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# MONETARY POLICY ALTERNATIVES

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

August 20, 1999

## MONETARY POLICY ALTERNATIVES

### Recent Developments

(1) The announcement that the FOMC increased the target federal funds rate to 5 percent at its June meeting had been widely expected, but the move to a neutral directive surprised many market participants.<sup>1</sup> Treasury coupon yields tumbled 10 to 15 basis points the day of the announcement, apparently as investors trimmed their odds for further policy tightenings, and fell further on balance in subsequent weeks, partly in response to favorable inflation data. Yields retraced these declines, however, in the weeks following the Chairman's Humphrey-Hawkins testimony on July 22. The testimony was widely read as emphasizing both the risks of an uptick in inflation pressures and the Federal Reserve's resolve to act "promptly and forcefully" should such pressures become more apparent. And it provided a backdrop for market responses to subsequent data showing an acceleration of labor costs, indications of a firming of activity abroad, and a weaker dollar. Most recently, in response to continued benign inflation reports, interest rates have fallen back a bit, and for the intermeeting period, on net, are about unchanged.<sup>2</sup> Judging from federal funds futures quotes, market participants now see a 1/4 point tightening at the August FOMC meeting as highly likely and attach some probability to further tightening later in the year. Equity prices

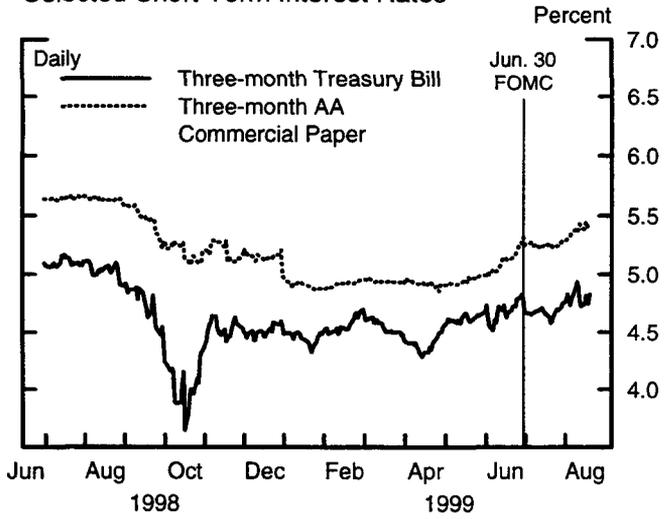
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1. The federal funds rate averaged very close to the intended level over the intermeeting period.

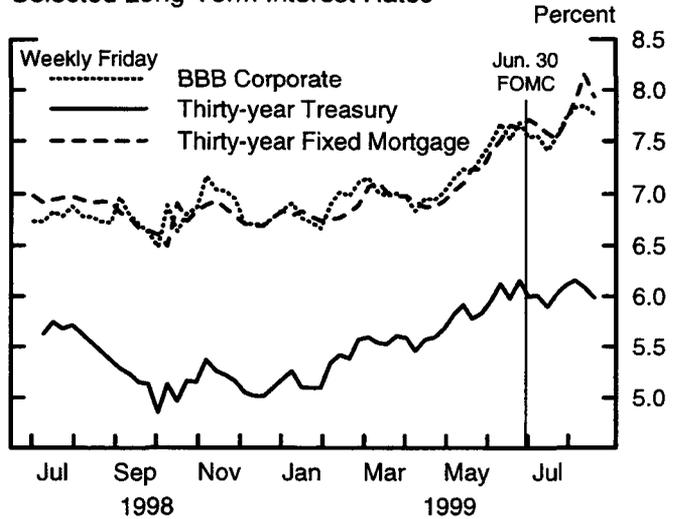
2. The posted rate declines at those maturities included in the midquarter refunding cycle owed entirely to the switch to new on-the-run coupon securities at the refunding.

Chart 1

Selected Short-Term Interest Rates

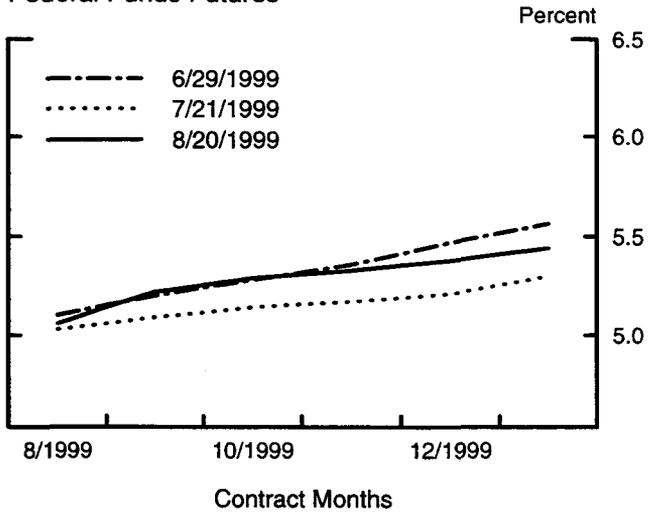


Selected Long-Term Interest Rates

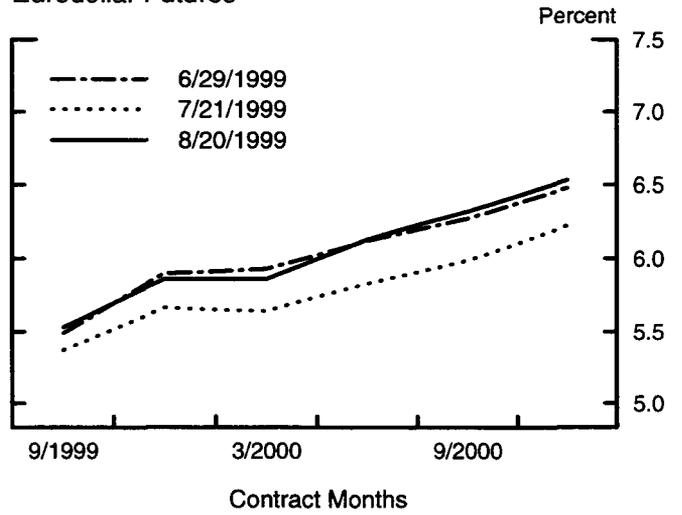


Source: Merrill Lynch

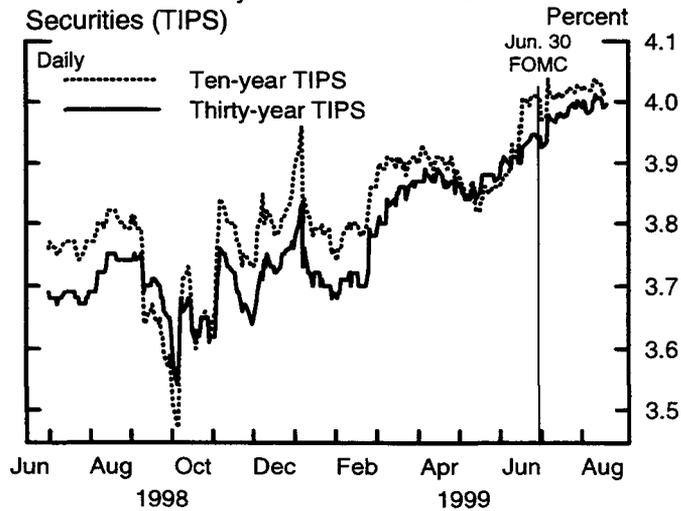
Federal Funds Futures



Eurodollar Futures



Yields on Treasury Inflation-Protected Securities (TIPS)



