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<sup>1</sup> In some cases, original copies needed to be photocopied before being scanned into electronic format. All scanned images were deskewed (to remove the effects of printer- and scanner-introduced tilting) and lightly cleaned (to remove dark spots caused by staple holes, hole punches, and other blemishes caused after initial printing).

<sup>2</sup> A two-step process was used. An advanced optimal character recognition computer program (OCR) first created electronic text from the document image. Where the OCR results were inconclusive, staff checked and corrected the text as necessary. Please note that the numbers and text in charts and tables were not reliably recognized by the OCR process and were not checked or corrected by staff.

## MONETARY POLICY ALTERNATIVES

### Recent Developments<sup>1</sup>

(1) Short-term interest rates in the United States moved down somewhat on the announcement of a 50 basis point easing at the May 15 FOMC meeting.<sup>2</sup> Market participants evidently were placing some odds on a 25 basis point move or at least were anticipating an indication that the Committee might subsequently slow the pace of easing. Since the meeting, news on economic activity and corporate earnings—both in the United States and abroad—has generally been weaker than market expectations. As a consequence, the trajectory for the expected funds rate shifted down further, triggering declines in other money market rates, which ended the intermeeting period 30 to 50 basis points lower. Market prices now embody at least a quarter-point easing at the upcoming meeting and a little more than an even chance of a half-point move. Yields on long-term Treasury and investment-grade corporate securities fell about 15 to 35 basis points over the intermeeting period (chart 1). Rates on speculative-grade bonds, however, jumped in response to adverse earnings warnings, particularly in the telecom sector, widening spreads substantially. Earnings warnings also weighed on

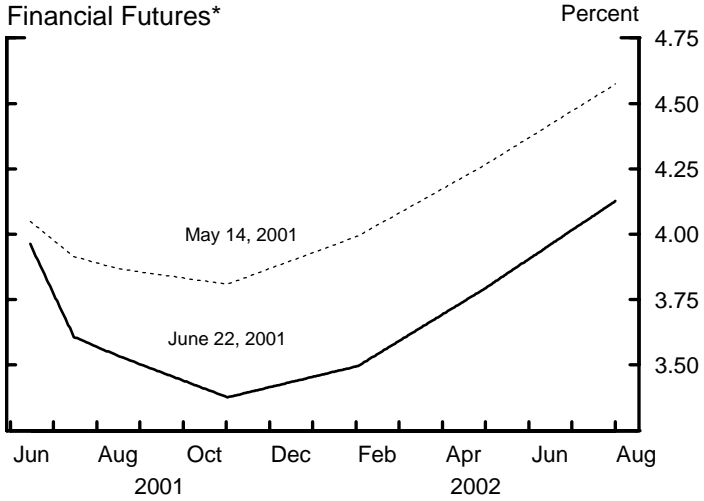
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1. Interest rates in this Bluebook have been updated through 3:00 p.m. June 22, and exchange rates are updated through noon.

2. Over the intermeeting period, federal funds have traded near the current target level of 4 percent. The Desk redeemed \$2.3 billion of Treasury securities, consisting entirely of coupon issues, to continue bringing SOMA holdings into conformance with the guidelines on per-issue limits. To offset the resulting reserve drain and meet longer-term reserve needs, the Desk purchased outright \$9.9 billion of Treasury securities, consisting of \$7.2 billion of coupon issues, \$2.1 billion of bills purchased in the market, and \$0.6 billion of bills purchased from foreign customers. The amount of outstanding long-term RPs was kept unchanged at \$12.0 billion.

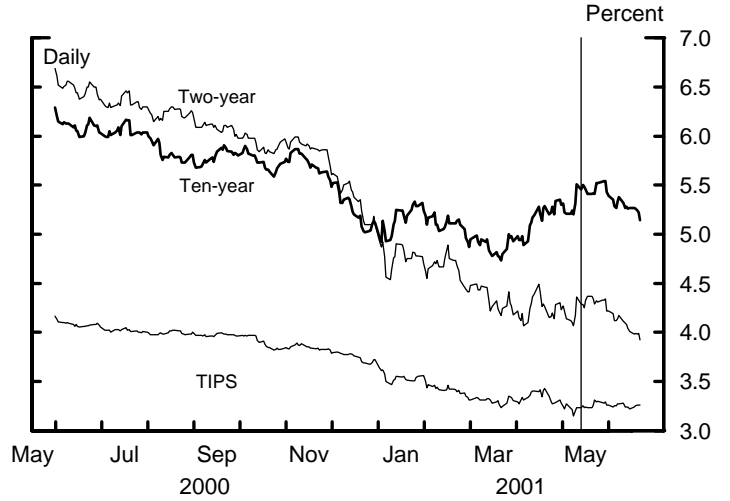
# Chart 1 Financial Market Indicators

**Expected Federal Funds Rates Estimated from Financial Futures\***

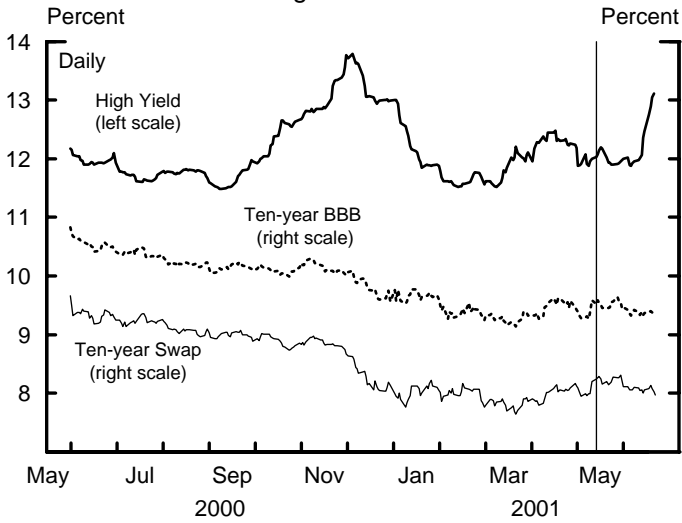


\*Estimates from federal funds and eurodollar futures rates with an allowance for term premia and other adjustments.

