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# MONETARY POLICY ALTERNATIVES

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Prepared for the Federal Open Market Committee

By the staff Board of Governors of the Federal Reserve System

June 30, 1994

MONETARY POLICY ALTERNATIVES

Recent Developments<sup>1</sup>

(1) At the conclusion of the May 17 FOMC meeting, the Federal Reserve issued a press release stating that the Board had voted to raise the discount rate from 3 to 3-1/2 percent and that the Committee had decided that this change should pass through fully to reserve market conditions. The press release also indicated that these and earlier actions were viewed by policymakers as substantially removing the degree of monetary accommodation that had prevailed during 1993. The intended federal funds rate was increased 1/2 percentage point, to 4-1/4 percent, where it remained over the intermeeting period.<sup>2</sup> Over that span, the federal funds rate has traded close to its intended level.

(2) As shown in the upper left panel of Chart 1, interest rates beyond the three-month maturity moved lower immediately following the announcement of the System's action.<sup>3</sup> Apparently, the size of the change in reserve market conditions and its implementation by a hike in the discount rate, as well as the wording of the associated press release, suggested to market participants that the Committee would not be raising rates in the next few months as quickly as they

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1. Financial market quotations in this section are taken as of noon, Thursday, June 30.

2. Given the full pass-through of the discount rate to the funds rate, the allowance for adjustment plus seasonal borrowing was initially kept unchanged at \$175 million. Later in the intermeeting period, the seasonal upswing in borrowing necessitated two increases of \$25 million and one of \$100 million, bringing the allowance to its current level of \$325 million. Over the intermeeting period, borrowing averaged close to its allowance.

3. A move of this magnitude had not been fully anticipated by markets, and some very short-term rates notched higher. Major commercial banks raised their prime rate 1/2 percentage point, to 7-1/4 percent.

Chart 1

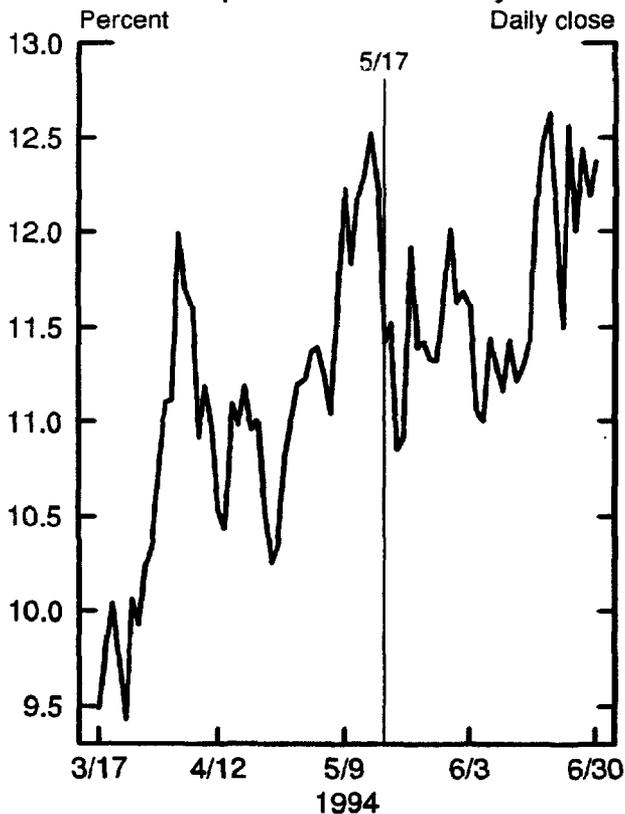
**Market Reaction to the Policy Announcement, May 17**  
(announced at 2:30 p.m.)

	2 p.m. (2)	4 p.m. (1)	Net change (2)-(1)  basis points
<u>Treasury Bill rates</u>			
Three months	4.19	4.23	4
Six months	4.67	4.60	-7
One year	5.09	5.02	-7
<u>Treasury Bond yields</u>			
Three years	6.33	6.21	-12
Ten years	7.19	7.05	-14
Thirty years	7.42	7.27	-15

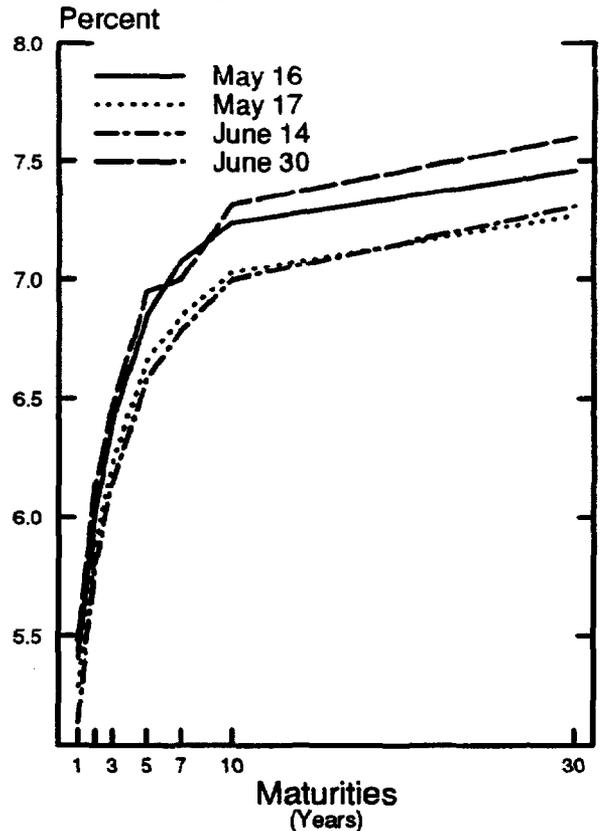
**Federal Funds Futures Rates**

	May 16	May 17	June 14	June 30
May	3.94	4.00	N.A.	N.A.
June	4.26	4.31	4.24	4.20
July	4.57	4.53	4.34	4.45
Aug.	4.75	4.67	4.48	4.69
Sept.	5.00	4.88	4.66	4.86

**Implied Bond Volatility**



**Treasury Security Yield Curves**



had previously anticipated; these revisions in expectations can be seen in the federal funds futures rates in the first two columns of the upper right panel of the chart. Lessened uncertainty about the timing and extent of subsequent policy action, as suggested by the decline in a forward-looking measure of the volatility of bond prices (the lower left panel), seemed to reduce risk premiums embedded in longer-maturity rates. Moreover, market participants may have been encouraged that timely action would reduce the degree of tightening needed later. As a consequence, in contrast to the response to previous tightenings, forward rates all along the term structure moved down, as evidenced by the parallel shift in the coupon yield curve (the lower right panel).