Selected Stock Indexes

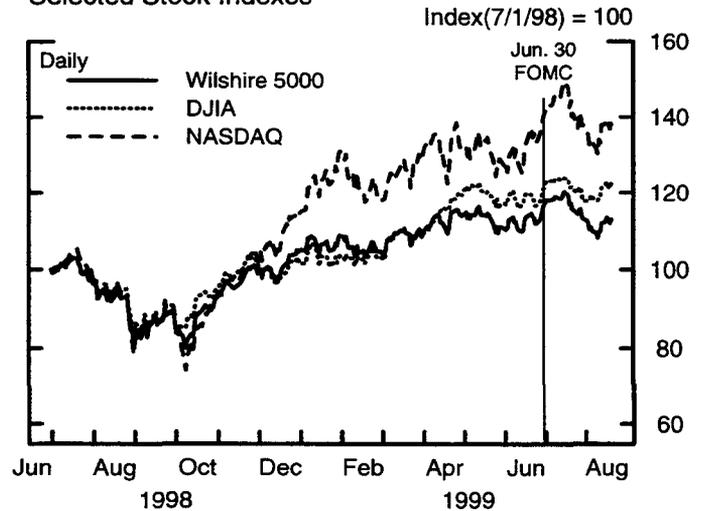
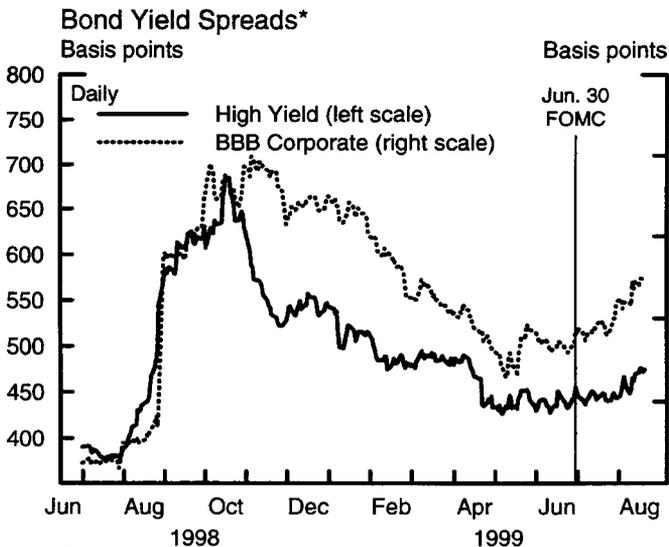
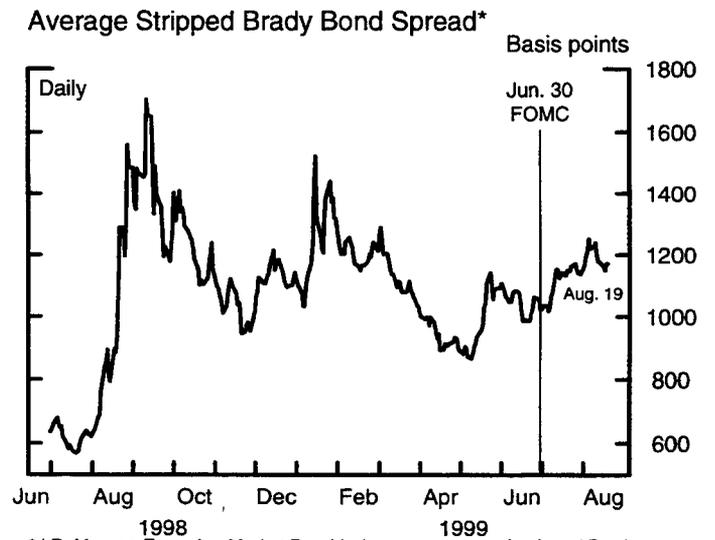
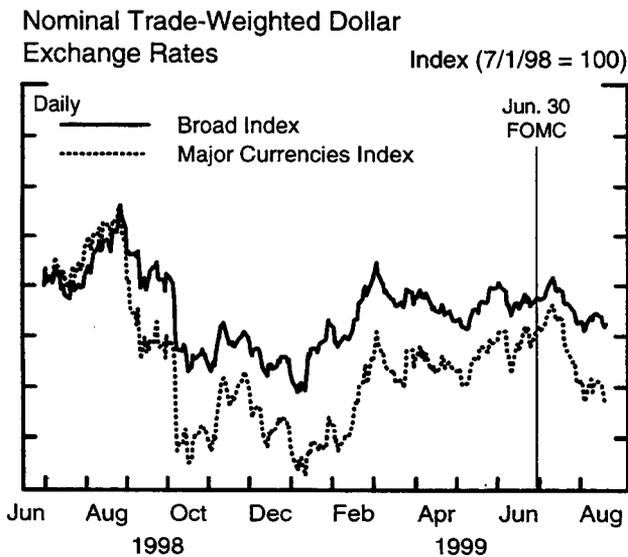
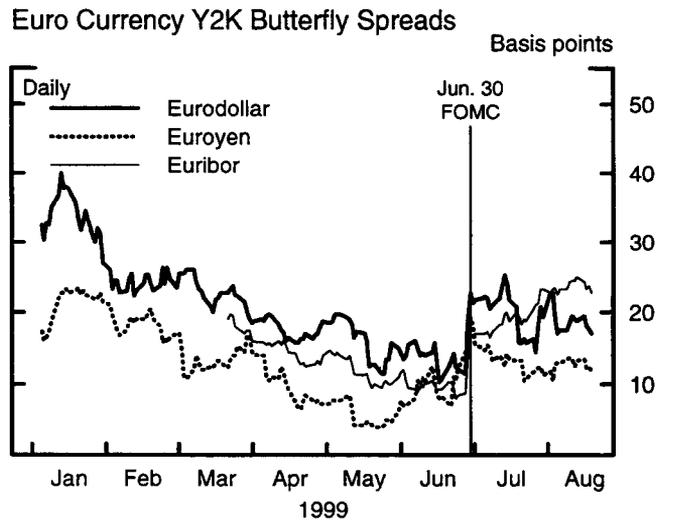
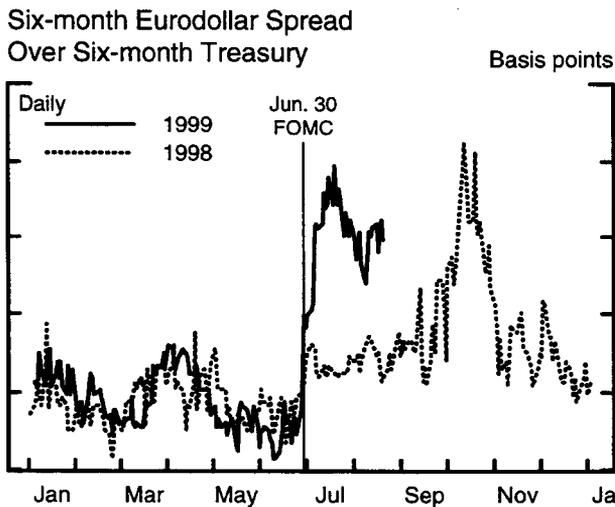
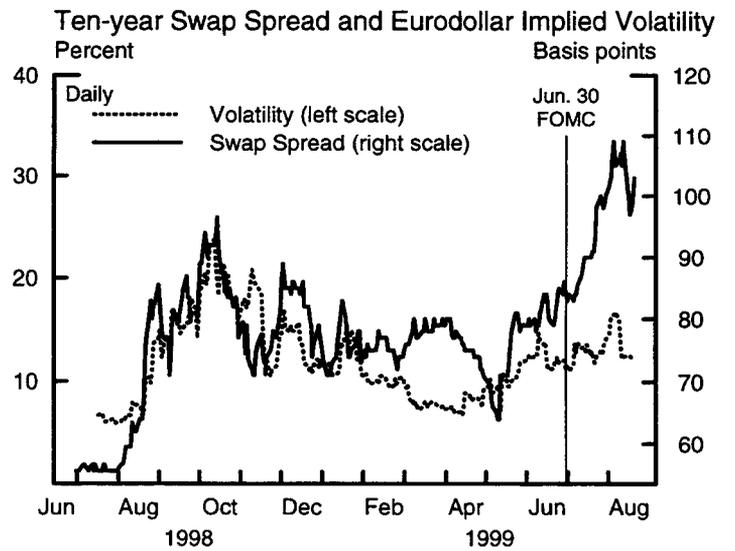


Chart 2



\*High yield spread is relative to the seven-year Treasury yield.  
 BBB corporate spread is relative to the ten-year Treasury yield.



