

Prefatory Note

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² 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

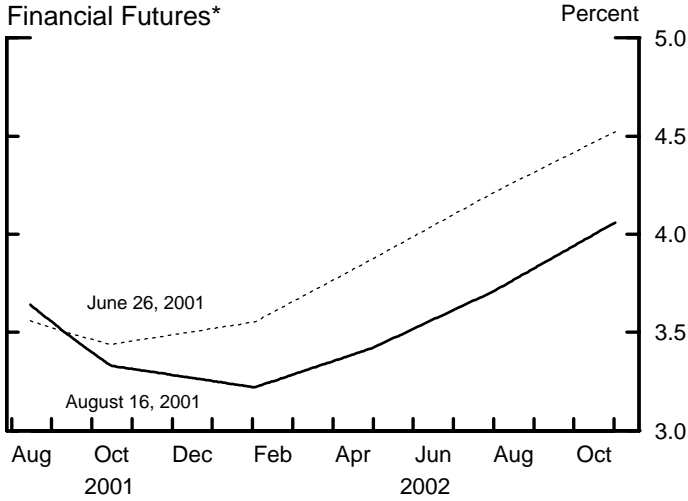
Recent Developments

(1) Market expectations for the path of the federal funds rate moved up in late June as investors apparently read the Committee's choice of a 25 basis point easing at the June meeting and the May minutes released the next day as evidence that the Committee might ease in the future by less than previously thought.¹ This step-up was short-lived, though, as market participants began to mark down the expected path for policy in light of predominantly disappointing news on economic activity and corporate earnings and generally benign inflation reports. Policy expectations declined considerably following the Chairman's monetary policy testimony in mid-July—which was seen as emphasizing downside risks for the economy in general and capital spending in particular—and the anecdotal reports in the August Beigebook—which were viewed as signs that economic weakness was becoming more widespread. Concerns about the deteriorating economic outlook in Europe and Japan, along with the continuing woes of Argentina and some other emerging market countries, added to the sense of uncertainty and pessimism in global financial markets. Futures market quotes suggest that investors are confident that the FOMC will ease by at least ¼ percentage point at this meeting (chart 1). Futures prices imply a path for the funds rate that troughs at about 3¼ percent early next year—about ¼ percentage point lower and a few months later than expected at the time of the June

1. The federal funds rate averaged close to 3¾ percent over the intermeeting period. The Desk redeemed \$4.7 billion of Treasury securities to maintain SOMA holdings of individual securities within the internal per-issue guidelines. Over the period, the Desk purchased \$9.5 billion of Treasury securities in outright operations, including \$2.1 billion in Treasury bills and \$7.4 billion in coupon securities. The outstanding volume of long-term RPs increased \$4 billion, to \$16 billion.

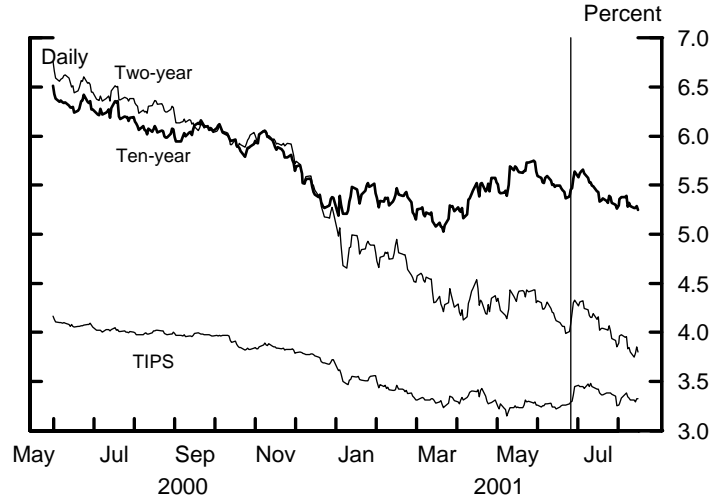
Chart 1 Financial Market Indicators

Expected Federal Funds Rates Estimated from Financial Futures*



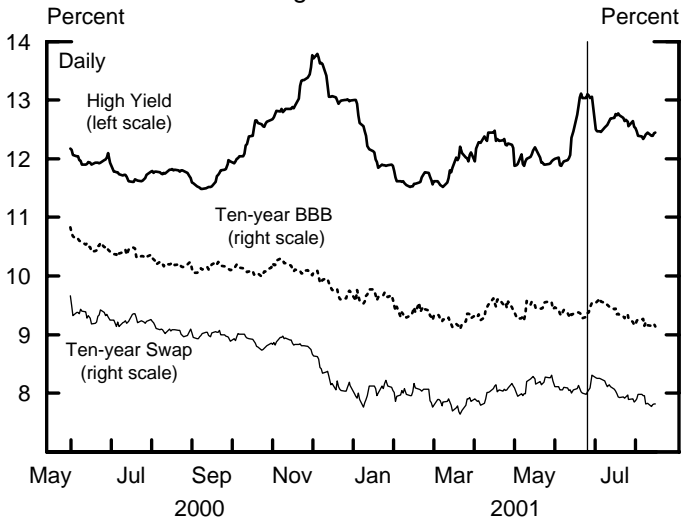
*Estimates from federal funds and eurodollar futures rates with an allowance for term premia and other adjustments.