(3) For several weeks following the FOMC meeting, financial markets generally at least preserved the price gains that were posted on May 17. In part encouraged by sluggish spending indicators, favorable readings on inflation, and statements of Federal Reserve officials, the sense that policy was temporarily on hold gained a firmer footing among market participants, and federal funds futures rates edged lower. In the last few weeks of the intermeeting period, however, bond yields have risen about 1/4 percentage point in often volatile trading, in part as the sizable decline in the dollar's value on exchange markets suggested additional pressures on prices and possibly higher inflation expectations. These developments, in turn, were interpreted to have increased the likelihood of near-term monetary policy action and raised the level of uncertainty, perhaps feeding through to higher risk premiums. On balance, intermediate- and longer-term rates ended the intermeeting period a bit above where they had begun. Most major equity indexes, which were up early in the

period and then moved lower later in sympathy with bond prices and the dollar, lost 1 percent over the intermeeting period.

(4) The dollar's weighted average exchange value declined 3-3/4 percent, on balance, over the intermeeting period. Essentially all of this decline occurred after early June, reflecting evidence of stronger growth abroad and associated increases in foreign bond yields, as well as increasing concerns about potential inflationary pressures in the U.S. economy. The shrinking prospects for any progress in U.S.-Japanese trade negotiations in light of the uncertain political situation in Japan also tended to strengthen the yen against the dollar. While short-term rates abroad were little changed, foreign long-term interest rates rose 55 basis points, on average. U.S. monetary authorities sold \$1,560 million equivalent of yen and marks in concerted operations on June 24.

(5) Growth of the broad monetary aggregates over May and June now appears to be considerably weaker than was thought at the time of the previous FOMC meeting. M2 fell at an average rate of 1-1/2 percent over those two months, as compared with the modest deceleration that had been anticipated. Capital markets appear to have retained considerably more appeal to investors than we had thought would be the case. The exodus from bond funds that had begun when the System moved toward restraint in February came to a halt by the end of May, and flows turned positive in June, albeit well below the volumes recorded over much of last year; inflows to equity funds picked up as the intermeeting period progressed. In addition, declines in mortgage refinancing were greater than expected, with associated depressing effects on liquid deposits.

(6) More generally, M2 appears to have been significantly restrained by the increases in short-term rates thus far this year. Households have withdrawn funds from liquid deposits and money market funds, only some of which have been redeposited in small time deposits. Growth of M2 and, in particular, its small time deposit component has been held down by the apparent reluctance of depositories to increase their offering rates by as much as past episodes of rising market rates would have suggested. The relative attractiveness of assets outside the standard monetary aggregates is suggested by the sizable pickup in net noncompetitive tenders at Treasury auctions, as well as continued flows into bond and stock mutual funds.<sup>4</sup> The effects of rising opportunity costs were particularly evident on M1, which grew at only a 3-1/4 percent rate over May and June, despite a pickup in currency growth to a 10 percent rate.<sup>5</sup> The sluggish performance of M2 over the past two months has brought the aggregate to near the lower arm of its target cone. The 1.1 percent growth rate for M2 from the fourth quarter of 1993 to June was about one-half the pace anticipated for that period in the January bluebook. The shortfall largely reflected the effects on opportunity costs of the System's tightening, which significantly outstripped the policy firming incorporated in the January forecast.

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4. M2 plus stock and bond funds is estimated to have fallen at a 3/4 percent rate over May and June, pulling down its growth from the fourth quarter of 1993 to June to 1 percent. Capital losses have lowered growth of M2-plus by an estimated 1-1/2 percentage points since the fourth quarter.

5. By June, M1 had expanded at about a 4 percent rate above its level in the fourth quarter of last year. The institution of a retail sweep program at \_\_\_\_\_ shifted about \$8 billion from M1 and into M2, pulling M1 growth down about 1 percentage point at an annual rate in the first half of 1994. From the fourth quarter of last year through June, total reserves declined at a 1-1/2 percent annual rate, while the monetary base, supported by strong demands for currency, particularly from abroad, expanded at a 9 percent rate.

(7) M3 declined at an average rate of 1-3/4 percent over May and June. Within the non-M2 portion of M3, institutional money market mutual funds have run off sharply, as investors, impatient with the lagged adjustment of their yields to market rates, have increasingly turned to open market instruments. Counterbalancing this somewhat, banks have issued more large CDs over the past two months on net to offset some of the decline in retail deposits and a slowing in borrowing from overseas branches. All told, the decrease in the broad aggregate over the past two months places M3 just below its 0-to-4 percent annual growth range. The standstill in M3 from the fourth quarter of 1993 to June is in contrast to the staff's expectation in the January bluebook that the broad aggregate would advance at a 1-1/2 percent rate over that period. Bank credit has expanded at a 6-1/4 percent rate from the fourth quarter of 1993 to June, about in line with the staff's projection in January after abstracting from the effects of accounting rule changes.<sup>6</sup> In retrospect, however, depositories have chosen to rely more on nondeposit sources than we had anticipated, reflecting a wider cost advantage favoring Eurodollar borrowing.

