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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STRICTLY CONFIDENTIAL (FR) CLASS I FOMO

AUGUST 5, 2004

MONETARY POLICY ALTERNATIVES

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

MONETARY POLICY ALTERNATIVES

Recent Developments

The decision at the June 30 FOMC meeting to increase the target federal (1)funds rate by 25 basis points to 11/4 percent was anticipated in financial markets. Nonetheless, investors revised down their expectations for the path of policy upon the release of the accompanying statement. In particular, investors noted that the Committee attributed some of the recent increase in inflation to transitory factors, again characterized the risks to sustainable growth and price stability as balanced, and reiterated its belief that policy accommodation could be removed at a pace that is likely to be measured.¹ Subsequently, the Chairman's monetary policy testimony, which indicated that recent softness in consumer spending should prove short-lived and emphasized the FOMC's commitment to price stability, spurred a rise in expectations for the path of policy. Over the intermeeting period to date, though, policy expectations have been revised down on net, as incoming data have pointed to weaker-than-anticipated spending and more subdued core inflation (Chart 1). Money market futures and options prices, as well as the Desk's survey of primary dealers, suggest that market participants are virtually certain of a 25-basis-point increase in the target federal funds rate at the August meeting. Nearly all the primary dealers expect the Committee to retain balanced risk assessments for both growth and price stability, and many commented that they expect it to repeat the "measured pace" language or some variant of it. Looking further out, futures quotes now indicate that investors

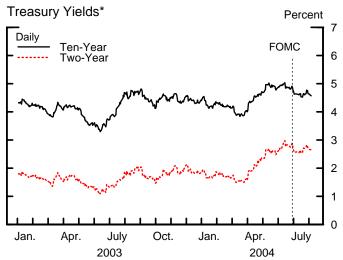
¹ The effective federal funds rate averaged 1.27 percent over the intermeeting period. The Desk expanded the System's outright holding of securities by \$6.5 billion, with purchases from foreign official customers of \$1.2 billion of Treasury bills and purchases from dealers of \$5.3 billion of Treasury coupon securities. The volume of outstanding long-term RPs decreased \$7 billion to \$12 billion.

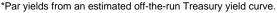
Chart 1 Interest Rate Developments

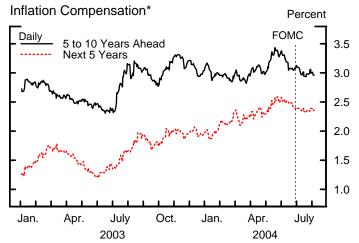
Policy Expectations

	Expected Federal Funds Rate (percent)								
	August Me	eting \(\)	∕ear-End						
Futures Market	1.50		2.00						
Dealer Survey (median)	1.50		2.00						
	Assessment of Risks (number of dealers)								
	To the		Almost						
Risks to:	<u>Upside</u>	<u>Balanced</u>	<u>Equal</u>						
Sustainable Growth	0	19	3						
Price Stability	1	18	3						

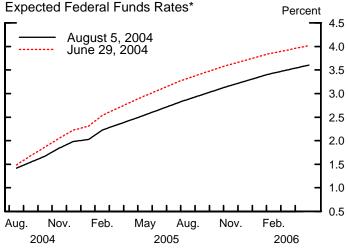
Note: Expected funds rate from futures market based on money market futures prices as of August 5, 2004. Dealer expectations based on a Trading Desk survey conducted July 30 and August 2.



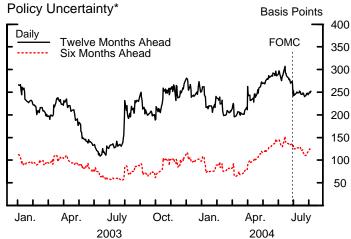




*Based on a comparison of an estimated TIPS yield curve to an estimated nominal off-the-run Treasury yield curve.

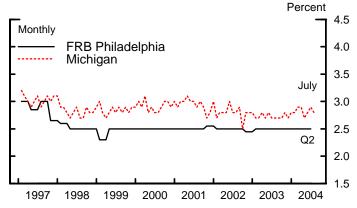


*Estimates from federal funds and eurodollar futures, with an allowance for term premia and other adjustments.



*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.

Survey Measures of Long-Term Inflation Expectations

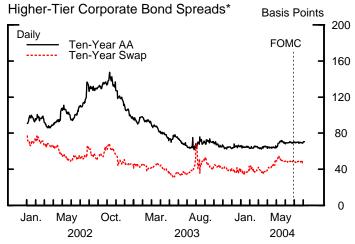


Note: The black line measures median ten-year inflation expectations by the Philadelphia FRB survey. The red line plots the Michigan survey median five- to ten-year inflation expectations. expect the funds rate to rise to around 2 percent by the end of this year and 3½ percent by the end of 2005, down about 25 and 45 basis points, respectively, from the time of the June meeting.²

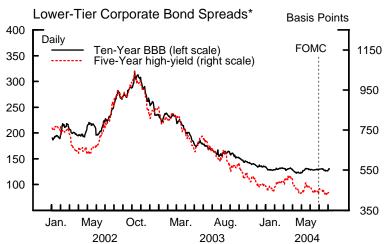
- (2)Yields on intermediate- and long-term nominal Treasury securities fell about 20 to 30 basis points on balance over the intermeeting period, consistent with the downward revision to policy expectations and perhaps also reflecting heightened concerns about terrorism. Standard measures of volatility and liquidity in the Treasury securities market appear to have held fairly steady at typical levels. (See the box on page 3 for a discussion of recent survey evidence on liquidity in funding and derivatives markets.) Yields on inflation-indexed issues declined a bit less than those on nominal Treasuries since the last meeting, leaving inflation compensation measures narrower and as much as ½ percentage point below their highs of mid-spring. Survey measures of inflation expectations also ticked down in July. The most recent data suggest that corporate credit quality remains strong, and credit spreads on investmentand speculative-grade bonds changed little over the intermeeting period (Chart 2). In equity markets, most broad indexes fell 5 to 6 percent, but the Nasdaq index dropped about 10 percent. Although earnings grew rapidly in the second quarter, equity investors reacted negatively to the cautious outlook for sales reported by some major companies, particularly technology firms. Investor sentiment was also said to be adversely affected by the sharp increases in spot and futures prices for crude oil over the intermeeting period (Chart 3).
- (3) In foreign exchange markets, the dollar was about unchanged on balance against other major currencies since the last FOMC meeting. The dollar appeared to be supported by Chairman Greenspan's monetary policy testimony as well as the announcement of a narrower U.S. trade deficit for May, but it was weakened by signs of softer U.S. growth. On a bilateral basis, the dollar climbed most versus the yen, rising more than 3 percent over the intermeeting period. The yen was pressured by

² Market quotes reported in this Bluebook are as of the close of business on Thursday, August 5.