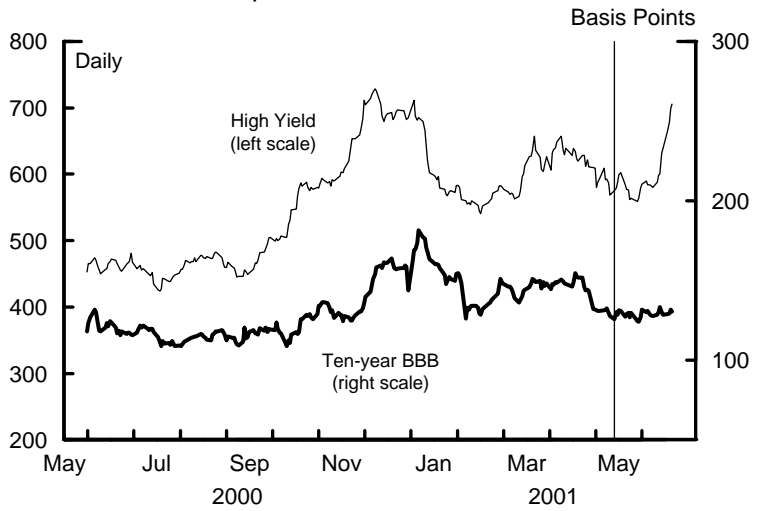
**Selected Treasury Yields**



**Selected Private Long-Term Yields**

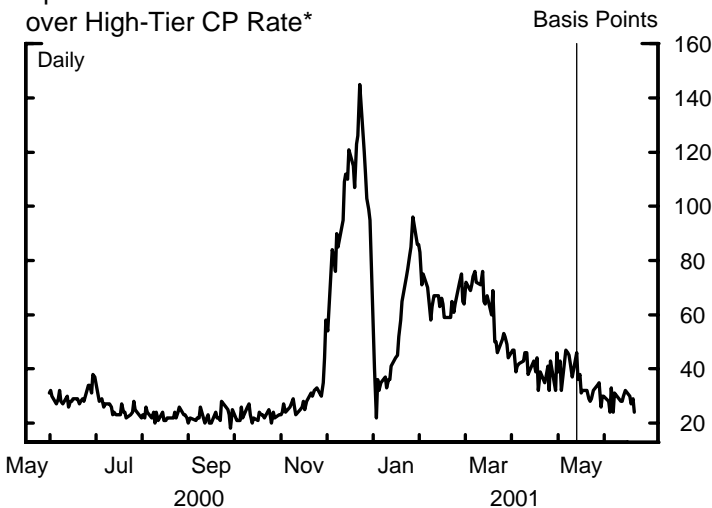


**Selected Risk Spreads\***



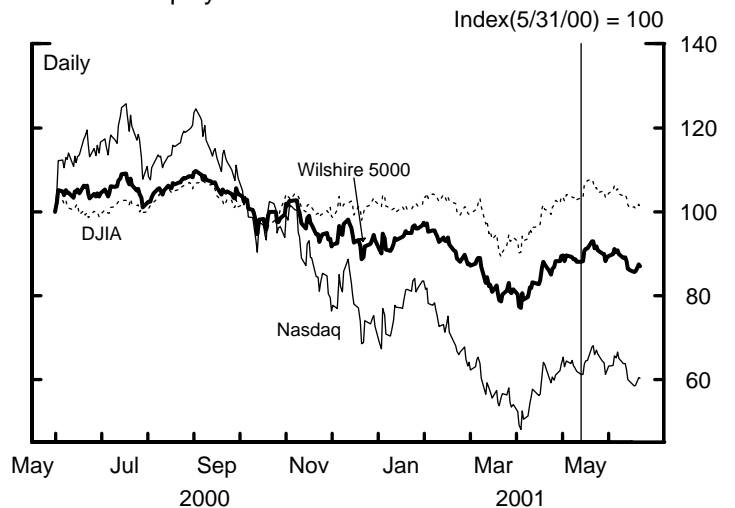
\*These spreads are the difference between the yields on the Merrill Lynch 175 and a ten-year BBB index versus rates on ten-year swaps.

**Spread of Low-Tier CP Rate over High-Tier CP Rate\***



\*30-day nonfinancial, A2/P2 rate less AA rate.

**Selected Equity Indexes**



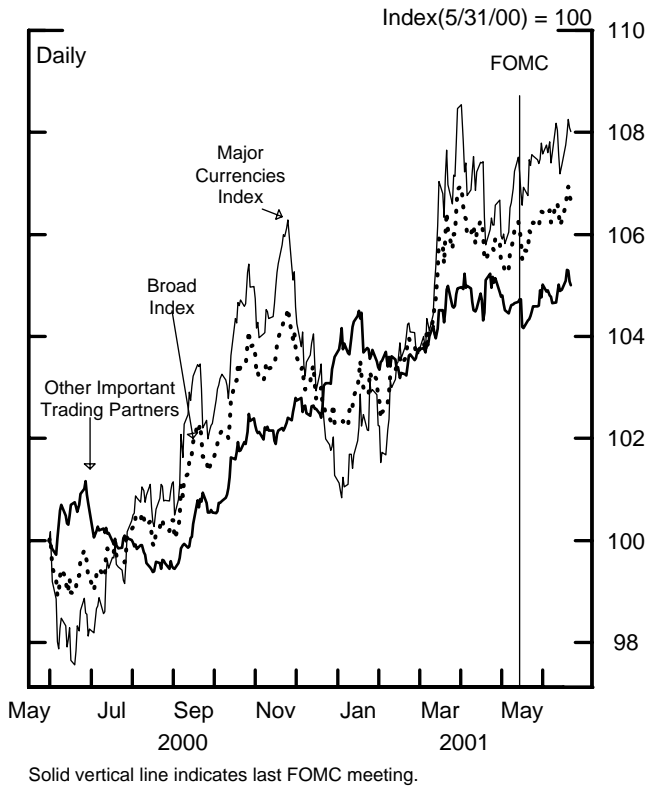
Note: Solid vertical line indicates last FOMC meeting.

equity prices, which have declined about 1½ percent on net since the May meeting. These declines in long-term interest rates and equity prices have reversed only part of the increases registered from late-March to mid-May, suggesting that investors remain somewhat more optimistic about economic prospects than they were in late March. The yield curve retains its upward slope, and futures markets still expect an appreciable rise in short-term rates next year.

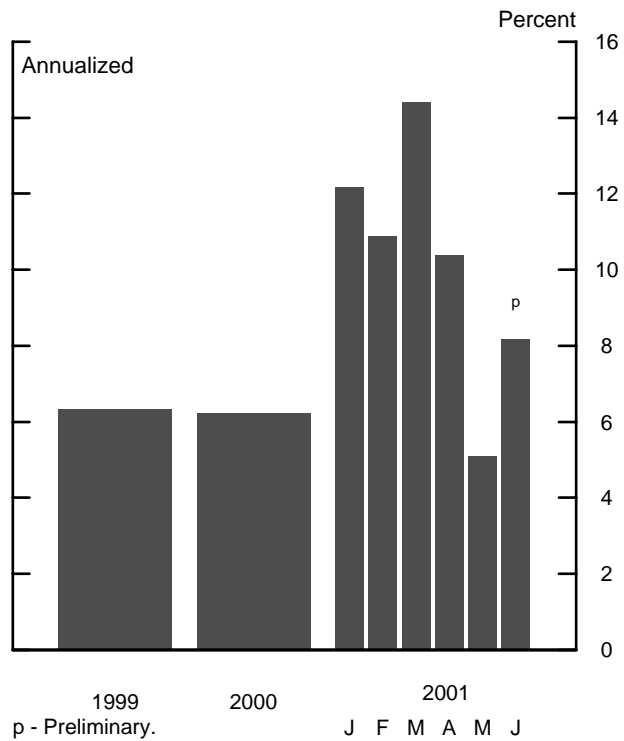
(2) With indicators of economic activity in Japan and Europe also suggesting softening, the exchange value of the dollar in terms of the major currencies index rose slightly on net over the intermeeting period (chart 2). The decline in first-quarter Japanese GDP surprised observers, and Japanese share prices, especially those of high-tech and banking sector companies, dropped sharply; yields on Japanese government debt with maturities out to two years fell to near zero. In the large European economies, economic prospects dimmed but inflation concerns mounted. Long-term interest rates were little changed on net until late in the period, when they declined 8 to 10 basis points, but broad share price indexes fell 1 to 5 percent. Market participants apparently interpreted recent upticks in inflation as lowering the odds that the European Central Bank will ease as much as was previously expected and eliminating any chance for further easing by the Bank of England. Although most other industrial-country central banks did not act during the intermeeting period, the Bank of Canada eased by a quarter point near the end of May.

## Chart 2 Exchange Rates and Financial Flows

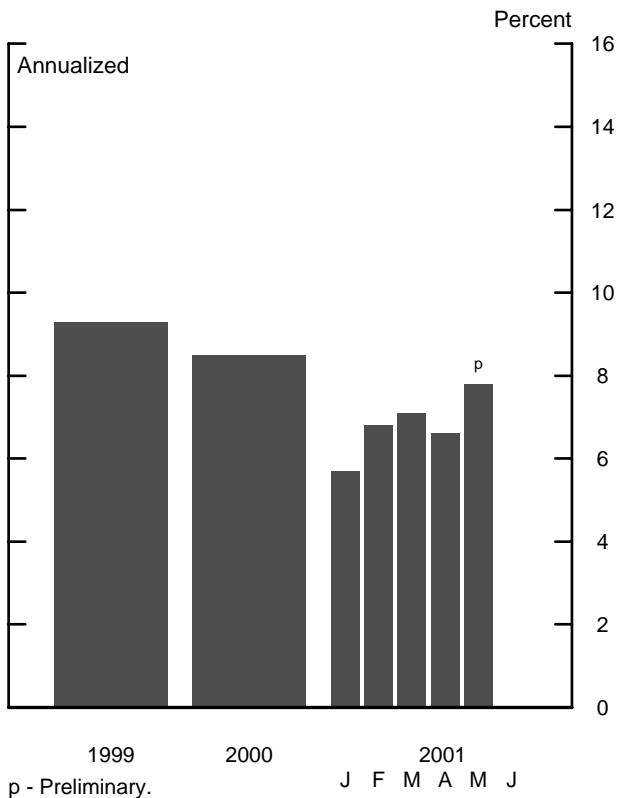
### Nominal Trade-Weighted Dollar Exchange Rates