(8) The rise in long-term interest rates has sharply curtailed the refinancing of high-cost debt by households, businesses, and state and local governments and has shifted net borrowing away from long-term, fixed-rate obligations. Net borrowing by these sectors, however, continued in April and May at about its previous pace of 4-1/2 percent. The enthusiasm of households to borrow has

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6. The entire \$25 billion increase in the "other securities" component of bank credit in the first half of the year, or about one-half of the total pickup in investment accounts, owed to the application of a new accounting standard that limited banks' ability to net off-balance sheet items. This added 1-1/2 percentage points to the annual rate of expansion of bank credit.

shown little sign of letting up: Consumer credit appears to have expanded at a brisk pace in May and June, based on bank data adjusted for securitizations. Net mortgage borrowing has slowed only a touch, despite the drop in gross flows, with a growing share at adjustable rates. Overall business borrowing also has edged lower and remains concentrated at banks and finance companies rather than in the bond markets. On balance, from the fourth quarter of 1993 through May, nonfederal debt grew at about a 5 percent rate and total nonfinancial debt at about a 5-1/4 percent rate. This placed total debt in the lower half of its 4-to-8 percent monitoring range.

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

	Apr.	May	June	QIV. to June <sup>1</sup>
<u>Money and credit aggregates</u>				
M1	-1.2	2.0	4.3	4.0
M2	2.4	0.4	-3.2	1.1
M3	2.5	-2.4	-1.1	-0.2
Domestic nonfinancial debt	4.5	4.5	--	5.2
Federal	2.9	4.2	--	6.1
Nonfederal	5.1	4.6	--	4.9
Bank credit	10.1	2.2	1.2	6.2
<u>Reserve measures</u>				
Nonborrowed reserves <sup>2</sup>	-8.8	-5.4	-9.3	-1.9
Total reserves	-7.4	-3.8	-7.9	-1.6
Monetary base	6.3	8.2	7.0	9.1
Memo: (Millions of dollars)				
Adjustment plus seasonal borrowing	124	200	269	--
Excess reserves	1151	918	965	--

1. QIV to May for debt aggregates.

2. Includes "other extended credit" from the Federal Reserve.

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.

### Alternative Long-Run Scenarios

(9) This section addresses several issues related to the conduct of monetary policy over the next several years. The first set of simulations considers the effects of alternative monetary policies, given the staff's assessment of the strength of aggregate demand and associated inflation pressures. The next two sets show the consequences of different assumptions about the natural rate of unemployment and underlying demand. The baseline scenario, to which the alternatives are compared in all the simulations, embodies the Greenbook forecast through 1995 and a judgmental extension thereafter. The effects of differences in assumptions relative to the baseline under each alternative were derived using staff econometric models of the U.S. and foreign economies.

(10) These scenarios have been developed within a framework that contains several key assumptions. On the supply side, the change in the inflation rate is related mainly to the gap between the natural rate of unemployment and the actual rate; a 1 percentage point gap, when maintained for a year, reduces the actual rate of inflation by about 1/2 percentage point per year.<sup>7</sup> The natural rate of unemployment is about 6-1/4 percent (except where assumed otherwise in the second set of scenarios), and potential GDP grows at about a 2-1/2 percent rate over the remainder of the decade.<sup>8</sup> On the demand side, the fiscal stance of the federal government follows the Greenbook projections of the federal deficit out through 1995:Q4 when

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7. The credibility of monetary policy is assumed to have no special effect on inflation.

8. This measure of the natural rate is on the new basis. The wedge between the old and new CPS surveys is assumed to be about 1/3 percentage point (a smaller wedge than estimated earlier in the year). On the old basis, the natural rate is estimated to be about 5.9 percent.

the deficit is projected to be 2-1/2 percent of nominal GDP. It is assumed that actions are taken subsequently that reduce the deficit to 1-1/2 percent of nominal GDP by 1999:Q4. The money growth projection is based on a gradual return to a more typical alignment with that of nominal income; the forces disrupting this relationship are assumed to ebb as the yield curve returns to a more normal slope and portfolios become more fully adjusted to the enhanced availability of bond and stock mutual funds.<sup>9</sup>

(11) In the baseline scenario, policy acts to keep inflation at 3 percent. (The table below and Chart 2 give the results for the baseline and tighter policy scenarios.) This outcome requires unemployment to remain in the neighborhood of its recent levels, which are judged to be around its natural rate. The real federal funds rate needs to rise by another percentage point to about 2-1/4 percent--a little above its assumed longer-run neutral level. The higher level of the real funds rate offsets some of the prospective strength in aggregate demand and inflation pressures arising in part from the decline in the exchange value of the dollar. The associated increase in the nominal federal funds rate in the staff forecast--to 5-1/4 percent by early 1995--is roughly in line with what is expected in the market for this period and should keep long-term interest rates--both real and nominal--close to their recent readings into 1995. The dollar is projected to remain at about its current level through the forecast period. After 1995, the funds rate can be brought down some, and gradually declining long-term real rates in the out years offset the effects on aggregate demand of continuing fiscal restraint.