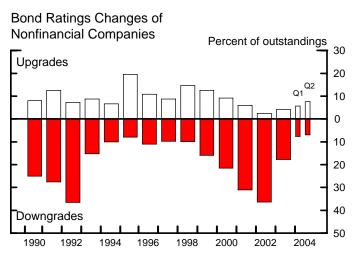
Chart 2 Capital Market Developments



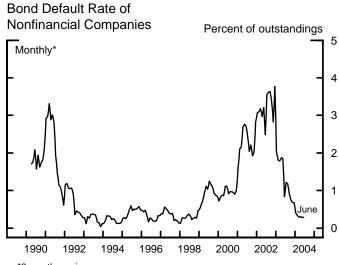
^{*}AA spread measured relative to an estimated off-the-run Treasury yield curve. Swap spread measured relative to the on-the-run Treasury security.



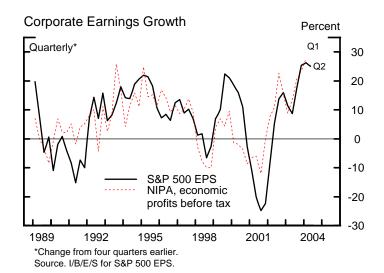
^{*}Measured relative to an estimated off-the-run Treasury yield curve.

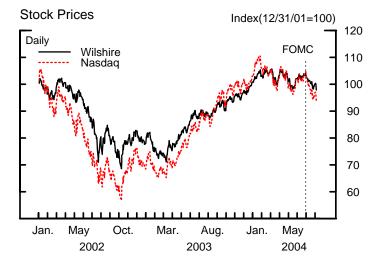


Note. Data are at an annual rate. Source. Moody's Investors Service.



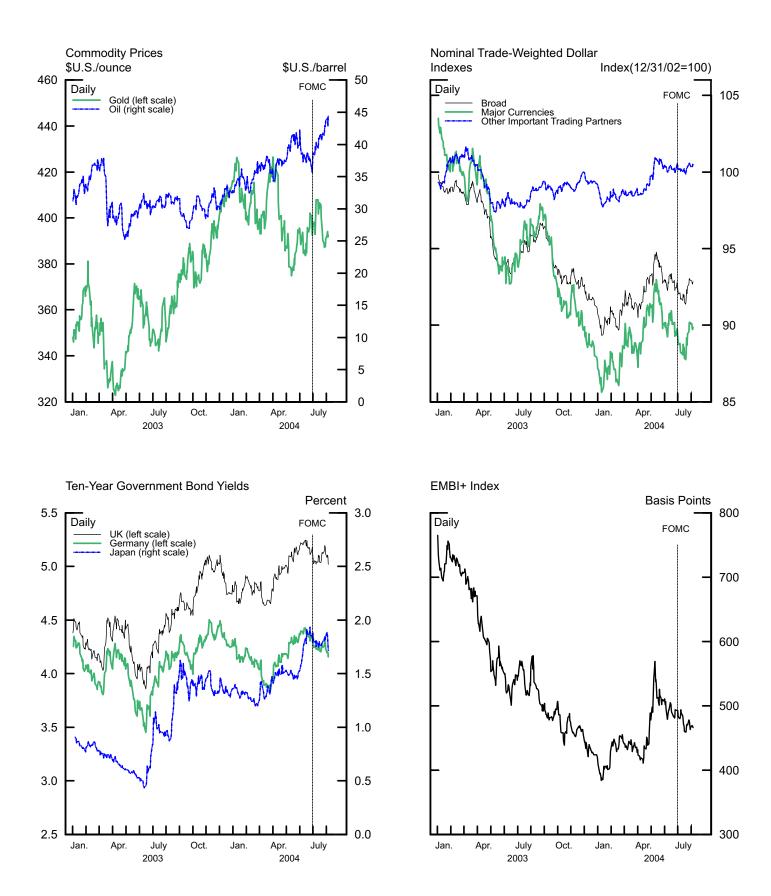
*6-month moving average. Source. Moody's Investors Service.





Note: Vertical lines indicate June 29, 2004. Last daily observations are for August 5, 2004.

Chart 3
International Financial Indicators



Note: Vertical lines indicate June 30, 2004. Last daily observations are for Aug 5, 2004.

official comments early in the period suggesting that policy tightening was not imminent in Japan and by disappointing sales and production data. Higher oil prices and lower earning expectations at Japanese firms also may have contributed to theweakness in the yen. The dollar gained ½ percent against the euro over the intermeeting period, but lost about 2¼ percent versus the Canadian dollar. Yields on long-term government bonds in foreign industrial countries declined by amounts that either matched or were somewhat smaller than the drop in yields on corresponding U.S. securities. Foreign equity prices moved down 2 to 6 percent over the period.³

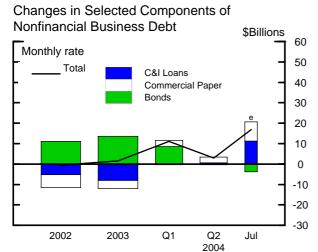
Financial Market Conditions

Financial institutions and markets seemed to have taken the June policy tightening in stride, with few signs of the volatility and market stress that accompanied the onset of some past episodes of policy tightening. A variety of indicators of market stress—including implied volatilities for equities and long-term bonds, credit default swap spreads for financial firms, and on-the-run premiums and bid-ask spreads for Treasury securities—have been fairly steady in recent weeks. A recent survey of primary dealers asked the respondents to characterize conditions in longand short-term funding markets and interest-rate derivatives markets. A total of eighteen dealers responded to the survey. For both long- and short-term funding markets, a sizable net percentage of respondents indicated that dealers' willingness to act as market makers or underwriters was above normal. Moreover, about half of the dealers judged investors' willingness to bear risk and overall market liquidity to be normal. However, several assessed these characteristics as below normal, hinting at some caution in markets that is not evident in risk and liquidity spreads, which are relatively narrow. A few respondents commented that some market participants were hesitant to take large positions, given expectations for continued policy tightening. The net percentage of dealers reporting below-normal liquidity in interest-rate derivatives markets was somewhat larger than for cash markets, reportedly reflecting, in part, scaled-back activity of mortgage investors and hedge funds.