\*J.P. Morgan Emerging Market Bond Index, an average of stripped Brady bond yield spreads over Treasuries for ten emerging market countries.

generally tracked movements in bond prices over the period—rising initially, dropping off sharply late in July, and rebounding more recently. Major indexes show mixed net changes, from up 2-1/2 percent to down 4-1/4 percent.

(2) Spreads of yields on many financial assets over Treasuries, including swap spreads, widened appreciably during the intermeeting period, although some of that movement has been reversed in the past few days.<sup>3</sup> The widening in spreads seemed to be prompted by heavy demands for fixed-rate financing in an environment of increased uncertainty about the course of interest rates and concerns about the liquidity of markets around the end of the year.<sup>4 5</sup> Many corporations reportedly have shifted forward some

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3. Swap spreads are the difference between the fixed rate paid under a swap agreement and a benchmark Treasury rate.

4. Swap spreads are not very sensitive to changing perceptions of credit risk because notional amounts are not exchanged under swap agreements, interest payments are netted, and most active participants in the interest rate swaps market tend to be highly rated institutions or to rely on various credit enhancement techniques.

5. Investors' concerns about Y2K funding conditions became more apparent as standard six-month funding instruments crossed over the year-end. The yield on six-month Eurodollar deposits, for example, edged up noticeably at the end of June, and the spread between the six-month Eurodollar deposit yield and the six-month Treasury yield is unusually wide (chart). Y2K effects in futures markets also seemed to become more pronounced. The so-called Eurodollar butterfly spread widened appreciably, on balance, over the intermeeting period. To help alleviate some of the concerns about funding pressures around the year-end, the Board gave final approval on July 20 to a Special Liquidity Facility (SLF) that would operate from October 1, 1999 through April 7, 2000. The SLF will provide collateralized discount window loans to eligible depository institutions at a rate of 150 basis points above the FOMC's target federal funds rate. SLF loans will entail few of the administrative conditions that apply for other forms of discount window credit.

longer-term issuance that they had planned for later this year or early next year. At the same time, Treasury debt outstanding has been declining, contributing to a trend in relative debt supplies that has tended to depress Treasury yields relative to comparable private yields. Fallout from the events of last autumn may have exacerbated the resulting widening of spreads. Market participants are more conscious of the possibility and consequences of a widespread reduction in market liquidity, and the amount of funds committed to taking a view on a narrowing of spreads probably has been reduced considerably. Moreover, the willingness to take such positions may have been further diminished for a time by counterparty credit concerns prompted by rumors that a large swap dealer was in trouble. In the past few days, however, spreads have narrowed noticeably as interest rate volatility and longer-term rates have declined in response to reduced fears about the possible extent of monetary policy tightening and as concerns about possible financial difficulties of market participants have diminished. Still, markets remain somewhat skittish and spreads are wider than they were at the end of June.

(3) Over the intermeeting period, the dollar depreciated about 1 percent, on balance, against a broad set of currencies; this performance averages an appreciation against the index of the currencies of important developing country trading partners and a depreciation against the index of the currencies of major industrial countries. The dollar fell 8 percent versus the yen, 3 percent against the euro, and 2 percent in terms of sterling. The bulk of the dollar's decline against the major currencies started in mid-July amid data releases suggesting a pickup in activity in Europe and Japan. Although central banks in

most industrial countries held their policy rates steady over the intermeeting period, longer-term interest rates in many countries rose on the market's more upbeat assessment of economic growth going forward. Spurred in part by data showing a sharp widening of the trade balance, the dollar dropped further against European currencies in recent days.

Concerns about a stronger yen drove the Japanese authorities to intervene three times in July. The depreciation of the dollar against the yen resumed in mid-August, as statements by Japanese officials and an absence of further intervention by the Japanese government apparently suggested to market participants that the willingness of Japanese authorities to engage in measures to limit the rise in the yen may be diminishing.<sup>6</sup>

(4) Credit spreads widened across a broad range of international financial assets during the intermeeting period. Corporate bond spreads against government obligations rose 10 to 15 basis points in Germany, Japan, and Canada. In Latin America, financial markets appeared particularly sensitive to prospects for rising interest rates in the United States. Spreads were further boosted by the news very late in the period that Ecuador would seek to reschedule its next Brady debt payment. In total, Brady yield spreads over Treasuries widened appreciably, with the Emerging Market Bond Index spread increasing 150 basis points. The Brazilian *real* depreciated about 10 percent against the dollar, but the

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6.

. The Desk did not intervene during the period for the accounts of the System or the Treasury.

Mexican peso was little changed on balance, perhaps supported by rising crude oil prices and an improving economic outlook. Concerns over the viability of Argentina's currency board continued, as that country's recession appeared to deepen and political uncertainty mounted ahead of this fall's presidential election. Equity prices fell about 10 percent in Brazil, Argentina, and Mexico. In Asia, renewed tensions between China and Taiwan, as well as increasing speculation about a possible devaluation of the renminbi, were reflected in falling equity prices in much of the region. The dollar appreciated about 4 percent versus the Thai baht, the Korean won, and the Philippine peso, and over 11 percent against the Indonesian rupiah amid continued political uncertainty and increasing doubts about the reform of Indonesia's financial sector.

(5) Growth of the broad monetary aggregates has moderated in recent months. In addition to the slower expansion in nominal output, the upward movement in market interest rates over the spring and summer likely has been restraining M2 growth. A portion of this effect likely owes to the decline in prepayments on mortgage-backed securities, which are typically held for a time as liquid deposits. But a pickup in noncompetitive tenders at Treasury auctions also suggests a growing attractiveness of market instruments relative to M2 assets. Currency has expanded at around an 8 percent clip over recent months, down a notch from the double-digit growth rates recorded over the first few months of the year. The moderate advance in M2 has contributed to the relatively tepid growth of M3. In addition, expansion in bank credit slowed sharply in July, likely damping

the growth of managed liabilities in M3. The generally sluggish rise in bank credit in July likely reflected, in part, substitutions by businesses of bond financing for bank loans.

(6) Borrowing by nonfinancial sectors has been slower in recent months than earlier in the year, similar to the pattern for money. Continued budget surpluses have kept federal debt on a downward trend, and borrowing by other sectors has slowed noticeably. Business borrowing, while off from earlier, remains faster than the growth of output, and has been focused on the bond market. Perhaps reflecting greater selectivity and preference for liquidity on the part of investors, junk bond issuance has slackened and issuance in general has shifted toward larger offerings by better-known firms. In the household sector, the rise in mortgage rates appears to be holding down mortgage borrowing, especially cash-out refinancing, while consumer credit has stayed on a slower trajectory relative to earlier in the year.

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

	May	Jun.	Jul.	1998:Q4 to Jul. <sup>2</sup>
<u>Money and Credit Aggregates</u>				
M1	-4.0	-4.0	-3.3	1.4
Adjusted for sweeps	4.2	1.1	2.7	5.4
M2	4.7	4.3	5.0	6.1
M3	4.6	5.3	4.8	6.1
Domestic nonfinancial debt	4.4	4.6	n.a.	5.8
Federal	-5.3	0.1	n.a.	-2.6
Nonfederal	7.2	5.9	n.a.	8.4
Bank credit	1.4	8.8	-1.2	0.3
Adjusted <sup>1</sup>	2.0	11.0	0.1	2.4
<u>Reserve Measures</u>				
Nonborrowed reserves	11.5	-41.0	-29.5	-9.5
Total reserves	10.4	-40.4	-24.8	-8.8
Adjusted for sweeps	19.4	-15.2	-4.0	2.7
Monetary base	13.9	6.2	7.9	9.4
Adjusted for sweeps	14.9	6.9	8.7	10.0
Memo: (millions of dollars)				
Adjustment plus seasonal borrowing	127	145	309	--
Excess reserves	1256	1261	1075	--

NOTE: Monthly reserve measures, including excess reserves and borrowing, are calculated by prorating averages for two-week reserve maintenance periods that overlap months. Reserve data incorporate adjustments for discontinuities associated with changes in reserve requirements.