Selected Treasury Yields*

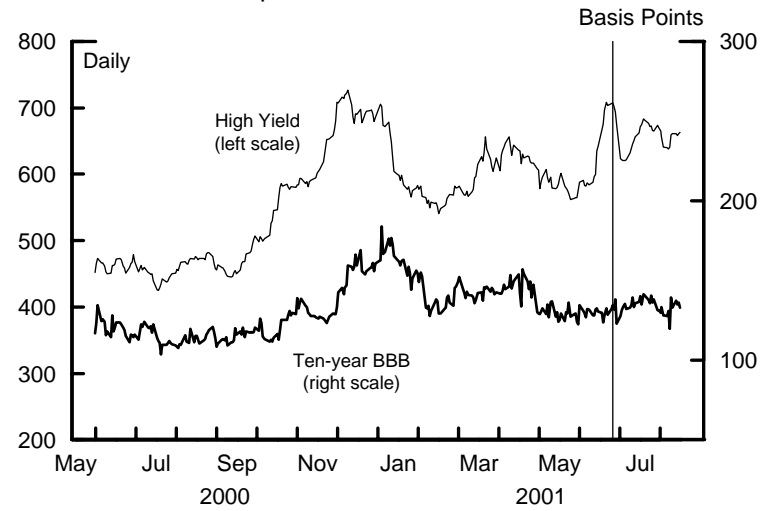


*Nominal Treasury yields are estimated from a smoothed yield curve based on off-the-run securities.

Selected Private Long-Term Yields

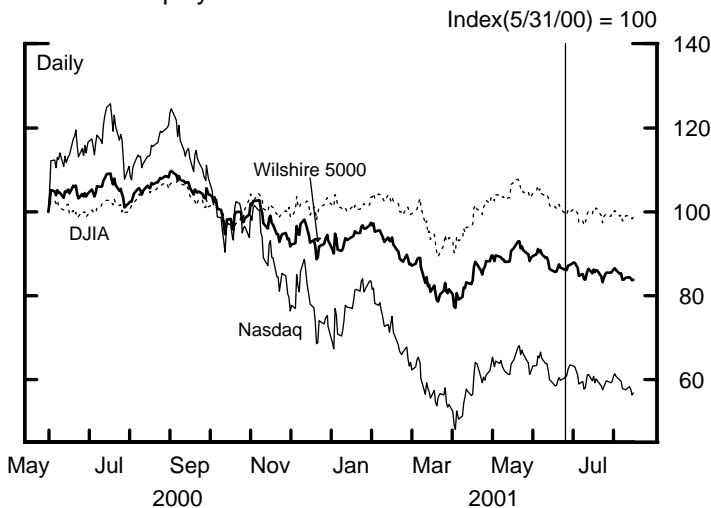


Selected Risk Spreads*

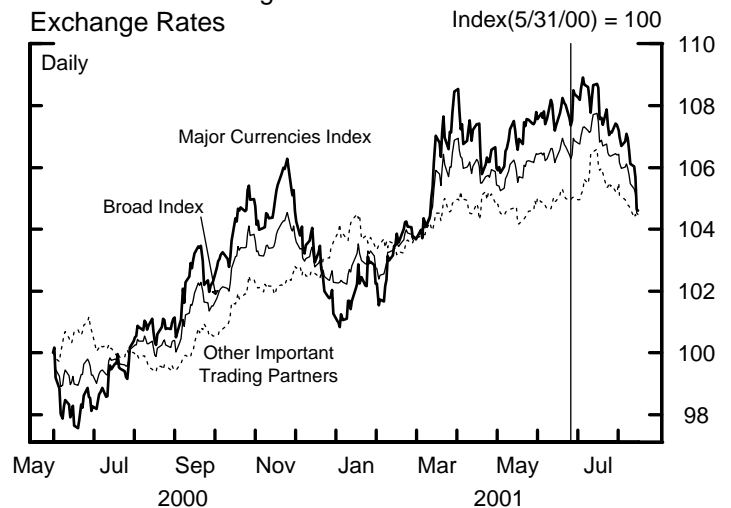


*Computed as the spread of the yield on the Merrill Lynch 175 index and an estimated ten-year BBB yield over ten-year swap rates.

Selected Equity Indexes



Nominal Trade-Weighted Dollar Exchange Rates



Note: Solid vertical line indicates last FOMC meeting.

FOMC meeting—before rebounding to about 4 percent or so by late next year.²

(2) The souring mood regarding the economic outlook and the attendant change in expectations for monetary policy were associated with widespread declines in longer-term yields over the period and a selloff in equity markets. Off-the-run nominal Treasury coupon yields fell 20 to 30 basis points, with shorter maturities registering the steepest declines.³ By contrast, yields on longer-term Treasury inflation-indexed securities were little changed, implying that the inflation compensation in nominal securities fell about 25 basis points.⁴ Despite the more pessimistic economic outlook, investment- and most speculative-grade private yields declined about in line with comparable off-the-run Treasury yields, leaving risk spreads little changed on balance. As an exception to this general pattern, yields on junk bonds in the telecom sector rose further to widen already hefty spreads. Through early August, stock prices largely proved resilient to a spate of negative earnings announcements and resulting cuts in analysts' earnings projections for the remainder of this year. But equity prices have slumped since then in response to the

2. The box on page 6 highlights investors' uncertainty surrounding that mean expected path for the funds rate.

3. The yield on the on-the-run ten-year note fell considerably more than that on the comparable off-the-run security over the period as the newly auctioned note, as usual, garnered a sizable premium; other on-the-run Treasury coupon yields declined about in line with comparable off-the-run yields. Treasury bill yields fell over the period, but by less than other money market yields, in part as the ramping up of weekly bill auction sizes and the additional supply from the introduction of the weekly four-week bill put pressure on the financing market at times and evidently strained investors' willingness to accumulate more of those securities. Indeed, the overnight RP rate moved above the funds rate on a few days, and bill rates were unusually elevated relative to other money market instruments. Spreads of three-month commercial paper and eurodollar rates over the three-month bill yield touched historic lows of only a few basis points in late July.

4. The drop in implied inflation compensation may have been amplified by upward pressures on indexed yields surrounding the auction of new ten-year indexed notes in mid-July, as investors may have required larger premiums to absorb these securities into their portfolios.

accumulation of adverse news on the economy and earnings; broad indexes have fallen $2\frac{3}{4}$ to $6\frac{1}{2}$ percent over the period, with especially disappointing reports on profits for high-tech firms weighing on the Nasdaq.