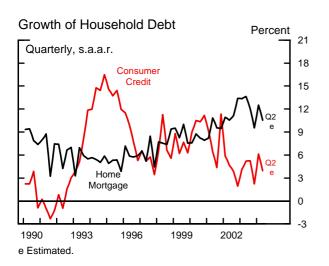
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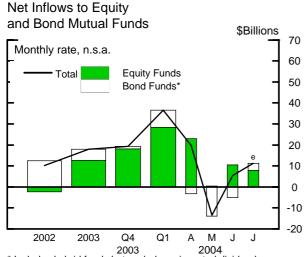
- (4) The dollar was also essentially unchanged over the intermeeting period against an index of currencies of our other important trading partners. In Brazil, signs of improvement in the domestic economy, as well as continued strong export performance, boosted stock prices and helped push the *real* up 2 percent versus the dollar. Brazil's EMBI+ spread narrowed 50 basis points to about 6 percentage points. The Mexican peso also gained slightly versus the dollar, as the Banco de Mexico tightened in late July, citing inflation risks. China's slower growth and the somewhat weaker outlook for some major high-tech firms weighed on share prices in Asian equity markets, and the Korean won and the Taiwanese dollar both declined somewhat versus the U.S. dollar. Russian financial markets were roiled by an ongoing dispute between the government and the country's largest oil producer and, for a time, by runs on several banks. Russian stock prices fell almost 6 percent, and Russia's EMBI+ spread widened somewhat to about 3½ percentage points.
- In U.S. credit markets, growth in overall business debt was subdued in the second quarter, but it appears to have picked up a little in July as an increase in short-term borrowing more than offset a net paydown of corporate bonds (Chart 4). On a month-average basis, commercial and industrial (C&I) loans rose in both June and July, the first successive months of growth since 2001. On net, about a third of the respondents to the July Senior Loan Officer Opinion Survey reported that demand for C&I loans had increased over the past three months, with firms indicating that the loan proceeds were used to finance inventories, accounts receivable, plant and equipment, and mergers and acquisitions. Supply conditions likely are playing a role in the recent growth of business loans, as significant net fractions of banks reported easing business credit standards and terms for the third consecutive survey. Net issuance of commercial paper, which had turned positive in the first half of 2004 after three years of run-offs, jumped in July, likely owing to some of the same demand factors driving C&I lending. Household borrowing, while still brisk, appears to have moderated somewhat in the second quarter, as higher interest rates weighed on mortgage debt growth and the slower advance in consumption spending limited the need for consumer credit. Federal debt continued to grow rapidly in the second

Chart 4 **Debt and Money**

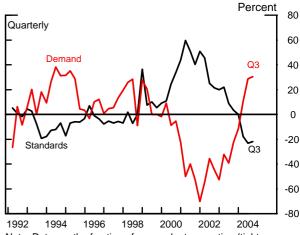


Note. Commercial paper and C&I loans are seasonally adjusted, bonds are not. e Estimated.



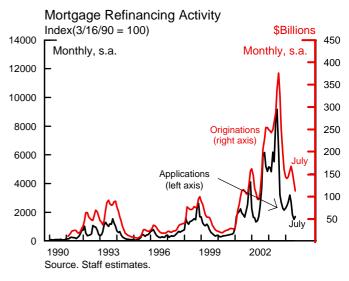


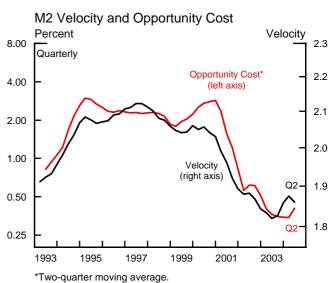
* Includes hybrid funds but excludes reinvested dividends. e Estimated.



Changes in C&I Loan Standards and Demand

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





quarter, but state and local government debt issuance dropped, partly as a result of the improving fiscal conditions of many states. Total domestic nonfinancial sector debt is estimated to have advanced at about a 7½ percent annual rate in the second quarter, more than a percentage point below the first-quarter pace.

(6) Following several months of robust expansion, M2 grew at only a 1½ percent pace in June and appears to have contracted slightly in July. Some of the recent weakness can be attributed to the decline in mortgage refinancing activity this spring and the related runoff of the earlier inflows to liquid deposits. In addition, retail money market funds experienced outflows in June and July, as households apparently found capital market investments more attractive. Flows into equity mutual funds, which had lagged in May, picked up in June and July, and bond funds experienced modest inflows last month following three months of outflows. In contrast to other components of M2, currency growth strengthened over the past two months, partly as a result of strong demand from Iraq and Russia. The opportunity cost of holding M2 edged up in the second quarter for the first time in two years as short-term market interest rates rose in anticipation of the June 30 monetary policy action. Nonetheless, M2 expanded briskly on balance in the second quarter, resulting in a modest decline in velocity.

Policy Alternatives

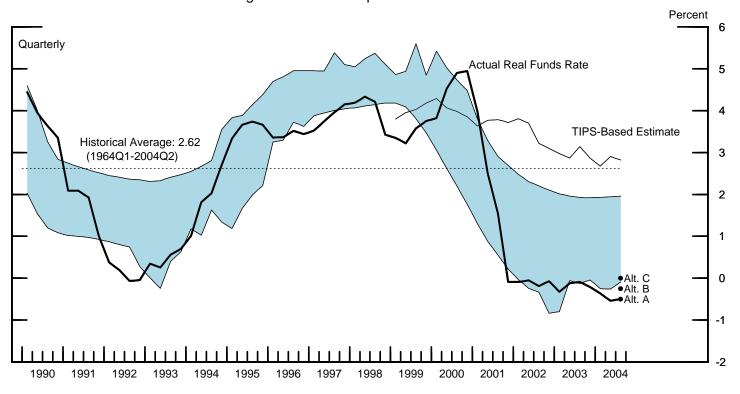
- Weaker-than-expected incoming data on spending have led the staff to mark down its projection for GDP growth in 2004 to about 4 percent, significantly below the previous forecast and also below the $4\frac{1}{2}$ to $4\frac{3}{4}$ percent central tendency of forecasts made by Committee participants at the June meeting. As a consequence, the staff has trimmed its assumed path for monetary policy, with the federal funds rate now reaching 2³/₄ percent by the end of next year. The staff anticipates that yields on longer-term securities will edge down further over the projection horizon, as the lift from rising short-term rates is more than offset by a shallower trajectory for the funds rate than currently incorporated in market prices. Equity prices are expected to rise enough from current levels to generate risk-adjusted returns in line with returns on fixed-income instruments, while the nominal trade-weighted index of the dollar's value against major foreign currencies is assumed to fall at an annualized rate of ½ percent. Oil prices are anticipated to decline to about \$38 per barrel by the end of next year, \$4 per barrel higher than in the June forecast. In 2005, less accommodative monetary policy and a shift toward fiscal restraint contribute to a moderation in the advance of GDP to around 3½ percent, still a tad faster than estimated growth in potential GDP. As a result, the output gap is projected to contract gradually over the forecast period and the unemployment rate to edge down to 51/4 percent, a little above the staff's estimate of the NAIRU. The staff continues to forecast core PCE inflation of about 1³/₄ percent for 2004, but its forecast for overall PCE inflation has been boosted to around 2½ percent, reflecting higher energy prices. Core inflation is projected to edge down to 1½ percent in 2005, owing to the pass-through of falling energy and non-oil import prices as well as lingering economic slack, while total PCE price inflation drops to 11/4 percent.
- (8) Table 1 presents three alternatives for near-term policy for the Committee's consideration, including draft language for the announcement. Under Alternative A, the existing stance of policy would be maintained at this meeting. Alternative B would raise the target for the federal funds rate 25 basis points to 1½ percent. Alternative C would boost the funds rate 50 basis points to 1¾ percent.