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

2. For nonfinancial debt and its components, 1998:Q4 to June.

## Policy Alternatives

(7) In the staff forecast, bond yields and equity prices holding in their recent ranges foster growth of real GDP near that of its potential over the next year and a half, smoothing through quarterly gyrations arising from year 2000 effects. This slowing in GDP growth from the pace of the past several years is produced by a substantial moderation in the expansion of private domestic demand, which is only partly offset by a reduced drag from the external sector and a pickup in government spending. The staff believes that maintaining the financial conditions necessary to slow private domestic demand to this degree will require two more quarter-point increases in the federal funds rate by the early spring, one more than assumed in the June Greenbook. The unemployment rate remains around its current low level, which produces increasing pressures on labor costs. The effect of these pressures on inflation is reinforced by the turnaround in the prices of commodities and imported goods as the dollar drifts lower. As a result, inflation is expected to trend higher, with core consumer prices projected to expand around 2 percent over the four quarters of this year and 2-1/2 percent next year.

(8) Despite the pickup in underlying inflation in the staff forecast, the Committee may nonetheless prefer to keep the federal funds rate unchanged at this meeting, as under **alternative B**. The projected pickup in inflation, if realized, would be gradual and not likely for some time to foster an appreciable increase in inflation expectations that could destabilize financial markets or materially increase the ultimate cost to economic activity of containing price pressures. Accordingly, policy makers would be afforded more time to

judge whether the rise in inflation in fact is likely to materialize. Such additional time might be viewed as especially desirable if the Committee were to put less weight than the staff on the possibility that underlying inflation trends are adverse. Recent data may suggest that spending is on a lower trajectory than in the staff forecast--particularly because domestic demand likely has not yet felt much of the effects of the run-up in interest rates and flattening out of equity prices since early May. While some of the recent restraint from financial markets would be rolled back should the Committee fail to validate prevailing expectations of policy tightening, financial conditions on net could well remain more restrictive than those that generally have prevailed this year. And the Committee may see the wage and cost data as sufficiently ambiguous to reserve judgment on whether the current level of tautness in labor markets will produce accelerating prices, especially since trends in core consumer inflation and longer-run inflation expectations remain flat. Moreover, recent developments may indicate that global financial markets are fragile, with the potential for further deterioration as year-end approaches even absent a firming in policy.

(9) News that the Committee was standing pat, as under alternative B, would come as a considerable surprise in the market, triggering a rally in capital markets and putting further downward pressure on the foreign exchange value of the dollar. That reaction would be tempered if the Committee chose and announced a directive tilted toward restraint, thus preserving expectations of a higher funds rate in the near term. This approach might be favored if the Committee believed tightening was probably needed fairly

promptly but wanted to be more assured that an acceleration of costs and prices was in train. In these circumstances, however, financial markets could remain volatile as market participants awaited policy action, with possible adverse effects on spreads. If, instead, the Committee thought that the sense in financial markets that policy tightening is almost inevitable were inconsistent with its own assessment of the situation, this market misconception could be countered by announcing that a neutral bias was being retained, though the announcement would need to convey a more balanced sense of risks than the market now sees as implied by the “asymmetrical symmetry” of the June directive and related announcement. The expected path of short-term rates would be revised down, but a traditional symmetry might elevate market participants’ uncertainty about the Federal Reserve’s assessment of inflation risks and policy intentions in light of the inflationary concerns expressed in the Chairman’s testimony.

(10) The staff forecast suggests that there are substantial risks that price pressures will be intensifying and by enough to require an appreciable tightening of policy ultimately to stabilize inflation. If the Committee shares these concerns, it might see little to be gained from delaying policy action and choose the 1/4 percentage point firming of **alternative C** as an appropriate down payment. Even a sense that inflation risks were less pronounced than in the staff forecast might lead the Committee to the view that a modest near-term policy firming was warranted. As noted, failing to validate current market expectations of policy action would tend to erode prevailing financial restraint, which may be seen as risking unsustainable economic growth and greater strains in already-tight labor markets, thus

heightening the odds of accelerating prices. Given apparently mounting worries about the secular imbalance in the U.S. trade position, the Committee especially might want to avoid fostering doubts among global investors about the Federal Reserve's commitment to contain inflation. Elevated market stresses apparently owe importantly both to uncertainty surrounding the outlook for System action and some aversion on the part of traders and investors to participate in the market in the fourth quarter. The former could be alleviated by immediate action combined with an announcement suggesting little likelihood of subsequent policy moves, while the latter might suggest that--because the Committee may feel increasingly uncomfortable in tightening as the year wears on--action delayed now may wind up being delayed for some time to come.

(11) Given the high odds market participants put on action at this meeting, the announcement that the Committee was raising the intended federal funds rate 1/4 percentage point, as under alternative C, should produce little response in key financial prices if no surprises are in store from the wording of the press release. The market consensus has settled on a quarter-point move and the retention of a symmetric directive. If the announcement of such a directive suggested to market participants that further action was unlikely for some time, financial markets might rally to some extent, as investors removed the modest odds on additional tightening that now seem built into the structure of interest rates for the fourth quarter. If, instead, action on Tuesday were accompanied by a directive tilted toward tightening, market participants could take it as a signal that additional firming is in the cards this year--and more so even than is currently built into financial

prices. As a result, the term structure of interest rates would likely shift up and the dollar would probably strengthen on exchange markets. Because additional tightening would be taken as fairly imminent, market spreads would likely remain wide as issuers rushed to lock in longer-term financing in advance of the Committee's next action. Indeed, if the Committee thought that it likely would need to tighten again before year-end because it wanted to forestall an upward trend to inflation like that in the staff forecast, century-date-change considerations might strengthen the argument for a 50 basis point firming with a symmetric directive at this meeting instead of a 25 basis point move with an asymmetric directive. Such a move, by restoring the federal funds rate to its level of last August and by getting ahead of market expectations, would have a very good chance of being seen as the last action for the year. While interest rates and the dollar's exchange rate would rise appreciably and equity prices likely would fall, helping to damp demand more than in the staff forecast, the elements of volatility and uncertainty in the market associated with possible near-term policy action would be greatly diminished. After the initial adjustment, market conditions should settle down, providing a better environment for financial market participants to plan their balance sheet management over the year-end.

(12) Staff projections for debt and money over the balance of the year allow for some added demands for credit to finance inventories and a buildup of liquid assets and for a modest displacement of credit demand from late in the year to the current quarter and from markets to banks. Overall, however, the Y2K effects are modest. The expansion of the debt of domestic nonfederal sectors is expected to be well maintained over the balance

of the year under the Greenbook forecast; the staff interprets the recent widening in risk spreads as more indicative of strong demands for credit than of supply restrictions that would restrain borrowing. Corporate borrowing is projected to slow relative to the rapid pace on average over the first half of the year, but to remain substantial. More of that borrowing is expected to occur in the next few months than later in the year, as issuers show increasing wariness to tap market finance as the century date change approaches. And borrowing could be boosted by efforts to build up liquidity to cover possible credit needs into early next year in the event that funding markets are temporarily disrupted. The extent to which businesses turn to credit markets in the near term will depend partly on whether they believe they can count on borrowing from banks: Senior loan officers recently reported that they are making Y2K lines available, at least to their current customers, and are renewing existing lines with few restrictions on year-end draws. The runup in mortgage rates is anticipated to restrain housing activity and mortgage borrowing. The growth of consumer credit should be subdued, in part owing to the projected deceleration in purchases of consumer durables. In the federal sector, Treasury debt is now expected to run off less sharply in 1999 than was forecast in the June Greenbook. This is a result of the Treasury's decision to aim for a higher end-of-year cash balance as a precaution against problems during the century date change. Still, ongoing paydowns of Treasury debt over the next few months on net will hold down the expansion of total nonfinancial sector debt to a 5 percent rate in the second half of this year.