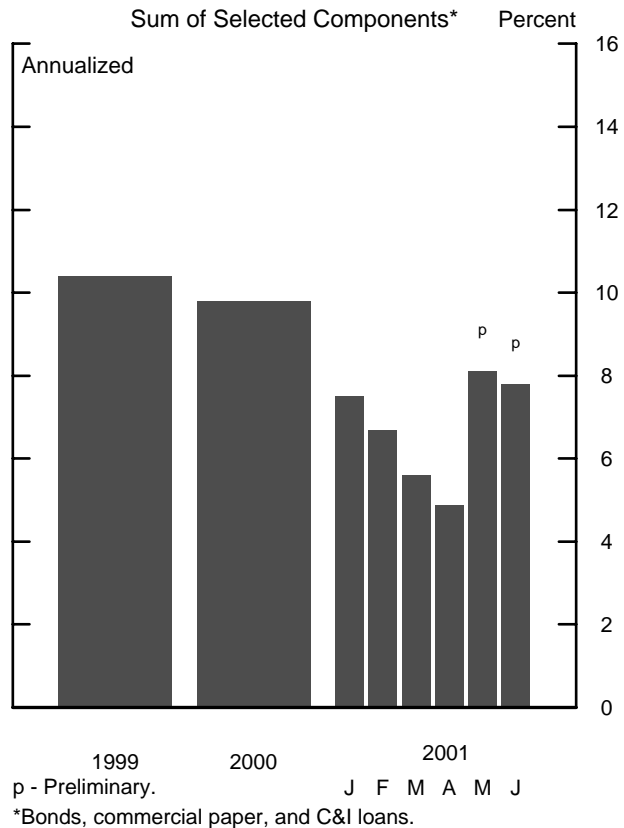
### Growth of M2



### Growth of Nonfederal Debt



### Growth of Business Debt Sum of Selected Components\*



(3) The dollar's value against the currencies of other important trading partners edged up on net over the intermeeting period. In early June, Argentina swapped shorter-term for longer-term debt to reduce its debt-servicing burden in the near term. Even though this exchange required generous longer-term yields to entice a large volume of propositions, spreads on Argentine dollar-denominated debt declined substantially from their levels in mid-May. In mid-June, Argentina introduced an exchange-rate-linked system of export subsidies and import taxes, which effectively lowered the value of the peso for traded goods but kept the dollar peg for other types of transactions. The implementation of this program led to fears that it was a prelude to a full devaluation, and financial markets erased some earlier gains, leaving Argentine bond spreads over comparable U.S. Treasury securities down only about 120 basis points for the intermeeting period as a whole. The Brazilian *real* was battered over the intermeeting period by spillovers from Argentina, problems in the energy sector arising from drought, and domestic political scandals, but central bank intervention and a tightening of monetary policy in late June helped the currency to battle back and end the period down only about 3½ percent versus the dollar. Benefitting from continued foreign interest in Mexican investments and high oil prices, Mexico's currency appreciated about 1½ percent against the dollar, while the yield spread of Mexican sovereign debt over Treasuries declined about 30 basis points.

(4) The debt of nonfederal sectors has continued to increase at a good clip in recent months, expanding at about a 6½ percent annual rate in April and, based on preliminary data, at a somewhat faster pace in May. With bond markets quite receptive and long-term rates viewed as attractive, nonfinancial businesses borrowed huge amounts in the bond market in May, and data for early June suggest another strong month. A portion of this issuance was used to repay bank loans and commercial paper, but much of it represented new financing as internal funds have

dropped off. Although the growth of household debt is projected to slow to about a 7¼ percent annual rate for the second quarter as a whole, it remains higher than that of disposable income, pushing up debt-servicing burdens despite declines in consumer loan rates. Problems servicing debt continued to increase in certain market segments but restraint on credit supplies has been quite limited. State and local governments have continued to raise funds at a rapid clip, especially for new capital projects. Outstanding marketable debt of the federal government shrank substantially further over the intermeeting period. From the fourth quarter of 2000 through May 2001, total nonfinancial debt is estimated to have expanded at about a 4½ percent annual rate, only slightly faster than the projected growth of nominal GDP over the first half of the year.

(5) M2 growth slowed in May, as a large amount of final individual tax payments cleared, but has rebounded smartly in June to an estimated 8¼ percent annual rate (chart 3). On a quarterly average basis, therefore, M2 has hardly slowed at all this quarter. Overall, from the fourth quarter of last year through June, M2 is estimated to have grown at about a 10 percent pace, bolstered importantly by the reduction in the opportunity costs of holding liquid deposits and money market mutual funds engendered by five policy easings in quick succession. Moreover, a drop in mortgage rates, which began about a year ago, had progressed far enough by the end of 2000 to kick off a wave of refinancing that elevated M2 this year, as the proceeds earmarked to pay off previously securitized mortgages were temporarily held in escrow in M2 deposit accounts. A further influence supporting M2 growth in the first part of the year may have been the reduced attractiveness and greater volatility of stock market returns. M3 growth, which has come down from April's unusually strong pace, is still quite robust. Institution-only money funds, which expanded rapidly during the first quarter because of the effects of policy easing and a continued

Chart 3  
 Money and Credit Aggregates  
 (growth in percent saar) <sup>1</sup>

	M2	M3	Domestic Nonfinancial Debt			Bank Credit Adjusted <sup>2</sup>	Monetary Base
			Total	Federal	Nonfederal		
2000	6.2	9.2	5.3	-6.7	8.5	9.4	1.4
2001: H1 <sup>P</sup>	10.5	13.1	4.6	-6.4	7.2	4.7	6.1
Q4 - May	10.3	13.2	4.5 p	-7.4 p	7.2 p	4.8	6.0
Q4 - June <sup>P</sup>	10.0	13.0	n.a.	n.a.	n.a.	4.2	6.4
Q1	10.7	12.2	4.8	-5.4	7.2	6.8	6.4
Q2 <sup>P</sup>	10.0	13.5	n.a.	n.a.	n.a.	2.6	5.7
April	10.4	17.6	3.4	-10.9	6.6	5.0	7.1
May	5.1	13.3	3.2 p	-17.6 p	7.8 p	1.7	6.3
June <sup>P</sup>	8.2	11.5	n.a.	n.a.	n.a.	0.3	8.4

1. Annual growth rates are Q4/Q4. Semi-annual growth rates are Q2/Q4, annualized. Quarterly growth rates are from previous quarter, annualized. Monthly growth rates are from previous month, annualized. Levels underlying growth rates are averages for the quarter or month.

2. Adjusted to remove the effects of mark-to-market accounting rules (FIN 39 and FAS 115).

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strong trend toward their use for corporate cash management, have kept growing rapidly in recent months. From the fourth quarter of last year through June, M3 has increased at a 13 percent annual rate.

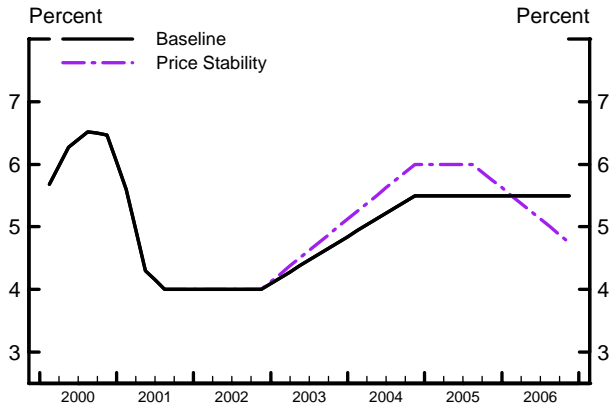
## Longer-Term Strategies

(6) This section examines some implications of the Greenbook outlook for longer-term strategies for monetary policy and considers the implications for policy of alternative possibilities for productivity growth. The experiments are constructed from a baseline scenario in which the Greenbook forecast is extended through 2006 using the FRB/US model, with certain judgmental adjustments to the model that preserve the central features underlying the staff outlook. Potential output growth in the baseline is driven by several key considerations: Multifactor productivity growth continues at its 2002 pace; overall investment in capital equipment accelerates beyond the Greenbook horizon, buoying the expansion of capital services; and the degree of labor market slack consistent with stable inflation (the effective NAIRU) rises from about 5¼ percent in 2002 to 5½ percent by 2005. Taking all these factors together, the rate of increase in potential output is a tad above 3½ percent after 2003, a slight rise from this year and next. Growth abroad strengthens to 3¾ percent by 2003, and the dollar is assumed to depreciate at a 3 percent annual rate in real terms, keeping the ratio of the current account deficit to GDP about flat. Lastly, the fiscal assumptions in the extension hold the unified budget surplus at about 2 percent of nominal GDP, modestly higher than the surplus in calendar 2002.