	Table 1	: Alternative Language for the	August FOMC Announcement	
	June FOMC	Alternative A	Alternative B	Alternative C
Policy Decision	1. The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 1-1/4 percent.	The Federal Open Market Committee decided today to keep its target for the federal funds rate at 1-1/4 percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 1-1/2 percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 50 basis points to 1-3/4 percent.
	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 accommodative stance of monetary policy, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	[Unchanged]	The Committee continues to believe that robust underlying growth in productivity is providing ongoing support to economic activity.
Rationale	3. The evidence accumulated over the intermeeting period indicates that output is continuing to expand at a solid pace and labor market conditions have improved.	The evidence accumulated over the intermeeting period indicates a moderation in output growth and some slowing in the pace of improvement in labor market conditions.	The evidence accumulated over the intermeeting period indicates that labor market conditions continue to improve. Although output growth has moderated in recent months, the economy appears poised to expand at a solid pace going forward absent significant further increases in energy prices.	The evidence accumulated over the intermeeting period indicates that output growth has moderated but appears poised to resume a stronger pace going forward and that labor market conditions continue to improve.
	4. Although incoming inflation data are somewhat elevated, a portion of the increase in recent months appears to have been due to transitory factors.	Recent inflation data have been somewhat elevated, though a portion of the rise in prices evidently reflects transitory factors.	Recent inflation data have been somewhat elevated, though a portion of the rise in prices evidently reflects transitory factors.	Although a portion of the rise in inflation this year appears to have been due to transitory factors, continuing and substantial increases in energy prices are putting persistent upward pressure on costs and overall prices.
Assessment	5. The Committee perceives the upside and downside risks to the attainment of both sustainable growth and price stability for the next few quarters are roughly equal.	[Unchanged]	[Unchanged]	In current circumstances, the Committee believes that the existing degree of policy accommodation, if sustained over the next few quarters, could foster economic growth that is more likely to be above than below its long-run sustainable pace. Similarly, with respect to the Committee's goal of price stability, such an unchanged policy stance implies greater risks to the upside than the downside.
of Risk	6. With underlying inflation still 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 still 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 promote price stability and sustainable growth.	[Unchanged]	[None]

The first two alternatives propose a structure of the announcement fairly close to that employed at the last meeting. Alternative C, however, offers a substantial departure from the form and substance of recent announcements. It involves an assessment that the risks to growth and inflation are tilted to the upside—conditioned explicitly on an unchanged stance of policy following the action—and elimination of the "measured pace" sentence. Paragraph 18 discusses a hybrid of Alternatives B and C in which the funds rate would be increased 25 basis points while some of the language proposed for Alternative C would be incorporated in the announcement. Regarding the rationale section of the announcement, the Committee's characterization of the labor market, and possibly of the economic outlook more generally, may be affected by the release on Friday of the employment report for July. If that report comes in about as the staff expects, the Committee might wish to indicate, as under Alternatives B and C, that "labor market conditions continue to improve." However, if the report is again on the soft side, as in June, the Committee might wish to cite "some slowing in the pace of improvement in labor market conditions," as in Alternative A.

than projected in the June Greenbook, the Committee may still judge that the economy is poised for significant expansion going forward, as in the current staff forecast. Under this view, a gradual tightening of monetary policy should be consistent with a pace of growth sufficient to make some headway in reducing economic slack while keeping inflation well contained. If the Committee subscribes to such an outlook, it may find it appropriate to continue paring the degree of monetary policy accommodation and thus be attracted to the 25-basis-point firming at this meeting of **Alternative B**. Policy likely will need to be firmed considerably over time: The real federal funds rate, measured as the difference between the nominal funds rate and lagged four-quarter core PCE inflation, remains negative and below the estimates of its equilibrium value implied by selected staff models (Chart 5). And given recent inflation trends, as well as the continued climb in crude oil prices in recent weeks, a further tightening of policy might be viewed as desirable to reduce the odds of an upturn in inflation expectations and more generally to help ensure that

Chart 5
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 a four-quarter moving average of core PCE inflation as a proxy for inflation expectations, with the staff projection used for 2004Q3.

Equilibrium Real Funds Rate Estimates (Percent)

	<u>2002</u>	<u>2003</u>	2004H1	2004Q3 —
Statistical Filter - Two-sided: Based on historical data and the staff forecast June Bluebook	-0.2 0.0	-0.1 <i>0.2</i>	0.0 0.4	0.0
- One-sided: Based on historical data* June Bluebook	0.1 <i>0.3</i>	-0.2 -0.2	-0.3 <i>0.3</i>	-0.1
FRB/US Model - Two-sided: Based on historical data and the staff forecast June Bluebook	2.3 2.4	2.0 2.2	1.9 2.2	2.0
- One-sided: Based on historical data** June Bluebook	1.7 1.9	0.7 1.0	1.0 1.4	1.2
Treasury Inflation-Protected Securities June Bluebook	3.5 3.5	3.0 3.0	2.8 2.8	2.8

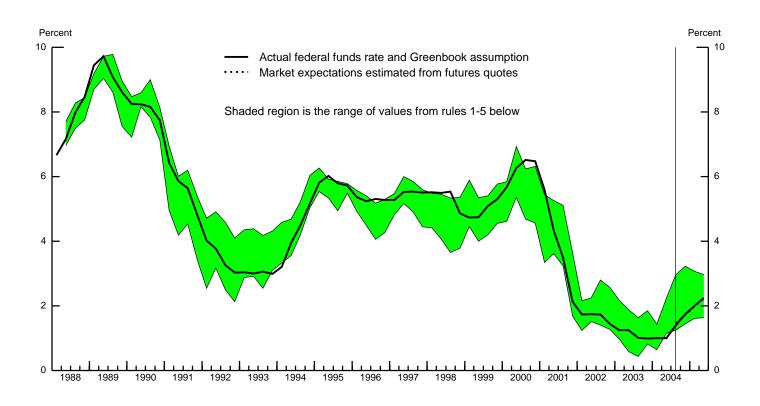
^{*} Also employs the staff projection for the current and next quarters.