(13) Recent data on the monetary aggregates have provided little in the way of surprise. Going forward, the effect on M2 growth of the slightly firmer money market rates for the second half of the year foreseen in the Greenbook is about offset by the slightly stronger cast to expected spending. Under alternative B, M2 is expected to grow at a 6-1/4 percent pace over the five months from July to December. Over the last two quarters of the year, projected M2 velocity is about flat. The staff M2 forecast embodies modest dislocations associated with the century date change, which on net should give a fillip to money growth owing to a late-year shift toward currency and insured deposits from investments outside M2. M3 is expected to be buoyed by these effects and by a pickup in bank credit induced by precautionary borrowing, pushing M3 growth over the July-to-December period up to 7 percent. The staff anticipates that both aggregates will end the year above their annual ranges. The firming in policy under alternative C occurs late enough this year to impart only slight restraint on the aggregates in 1999.

**Directive Language**

(14) Presented below for the members' consideration is the operational paragraph for the intermeeting period

**OPERATIONAL PARAGRAPH**

To promote the Committee's long-run objectives of price stability and sustainable economic growth, the Committee in the immediate future seeks conditions in reserve markets consistent with MAINTAINING/increasing/DECREASING the federal funds rate to an average of around \_\_\_ 5 percent. In view of the evidence currently available, the Committee believes that prospective developments are equally likely to warrant an increase or a decrease [MORE LIKELY TO WARRANT AN INCREASE/A DECREASE THAN A DECREASE /AN INCREASE] in the federal funds rate operating objective during the intermeeting period.

Alternative Growth Rates for Key Monetary and Credit Aggregates

	M2		M3		Debt			
	Alt. B	Alt. C	Alt. B	Alt. C	All Alternatives			
<b>Monthly Growth Rates</b>								
Aug-99	4.6	4.6	5.2	5.2	4.3			
Sep-99	4.2	3.8	5.9	5.7	3.6			
Oct-99	6.0	5.2	6.8	6.4	4.1			
Nov-99	6.7	5.9	7.1	6.7	4.8			
Dec-99	9.8	9.1	9.4	9.1	4.1			
<b>Quarterly Averages</b>								
1999 Q1	7.2	7.2	7.5	7.5	6.0			
1999 Q2	5.7	5.7	5.2	5.2	5.9			
1999 Q3	4.6	4.6	5.1	5.1	4.9			
1999 Q4	6.1	5.7	6.8	6.6	4.9			
<b>Growth Rate</b>								
From	To							
Jul-99	Dec-99		6.3	6.0	7.0	6.8	5.0	
Jul-99	1999 Q4		5.7	5.4	6.5	6.4	4.9	
1998 Q4	Jun-99		6.2	6.2	6.2	6.2	5.8	
1998 Q4	Jul-99		6.1	6.1	6.1	6.1	5.7	
1998 Q4	Dec-99		6.3	6.1	6.5	6.4	5.5	
1997 Q4	1998 Q4		8.5	8.5	10.8	10.8	6.1	
1998 Q4	1999 Q2		6.5	6.5	6.4	6.4	6.0	
1999 Q2	1999 Q4		5.4	5.2	6.0	5.9	4.9	
1998 Q4	1999 Q4		6.0	6.0	6.3	6.2	5.5	
1999 Annual Ranges:			1.0 to 5.0		2.0 to 6.0		3.0 to 7.0	