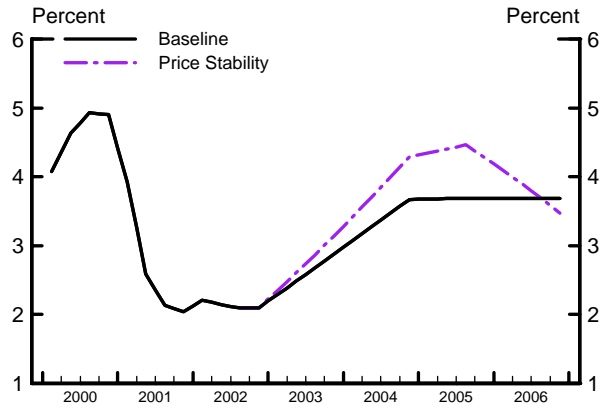
(7) The **baseline strategy** in chart 4 is designed to hold core PCE inflation at 1¾ percent, a touch below the rate at the end of the Greenbook horizon. Monetary policy is relatively accommodative at the start of the extension, with a real federal funds rate of about 2¼ percent, more than a percentage point below its equilibrium level implied by the baseline at that time. Consequently, monetary policy must tighten in this scenario, by raising the nominal funds rate to 5½ percent by mid-decade and the real rate to about its equilibrium level of 3¾ percent. The purple ball-and-chain line in chart 4 shows a path for policy that is sufficient to reduce inflation to

## Chart 4 Alternative Strategies for Monetary Policy

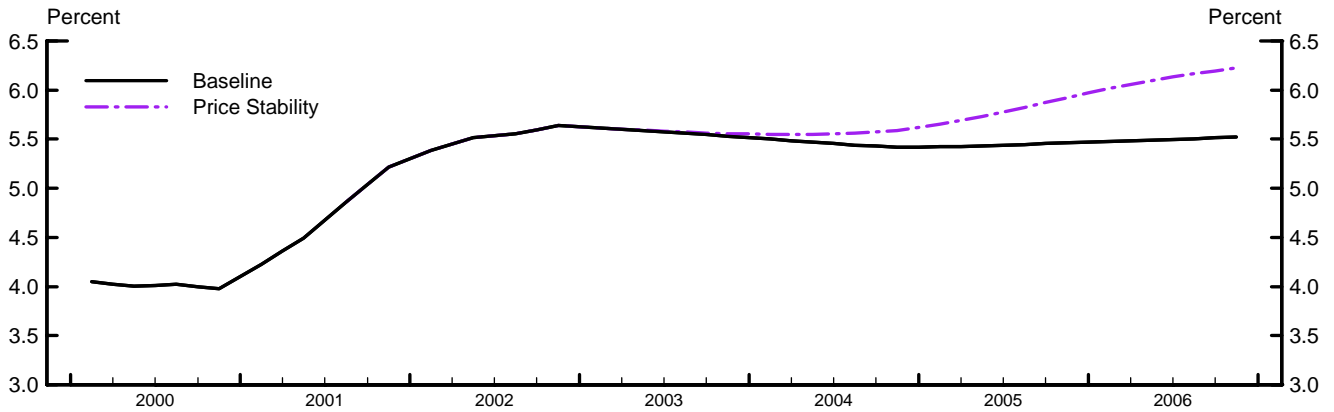
### Nominal Federal Funds Rate



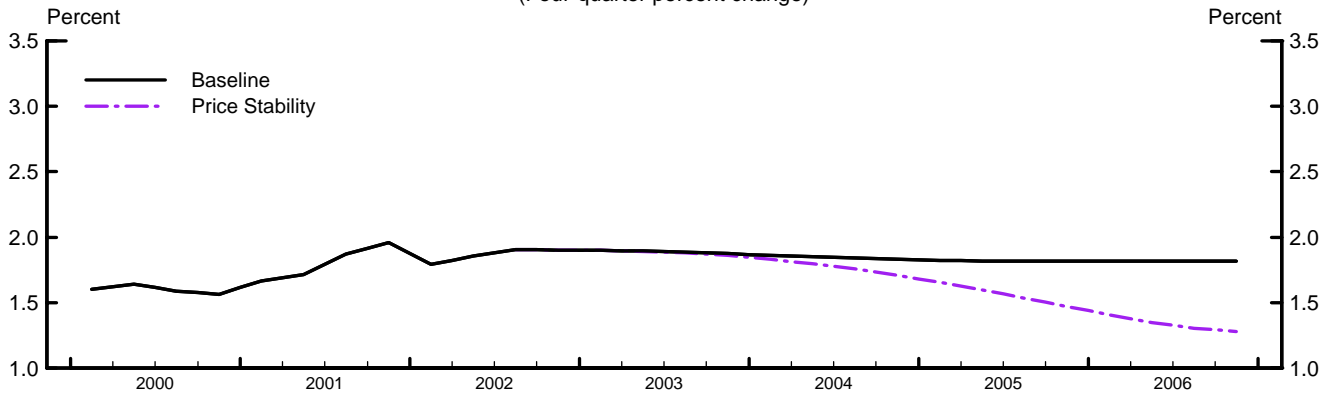
### Real Federal Funds Rate<sup>1</sup>



### Civilian Unemployment Rate



### PCE Inflation (ex. food and energy) (Four-quarter percent change)

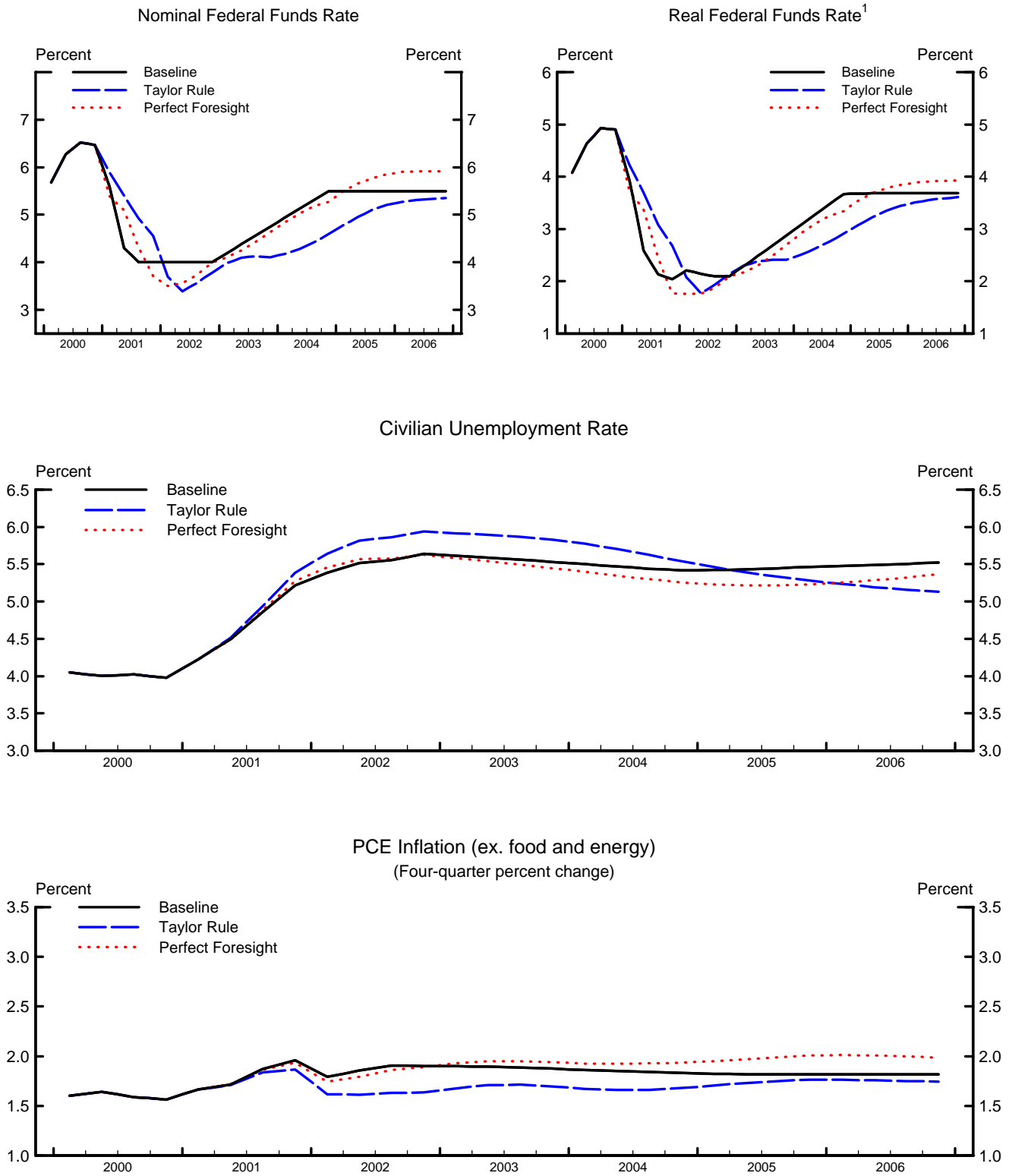


1. The real federal funds rate is calculated as the quarterly nominal funds rate minus the four-quarter percent change in the PCE chain-weight price index excluding food and energy.