^{**} Also employs the staff projection for the current quarter.

core inflation does not rise above acceptable levels. At the same time, the Committee may believe that a gradual pace of policy adjustment will likely be sufficient to foster achievement of its goals, particularly given the apparent persistence of economic slack, which should help restrain inflation. Also, the recent data may be read as hinting that the sluggishness in spending of the past few months might prove more protracted than forecast in the Greenbook, arguing for only a modest firming step at this meeting. Estimated policy rules generally suggest that a such a tightening at this meeting would be consistent with the Committee's past policy conduct (Chart 6).

- In announcing implementation of Alternative B, the Committee would presumably want to modify its previous statement that "output is continuing to expand at a solid pace" to acknowledge both the softness in economic activity in the past few months and the potential effects on economic prospects of energy price developments. One way to accomplish this would be to note that "Although output growth has moderated in recent months, the economy appears poised to expand at a solid pace going forward absent significant further increases in energy prices." With regard to recent price developments, core consumer inflation was subdued on a monthly basis in June although the twelve-month inflation rate was higher than a year earlier. The Committee may wish to retain the sense of its previous announcement regarding inflation while not putting excessive weight on the latest monthly data by saying "Recent inflation data have been somewhat elevated, though a portion of the rise in prices evidently reflects transitory factors." If the Committee finds the staff projection of aggregate demand and supply conditions plausible, it could reiterate its previous assessment that the risks to the attainment of sustainable growth and price stability are balanced for the next few quarters. The Committee might again wish to communicate a view of the likely pace of policy adjustment by stating that, "With underlying inflation still expected to be relatively low . . . policy accommodation can be removed at a pace that is likely to be measured," while also retaining the indication that it would tighten at a faster pace if necessary to maintain price stability.
- (11) Market participants apparently have viewed the incoming data, in the context of the FOMC's June announcement and the Chairman's monetary policy

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



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

Г	2004			2005		
	Q2	Q3	Q4	Q1	Q2	
Outcome-based Rules						
1. Baseline Taylor	2.25	2.96	3.23	3.07	2.97	
2. Aggressive Taylor	1.47	2.30	2.73	2.63	2.55	
3. Estimated	1.27	1.44	1.99	2.29	2.44	
Forecast-based Rules						
Estimated with Greenbook forecasts	1.16	1.25	1.47	1.61	1.72	
5. Estimated with FOMC forecasts	1.26	1.39	1.45	1.68	1.63	
6. First-difference rule*	1.16	1.10				
From Financial Markets						
7. Estimated TIPS-based rule*	1.33	1.29 **				
Memo: Expected federal funds rate derived from futures		1.46	1.72	1.99	2.22	
Memo: Greenbook assumption	1.00	1.40	1.75	2.00	2.25	

^{*} Not included in the shaded region in the figure.

Note: Rule prescriptions for 2004Q3 through 2005Q2 are calculated using Greenbook projections for inflation and the output gap (or unemployment gap), except for 2004Q3 of line 5, which uses FOMC projections. For rules that contain the lagged funds rate, the rule's previous prescription for the funds rate is used for 2004Q4 through 2005Q2. It is assumed that there is no feedback from the rule prescriptions to the Greenbook projections through 2005Q2.

^{**} Computed using average TIPS and nominal Treasury yields to date

Rules Chart: Explanatory Notes

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

Rule	Specification	Root-	mean- e error							
Kuic	Specification	1988:1- 2004:2	2001:1- 2004:2							
Outo	come-based									
Baseline Taylor Coefficients are benchmark values, not estimated.	$i_{t} = 2 + \pi_{t} + 0.5(y_{t} - y_{t}^{*}) + 0.5(\pi_{t} - y_{t}^{*})$.94	.95							
2. Aggressive Taylor Coefficients are benchmark values, not estimated.	$i_t = 2 + \pi_t + (y_t - y_t^*) + 0.5(\pi_t - 2)$.72	.73							
3. Estimated Outcome-based Rule includes both lagged interest rate and serial correlation in residual.	$i_{t} = .53i_{t-1} + 0.47 [1.07 + 0.97(y_{t}-y_{t}^{*}) + 1.51 \pi_{t}] + 0.48\varepsilon_{t-1}$.24	.26							
Fore										
4. Estimated Greenbook Forecast-based Rule includes both lagged interest rate and serial correlation in residual.	$i_{t} = .72i_{t-1} + 0.28 [0.41 + 1.08(y_{t+3 t} - y_{t+3 t}) + 1.67 \pi_{t+3 t}] + 0.33 \varepsilon_{t-1}$.25	.27							
5. Estimated FOMC Forecast-based 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.	$i_{t} = 0.49i_{t-2} + 0.51 \left[0.26 - 2.10(u_{t+3 t}^{-} u_{t+3 t}^{*}) + 1.60 \pi_{t+3 t} \right]$.45	.66							
6. First-difference Rule Coefficients are benchmark values, not estimated.	$\begin{vmatrix} i_{t} = i_{t-1} + 0.5(\Delta y_{t+3 t} \Delta y_{t+3 t}) \\ + 0.5(\pi_{t+3 t} 2) \end{vmatrix}$.83	.32							
From Fir	From Financial Markets									
7. Estimated TIPS-based $\pi_{comp5 t}$ denotes the time- t difference between 5-yr nominal Treasury yields and TIPS. Sample begins in 1999 due to TIPS volatility in 1997-8.	$i_t = 0.97i_{t-1} + [-1.18 + 0.63 \pi_{comp5 t}]$.43#	.47							

[#] RMSE calculated for 1999:1-2004:2.

testimony, as implying that the FOMC will firm policy another 25 basis points at this meeting, again assess the risks to growth and inflation as balanced, and retain the reference to a "measured pace." Moreover, a range of indicators continues to suggest that investors generally remain well prepared for gradual policy tightening.⁴ Thus, the market reaction to implementation of this alternative would likely be rather muted, as in June. However, the mention of crude oil prices as a factor potentially influencing future economic growth could prompt investors to focus more closely on evolving energy price developments in revising their expectations for monetary policy.