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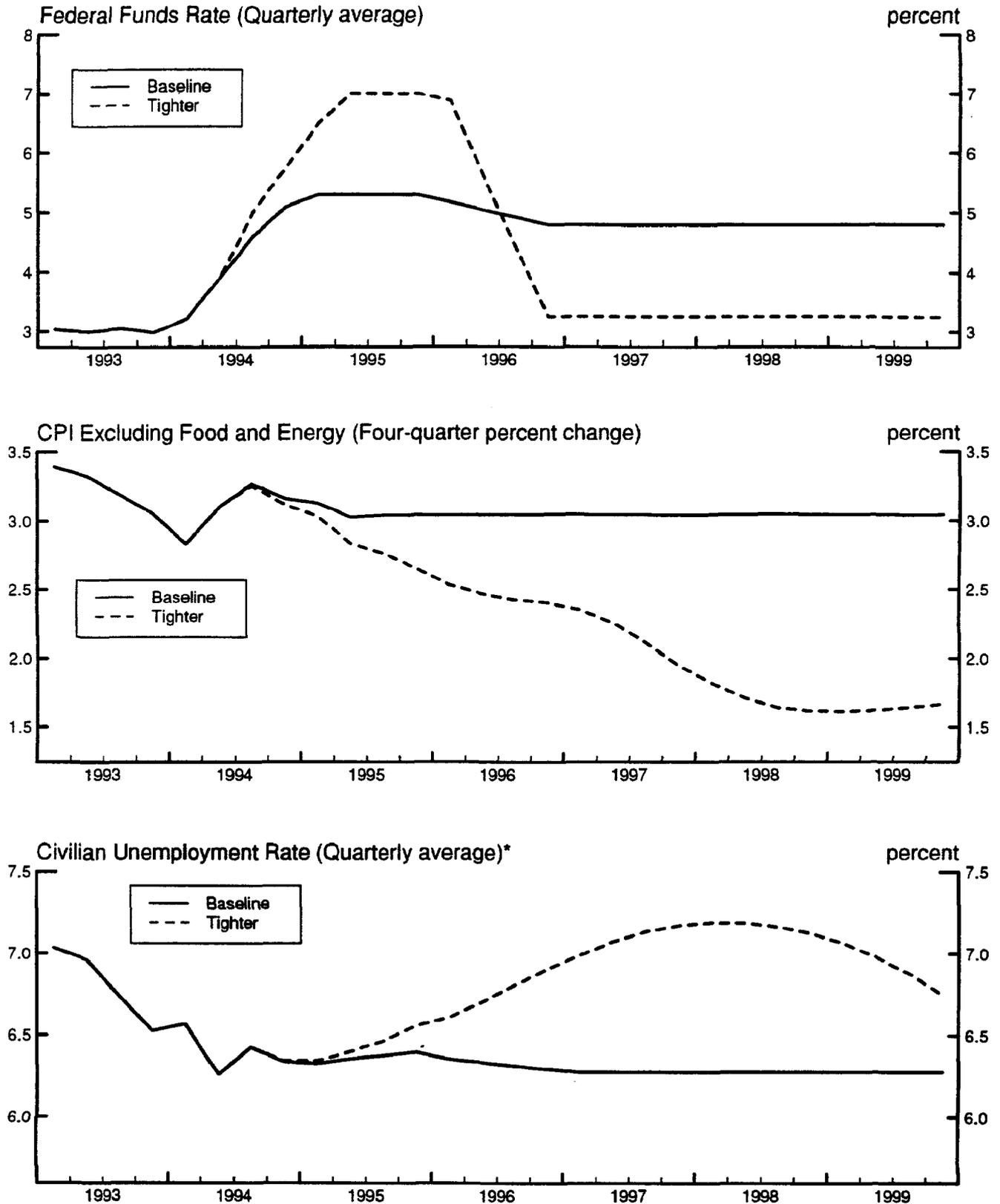
9. The paths for M2 were determined judgmentally, though informed by several staff econometric models.

Alternative Strategies for Monetary Policy

	1994	1995	1996	1997	1998	1999
(QIV to QIV percent change)						
CPI inflation--excluding food and energy						
baseline	3.1	3.1	3.1	3.1	3.1	3.1
tighter	3.0	2.7	2.4	2.0	1.6	1.7
Nominal GDP growth						
baseline	5.5	4.6	4.6	4.5	4.4	4.4
tighter	5.5	4.1	3.1	3.1	3.2	3.7
Real GDP growth						
baseline	3.0	2.2	2.6	2.4	2.4	2.4
tighter	2.9	1.7	1.5	2.0	2.7	3.3
(fourth-quarter level, percent)						
Unemployment Rate (1994-survey basis)						
baseline	6.3	6.4	6.3	6.3	6.3	6.3
tighter	6.3	6.6	6.9	7.2	7.1	6.8
(QIV to QIV percent change)						
M2						
baseline	1	2	4-1/2	4-1/2	4-1/2	4-1/2
tighter	3/4	1	4-1/2	3-1/2	3-1/2	4
(fourth-quarter level, percent)						
Federal funds rate						
baseline	5.1	5.3	4.8	4.8	4.8	4.8
tighter	5.8	7	3.3	3.3	3.3	3.3

Chart 2

## ALTERNATIVE STRATEGIES FOR MONETARY POLICY



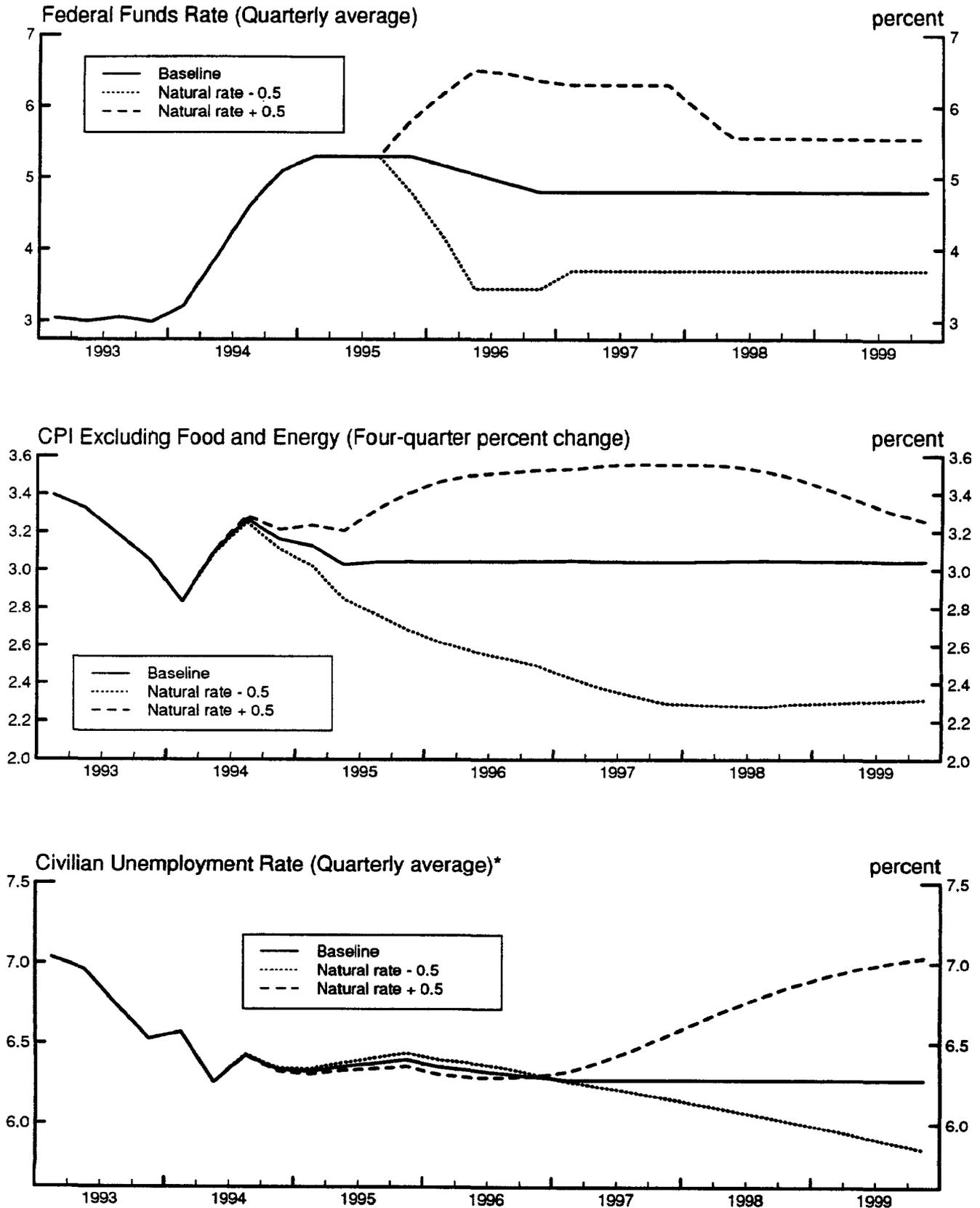
\*The unemployment rate is shown on the 1994-survey basis. Observations in 1993 were level-adjusted up 0.3 percentage points. Data points are plotted in the midpoint of each period.

