11,849	-8,751	-7,000	-15,751
Memo: LEVEL (bil. \$)														
Nov 4			259.4	117.2	203.8	51.4	76.8		449.2		708.6	-20.5	15.0	-5.5

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.

NOVEMBER 5, 2004

# MONETARY POLICY ALTERNATIVES: UPDATE

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

## MONETARY POLICY ALTERNATIVES

### An Update

Attached is an exhibit that details the market reaction to this morning's employment report and a revised version of table 1 from the Bluebook. As shown in the top panel of the market reaction exhibit, interest rates and policy expectations registered substantial increases following the release of the employment report. As of 10 a.m., Treasury coupon yields were up 12 to 15 basis points across the maturity structure. Treasury inflation-indexed yields rose nearly as much as comparable-maturity nominal yields, suggesting that much of the market response was attributable to an upward revision in the market's outlook for real economic activity. The November federal funds futures contract ticked up a half basis point, putting the implied probability of a quarter-point tightening at the upcoming meeting at 90 percent. Further-ahead futures rates were marked up as much as 20 basis points, as investors evidently concluded that a more vigorous expansion would likely be accompanied by more rapid policy tightening than they had previously expected.

The bottom left panel of the exhibit displays the option-implied probability distribution for the employment report outcome based on the economic derivatives auction held at 8:00 a.m. today. As noted by the vertical line, the reported increase of 337,000 was well into the upper tail of this distribution, which helps to explain the sizable market reaction. But, as noted at the right, the market reaction was sizable even controlling for the magnitude of the surprise. For example, the response of the ten-year Treasury yield—denoted by the blue square—was larger than would have been predicted based upon a historical event-study regression (shown by the thin black line) but was quite close to the regression line based on experience over the last

year (the red line) during which markets have appeared especially sensitive to news bearing on labor market conditions.

In view of the sizable employment gains reported for October and the upward revisions for the prior two months, as well as comments from several members, the staff has revised Bluebook table 1. The revised table eliminates alternative A and incorporates a new variation on alternative B that is labeled alternative B'. The new alternative does not hint that the Committee is entertaining the possibility of a pause. As a result, the language of alternative B' incorporates only minimal changes to the wording of the September FOMC statement. Alternatives B and C in the revised table are slightly revised for clarity, with material struck out in rows three and four.