- (12) If the Committee is concerned by the slow pace of progress in reducing resource slack projected in the Greenbook or is worried that the forecasted rebound in growth could fail to materialize, it may prefer the unchanged policy stance of Alternative A. The sluggish consumption spending of late and the still-limited pickup in capital investment—even ahead of the expiration of the partial-expensing tax provisions at year-end—might be read by policymakers as suggesting that aggregate demand could remain soft for some time. Such concerns about prospects for economic activity could intensify if the labor market report for July turns out to be surprisingly weak. The possibility that business and consumer confidence could be impaired by heightened terrorist threats might also be seen as posing some downside risk to spending and output. With inflation apparently moving down somewhat from its elevated levels of earlier this year and inflation expectations apparently contained, a brief hiatus in the process of firming policy might involve little risk of higher inflation and would permit the accumulation of additional data that could be helpful in assessing whether spending is rebounding in line with projections.
- (13) The announcement accompanying a decision to leave rates unchanged could point to the evidence of "a moderation in output growth" and possibly, as mentioned above, a slowing in the pace of improvement in labor market conditions. The inflation sentence could well be similar to that under Alternative B. If FOMC

⁴ See "Market Preparedness for Monetary Policy Tightening," to be distributed to the Committee on August 6, 2004.

members are especially concerned that the recent weakness in spending might prove persistent, they might consider an assessment that risks to sustainable growth are weighted to the downside. However, the Committee may judge that, especially given the easing of market interest rates that would likely accompany an unchanged policy stance, the risks to both sustainable growth and price stability would remain in balance. Assuming that the Committee still sees a need to move over time toward a neutral stance, it probably would want to retain in the announcement the judgment that policy accommodation can likely be removed at a "measured pace." Consistent with its motivation for selecting Alternative A, the Committee might also wish to note that policy will be adjusted as appropriate to promote "sustainable growth" as well as price stability in the last sentence of the risk assessment section.

- (14) Unless market expectations for the decision at this meeting are altered substantially by a weak employment report for July, announcement of an unchanged policy stance would come as a considerable surprise to investors and might trigger a sizable drop in short-term interest rates, a rally in bond prices, and some depreciation in the foreign exchange value of the dollar. The drop in bond yields would tend to support equity prices, but that influence could be offset if the policy announcement led investors to believe that economic activity and corporate profits were likely to be weaker than previously anticipated. The declines in market interest rates and in the dollar would likely be even more pronounced, and a fall in equity prices more likely, if the FOMC provided an assessment of net downside risks to sustainable growth or otherwise communicated concern about prospective economic weakness.
- (15) If the Committee sees the recent slower growth of aggregate demand as likely to be transitory but suspects that the pickup in core inflation could well be more durable than the staff anticipates, it might choose to raise the funds rate 50 basis points at this meeting, as in **Alternative C**. FOMC members may consider inflation already to be close to the top of an acceptable range and see several reasons to question the decline in inflation in the staff forecast. With inflation expectations remaining in a 2 to 3 percent range, well above the Greenbook forecast, the Committee may believe that underlying inflation has considerable momentum. Also,

high energy prices may prove to be longer lasting than anticipated by the staff forecast and the markets, providing less downward pressure on overall inflation. Policymakers may see less slack in prospect than in the Greenbook projection, because they may perceive the economy as already close to its potential or the growth rate of potential output as lower than estimated by the staff. Finally, Committee members might be uneasy about inflation prospects if they place less weight on the most recent spending indicators and foresee more robust growth in aggregate demand than in the staff forecast, perhaps along the lines of the "Spending Rebound" scenario in the Greenbook. In light of these considerations, the FOMC may judge a 25-basis-point move at this meeting—which would leave the real funds rate in negative territory—as insufficient, whereas a 50-basis-point move would at least bring the real rate to around zero.

(16) With market participants interpreting a "measured pace" as implying at most 25-basis-point moves, policymakers probably would want to alter that phrase significantly or drop it from an announcement of Alternative C. While some policymakers might prefer not to provide guidance about the likely pace of policy change, they may be comfortable giving an indirect indication of its probable direction. If so, the last sentence of the announcement might read: "In current circumstances, the Committee believes that the existing degree of policy accommodation, if sustained over the next few quarters, could foster economic growth that is more likely to be above than below its long-run sustainable pace. Similarly, with respect to the Committee's goal of price stability, such an unchanged policy stance implies greater risks to the upside than the downside." ⁵ Given the explicit conditioning on the stance of policy in this assessment, a reference to the role of monetary accommodation in the first sentence of the rationale paragraph would be redundant. That paragraph might instead begin: "The Committee continues to believe that robust underlying growth in productivity is providing ongoing support to economic activity." If the Committee thinks that the "soft patch" in the economy is probably behind us and that

⁵ See "A Potential Change in the Wording of the Risk Assessment," memorandum to the Federal Open Market Committee from Vincent Reinhart, August 5, 2004.

conditions are in place for a robust snap-back, it might also want to state that output growth "appears poised to resume a stronger pace going forward." To underscore its concerns about the effect of energy price increases on the inflation outlook, the Committee might want to say: "Although a portion of the rise in inflation this year appears to have been due to transitory factors, continuing and substantial increases in energy prices are putting persistent upward pressure on costs and overall prices."

- (17) Unless the employment report for July turns out to be exceptionally strong, market participants would be quite surprised by the combination of a 50-basis-point move and the announcement proposed under Alternative C. The assessment of upside risks to growth and inflation and the deletion of the "measured pace" language would reinforce the sense that the trajectory of policy would be steeper than previously anticipated. Market interest rates would likely increase sharply, while stock prices would drop and the foreign exchange value of the dollar would rise.
- wishes to move away from the "measured pace" language before long, it might wish to combine the 25-basis-point firming action and rationale of Alternative B with the conditional assessment of upside risks proposed for Alternative C. That assessment would imply a need for continued policy tightening and thus could facilitate dropping the measured pace language, perhaps even at this meeting. If that language were dropped on Tuesday, the market reaction to the announcement of conditional upside risks could be fairly sharp, approaching that expected under Alternative C, as market participants would probably conclude that the FOMC no longer believed that policy tightening was likely to be gradual. But if the "measured pace" wording were retained for this meeting, the response might be rather muted, with perhaps a small rise in market yields and a modest decline in equity prices.

Money and Debt Forecasts

(19) Under the Greenbook projection, M2 is expected to continue to expand at a subdued pace, averaging only around 1½ percent from July through December. Historical evidence indicates that deposit interest rates are likely to respond sluggishly to rising short-term market rates, leading to a widening of the opportunity cost of

holding monetary assets. As a consequence, households are expected to shift their portfolios away from deposits and toward market instruments. The lagged effects on deposit balances of the continuing slowdown in mortgage refinancing activity are also expected to damp money growth, but to declining degree in the months ahead.

(20) The growth of domestic nonfinancial sector debt is forecast to slow to a 7 percent pace over the second half of this year. Household debt should decelerate as higher mortgage rates slow residential investment and home price appreciation. By contrast, business borrowing is expected to increase as internal funds fail to keep pace with rising capital expenditures and as equity retirements quicken with increased merger activity. Federal debt growth is expected to moderate somewhat from its robust first half pace, but budget deficits are projected to remain sizable. As the fiscal positions of state and local governments continue to improve, and with long-term interest rates expected to remain about flat, growth of state and local debt should slow further.