(12) Under the tighter alternative, the Committee strives to bring CPI inflation down to around 1-1/2 percent--close to effective price stability--by the end of the decade. Achieving this outcome requires a considerably tighter policy stance over the next two years than in the baseline. Lower money growth and higher real interest rates, with the real federal funds rate moving above 4-1/2 percent by the end of 1995, pushes the unemployment rate a little over 7 percent for a time. To avoid falling below the inflation objective late in the period, policy needs to be eased substantially in 1996, with a marked decline in short-term interest rates and step-up in money growth, so that the unemployment rate is approaching the natural rate at the end of the simulation period.

(13) Different assumptions about the level of the natural rate of unemployment, along with policy responses to the resulting economic conditions, are embedded in the simulations shown in Chart 3. The baseline simulation is the same as in Chart 2 above and retains the assumption that the natural rate of unemployment is 6-1/4 percent. In light of considerable uncertainty about the precise level of the natural rate, however, the two alternatives incorporate natural rates that are either 1/2 percentage point higher or lower over the forecast period. In the case of a lower natural rate of unemployment, monetary policy needs to reduce the real interest rate to bring spending in line with the higher level of potential GDP. However, the Committee is assumed to recognize and respond to the unexpectedly low natural rate only as inflation falls perceptibly short of the path in the baseline simulation. The unemployment rate remains above the lower level of the natural rate for a time, and the Committee takes advantage of the opportunity presented by this circumstance to make

Chart 3

### ALTERNATIVE ASSUMPTIONS ABOUT THE NAIRU



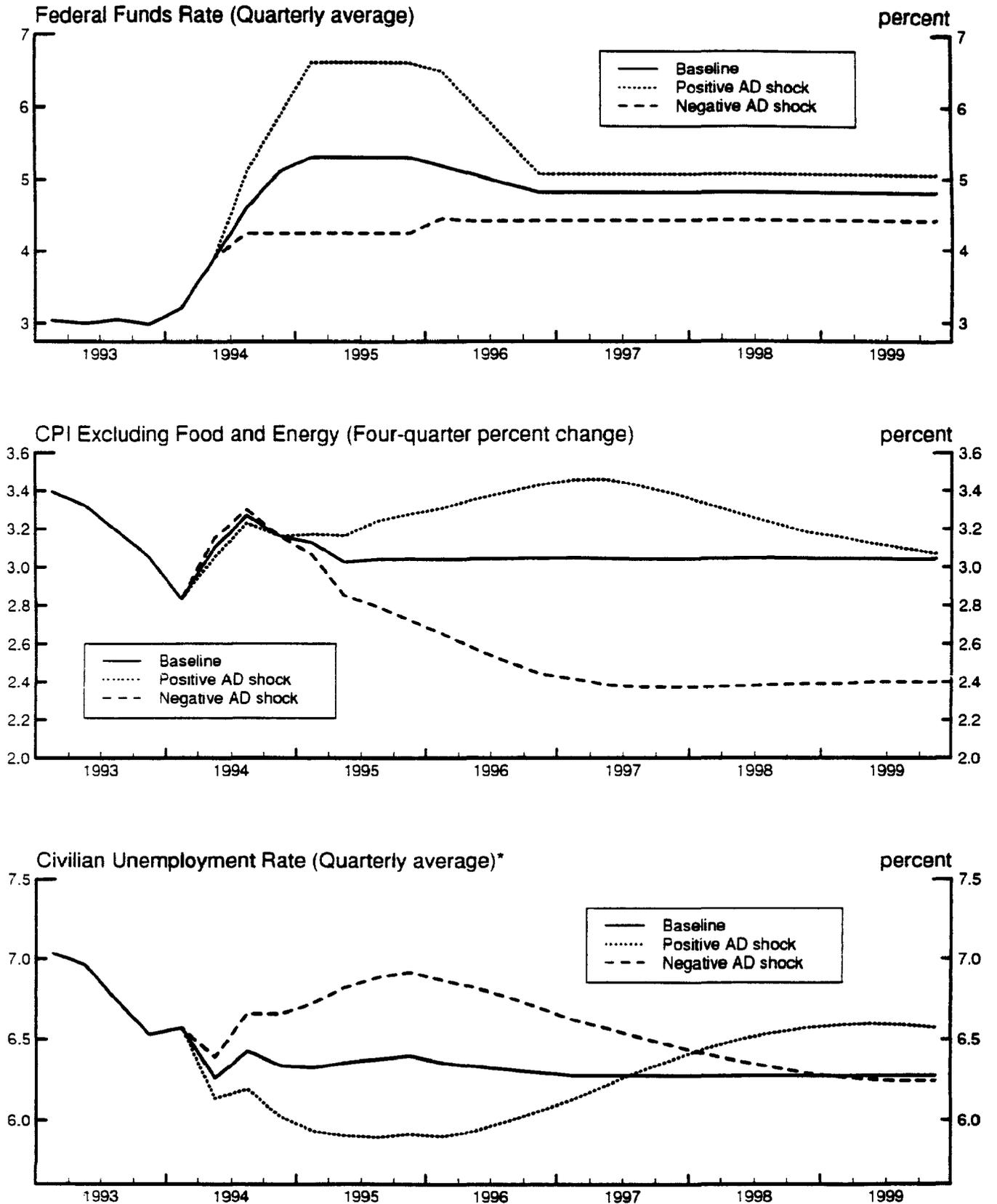
\*The unemployment rate is shown on the 1994-survey basis. Observations in 1993 were level-adjusted up 0.3 percentage points. Data points are plotted in the midpoint of each period.