near **price stability**, defined here as 1¼ percent growth in core PCE prices. To achieve this outcome, the real funds rate needs to rise above its long-run equilibrium level to induce slack in the economy. In this exercise, the nominal rate peaks at 6 percent by the end of 2004, enough to push the unemployment rate above 6 percent and bring inflation down to its target level by 2006. Policy, which begins to ease in 2005 in anticipation of the completion of the disinflation, would presumably ease further after 2006 to bring the unemployment rate back to the NAIRU.

(8) The 2½ percentage point decline in the funds rate so far this year represents the swiftest monetary policy easing since the autumn of 1984. To provide perspective on this action, chart 5 compares this outcome with those that would have occurred under two monetary policy rules. As in chart 4, the black solid line in the upper left panel shows the nominal federal funds rate for the extended Greenbook baseline. The blue dashed line shows the path predicted by a **Taylor rule**. The rule employed here uses standard coefficients on the contemporaneous inflation and output gaps beginning in 2001:Q1, but incorporates the baseline's time-varying equilibrium real funds rate and its inflation target of 1¾ percent. In the first half of 2001, policy eased considerably more than this Taylor rule would have suggested. One possible explanation for this discrepancy is that policy choice was informed by more than the limited information used in the Taylor rule, especially forecasts of the economy. To provide a perspective on this possibility, the red dotted line presents the federal funds rate that would be chosen by a policymaker with **perfect foresight** starting at the beginning of this year. Specifically, the policymaker is assumed to be certain that the model accurately described the economy and that the baseline

Chart 5  
Policy Easings in 2001 H1: Alternative Views



1. The real federal funds rate is calculated as the quarterly nominal funds rate minus the four-quarter percent change in the PCE chain-weight price index excluding food and energy.

correctly described all of the forces impinging on the economy.<sup>4</sup> The actual path for the funds rate in the first half of this year has been much closer to that of the perfect foresight policy than to that of the Taylor rule.

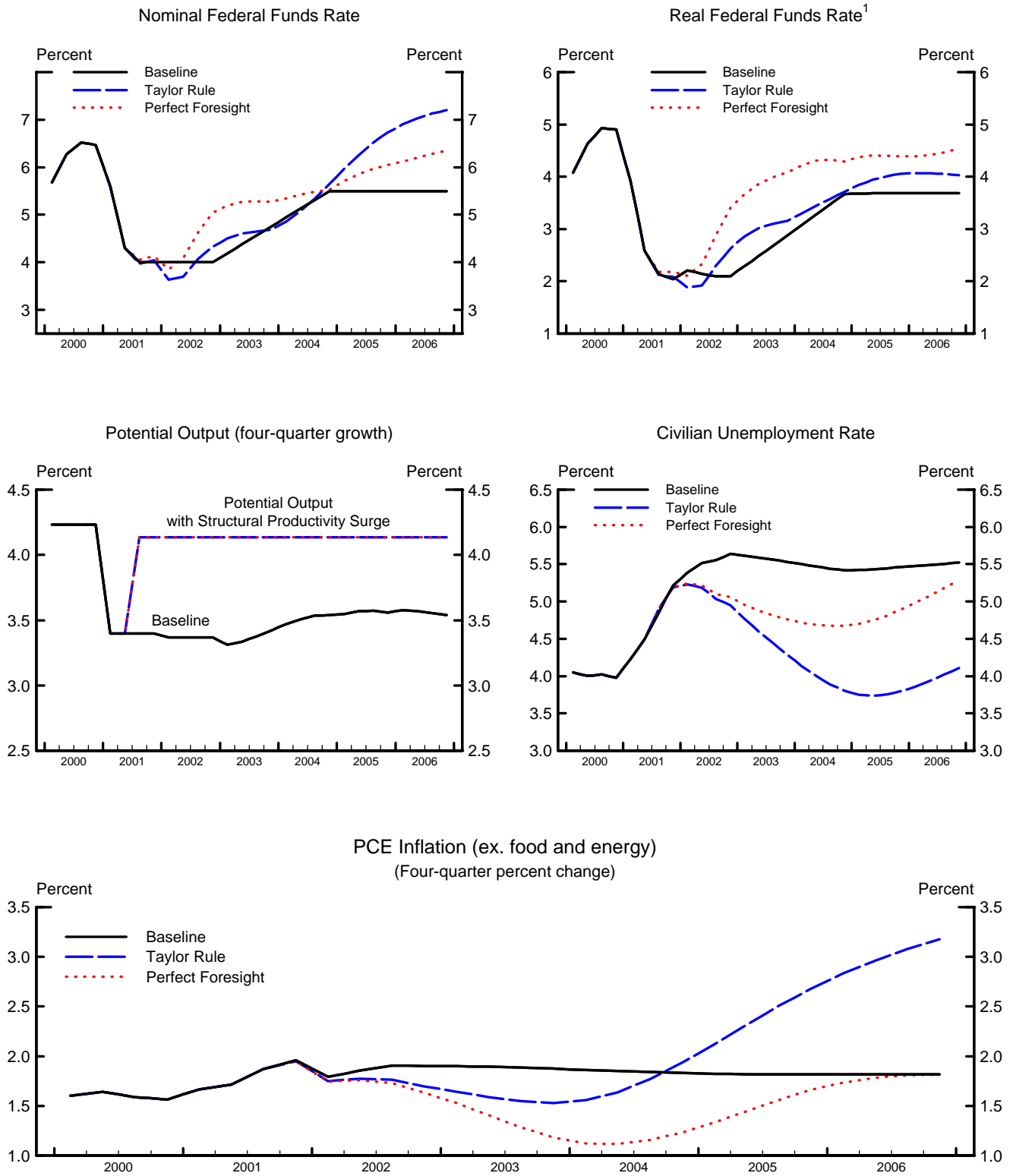
(9) The staff forecast is arguably at odds with the market's view, which appears to incorporate expectations of both a rapid reversal of the funds rate and stronger corporate earnings. Chart 6 considers the possibility that the market's outlook can be rationalized by faster growth of potential output than projected by the staff. In these exercises, structural labor productivity accelerates  $\frac{3}{4}$  percentage point to  $3\frac{1}{4}$  percent beginning in 2001:Q3, about the same as estimated for 1999-2000. As before, the black solid line plots the extended baseline, shown for reference purposes. The blue dashed line and the red dotted line show the funds rates from the Taylor rule and the perfect foresight policy, respectively, operating in the context of the higher structural productivity growth. Both rules initially hold the federal funds rate around its current value in response to near-term economic weakness and ultimately raise it enough to be consistent with the higher returns to capital provided by faster long-run growth.<sup>5</sup> However, because the Taylor rule does not respond to the productivity surge until it becomes manifest in output, imbalances in inflation and output arise. By contrast, the funds rate under the perfect foresight policy increases much more rapidly,

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4. More precisely, the red dotted line is the outcome of a full-information optimal control exercise. The policymaker is assumed to place equal weight on minimizing squared deviations of core PCE inflation from its target and unemployment from the short-run effective NAIRU and to follow a gradualist strategy that penalizes quarter-to-quarter changes in the funds rate. The penalty was chosen to approximate the gradual changes in the funds rate that have been observed over the past fifteen years.

5. This specification does not allow the estimated equilibrium real rate in the Taylor rule to respond to this productivity shock. Instead, the higher real fed funds rate evolves with movements in the output and inflation gaps.