M2 Growth Under Alternative Policy Actions

		M2		M2
	No Change	Tighten 25 bp	Tighten 50 bp	Greenbook Forecast*
Monthly Growth Rate	S			
Jun-0	4 1.4	1.4	1.4	1.4
Jul-0	4 -1.1	-1.1	-1.1	-1.1
Aug-0	4 1.7	1.5	1.3	1.5
Sep-0	4 1.8	1.2	0.6	1.2
Oct-0	4 2.4	1.6	0.8	1.2
Nov-0	4 3.0	2.2	1.4	1.2
Dec-0	4 3.5	2.9	2.3	1.3
Quarterly Growth Rate				
2004 Q		3.5	3.5	3.5
2004 Q		9.5	9.5	9.5
2004 Q		1.9	1.8	1.9
2004 Q	4 2.4	1.8	1.1	1.2
Annual Growth Rate				
200		5.3	5.3	5.3
200	4 4.4	4.2	4.0	4.1
Growth From T				
2003 Q4 Jul-0		5.5	5.5	5.5
Jul-04 Dec-0	4 2.5	1.9	1.3	1.3

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

Directive and Balance-of-Risks Language

(21) 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 ______ 1½ percent.

(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 are roughly equal. With underlying inflation still 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 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 are roughly equal. With underlying inflation still 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. In current circumstances, the Committee believes that the existing degree of policy accommodation, if sustained over the next few quarters, could foster economic growth that is more likely to be above than below

its long-run sustainable pace. Similarly, with respect to the Committee's goal of price stability, such an unchanged policy stance implies greater risks to the upside than the downside.

SELECTED INTEREST RATES (percent)

	Short-term						Long-term									
			Treasury bill condary ma		CDs secondary market	Comm. paper	0	ff-the-run Tr	easury yield	ds	Indexe	d yields	Moody's Baa	Municipal Bond Buyer	Convention mortga primary	ages
		4-week	3-month	6-month	3-month	1-month	2-year	5-year	10-year	30-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 Low	1.45 0.86	1.26 0.75	1.22 0.81	1.28 0.82	1.32 0.93	1.28 0.91	2.11 1.09	3.60 2.06	4.80 3.29	5.61 4.37	1.84 0.77	2.48 1.56	7.48 6.01	5.50 4.78	6.44 5.21	4.06 3.45
04 High Low	1.40 0.92	1.37 0.73	1.51 0.87	1.79 0.96	1.67 1.04	1.43 0.97	2.97 1.49	4.10 2.65	5.03 3.84	5.68 4.77	1.57 0.42	2.25 1.35	6.90 6.03	5.45 4.73	6.34 5.38	4.19 3.36
Monthly Aug 03 Sep 03 Oct 03 Nov 03 Dec 03	1.03 1.01 1.01 1.00 0.98	0.95 0.91 0.91 0.94 0.89	0.97 0.96 0.94 0.95 0.92	1.05 1.03 1.02 1.04 1.01	1.08 1.08 1.10 1.11 1.10	1.03 1.02 1.02 1.02 1.03	1.89 1.70 1.75 1.92 1.90	3.36 3.16 3.17 3.27 3.25	4.64 4.45 4.45 4.45 4.41	5.46 5.30 5.30 5.27 5.22	1.53 1.34 1.24 1.29 1.26	2.32 2.19 2.07 1.97 1.99	7.01 6.79 6.73 6.66 6.60	5.43 5.30 5.27 5.15 5.11	6.26 6.15 5.95 5.93 5.88	3.79 3.86 3.74 3.75 3.76
Jan 04 Feb 04 Mar 04 Apr 04 May 04 Jun 04 Jul 04	1.00 1.01 1.00 1.00 1.00 1.03 1.26	0.84 0.92 0.96 0.90 0.90 1.04 1.18	0.90 0.95 0.95 0.96 1.04 1.29 1.35	0.99 1.01 1.01 1.11 1.33 1.64 1.69	1.06 1.05 1.05 1.08 1.20 1.46 1.57	0.99 0.99 0.99 1.00 1.00 1.13 1.29	1.75 1.73 1.57 2.09 2.56 2.78 2.64	3.10 3.05 2.78 3.38 3.86 3.93 3.70	4.28 4.22 3.96 4.50 4.88 4.88 4.64	5.13 5.06 4.87 5.28 5.56 5.54 5.36	1.11 0.88 0.55 1.05 1.37 1.43 1.32	1.88 1.77 1.48 1.90 2.09 2.14 2.02	6.44 6.27 6.11 6.46 6.75 6.78 6.62	4.99 4.86 4.78 5.13 5.39 5.40 5.29	5.74 5.64 5.45 5.83 6.27 6.29 6.06	3.65 3.55 3.41 3.65 3.88 4.10 4.11
Weekly Jun 4 04 Jun 11 04 Jun 18 04 Jun 25 04 Jul 2 04 Jul 9 04 Jul 16 04 Jul 23 04 Jul 30 04 Aug 6 04	1.01 0.99 1.01 1.01 1.19 1.26 1.25 1.25	0.95 1.00 1.04 1.07 1.10 1.13 1.16 1.20 1.30 1.33	1.18 1.27 1.32 1.31 1.32 1.30 1.34 1.36 1.45 1.49	1.46 1.59 1.70 1.69 1.64 1.67 1.70 1.78	1.32 1.41 1.50 1.51 1.54 1.52 1.55 1.63 1.66	1.01 1.07 1.15 1.18 1.26 1.25 1.26 1.31 1.34 1.41	2.66 2.77 2.85 2.78 2.73 2.57 2.58 2.67 2.76 2.65	3.90 3.98 3.97 3.90 3.82 3.65 3.65 3.68 3.80 3.67	4.90 4.95 4.90 4.83 4.77 4.63 4.61 4.60 4.71 4.59	5.55 5.59 5.56 5.50 5.44 5.35 5.33 5.32 5.42 5.33	1.34 1.46 1.46 1.43 1.41 1.25 1.27 1.33 1.41 1.29	2.04 2.15 2.17 2.15 2.10 1.99 2.01 2.02 2.08 1.99	6.80 6.84 6.78 6.75 6.71 6.63 6.60 6.58 6.66	5.39 5.42 5.40 5.37 5.34 5.26 5.27 5.26 5.31	6.28 6.30 6.32 6.25 6.21 6.01 6.00 5.98 6.08 5.99	3.98 4.14 4.13 4.13 4.19 4.05 4.02 4.12 4.17 4.08
Daily Jul 20 04 Jul 21 04 Jul 22 04 Jul 23 04 Jul 26 04 Jul 27 04 Jul 28 04 Jul 29 04 Jul 30 04 Aug 2 04 Aug 3 04 Aug 4 04 Aug 5 04	1.25 1.25 1.26 1.25 1.27 1.27 1.29 1.30 1.29 1.28 1.24 1.22	1.22 1.21 1.21 1.22 1.28 1.35 1.32 1.26 1.26 1.37 1.34 1.33	1.36 1.35 1.36 1.37 1.46 1.47 1.44 1.51 1.49 1.49	1.70 1.71 1.71 1.71 1.78 1.79 1.77 1.76 1.78 1.77 1.76 1.75	1.57 1.59 1.60 1.61 1.61 1.64 1.65 1.65 1.65 1.65 1.66	1.32 1.31 1.32 1.32 1.33 1.34 1.34 1.33 1.40 1.41 1.43	2.67 2.72 2.70 2.69 2.74 2.83 2.80 2.76 2.69 2.66 2.65 2.66 2.64	3.69 3.73 3.72 3.70 3.74 3.86 3.83 3.72 3.69 3.67 3.67 3.65	4.61 4.63 4.60 4.64 4.76 4.75 4.74 4.64 4.62 4.59 4.59	5.33 5.36 5.35 5.32 5.36 5.47 5.45 5.36 5.34 5.33 5.33 5.31	1.35 1.37 1.35 1.34 1.40 1.50 1.45 1.40 1.32 1.29 1.27 1.30 1.27	2.05 2.04 2.02 2.01 2.05 2.15 2.11 2.08 2.02 1.99 1.98 2.00 1.96	6.59 6.62 6.61 6.58 6.60 6.71 6.69 6.60 6.61 6.59 6.59	 		