(3) The index of the dollar's trade-weighted exchange value against other major currencies declined $2\frac{1}{2}$ percent over the period, with much of this change occurring in recent days. While investors marked down their expectations of economic growth around the world and interest rates and equity prices fell in most industrial countries, the downward revision to the expected path of policy rates seemed greatest in the United States. In addition, public debate about the merits of the "strong-dollar" policy intensified over the intermeeting period, and market concerns about the sustainability of the U.S. current account deficit were heightened by the publication this week of the IMF Article IV review of the U.S. economy. On balance since the June meeting, the dollar has fallen 6 percent against the euro and 3 percent against the yen despite further discouraging news about the economies of Europe and Japan. On August 14, the Bank of Japan surprised many market participants by announcing an increase in its provision of liquidity to the financial system. The dollar gained 1 percent on balance against the Canadian dollar; the Bank of Canada cut its policy rate 25 basis points in mid-July, citing spillover effects from slower growth in the U.S. economy. Over the intermeeting period,

U.S. monetary authorities did not intervene.

(4) The dollar was little changed against a basket of currencies of our other important trading partners. Concerns about the Argentine government's ability to resolve its budget problems were not allayed by the announcement of a fiscal austerity plan requiring budgetary balance on a month-to-month basis. The runoff of private-sector deposits from the banking system was very steep, and spreads of Argentine debt over comparable Treasuries remained high and volatile. Spillovers from the turmoil in Argentina added to problems in Brazil, which resorted to monetary policy

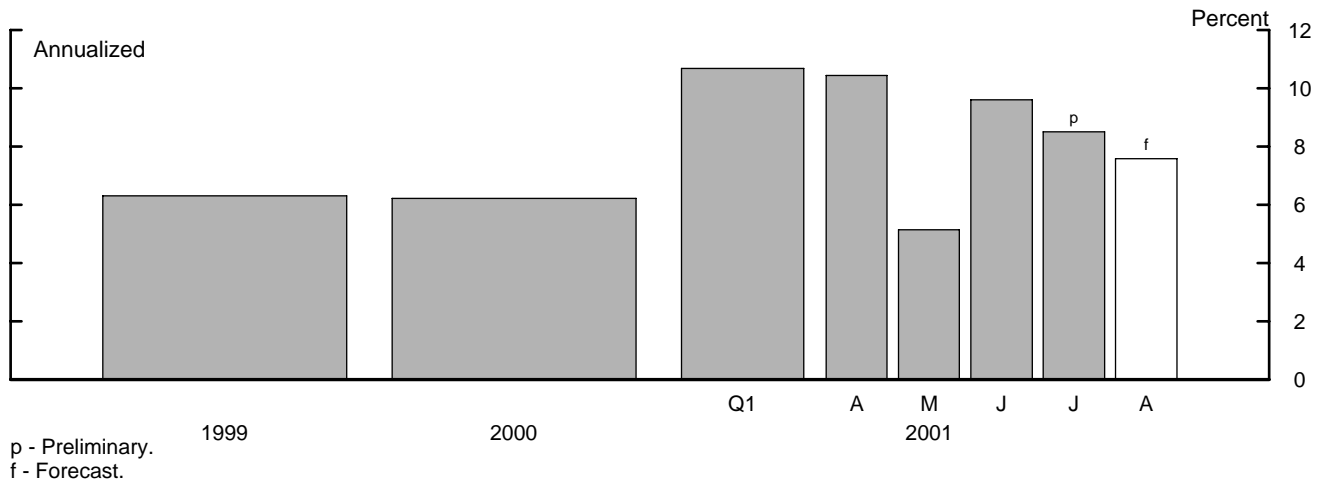
tightening and foreign exchange intervention to blunt pressure on the *real*. Despite the announcement in early August that Brazil would obtain a new \$15 billion IMF program, the *real* has depreciated 7½ percent against the dollar on net over the intermeeting period. Mexican financial markets were largely unaffected by the turmoil elsewhere in Latin America, and the peso held steady even as the central bank eased policy. In emerging Asia, the ongoing worsening of global high-tech markets put downward pressure on exchange rates and equity prices in several countries.

(5) In the United States, overall private borrowing appears to have slowed from the brisk pace registered in the spring (chart 2). In recent months, issuance of corporate bonds has dropped well below its earlier torrid rate, while commercial paper and business loans at banks have continued to contract. According to respondents to the August Senior Loan Officer Survey, almost all of whom represent large banks, the recent decline in business loans owed importantly to a weakening in demand that has stemmed, in part, from firms scaling back their capital spending. These banks also reported a further tightening of terms and standards on business loans, although the fraction doing so was down from prior surveys. In the household sector, mortgage debt growth has slowed only a little, but the expansion of consumer credit has fallen off appreciably. By contrast, federal debt growth has turned up in the last couple of months—albeit probably only temporarily—reflecting both weaker-than-expected tax receipts and borrowing to finance the tax rebates.

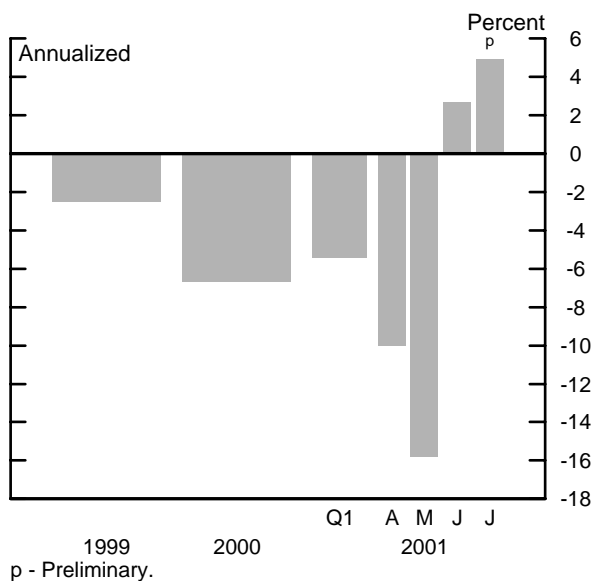
(6) M2 growth remained strong in July, at about 8½ percent, but was below the average pace over the first half of this year. The expansion over the first half was supported by declining opportunity costs associated with policy easing, but M2 growth was faster than would have been expected based on historical relationships. Indeed, M2 velocity fell at a 6¾ percent rate, the most rapid half-year decline since the early 1980s. A portion of this unusual strength likely owes to a surge in mortgage refinancing spurred by declining long-term interest rates late last year and also to the increase in stock market volatility and steep declines in equity prices earlier this year,