lasting progress toward price stability. In contrast, a half-point higher natural rate means that the economy is already producing above capacity and an accelerating inflation process is underway. To contain this process, the Committee needs to tighten to bring the unemployment rate to its higher natural level; in the simulation, the Committee tightens even more to avoid a permanently higher inflation rate, implying a period of slack in the economy.

(14) The third set of simulations, shown in Chart 4, considers the implications of stronger or weaker aggregate demand than in the staff forecast. The aggregate demand shocks embody a one percent higher or lower level of real spending (relative to the baseline forecast) by the first quarter of next year. As the positive shock to demand becomes evident in the data, the Committee moves the federal funds rate up, though owing to uncertainty about the size and persistence of the shock, rates do not rise rapidly enough to forestall a dip in the unemployment rate, to below the natural rate, and a rise in inflation for a time. The negative shock to aggregate demand induces the Committee to keep the federal funds rate unchanged through 1995. Nonetheless, the unemployment rate rises above its natural rate, and inflation decelerates.

Chart 4

### AGGREGATE DEMAND SHOCKS



\*The unemployment rate is shown on the 1994-survey basis. Observations in 1993 were level-adjusted up 0.3 percentage points. Data points are plotted in the midpoint of each period.

Long-Run Ranges

(15) As background for Committee discussion of ranges for money and debt for 1994 and 1995, the table below presents the current ranges for 1994, as well as the growth rates of money and debt realized through June and projected for 1994 and 1995.<sup>10</sup>

	<u>Current ranges</u>	<u>1993:Q4 to June</u>	<u>Staff projections</u>	
			<u>1994</u>	<u>1995</u>
M2	1 to 5	1.1	1	2
M3	0 to 4	-.2	0	1
Debt	4 to 8	5.2 <sup>1</sup>	5	5
Nonfederal		4.9 <sup>1</sup>	4-3/4	4-1/2
M1		4.0	3-1/2	1
Memo:				
Nominal GDP		5-3/4 <sup>2</sup>	5-1/2	4-1/2

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1. 1993:Q4 to May.  
2. 1993:Q4 to 1994:Q2.

(16) The staff projections of money and debt are intended to be consistent with the economic and financial market forecast described in the Greenbook. Growth in nominal GDP is seen as slowing over the second half of this year to a 5 percent rate before leveling out at a 4-1/2 percent pace over next year. Monetary policy is assumed to move the federal funds rate up to around 5-1/4 percent by the beginning of next year and hold it at that level for the balance of 1995. By contrast, long-term interest rates are expected to remain near current levels this year before moving down somewhat next year.

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10. Ranges for previous years and outcomes are shown in Appendix A.

(17) Over the last six months of 1994, M2 growth is projected to maintain its 1 percent pace of the year to date. Moderating expansion of nominal GDP and previous as well as projected increases in opportunity costs will be exerting additional restraint on demand for M2 in the second half of the year. The rise in opportunity costs results not only from the assumed increase in short-term market interest rates but also from a continued unusually sluggish response of depositories in raising retail deposit rates; loan growth is seen as moderate and banks may prefer to limit acquisitions of securities or to issue managed liabilities rather than raising offering rates aggressively to the broad base of retail customers.<sup>11</sup> As an offset to these influences, declines in mortgage prepayments are anticipated to wane, reducing their depressing effects on money growth.<sup>12</sup> Portfolio shifts between capital market investments and deposits are a persisting source of uncertainty for future money growth. After the experience of the first half of the year, households likely have a more realistic assessment of the risks of holding long-term mutual funds. The staff forecast of relatively stable long-term rates over the balance of the year suggests no significant further capital losses, and we do not project additional net withdrawals from bond

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11. With higher opportunity costs, narrow measures of transactions balances, base money, and reserves are projected to put in a subdued performance over the second half of 1994. For the four quarters of the year, M1 is projected to grow by 3-1/2 percent, buoyed by 10-1/2 percent growth of currency, while transaction deposits post only a 3/4 percent gain. Required and total reserves are projected to be about flat. Largely reflecting the growth of currency, the monetary base grows 8-3/4 percent for the year.

12. Decreases in the level of mortgage prepayments, which depress demand deposits and money market deposit accounts, reduced M2 growth by an estimated 1 percentage point at an annual rate from the fourth quarter to June. A reduction in M2 growth of 1/2 percentage point owing to these effects is projected for June to December. With mortgage rates remaining well above last year's lows, prepayments should have little effect on money growth in 1995.

funds. However, a flatter term structure will narrow yield differentials favoring bond mutual funds. With the reduced yield incentive and better investor appreciation of risks, we are projecting that inflows into bond and stock mutual funds will remain substantially below the record pace of last year.<sup>13</sup> M2 velocity is projected to increase over the second half of the year at the same average pace as since mid-1991. (See Chart 5.)

(18) M3 over the rest of 1994 is expected to remain little changed from its level in the fourth quarter of last year. Bank credit is likely to expand over the next six months somewhat below its pace for the year to date (abstracting from the effects on "other securities" of the accounting change that did not alter bank financing needs). The slowing reflects reduced acquisitions of government securities, as projected loan growth rises gradually. However, in light of prospects for stronger credit demands in foreign economies, banks' funding preferences will likely shift toward large time deposits and away from borrowing from offices abroad, thereby supporting the growth of M3.