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.

August 9, 2004

Money Aggregates Seasonally adjusted

nontransactions components M2 M1 М3 Period In M2 In M3 only 1 2 3 5 Annual growth rates(%): Annually (Q4 to Q4) 2001 7.0 10.2 11.1 18.5 12.7 2002 6.7 7.6 5.8 3.3 6.4 2003 2.9 6.5 5.3 4.9 4.5 Quarterly(average) 2003-03 6.5 6.9 7.1 6.1 6.7 2.4 -2.3 -0.9 -1.3 -1.2 2004-Q1 6.1 3.5 2.8 10.8 5.8 10.3 11.3 Q2 6.4 9.5 15.0 Monthly 2003-July 2.3 8.0 9.5 14.5 10.0 7.5 8.0 8.1 -1.3 Aug. 5.1 Sep. -0.1 -4.5 -5.6 5.1 -1.5 Oct. 1.7 -3.1 -4.4 -4.3 -3.5 -0.5 -0.7 Nov. -0.1 -1.7 -0.9 Dec. 9.1 -0.7 -3.4 -0.6 -0.7 2004-Jan. -5.8 1.5 3.5 20.7 7.5 Feb. 18.1 9.9 7.7 10.7 10.2 17.8 9.3 Mar. 7.0 16.1 11.5 Apr. -2.0 9.4 12.5 15.0 11.1 May -0.8 13.5 17.4 16.4 14.4 June 12.0 1.4 -1.5 12.9 5.1 July e -11.1 -1.1 1.6 -0.8 -1.0 Levels (\$billions): Monthly 2004-Feb. 1305.9 6120.4 4814.5 2847.4 8967.8 Mar. 1325.3 6167.7 4842.5 2885.6 9053.4 Apr. 1323.1 6215.9 4892.8 2921.6 9137.5 May 1322.2 6285.8 4963.6 2961.6 9247.4 1335.4 6292.9 4957.5 2993.5 June 9286.4 Weekly 1312.4 6282.9 2004-June 4970.5 2979.8 9262.8 14 1324.3 6293.7 4969.4 3007.1 9300.7 21 1337.3 4951.8 6289.2 2999.6 9288.8 28 1352.5 6292.6 4940.1 3025.4 9318.0 2975.3 July 5 1333.9 6287.1 4953.2 9262.4 12 1309.9 6287.8 4977.8 2969.5 9257.3 19p 1316.8 6286.5 4969.7 2993.0 9279.5 1336.0 6282.3 3009.2 26p 4946.3 9291.5

р preliminary

estimated

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

August 5, 2004

	Treasury Bills				Treasury	Coupons		Federal		Net RPs ⁵				
	Net	Redemptions	Net		Net Purchas			Redemptions	Net	Agency Redemptions	total outright	Short-	Long-	Net
0004	Purchases 2	(-)	Change	<1	1-5	5-10	Over 10	(-)	Change	(-)	holdings 4	Term ⁶	Term 7	Change
2001 2002	15,503 21,421	10,095	5,408 21,421	15,663 12,720	22,814 12,748	6,003 5,074	8,531 2,280	16,802	36,208 32,822	1	41,496 54,242	3,492 -5,366	636 517	4,128
														-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 QII	6,259		6,259	2,209	1,790	234			4,232		10,491	-2,578	1,056	-1,522
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
2003 Dec	1,494		1,494		237	283	20		540	10	2,024	-767	5,268	4,500
2004 Jan	619		619								619	-424	-5,097	-5,520
Feb	747		747	1,311	1,555	510	235		3,611		4,358	-568	-2,423	-2,991
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
2004 May 12												-721	1,000	279
May 19	67		67	1,693					1,693		1,760	849	-1,000	-151
May 26	209		209		783				783		991	3,800		3,800
Jun 2	33		33			713	84		797		830	-564	3,000	2,436
Jun 9	1,437		1,437		725	275			1,000	1	2,437	-6,834	2,000	-4,834
Jun 16	14		14		1,035				1,035		1,049	248	-2,000	-1,752
Jun 23	172		172								172	6,762	-4,000	2,762
Jun 30	2,202		2,202								2,202	-2,772	4,000	1,228
Jul 7	480		480								480	1,465	-1,000	465
Jul 14	403		403		1,682	244	29		1,955		2,358	-738	-1,000	-1,738
Jul 21	69		69	1,898					1,898	1	1,968	-1,831		-1,831
Jul 28					1,396				1,396		1,396	-2,004	-3,000	-5,004
Aug 4												4,693	-1,000	3,693
2004 Aug 5												6,072	-1,000	5,072
Intermeeting Period														
Jun 30-Aug 5	1,202		1,202	1,898	3,078	244	29		5,249		6,452	-821	-7,000	-7,821
Memo: LEVEL (bil. \$)			255.2	117.4	192.4	51.9	76.8		438.5		693.7	-10.5	12.0	1 5
Aug 5	1		200.2	117.4	132.4	51.9	10.0		430.3		033.7	-10.5	12.0	1.5

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.
 Outright purchases less outright sales (in market and with foreign accounts).
 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.

Includes redemptions (-) of Treasury and agency securities.
 RPs outstanding less reverse RPs.
 Original maturity of 13 days or less.
 Original maturity of 14 to 90 days.