Chart 2 Growth of M2 and Selected Debt Aggregates

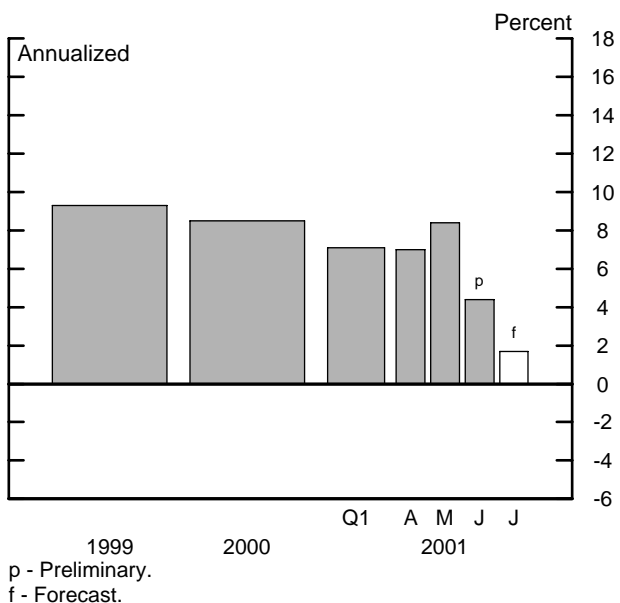
Growth of M2



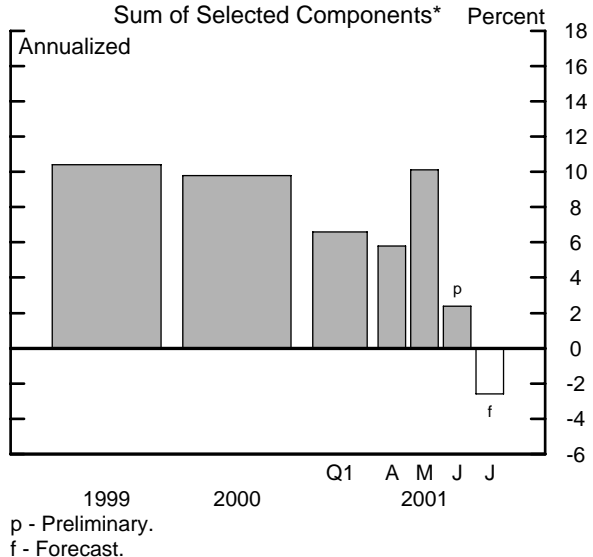
Growth of Federal Debt



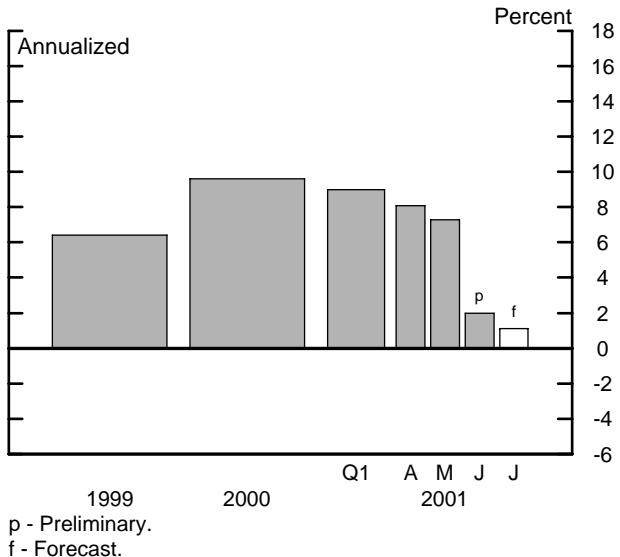
Growth of Nonfederal Debt



Growth of Business Debt Sum of Selected Components*



Growth of Consumer Credit

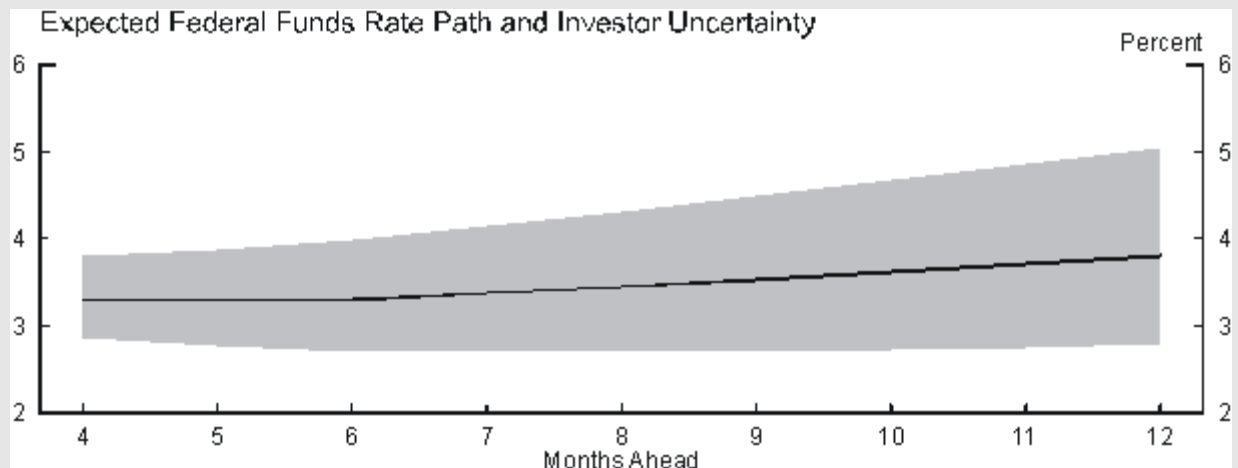


which may have prompted portfolio substitutions toward liquid deposits and money funds. The recent slowing in M2 reflects in part the ebbing of portfolio adjustments to opportunity costs and perhaps the effects of somewhat less volatile equity markets. Tending to offset this underlying slowing in the near term, M2 has been boosted of late by tax rebates and continued strong demand for U.S. currency abroad, particularly in Argentina.

The Expected Path of the Federal Funds Rate and Investor Uncertainty

The staff often presents measures of the expected path of the federal funds rate derived from federal funds and eurodollar futures, as in the panel below. This path is constructed by subtracting estimates of term premiums from futures quotes and, in the case of eurodollar futures, the premium of the spot three-month LIBOR rate (the settlement rate for the eurodollar futures contract) over the target federal funds rate. Estimates of term premiums are based on historical differences between futures rates and subsequent spot rates. The reliance on such estimates necessarily implies some imprecision in the calculated expected funds rate path. But the estimated expected funds rate path has nonetheless seemed to provide a reasonable measure of market participants' mean expectation of possible future federal funds rates.

In addition to a mean expectation of future federal funds rates, investors also have views about the *variance* of possible future federal funds rates. A measure of this type of uncertainty—investors' perceptions of the likely range of potential outcomes for the federal funds rate—can be obtained from the prices of options on eurodollar futures using a standard option-pricing formula. Such estimates indicate that investors believe there is a 90 percent probability that realized funds rates over the next twelve months will fall in the shaded area. Thus, although the expected funds rate path indicates that investors are forecasting some modest further easing into early next year followed by substantial tightening, the $2\frac{1}{4}$ percentage point width of the shaded area twelve months from now suggests that they believe it quite possible that the actual funds rate a year from now could turn out to be considerably higher or lower than their current mean expectation of almost 4 percent.



MONEY AND CREDIT AGGREGATES
(Seasonally adjusted annual percentage rates of growth)

	Apr 2001	May 2001	Jun 2001	Jul 2001 (p)
<u>Money and Credit Aggregates</u>				
M2	10.4	5.2	9.6	8.5
M3	18.2	14.0	13.1	6.8
Domestic nonfinancial debt	3.9	4.1	4.1	n.a.
Federal	-10.0	-15.8	2.7	n.a.
Nonfederal	7.0	8.4	4.4	n.a.
Bank credit	5.5	1.4	-1.4	-0.8
Adjusted ¹	5.9	1.8	-2.7	1.7
<u>Memo:</u>				
Monetary base ²	7.1	6.3	5.6	11.6
Adjusted for sweeps	7.6	6.2	5.7	11.3

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

2. Adjusted for discontinuities associated with changes in reserve requirements.

p -- preliminary

Policy Alternatives