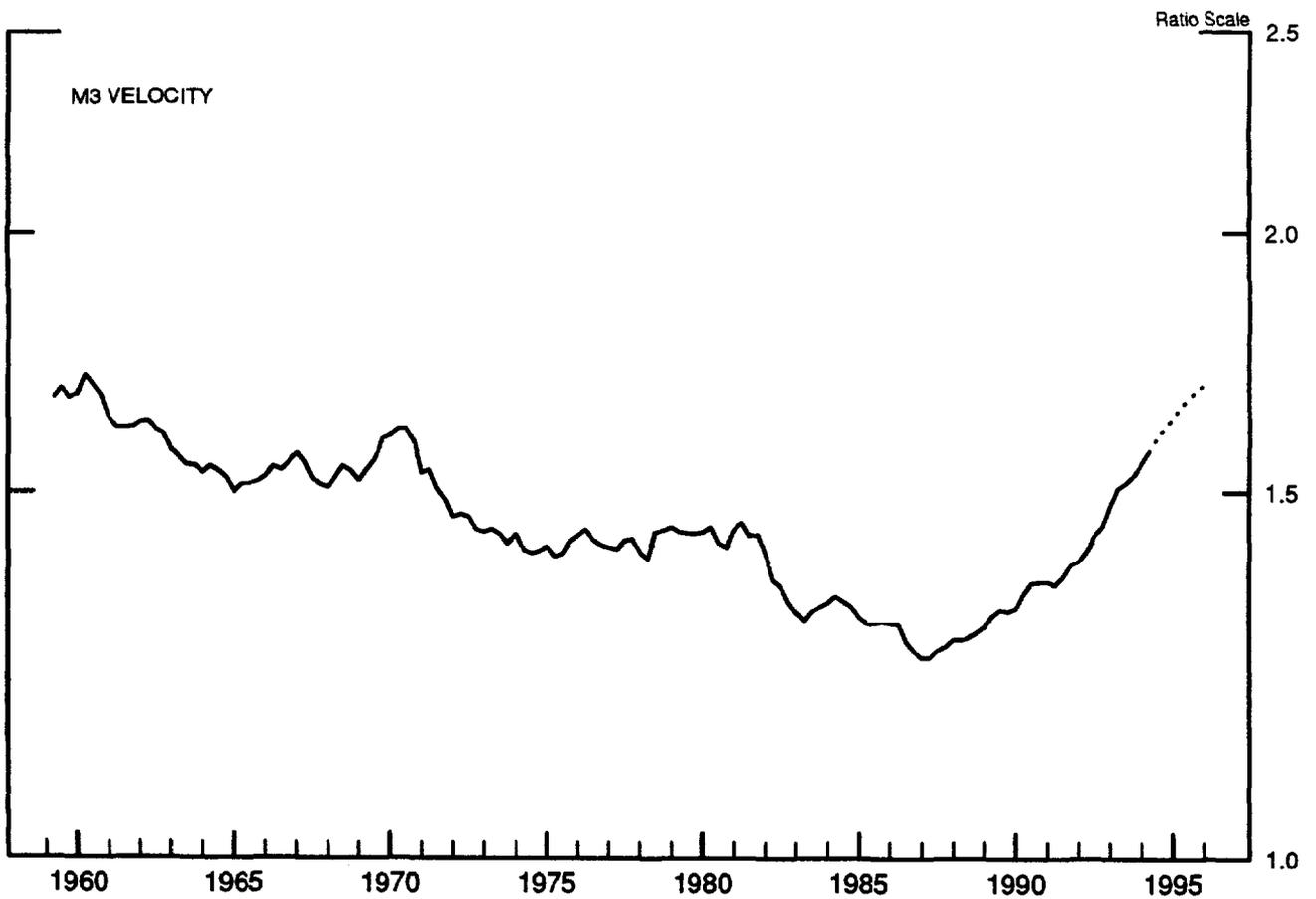
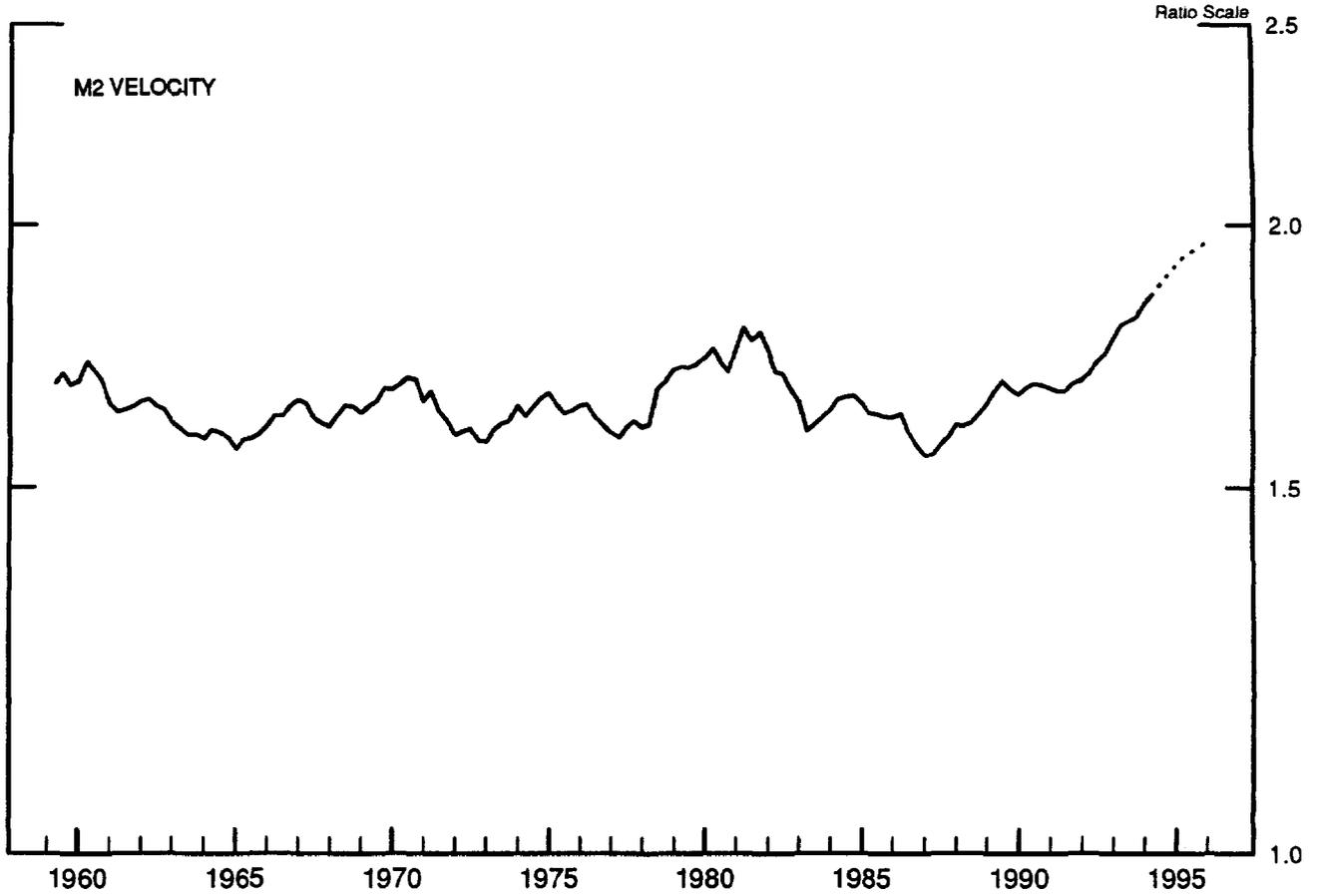
(19) The debt of domestic nonfinancial sectors is projected by the staff to continue growing at about a 5 percent rate over the remainder of the year, keeping this aggregate in the lower half of its 4 to 8 percent monitoring range. Federal debt is expected to expand 6 percent this year, while nonfederal debt appears to be on a 4-3/4 percent growth track, a bit below the pace of nominal GDP expansion. In the household sector, consumer borrowing should ease a bit from its recent brisk pace, while mortgage borrowing remains restrained by the