## Chart 6 Implications of Structural Labor Productivity Surge<sup>1</sup>



1. The real federal funds rate is calculated as the quarterly nominal funds rate minus the four-quarter percent change in the PCE chain-weight price index excluding food and energy.

beginning next year in a pattern similar to that seen in financial futures markets, and fosters a smoother path for inflation and unemployment.<sup>6</sup>

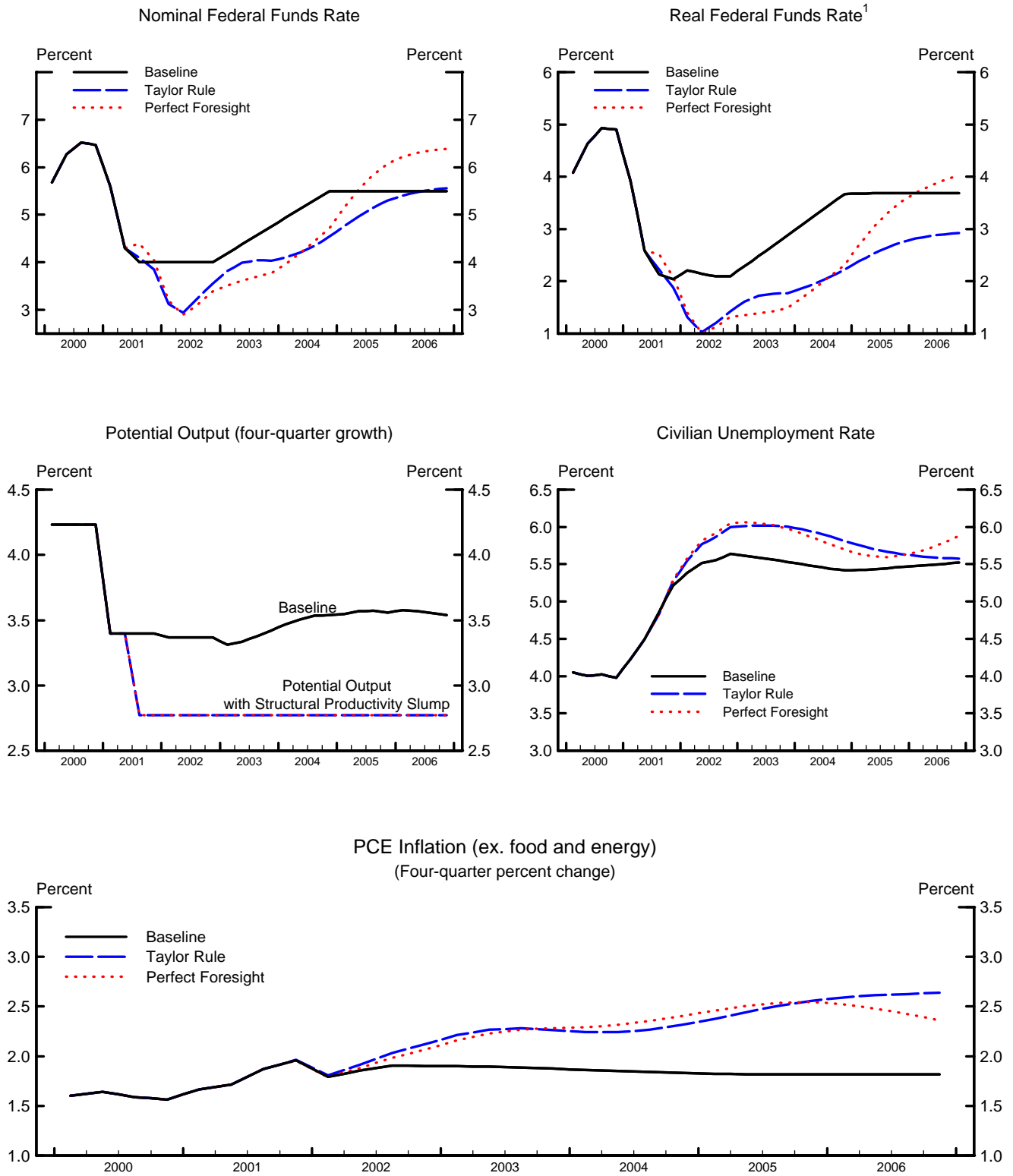
(10) The reduction in corporate earnings of late, should it continue, might be taken as signaling that structural labor productivity growth will continue to slow. To consider the implications of this possibility, we examine simulations in which productivity growth steps down to 1¾ percent, about ¾ percentage point below that projected in the Greenbook for this year and next. Chart 7 plots the funds rate in the baseline case for reference and, with this new assumption for productivity growth, the funds rate paths produced by the Taylor rule (the blue dashed line) and the perfect foresight policy (the red dotted line). The productivity deceleration reduces current and expected income and leads to a marked weakening in aggregate demand relative to the baseline, while adding to pressures on costs that boost inflation. The effects of the downshift in demand predominate for each of the policy rules, and so both call for sharp declines in the funds rate in early 2002. Unlike chart 6, where the Taylor rule falls behind emerging economic developments, here it does considerably better. The main reason for the Taylor rule's more appealing performance is that the productivity deceleration in this simulation exacerbates the economic sluggishness currently in train, which was already prompting the backward-looking Taylor rule to prescribe easing. Without the need for the kind of near-term reversal in the stance of policy that was required in chart 6, the myopia of the Taylor rule does not turn out to be a serious liability for the conduct of monetary policy.

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6. Indeed, a simulation under perfect foresight with less gradualism than observed over the past fifteen years produces a federal funds rate path that fairly closely matches the near-term dip as well as the subsequent rebound built into financial markets.



## Chart 7 Implications of Structural Labor Productivity Slump



1. The real federal funds rate is calculated as the quarterly nominal funds rate minus the four-quarter percent change in the PCE chain-weight price index excluding food and energy.