Chart 3

### Actual and Projected M2

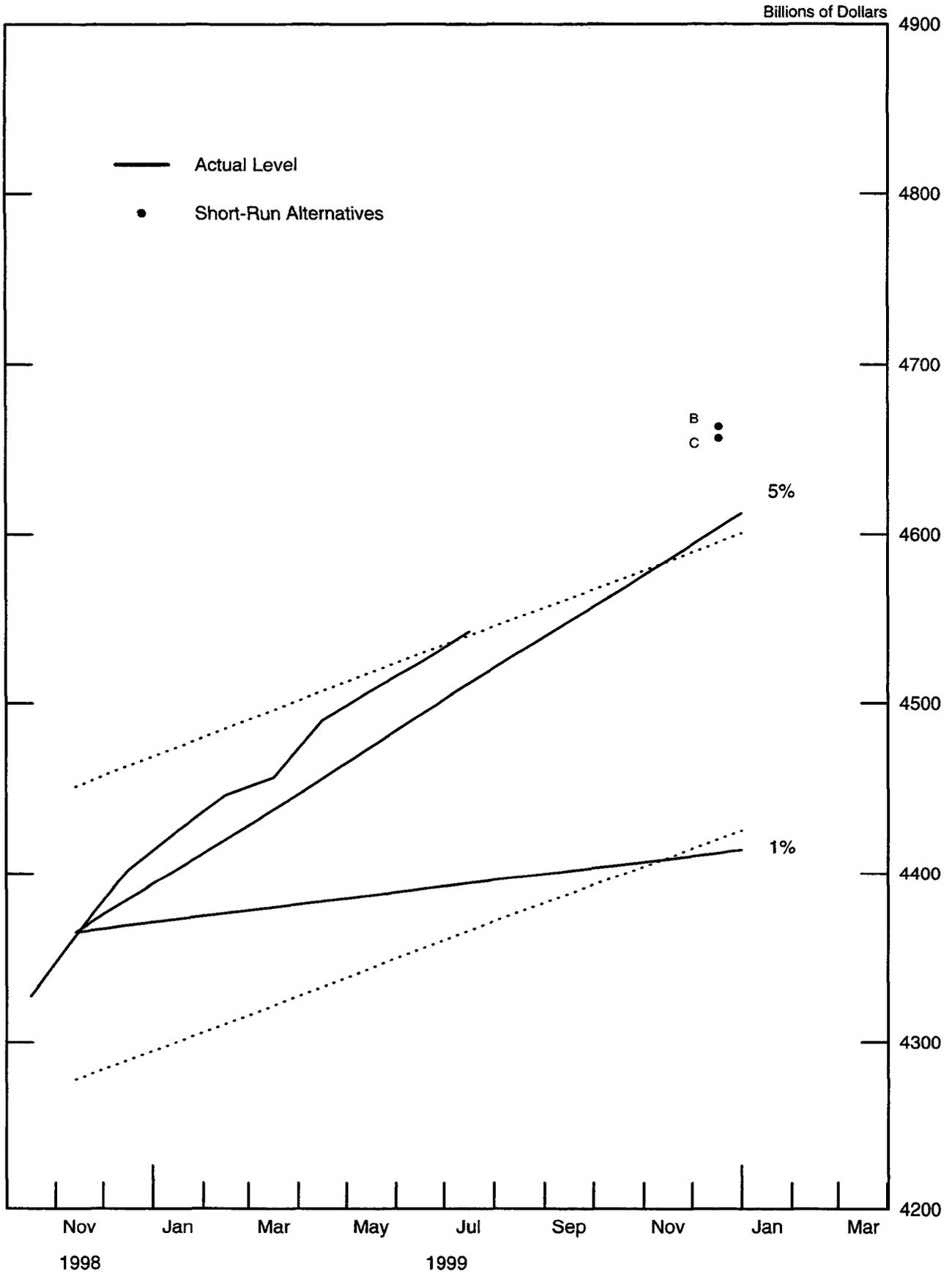


Chart 4

### Actual and Projected M3

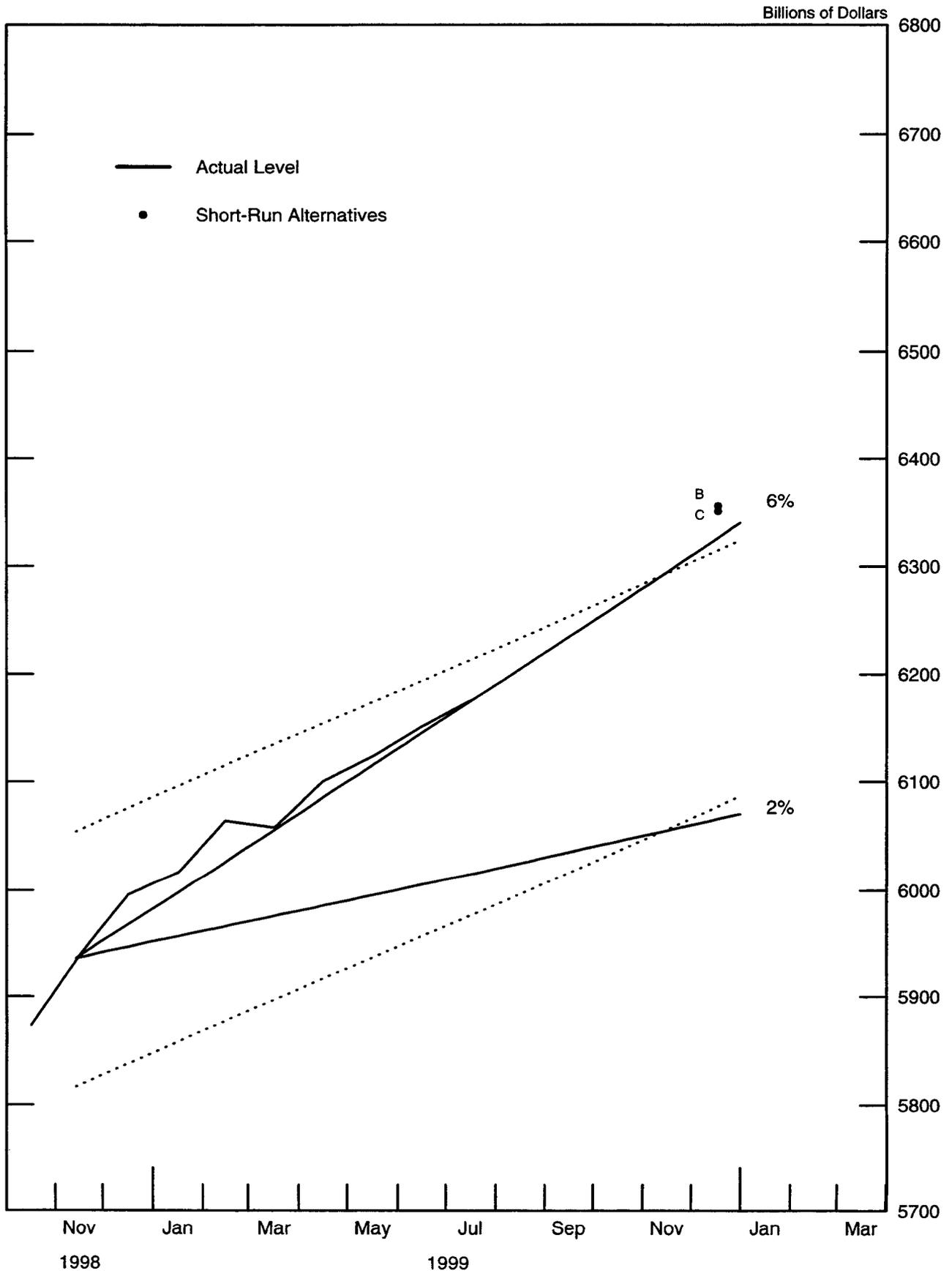
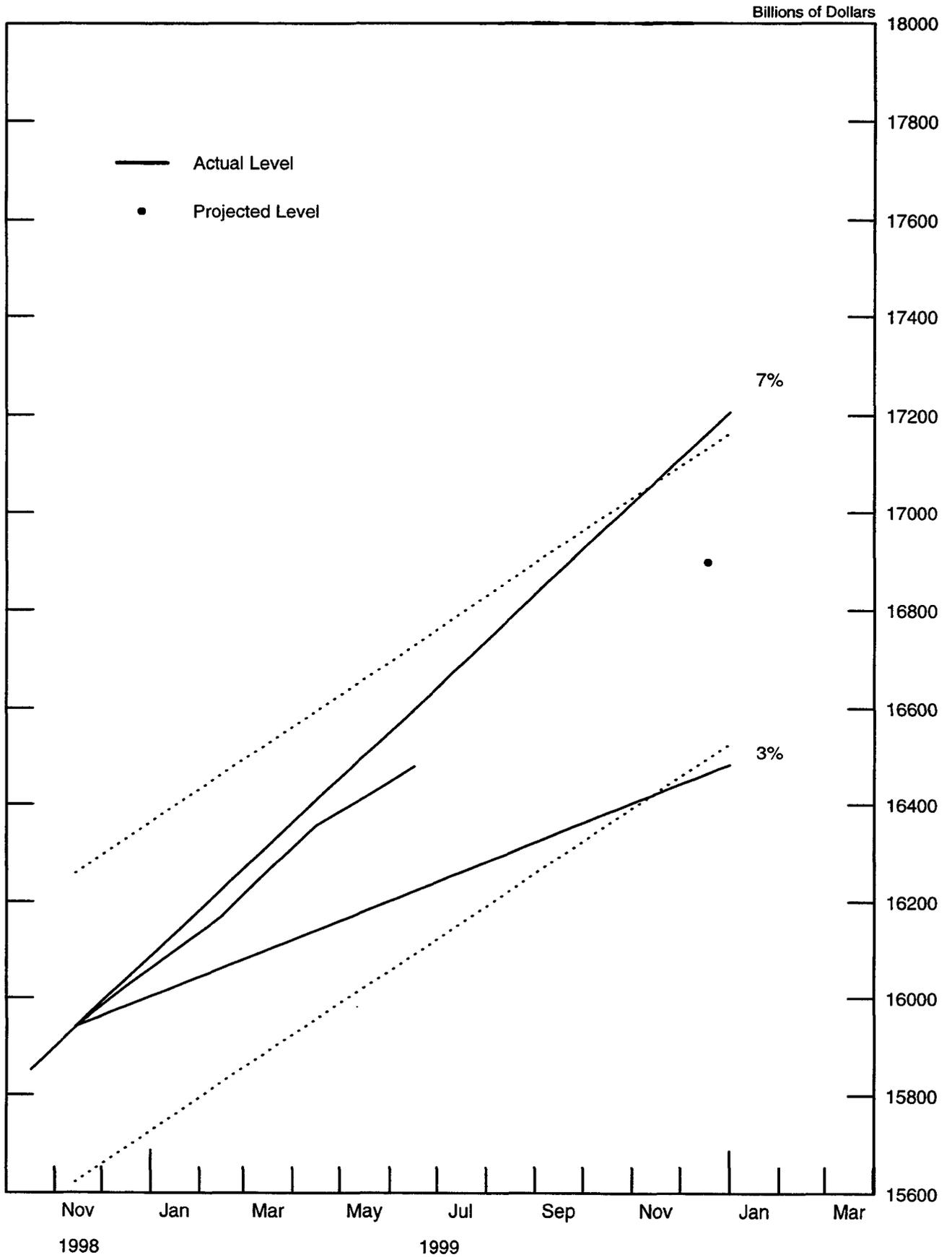