(7) Benchmark revisions to the National Income and Product Account data and reports of a bleaker outlook for fixed investment in the near term have prompted the staff to reduce further its estimate of prospective growth in potential output. Given the associated scaling down of future returns to labor and capital, as well as weaker-than-expected spending data here and abroad, the Greenbook projection of the growth of aggregate demand has been lowered about as much as that of aggregate supply. As a result, the forecasts of the output gap and inflation do not differ much from those prepared for the June meeting. As before, the staff believes that a variety of forces—including the expected completion of the inventory correction, further declines in energy prices, the fiscal stimulus provided by the tax cut, and the cumulative monetary policy easing—will support a revival of economic growth at around prevailing financial market conditions. In the baseline projection, the staff assumes that the federal funds rate will be maintained at $3\frac{3}{4}$ percent over the forecast period, with equity prices and the foreign exchange value of the dollar projected to edge off only a little and longer-term yields moving up a tad. Against this financial backdrop, real GDP is anticipated to advance at a rate of $1\frac{1}{4}$ percent in the second half of this year and of $2\frac{3}{4}$ percent over the four quarters of next year. Output growth over 2002 about matches the downward-revised estimate of growth of the economy's potential output and keeps the unemployment rate around the level consistent with no change in inflation pressures. The resulting slack in resource utilization helps to hold core PCE inflation to $1\frac{3}{4}$ percent next year, a touch below the rate projected for 2001. Given the projected drop in energy prices, overall PCE inflation is expected to decline from 2 percent this year to $1\frac{3}{4}$ percent in 2002.⁵

(8) Should the Committee find the staff's explication of the forces

5. The Greenbook portrays a significantly weaker economy and somewhat less inflation than implicit in the central tendencies of the forecasts of the Board members and Reserve Bank presidents reported in July.

promoting a rebound in economic growth and shaping the inflation outlook to be convincing, it may opt to keep the funds rate **unchanged**. After all, cumulative policy easing this year has put the real funds rate well below estimates of its equilibrium value (see box on page 13), and this policy stance presumably will, after some further delay, foster a reasonable revival in the growth of spending over time. In that regard, the rapid growth of M2 and other measures of household liquidity so far this year might be taken as a tentative indication that financial conditions are well positioned to support such a rebound. In these circumstances, the Committee may believe that further policy stimulus would carry too great a risk of an overshooting of aggregate demand that would lead to added pressures on inflation and a deterioration in inflation expectations that may prove stubborn to unwind. Indeed, the Committee may be of the view that the slow recovery of aggregate demand in the Greenbook forecast, and the associated easing of pressures in labor markets, is both necessary and desirable so as to provide better assurance that core inflation will be capped going forward, as it is in the staff forecast.