### Short-Run Policy Alternatives

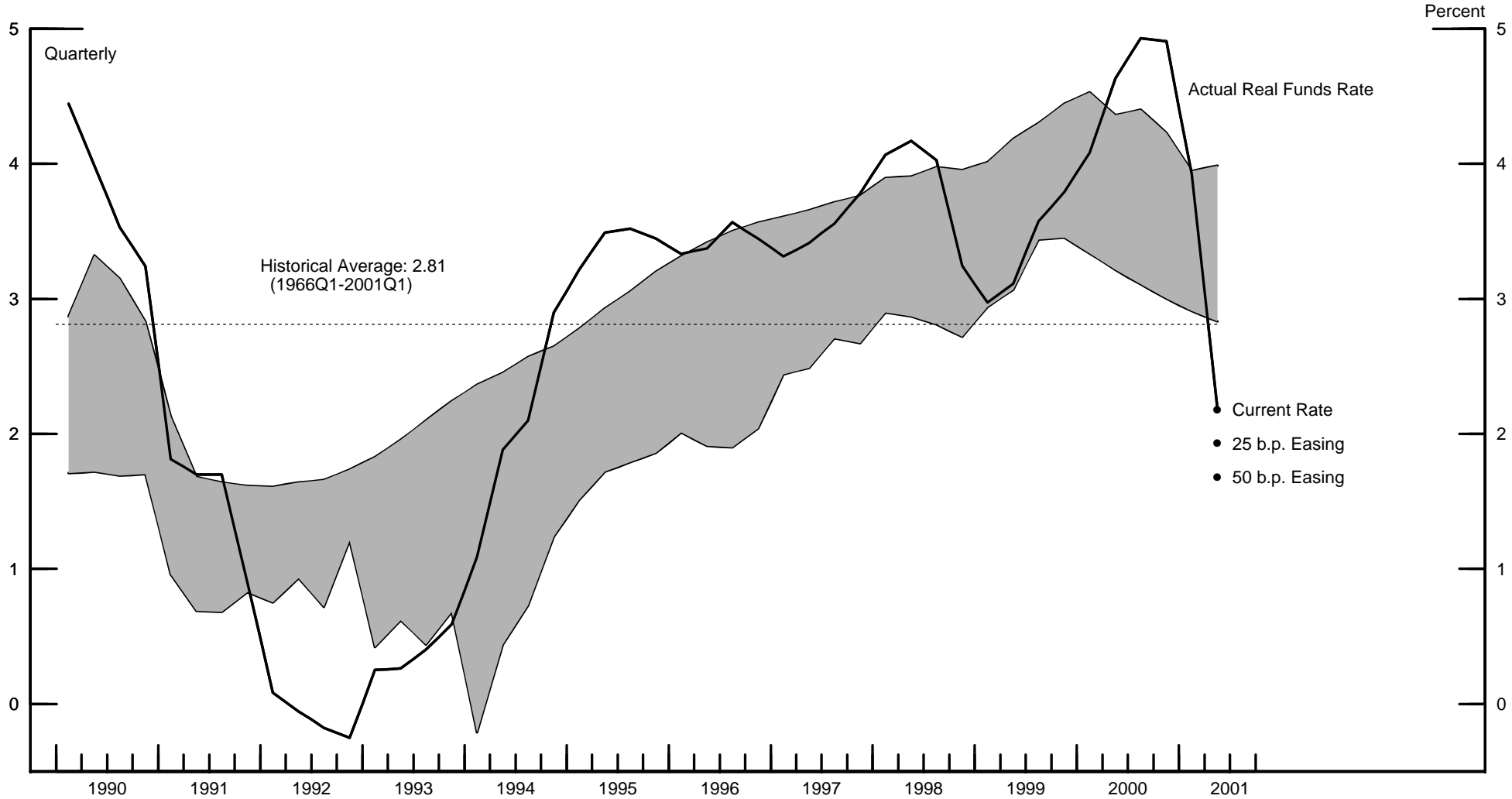
(11) Incoming data have prompted the staff to revise down its outlook for investment spending over the next year and a half, directly restraining the expansion of economic activity. This slower accumulation of capital also pulls down the estimated growth of structural productivity, and associated reductions in expected returns to labor and capital work to damp further the forecast of aggregate demand. The effects of these developments on consumption spending are partly offset by greater stimulus from tax cuts than assumed in the last Greenbook. On net, economic growth is expected to be somewhat slower this year and the unemployment rate to rise more sharply than in the last forecast. Although lower productivity growth implies more intense inflation pressures at any given unemployment rate, the economy is sufficiently weak in the forecast to put effective slack in labor markets by late this year. This slack and the indirect effects of lower oil prices cause core consumer inflation to edge down in 2002 from the higher pace experienced this year. In the staff's assessment, an unchanged federal funds rate over the next year and a half, as assumed in the Greenbook, is moderately accommodative and helps growth of aggregate demand rise a little above that of potential output by the second half of next year, halting the climb in the unemployment rate.

(12) The chart on the next page shows an update of the range of estimates of the equilibrium real federal funds rate presented in the previous bluebook.<sup>7</sup> The range

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7. These individual estimates of the intermediate-run equilibrium real federal funds rate are derived from the FRB/US model, from a statistical filter separating permanent and temporary changes in the relationship of the real funds rate to the output gap, and from indexed debt yields. One estimate from the FRB/US model and one from the filter are based on historical data, while another set takes account of the staff's forecast through 2002.

Chart 8  
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 the five estimates of the equilibrium real federal funds rate described in the text. Real federal funds rates employ four-quarter lagged core PCE inflation as a proxy for inflation expectations, with the staff projection used for the second quarter of 2001.

for the current equilibrium rate is roughly the same as that shown last time.<sup>8</sup> The ½ percentage point policy easing at the May meeting has put the estimated real funds rate noticeably below that range. This gap provides a measure of the stimulus from the current stance of monetary policy, but one that depends on the many assumptions that went into constructing the estimates of the equilibrium funds rate, importantly including the staff's estimate of structural productivity growth and the level of the NAIRU.<sup>9</sup> The real federal funds rates implied by the policy alternatives discussed below for this meeting—cuts of 25 and 50 basis points as well as an unchanged funds rate—are also plotted.

(13) With much of the effect on spending of the 250 basis points of easing still to be realized and the real funds rate already seemingly below its equilibrium value, the Committee may wish to keep the federal funds rate **unchanged** at this meeting, as assumed in the Greenbook. In the staff outlook, with an unchanged federal funds rate the effective NAIRU rises along with the unemployment rate over the forecast period, and therefore only a moderate amount of slack opens up in labor markets. The Committee may see that slack as needed to lean against the recent updrift in a number of measures of inflation, especially if it wishes to make further progress toward price stability over time. In the Greenbook forecast, the growth of real activity would already be drawing close to that of its potential and headed higher by the time an easing at this meeting would begin to have a noticeable impact on the economy.

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8. The range of estimates for past years has been adjusted downward to some extent, largely because of modifications to the FRB/US model.

9. The range indicated by the shaded area does not capture all the uncertainties associated with estimating the equilibrium real funds rate; in particular it does not include standard errors around the individual estimates. For example, the standard error of the current estimated equilibrium real rate from the statistical filter is around 1½ percentage points, even before accounting for uncertainty in the staff's estimate of potential output.

Indeed, the Committee may be concerned that the recent behavior in financial markets suggests that investors could revise up their inflation expectations should growth revive especially rapidly. In light of the uncertainties about the response of the economy to the steep easing of policy so far this year, a pause may be considered appropriate at present to assess better whether the previous policy actions are likely to induce a suitable rebound in economic activity.

(14) A decision to hold the funds rate unchanged at this meeting—even with a statement indicating that the Committee still saw risks weighted toward economic weakness—would take financial market participants by surprise. The extent of the surprise would depend in part on the data on durable goods orders, home sales, and consumer confidence that will be received just before the FOMC meeting, but judging from current futures market quotes, short-term rates would back up sharply, likely by more than  $\frac{1}{4}$  percentage point, as markets became uncertain about whether any additional easing would be forthcoming this year. The resulting upward pressure on long-term yields, though, would likely be offset somewhat by a decline in stock prices, which could be sharp.<sup>10</sup>

(15) Instead, the Committee may deem it appropriate to ease policy at this meeting. Aggregate demand again has proven weaker than anticipated and has yet to show concrete signs of firming, while declines in resource utilization are likely to relieve pressures on prices. In these circumstances, the Committee may view the staff's assessment of the economic outlook as reasonably likely and acceptable, but it may see the risk to that forecast as uncomfortably weighted to the downside. With the economy already soft for three quarters, the extent and further duration of the forces acting to restrain spending still very unclear, and the degree of the countervailing

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10. Market reactions to the surprise elements in policy easings have varied widely and somewhat unpredictably this year, as shown in the appendix on page 17.

stimulus from the easier monetary and fiscal policies quite uncertain, an additional easing of policy by **25 basis points** would provide greater assurance of a satisfactory strengthening of economic activity. Moreover, a rate cut smaller than those earlier this year would be appropriate if the Committee saw policy as already reasonably accommodative and therefore wished to proceed more cautiously on the thought that the easing cycle might need to be brought to a close before long. Braking the pace of easing would likely limit the tendency of market participants, observed after recent policy actions, to extrapolate further easing, which might otherwise lead to financial conditions that the Committee viewed as excessively stimulative.

(16) With market participants putting a little more than even odds on a 50 basis point move at this meeting, short-term interest rates would move up on an announcement of a 25 basis point easing, even if accompanied by a statement that the risks were still tilted toward weakness. Market participants are unlikely to revise up significantly their forecast of the low point for the target funds rate, but they probably would push that point further into the future, implying that intermediate- and longer-term interest rates would only edge higher. With the Federal Reserve still expected to ease again, the negative reaction in stock markets could well be limited. However, if the smaller size of the action and the words of the announcement fostered the belief that the easing cycle had come to an end, a more pronounced reaction in markets would be likely.

(17) Alternatively, the Committee may see aggregate demand or inflation pressures as likely to be noticeably weaker than in the staff forecast, arguing for a more forceful easing of **50 basis points**. The near-term prospects for corporate earnings are bleak, raising the possibility of larger declines in equity prices than are built into the staff forecast. The resulting hit to household wealth, along with the more rapid rise in unemployment, could sap consumption spending considerably. Even if the staff has

judged the fundamentals of spending correctly, the Committee may view the inflation outlook to be more favorable than in the Greenbook. In particular, the Committee may interpret the good inflation performance of the past few years as resulting more from lasting changes in underlying labor market conditions and less from the temporary effects of the acceleration of productivity than is implicit in the staff forecast. If so, the equilibrium real funds rate would also be lower than is implicit in the Greenbook, and more forceful policy ease could be seen as necessary to achieve the correct configuration of the actual and equilibrium real rates.