Chart 5

### Actual and Projected Debt



**SELECTED INTEREST RATES**  
(percent)

August 23, 1999

	Short-term						Long-term									
	Federal funds	Treasury bills secondary market			CDs secondary market	Comm. paper	U.S. government constant maturity yields				Indexed yields		Moody's Baa	Municipal Bond Buyer	Conventional home mortgages primary market	
		3-month	6-month	1-year	3-month	1-month	3-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	
98 -- High	5.87	5.24	5.24	5.23	5.74	5.71	5.70	5.72	5.75	6.05	3.93	3.82	7.42	5.52	7.22	5.71
-- Low	4.56	3.84	3.94	3.84	5.13	4.84	4.15	4.17	4.41	4.88	3.44	3.55	7.01	5.09	6.49	5.35
99 -- High	5.07	4.72	4.90	4.94	5.43	5.24	5.87	5.97	6.08	6.19	3.98	4.03	8.27	5.86	8.15	6.24
-- Low	4.42	4.20	4.30	4.29	4.86	4.76	4.58	4.56	4.67	5.12	3.61	3.76	7.24	5.17	6.74	5.56
Monthly																
Aug 98	5.55	4.90	4.95	4.94	5.58	5.50	5.24	5.27	5.34	5.54	3.85	3.80	7.14	5.32	6.92	5.59
Sep 98	5.51	4.61	4.63	4.50	5.41	5.44	4.62	4.62	4.81	5.20	3.64	3.67	7.09	5.22	6.72	5.47
Oct 98	5.07	3.96	4.05	3.95	5.21	5.14	4.18	4.18	4.53	5.01	3.53	3.63	7.18	5.19	6.71	5.38
Nov 98	4.83	4.41	4.42	4.33	5.24	5.00	4.57	4.54	4.83	5.25	3.75	3.77	7.34	5.27	6.87	5.53
Dec 98	4.68	4.39	4.40	4.32	5.14	5.24	4.48	4.45	4.65	5.06	3.75	3.80	7.23	5.23	6.72	5.55
Jan 99	4.63	4.34	4.33	4.31	4.89	4.80	4.61	4.60	4.72	5.16	3.73	3.81	7.29	5.23	6.79	5.60
Feb 99	4.76	4.44	4.44	4.48	4.90	4.80	4.90	4.91	5.00	5.37	3.70	3.79	7.39	5.27	6.81	5.65
Mar 99	4.81	4.44	4.47	4.53	4.91	4.82	5.11	5.14	5.23	5.58	3.84	3.90	7.53	5.31	7.04	5.77
Apr 99	4.74	4.29	4.37	4.45	4.88	4.79	5.03	5.08	5.18	5.55	3.72	3.90	7.48	5.29	6.92	5.60
May 99	4.74	4.50	4.56	4.60	4.92	4.79	5.33	5.44	5.54	5.81	3.65	3.85	7.72	5.37	7.15	5.72
Jun 99	4.76	4.57	4.82	4.82	5.13	4.95	5.70	5.81	5.90	6.04	3.78	3.94	8.02	5.53	7.55	5.91
Jul 99	4.99	4.55	4.58	4.75	5.24	5.06	5.62	5.68	5.79	5.98	3.94	4.01	7.95	5.61	7.63	5.99
Weekly																
Jun 18 99	4.72	4.56	4.82	4.77	5.12	4.95	5.67	5.80	5.91	6.05	3.78	3.95	8.02	5.52	7.65	5.94
Jun 25 99	4.76	4.61	4.85	4.85	5.18	5.01	5.77	5.88	5.98	6.11	3.89	4.00	8.10	5.62	7.63	5.93
Jul 2 99	5.07	4.63	4.85	4.84	5.28	5.13	5.68	5.76	5.87	6.03	3.92	4.00	8.01	5.61	7.71	6.05
Jul 9 99	4.90	4.55	4.61	4.78	5.23	5.06	5.70	5.75	5.87	6.04	3.95	4.01	7.98	5.61	7.65	5.96
Jul 16 99	4.99	4.57	4.52	4.72	5.23	5.06	5.57	5.61	5.72	5.91	3.94	4.01	7.86	5.59	7.58	5.97
Jul 23 99	4.96	4.50	4.49	4.71	5.22	5.04	5.55	5.61	5.72	5.94	3.95	4.02	7.91	5.59	7.52	5.97
Jul 30 99	5.02	4.59	4.61	4.80	5.27	5.07	5.65	5.75	5.86	6.05	3.96	4.02	8.04	5.65	7.70	5.99
Aug 6 99	5.02	4.65	4.78	4.85	5.35	5.11	5.73	5.86	5.95	6.12	3.98	4.02	8.13	5.71	7.89	6.09
Aug 13 99	4.99	4.72	4.90	4.94	5.41	5.14	5.87	5.97	6.08	6.19	3.97	4.03	8.27	5.84	8.15	6.24
Aug 20 99	5.00	4.65	4.88	4.91	5.43	5.18	5.75	5.81	5.91	6.03	3.95	4.02	--	5.86	7.93	6.18
Daily																
Aug 4 99	4.94	4.65	4.79	4.84	5.35	5.10	5.73	5.86	5.96	6.12	3.99	4.02	8.12	--	--	--
Aug 5 99	5.00	4.61	4.75	4.78	5.34	5.12	5.64	5.77	5.88	6.05	3.98	4.02	8.07	--	--	--
Aug 6 99	4.93	4.66	4.83	4.88	5.37	5.11	5.79	5.94	6.02	6.16	3.98	4.02	8.21	--	--	--
Aug 9 99	4.99	4.76	4.94	4.95	5.39	5.14	5.89	6.04	6.13	6.23	3.98	4.02	8.27	--	--	--
Aug 10 99	4.92	4.81	4.93	4.95	5.41	5.13	5.90	6.00	6.16	6.25	3.98	4.04	8.29	--	--	--
Aug 11 99	5.05	4.77	4.90	4.93	5.40	5.14	5.86	5.96	6.05	6.22	3.98	4.04	8.26	--	--	--
Aug 12 99	5.10	4.66	4.88	4.95	5.41	5.15	5.89	5.97	6.08	6.18	3.97	4.04	8.30	--	--	--
Aug 13 99	5.01	4.60	4.86	4.90	5.42	5.16	5.81	5.88	5.98	6.09	3.97	4.03	8.24	--	--	--
Aug 16 99	5.24	4.62	4.88	4.94	5.43	5.19	5.82	5.88	5.98	6.10	3.97	4.03	8.19	--	--	--
Aug 17 99	4.94	4.69	4.92	4.92	5.44	5.18	5.75	5.80	5.89	6.02	3.96	4.02	8.13	--	--	--
Aug 18 99	4.89	4.63	4.86	4.91	5.43	5.17	5.74	5.79	5.88	6.01	3.93	4.01	8.12	--	--	--
Aug 19 99	4.97	4.62	4.87	4.90	5.43	5.18	5.74	5.81	5.90	6.03	3.95	4.02	8.13	--	--	--
Aug 20 99	4.94 <sup>P</sup>	4.70	4.89	4.89	5.43	--	5.72	5.79	5.88	5.99	3.93	4.02	--	--	--	--

NOTE: Weekly data for columns 1 through 13 are week-ending averages. As of September 1997, data in column 6 are interpolated from data on certain commercial paper trades settled by the Depository Trust Company; prior to that, they reflect an average of offering rates placed by several leading dealers. Column 14 is the Bond Buyer revenue index, which is a 1-day quote for Thursday. Column 15 is the average contract rate on new commitments for fixed-rate mortgages (FRMs) with 80 percent loan-to-value ratios at major institutional lenders. Column 16 is the average initial contract rate on new commitments for 1-year, adjustable-rate mortgages (ARMs) at major institutional lenders offering both FRMs and ARMs with the same number of discount points.