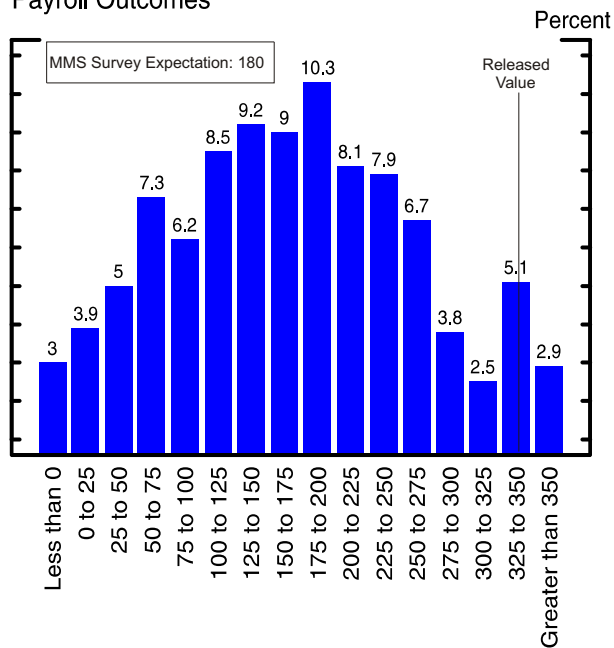
# Exhibit 1

## Market Reaction to the Nonfarm Payrolls Release on Nov. 5, 2004

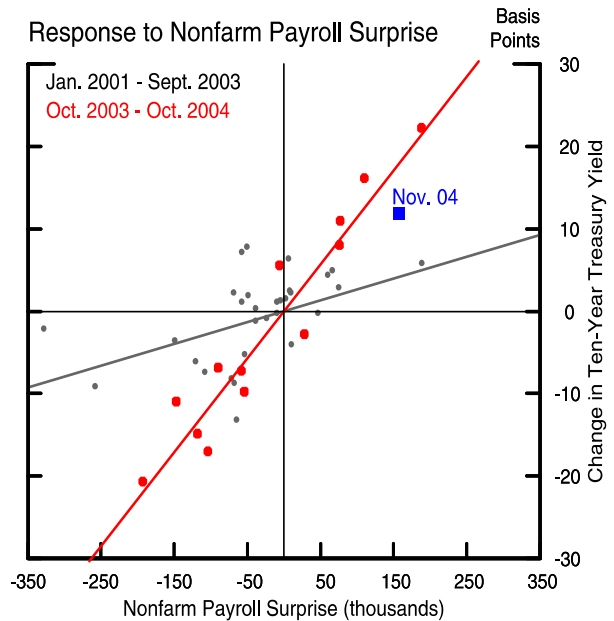
	Friday 5-Nov-04 8:15 AM (1)	Friday 5-Nov-04 8:45 AM (2)	Friday 5-Nov-04 10:00 AM (3)	Early Change (2)-(1)	Late Change (3)-(1)
<b>Treasury Coupon Yields</b>					
					<b>basis points</b>
Two-Year	2.62	2.80	2.77	18.0	14.7
Five-Year	3.35	3.53	3.49	18.1	13.9
Ten-Year	4.08	4.20	4.20	12.9	12.3
<b>Equity Indexes</b>					
					<b>percent change</b>
DJIA	10315*	—	10367	—	0.5
S&P 500	1162*	—	1166	—	0.3
Nasdaq	2024*	—	2040	—	0.8
<b>TIPS</b>					
					<b>basis points</b>
Five-Year	0.94	1.07	1.04	13.1	9.5
Ten-Year	1.63	1.73	1.72	10.0	8.5
<b>Fed Funds Futures</b>					
					<b>basis points</b>
Nov	1.92	1.93	1.92	1.0	0.5
Dec	2.07	2.10	2.11	2.5	3.0
Jan	2.14	2.19	2.19	5.5	5.5
Feb	2.31	2.39	2.39	8.5	8.5
<b>Eurodollar Futures</b>					
					<b>basis points</b>
D-04	2.35	2.43	2.42	8.5	7.5
M-05	2.60	2.74	2.73	14.0	13.0
J-05	2.79	2.97	2.96	17.5	17.0
S-05	2.98	3.18	3.17	20.0	19.0
D-05	3.18	3.39	3.37	21.5	19.5

\* Thursday close

Option Implied Probabilities of Nonfarm Payroll Outcomes



Response to Nonfarm Payroll Surprise



**Table 1: Alternative Language for the November FOMC Announcement (Revised)**

	September FOMC	Alternative B	Alternative B'	Alternative C
<b>Policy Decision</b>	1. The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 1¾ percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to <b>2 percent, bringing the cumulative increase in the target rate over the past several months to 1 percentage point.</b>	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to <b>2 percent.</b>	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to <b>2 percent.</b>
<b>Rationale</b>	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 the stance of monetary policy remains accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	[Unchanged from September statement]	[Unchanged from September statement]
	3. After moderating earlier this year partly in response to the substantial rise in energy prices, output growth appears to have regained some traction, and labor market conditions have improved modestly.	<b>Output appears to be growing at a moderate pace,</b> and labor market conditions have improved modestly.	<b>Output appears to be growing at a moderate pace,</b> and labor market conditions have improved modestly.	<b>Output appears to be growing at a moderate pace,</b> and labor market conditions have improved modestly.
	4. Despite the rise in energy prices, inflation and inflation expectations have eased in recent months.	Despite the rise in energy prices, inflation and <b>longer-term</b> inflation expectations <del>seem to</del> <b>remain well contained.</b>	Despite the rise in energy prices, inflation and <b>longer-term</b> inflation expectations <b>remain well contained.</b>	<b>Although longer-term inflation expectations seem to remain well contained, rising energy prices and an escalation of business costs have the potential to contribute to upward pressure on prices.</b>
<b>Assessment of Risk</b>	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.	[Unchanged from September statement]	[Unchanged from September statement]	[Unchanged from September statement]
	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.	[Unchanged from September statement]	[Unchanged from September statement]	[Unchanged from September statement]