(18) If the Committee reduces the funds rate 50 basis points while retaining a statement of risks weighted toward economic weakness, short-term interest rates would likely fall, especially as markets build in further easing this year and defer some of the policy tightening now expected for 2002. Equity markets would be buoyed by the move, but the rally could prove transitory if subsequent earnings reports prove disappointing as is likely under the staff forecast. Real bond yields would likely fall as a consequence of the policy action, and—unless the initial equity market rally were particularly vigorous—nominal yields could decline some as well. Any increase in inflation expectations would be short-lived if, consistent with the Committee's rationale for its action, the markets subsequently receive evidence of persisting weakness in economic activity and damped inflation.

(19) Borrowing by nonfederal sectors is expected to moderate slightly in the second half of the year, in line with the slowing in nominal income growth under the Greenbook forecast. Credit supply conditions for businesses are likely to continue to tighten in coming months amid signs of further deterioration in the quality of weaker borrowers and unfavorable news on corporate earnings. Nevertheless, with the economy strengthening later this year and in 2002, a widespread contraction in credit availability is not foreseen under the staff forecast. Businesses are anticipated to

maintain a moderate pace of borrowing, despite softness in capital expenditures and a reduced rate of equity retirements, as sluggish cash flow prompts firms to rely more on external funds. Household debt growth is forecast to drift down, reflecting a slower pace of spending on consumer durables and the paydown of some credit card debt with a portion of the tax rebates. In the months just ahead, the Treasury is projected to become a net borrower to finance tax rebates, but then to resume paying down debt over the final months of the year. Mainly reflecting this pattern, growth of total domestic nonfinancial debt is forecast to pick up some in the next few months and then to move down over the rest of the year, bringing growth for the year to 5 percent.

(20) With the waning of the effects of previous policy easings on opportunity cost and money demand, M2 is projected to slow to a 5½ percent growth rate over the June-to-December period under the staff forecast. While tax rebates should boost M2 holdings somewhat in the months ahead, a reduced level of mortgage refinancings likely will restrain growth of this aggregate. Given the Greenbook forecast of only a small decline in equity prices, the projection does not incorporate a renewal of investor shifts from the stock market to M2 assets. M2 is expected to post growth of 8¼ percent this year, implying a 4¼ percent decline in its velocity. The expansion of M3 is projected to slow to a 7½ percent pace over the June-to-December period, as growth of institutional money funds slows with the stabilizing of short-term interest rates. Over the four quarters of the year, M3 would expand 11 percent.



### **Directive and Balance-of-Risks Language**

(21) Presented below for the members' consideration is draft wording for (1) the directive and (2) the “balance-of-risks” sentence to be included in the press release issued after the meeting (not part of the directive).

#### (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~~ percent.

#### (2) “Balance-of-Risks” Sentence

Against the background of its long-run goals of price stability and sustainable economic growth and of the information currently available, the Committee believes that the risks [ARE BALANCED WITH RESPECT TO PROSPECTS FOR BOTH GOALS] [CONTINUE TO BE WEIGHTED MAINLY TOWARD CONDITIONS THAT MAY GENERATE HEIGHTENED INFLATION PRESSURES] [continue to be weighted mainly toward conditions that may generate economic weakness] in the foreseeable future.

### Appendix

The reaction of financial markets to changes in monetary policy this year has varied considerably and proved difficult to predict. The table below indicates how stock prices and Treasury coupon yields have responded to the five easings undertaken earlier in the year. The first column shows the “surprise” component of each adjustment in the target funds rate, which is inferred from the change in a near-term federal funds futures contract around the time of a policy announcement. In the afternoons following the first three easings this year, equity prices responded rather strongly to the surprise in policy actions, probably because investors were quite uncertain and concerned about the near-term outlook for the economy, and the “surprise” affected confidence as well as the outlook for interest rates. The consequences for the economy and for future policy of the shift in attitudes and equity market reactions appeared to cause nominal Treasury yields to move in the same direction as stock prices, rather than in the direction of the policy surprises. In April, however, with investors already becoming more optimistic about the economic future, a traditional response of market interest rates occurred following the unexpected policy easing—the equity price rise was more moderate relative to the degree of surprise and yields fell. In the wake of the easing at the May FOMC meeting, which was a little greater than the average of market expectations, short-term Treasury yields dropped, as would traditionally be expected, but stock prices and long-term yields were about unchanged.

**Policy Surprises and the Responses of Equities and Treasuries**

Date of Policy Move	Policy Surprise (b. p.)	Wilshire Index (percent)	2-Year Treasury Yield (b. p.)	10-Year Treasury Yield (b. p.)	10-Year TIPS Yield (b. p.)	<i>Memo: Nominal long rates responded primarily to:</i>
Jan. 3	- 39	5.8	2	21	6	Equity Prices
Jan. 31	4	- 1.0	-8	-4	0	Equity Prices
Mar. 20	7	- 3.0	-12	-6	0	Equity Prices
April 18	- 44	2.2	-34	-17	-9	Policy Surprise
May 15	- 9	0.1	-9	2	1	...

	M2			M3			M2	M3	Debt		
	Ease 50 b.p.	Ease 25 b.p.	No move	Ease 50 b.p.	Ease 25 b.p.	No move	Greenbook Forecast*				
Monthly Growth Rates											
Feb-2001	10.9	10.9	10.9	9.9	9.9	9.9	10.9	9.9	5.0		
Mar-2001	14.4	14.4	14.4	9.5	9.5	9.5	14.4	9.5	6.0		
Apr-2001	10.4	10.4	10.4	17.6	17.6	17.6	10.4	17.6	3.4		
May-2001	5.1	5.1	5.1	13.3	13.3	13.3	5.1	13.3	3.2		
Jun-2001	8.2	8.2	8.2	11.5	11.5	11.5	8.2	11.5	5.7		
Jul-2001	6.7	6.3	5.9	8.7	8.5	8.3	5.9	8.3	5.4		
Aug-2001	7.5	6.7	5.9	8.0	7.6	7.2	5.9	7.2	6.2		
Sep-2001	8.4	7.6	6.8	8.0	7.6	7.2	6.8	7.2	5.9		
Oct-2001	6.9	6.2	5.5	7.9	7.5	7.1	5.5	7.1	3.3		
Nov-2001	4.7	4.2	3.7	7.5	7.2	6.9	3.7	6.9	3.6		
Dec-2001	4.9	4.5	4.1	7.2	7.0	6.8	4.1	6.8	4.0		
Quarterly Averages											
2000 Q2	6.4	6.4	6.4	9.0	9.0	9.0	6.4	9.0	6.1		
2000 Q3	5.7	5.7	5.7	8.8	8.8	8.8	5.7	8.8	4.6		
2000 Q4	6.3	6.3	6.3	7.0	7.0	7.0	6.3	7.0	4.5		
2001 Q1	10.7	10.7	10.7	12.2	12.2	12.2	10.7	12.2	4.8		
2001 Q2	10.0	10.0	10.0	13.5	13.5	13.5	10.0	13.5	4.4		
2001 Q3	7.3	6.9	6.5	9.7	9.5	9.3	6.5	9.3	5.5		
2001 Q4	6.6	6.0	5.3	7.8	7.5	7.1	5.3	7.1	4.4		
Growth Rate											
From	To										
Dec-2000	May-2001		10.8	10.8	10.8	13.5	13.5	13.5	10.8	13.5	4.2
Dec-2000	Jun-2001		10.4	10.4	10.4	13.3	13.3	13.3	10.4	13.3	4.5
May-2001	Dec-2001		6.9	6.3	5.8	8.6	8.3	8.0	5.8	8.0	4.9
Jun-2001	Dec-2001		6.6	6.0	5.4	8.0	7.7	7.4	5.4	7.4	4.8
2000 Q4	May-2001		10.3	10.3	10.3	13.2	13.2	13.2	10.3	13.2	4.5
2000 Q4	Jun-2001		10.0	10.0	10.0	13.0	13.0	13.0	10.0	13.0	4.7
2000 Q4	Dec-2001		8.6	8.3	8.0	11.0	10.8	10.7	8.0	10.7	4.8
1999 Q4	2000 Q4		6.2	6.2	6.2	9.2	9.2	9.2	6.2	9.2	5.3
2000 Q4	2001 Q4		8.9	8.6	8.3	11.2	11.1	10.9	8.3	10.9	4.9

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