(9) The choice of an unchanged federal funds rate target would come as a surprise to financial markets that would be little tempered by an announcement of continued downside risks. Short-term interest rates would back up by a considerable amount and equity prices likely would decline, as the tighter-than-expected monetary policy stance more than offsets the perception that the Federal Reserve sees a stronger economy than previously thought by market participants. The policy surprise would tend to raise bond yields by pushing expected funds rates higher. The likely decline in equity prices, however, would lead investors to anticipate more restraint on consumption via the wealth effect, perhaps limiting the extent to which the expected path of the funds rates is ratcheted up and, accordingly, the pickup in longer-term yields.

(10) The Committee may consider the Greenbook forecast to be both

plausible and acceptable, even with the projected delay in the resumption of satisfactory output growth, but still choose to reduce the federal funds rate **25 basis points**. In particular, the string of bad news on the economy may heighten the sense that there are sizable odds on especially adverse outcomes for aggregate demand, particularly for capital spending. The Committee may be of the view that such downside risks to the real side could be countered by a slight further easing in the present situation with little ill effect, as inflation recently has been benign and is likely to remain contained. Given the scope for downside developments, the Committee may be especially averse to surprising markets, in that an unchanged policy stance could risk tightening financial conditions appreciably should market participants begin to question Federal Reserve intentions. Alternatively, the Committee may consider the staff's outlook, especially the speed and the extent of the projected rise in the unemployment rate, to be unacceptable and to warrant another slight further policy easing as a countervailing move.

(11) The selection of a 25 basis point reduction in the funds rate, presumably accompanied by an assessment that the risks are still weighted toward economic weakness, would be almost as accommodative as the average expectation built into financial markets. Accordingly, bond yields likely would edge higher, while stock prices may come under some downward pressure. The recent downdraft of the dollar on foreign currency markets makes it more difficult to predict the probable course of exchange rates. While textbooks teach that policy ease that falls short of market expectations should lead to an appreciation of the currency, the recent market focus on relative spending prospects suggests that the dollar might come under some downward pressure.

(12) Choice of a **50 basis point** easing action might follow from the concern that more economic weakness could well be in train than projected in the Greenbook. Although consumption has held up remarkably well so far, an abrupt softening in

consumer spending is not implausible given the prospect of a sharp rise in the unemployment rate and already relatively high debt burdens. Moreover, foreign economic activity could well disappoint for a variety of reasons, including deepening crises in certain emerging market economies or additional slowing in the pace of activity in some major industrial economies. Such eventualities would tend to prolong both the inventory liquidation and the decline in capital spending, which would translate into a decline in the equilibrium real funds rate. Although the level of the real funds rate implied by the 3¼ percent nominal funds rate of this alternative and prevailing inflation expectations would be appreciably below that which is sustainable in the long run, a rapid policy reversal along the lines of that currently embedded in futures market prices could be undertaken once information finally starts to signal convincingly that more solid economic growth has taken hold.

(13) The choice of a 50 basis point easing, combined with a statement continuing to point to downside risks, would be more forceful than markets have priced in for this meeting, though futures market participants seem to expect that a cumulative easing of this magnitude will be put in place by early next year. If investors come to believe that the Committee is more concerned about economic softening than previously thought as a result of the surprise component of the action, they would both move the anticipated easing forward in time and augment its cumulative extent. As an immediate consequence, short-term interest rates would move down. The unexpected size of the policy ease would probably prompt a decline in bond yields and the foreign exchange value of the dollar and some increase in equity values, although the magnitude of these changes would importantly be shaped by the wording of the statement announcing the action.

(14) Under the Greenbook assumption of no change in the federal funds rate, the staff projects that the growth of M2 from July to December would slow to a 5¼ percent rate, mainly reflecting the widening of the opportunity cost of holding M2

as deposit rates adjust further to prior easing actions. Other contributors to the slowing in M2 growth include the likely waning of mortgage refinancing activity and a leveling out of stock prices. M2 would still be growing faster than nominal GDP over the second and third quarters, but the contraction in velocity would be slowing. However, the staff considers this money projection to be subject to considerable uncertainty because several unusual influences will be boosting observed money growth to an extent that is difficult to assess. These special factors include households' placement of tax rebate checks in liquid deposits and elevated demands for U.S. currency in Argentina owing to that country's financial crisis and in the euro area ahead of the conversion to euro cash at the start of next year.

(15) The staff anticipates that growth of domestic nonfinancial debt will move lower to a 3½ percent rate over the last six months of the year. A renewed paydown of federal debt in the fourth quarter is expected to offset the rise this quarter, leaving federal debt outstanding about unchanged on net over the second half of the year. The growth of the debt of nonfederal sectors is foreseen to decline to a 4¼ percent rate from June to December. For households, mortgage borrowing is expected to be maintained at around its second-quarter pace, based on the continuation of low mortgage interest rates, a predilection for extracting equity in refinancings, and still-solid housing activity. Consumer credit growth, though, seems poised to downshift further from the second quarter pace, in line with projected weakness in nominal outlays on consumer durables over the second half of the year. Businesses have already made considerable strides in restructuring their balance sheets in response to lower longer-term yields and the favorable issuance climate of the first half of this year. With capital spending remaining weak and share repurchases and merger activity unlikely to revive for a time, overall business borrowing should remain light. That borrowing should still be concentrated in bond markets, though the paydown of C&I loans and commercial paper should be drawing to a close.

Estimates of the Equilibrium Real Federal Funds Rate

One way to assess the stance of monetary policy is by comparing the actual real federal funds rate to estimates of its equilibrium level. The equilibrium real federal funds rate can be thought of as the rate consistent with output being at its potential level once the effects of transitory shocks—those with dynamics that play out within a few years—have dissipated.