p - preliminary data

## Money and Debt Aggregates

Seasonally adjusted

August 23, 1999

Period	Money stock measures					Domestic nonfinancial debt		
	M1	M2	nontransactions components		M3	U. S. government <sup>1</sup>	other <sup>1</sup>	total <sup>1</sup>
			In M2	In M3 only				
	1	2	3	4	5	6	7	8
<b>Annual growth rates(%):</b>								
<b>Annually (Q4 to Q4)</b>								
1996	-4.5	4.6	8.6	15.3	6.8	3.8	5.5	5.1
1997	-1.2	5.8	8.5	19.3	8.8	0.7	6.3	4.8
1998	1.8	8.5	10.9	18.0	10.8	-1.2	8.6	6.1
<b>Quarterly(average)</b>								
1998-Q3	-2.0	6.9	9.9	13.4	8.6	-1.5	8.2	5.8
Q4	5.0	11.0	13.0	17.9	12.8	-2.0	8.9	6.3
1999-Q1	2.8	7.2	8.7	8.2	7.5	-2.6	8.6	6.0
Q2	3.5	5.7	6.5	3.7	5.2	-3.0	8.6	5.9
<b>Monthly</b>								
1998-July	-2.7	5.0	7.7	2.0	4.2	-0.9	8.4	6.1
Aug.	-3.6	7.3	11.0	24.3	11.7	-0.8	8.1	5.9
Sep.	2.8	12.4	15.6	15.2	13.1	-3.3	8.1	5.4
Oct.	6.4	11.6	13.3	15.7	12.7	-3.1	9.4	6.4
Nov.	9.6	10.6	11.0	20.4	13.2	-0.5	9.6	7.2
Dec.	4.8	10.1	11.9	16.5	11.8	-0.4	8.1	6.1
1999-Jan.	-2.6	6.6	9.6	-2.2	4.2	-2.1	7.9	5.6
Feb.	1.8	5.7	6.9	19.8	9.4	-7.3	8.9	5.2
Mar.	10.3	2.8	0.3	-12.1	-1.2	-1.2	9.7	7.2
Apr.	7.0	8.8	9.4	6.8	8.3	-2.4	9.3	6.6
May	-4.0	4.7	7.5	4.8	4.6	-5.3	7.2	4.4
June	-4.0	4.3	6.9	8.2	5.3	0.1	5.9	4.6
July p	-3.3	5.0	7.7	4.2	4.8			
<b>Levels (\$billions):</b>								
<b>Monthly</b>								
1999-Mar.	1102.0	4457.2	3355.2	1601.1	6058.3	3714.6	12552.4	16267.1
Apr.	1108.4	4490.0	3381.6	1610.2	6100.3	3707.2	12649.4	16356.6
May	1104.7	4507.4	3402.7	1616.6	6123.9	3690.8	12725.4	16416.2
June	1101.0	4523.5	3422.4	1627.6	6151.1	3691.0	12787.8	16478.9
July p	1098.0	4542.4	3444.4	1633.3	6175.7			
<b>Weekly</b>								
1999-July								
5	1094.9	4511.0	3416.1	1631.2	6142.2			
12	1099.9	4541.3	3441.4	1640.6	6181.9			
19	1096.0	4545.4	3449.4	1635.7	6181.1			
26	1102.9	4558.8	3455.8	1629.8	6188.6			
Aug. 2p	1099.5	4552.6	3453.1	1626.1	6178.7			
9p	1096.8	4548.2	3451.3	1636.8	6184.9			

1. Debt data are on a monthly average basis, derived by averaging end-of-month levels of adjacent months, and have been adjusted to remove discontinuities.

p preliminary  
pe preliminary estimate

**NET CHANGES IN SYSTEM HOLDINGS OF SECURITIES<sup>1</sup>**  
Millions of dollars, not seasonally adjusted

August 20, 1999

Period	Treasury bills			Treasury coupons						Federal agencies redemptions (-)	Net change outright holdings total <sup>4</sup>	Net RPs <sup>5</sup>
	Net purchases <sup>2</sup>	Redemptions (-)	Net change	Net purchases <sup>3</sup>				Redemptions (-)	Net Change			
				within 1 year	1-5	5-10	over 10					
1996	9,901	---	9,901	524	3,898	1,116	1,655	2,015	5,179	409	14,670	-7,849
1997	9,147	---	9,147	5,549	19,580	3,449	5,897	1,996	32,479	1,540	40,086	-5,202
1998	3,550	2,000	1,550	6,297	12,901	1,877	4,864	2,676	23,262	322	24,465	-11,981
1998 ---Q1	---	2,000	-2,000	1,501	2,262	283	743	478	4,311	60	2,251	-12,184
---Q2	3,550	---	3,550	1,369	2,993	495	---	286	4,571	99	8,022	-13,549
---Q3	---	---	---	2,024	4,524	654	1,769	1,311	7,659	98	7,536	-10,034
---Q4	---	---	---	1,403	3,122	445	2,352	602	6,721	65	6,656	-9,477
1999 ---Q1	---	---	---	3,163	5,180	681	3,019	492	11,551	27	11,524	-8,004
---Q2	---	---	---	3,978	8,751	2,291	3,152	726	17,446	52	17,394	-10,271
1998 August	---	---	---	986	535	303	1,769	---	3,593	50	3,518	-10,507
September	---	---	---	1,038	3,989	351	---	---	5,377	48	5,329	-9,868
October	---	---	---	741	725	---	1,674	602	2,539	15	2,524	-12,553
November	---	---	---	662	2,397	445	678	---	4,182	20	4,162	-11,659
December	---	---	---	---	---	---	---	---	---	30	-30	-6,096
1999 January	---	---	---	---	---	---	615	492	123	2	121	-7,799
February	---	---	---	2,103	2,752	335	---	---	5,190	---	5,190	-10,380
March	---	---	---	1,060	2,428	346	2,404	---	6,238	25	6,213	-7,243
April	---	---	---	1,677	3,362	945	262	726	5,520	---	5,520	-8,603
May	---	---	---	1,421	4,442	1,281	2,890	---	10,034	---	10,034	-10,368
June	---	---	---	880	948	65	---	---	1,893	52	1,841	-12,644
July	---	---	---	951	---	---	---	41	910	10	900	-11,355
Weekly												
May 5	---	---	---	---	---	---	---	---	---	---	---	-4,525
12	---	---	---	484	1,217	410	405	---	2,516	---	2,516	-11,926
19	---	---	---	---	1,869	---	1,536	---	3,405	---	3,405	-9,271
26	---	---	---	937	1,221	---	804	---	2,962	---	2,962	-15,717
June 2	---	---	---	---	135	871	145	---	1,151	---	1,151	-8,425
9	---	---	---	880	---	---	---	---	880	---	880	-14,008
16	---	---	---	---	948	65	---	---	1,013	48	965	-12,317
23	---	---	---	---	---	---	---	---	---	---	---	-16,247
30	---	---	---	---	---	---	---	---	---	4	-4	-9,090
July 7	---	---	---	---	---	---	---	---	---	---	---	-10,473
14	---	---	---	951	---	---	---	---	951	5	946	-10,087
21	---	---	---	---	---	---	---	41	-41	---	-41	-13,670
28	---	---	---	---	---	---	---	---	---	5	-5	-11,338
August 4	---	---	---	---	---	---	---	---	---	---	---	-11,437
11	---	---	---	---	---	---	---	---	---	---	---	-16,275
18	---	---	---	429	448	---	---	---	877	---	877	-25,786
Memo: LEVEL (bil. \$) <sup>6</sup>												
August 18			215.7	52.8	122.3	49.7	64.4		289.2		504.5	-26.3

1. Change from end-of-period to end-of-period.

2. Outright transactions in market and with foreign accounts.

3. Outright transactions in market and with foreign accounts, and short-term notes acquired in exchange for maturing bills. Excludes maturity shifts and rollovers of maturing issues.

4. Reflects net change in redemptions (-) of Treasury and agency securities.

5. Includes change in RPs (+), matched sale-purchase transactions (-), and matched purchase sale transactions (+).

6. The levels of agency issues were as follows:

within 1 year	1-5	5-10	over 10	total
0.1	0.0	0.2	0.0	0.3

August 18