Board staff constructs various estimates of the equilibrium real federal funds rate using three different frameworks: the FRB/US model, a statistical filter based on the relationship between the real federal funds rate and the output gap, and yields on indexed Treasury debt (which are available only since 1998). The FRB/US model and the statistical filter are each used to derive two estimates, the first based on historical data only and the second on historical data augmented by the staff projection.

The chart that follows shows the range of these estimates, as well as the actual real federal funds rate and the real funds rates implied by the policy alternatives discussed in the text. (The real funds rates are measured as the nominal federal funds rate less the lagged four-quarter change in core PCE prices as a proxy for expected inflation.) Over the past year or so, the range of the estimates of the equilibrium funds rate has fallen by about half a percentage point. For the equilibrium rates based on the FRB/US model, we can identify the sources of the decline. The

table at the right parses the change in the FRB/US estimate using the historical data augmented by the staff forecast. A reduction in the structural growth rate of GDP and a higher average equity premium account for the bulk of the decline.

Sources of the Change in the Equilibrium Federal Funds Rate

from 2000Q3 to 2001Q3

(Percentage points)

1. Total change in FRB/US measure* -1.1

Sources:

2. Lower structural GDP growth -0.4

3. Higher average equity premium -0.4

4. Higher average real exchange rate -0.1

5. Other -0.2

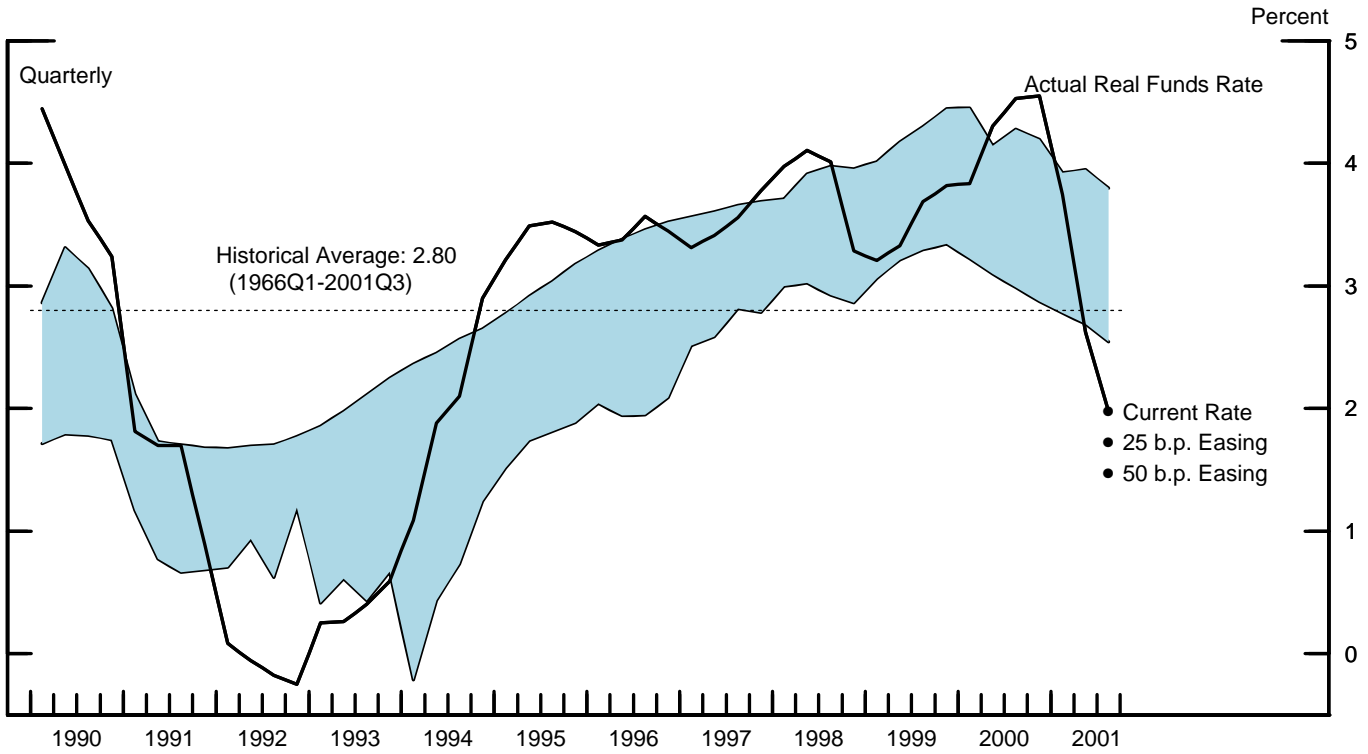
* Calculated using historical data augmented by the staff projection.

Estimates of the Equilibrium Real Federal Funds Rate (continued)

Benchmark revisions to the NIPA data published over the intermeeting period, as well as other incoming data, caused the staff to revise down its assessments of aggregate demand and potential output, both in the past and going forward. These changes had mostly offsetting effects on the estimates of the equilibrium real federal funds rate. In the case of the FRB/US measures, a reduction in the staff's estimates of structural growth in GDP in recent years and in the forecast caused a decrease in estimates of the equilibrium funds rate. However, this effect was countered by lower estimates of the equity premium—which reconcile the level of equity prices in recent years with more modest gains in earnings. As shown in the bottom-left panel of the chart, the net changes over the intermeeting period in the FRB/US estimates of the equilibrium funds rate (based on the historical data and the staff projection) are relatively small. Adjustments to the statistical-filter-based estimates of the equilibrium funds rate were also modest (the bottom-right panel). While the staff trimmed its estimates of potential output, it marked down aggregate demand by a similar amount, with only a modest impact on the estimates of the output gap that underlie these estimates of the equilibrium rate.

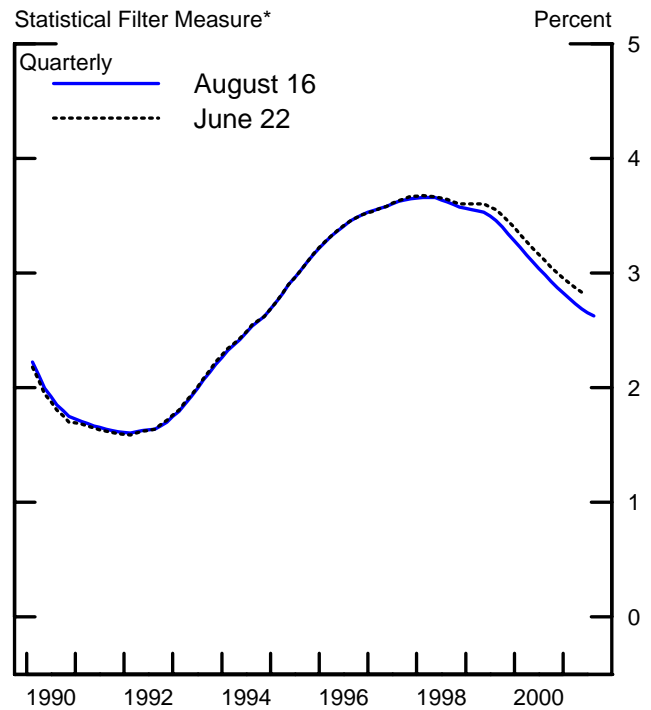
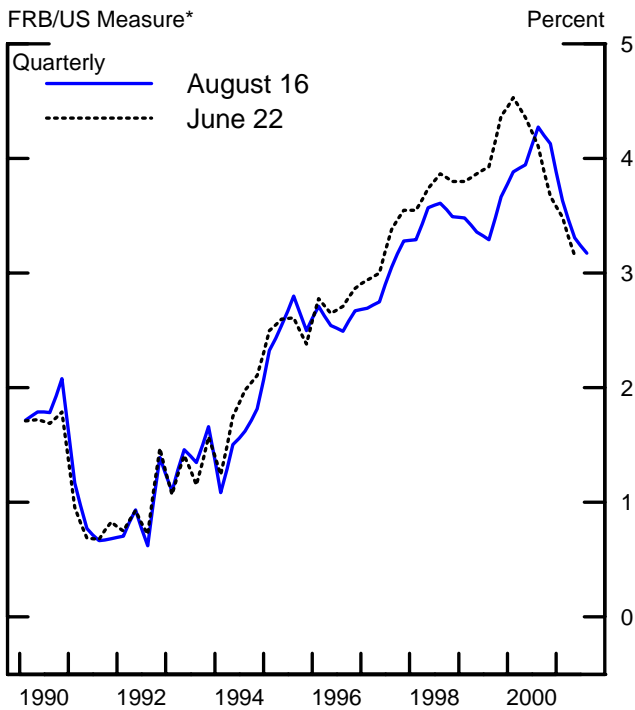
The revisions to the various equilibrium funds rate measures over the intermeeting period are quite small compared to the substantial uncertainty associated with the estimates. In the case of the statistical filter method, for example, formal standard errors of the estimates can be calculated for each observation. These standard errors indicate that a 90 percent confidence interval around the estimates of the equilibrium funds rate ranges from 1½ to 2½ percentage points on each side of the point estimates.

Chart 3
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 box. Real federal funds rates employ four-quarter lagged core PCE inflation as a proxy for inflation expectations, with the staff projection used for the third quarter of 2001.

Equilibrium Funds Rate Estimates



* Calculated using the historical data augmented by the staff projection.

Directive and Balance-of-Risks Language

(16) 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 ___~~3~~³/₄ 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] [ARE 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.

Alternative Growth Rates for Key Monetary and Credit Aggregates

	M2			M2	M3	Debt
	Ease 50 b.p.	Ease 25 b.p.	No Move	Greenbook Forecast*		
Monthly Growth Rates						
Mar-2001	14.4	14.4	14.4	14.4	9.8	6.2
Apr-2001	10.4	10.4	10.4	10.4	18.2	3.9
May-2001	5.2	5.2	5.2	5.2	13.9	4.1
Jun-2001	9.6	9.6	9.6	9.6	13.1	4.1
Jul-2001	8.5	8.5	8.5	8.5	6.8	2.3
Aug-2001	8.0	7.8	7.6	7.6	2.5	5.0
Sep-2001	8.8	8.2	7.6	7.6	5.9	6.1
Oct-2001	5.7	4.9	4.1	4.1	5.4	2.6
Nov-2001	4.6	3.9	3.1	3.1	5.4	2.6
Dec-2001	4.6	4.0	3.4	3.4	5.6	2.5
Quarterly Averages						
2000 Q4	6.3	6.3	6.3	6.3	7.3	4.6
2001 Q1	10.7	10.7	10.7	10.7	12.6	4.8
2001 Q2	10.2	10.2	10.2	10.2	14.1	4.6
2001 Q3	8.4	8.2	8.1	8.1	8.0	3.9
2001 Q4	6.3	5.6	5.0	5.0	5.2	3.7
Growth Rate						
From	To					
Dec-2000	Jun-2001	10.7	10.7	10.7	13.9	4.4
Dec-2000	Jul-2001	10.4	10.4	10.4	13.0	4.1
Jun-2001	Dec-2001	6.8	6.3	5.8	5.8	3.5
Jul-2001	Dec-2001	6.4	5.8	5.2	5.2	3.8
2000 Q4	Jun-2001	10.3	10.3	10.3	10.3	4.6
2000 Q4	Jul-2001	10.1	10.1	10.1	10.1	4.4
2000 Q4	Dec-2001	8.9	8.6	8.4	8.4	4.2
1999 Q4	2000 Q4	6.2	6.2	6.2	6.2	5.3
2000 Q4	2001 Q4	9.2	9.0	8.8	8.8	4.3

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