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13. M2 plus households' nonretirement holdings of bond and stock mutual funds are projected to grow somewhat faster than M2 over the second half of 1994 and the year as a whole.

Chart 5

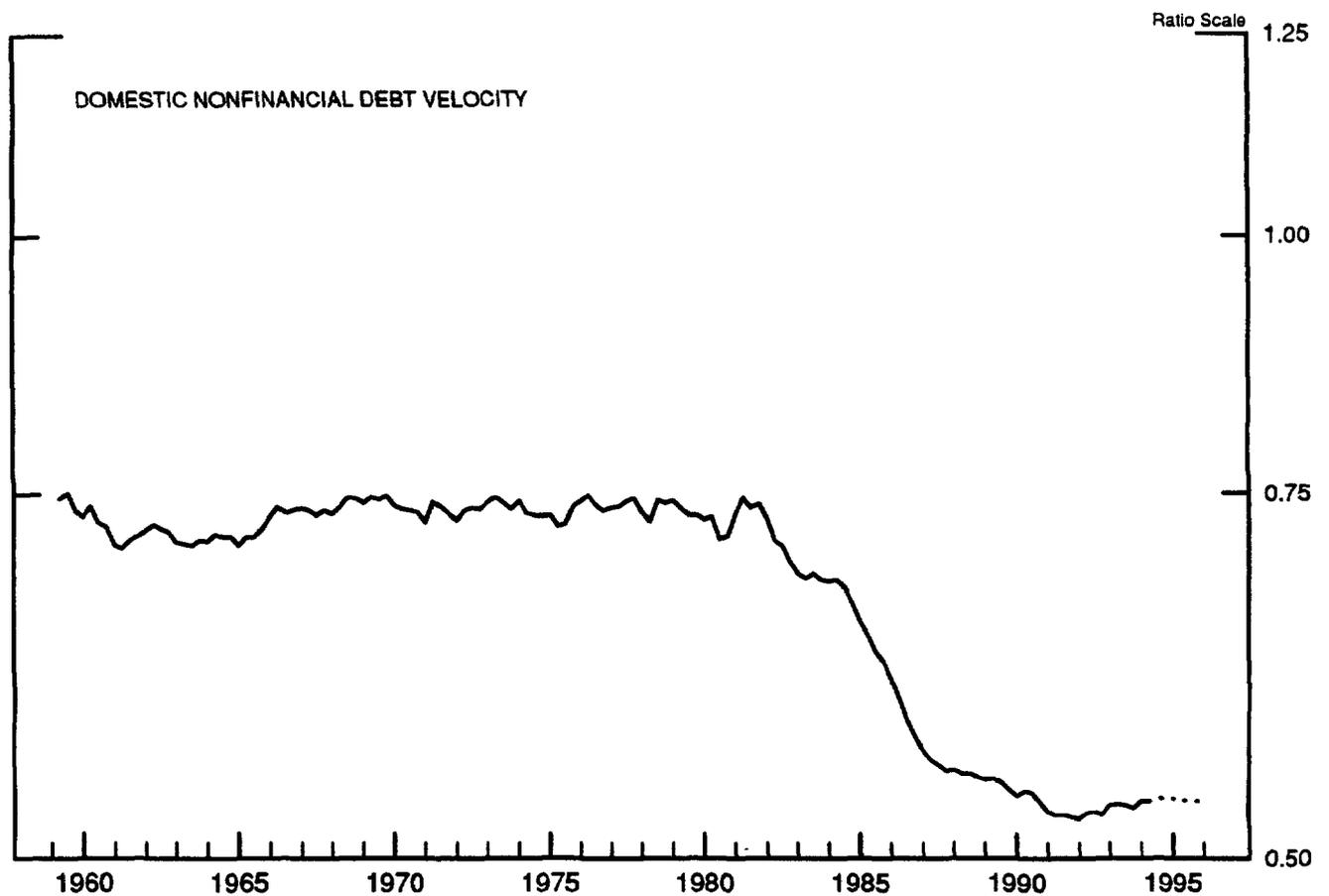
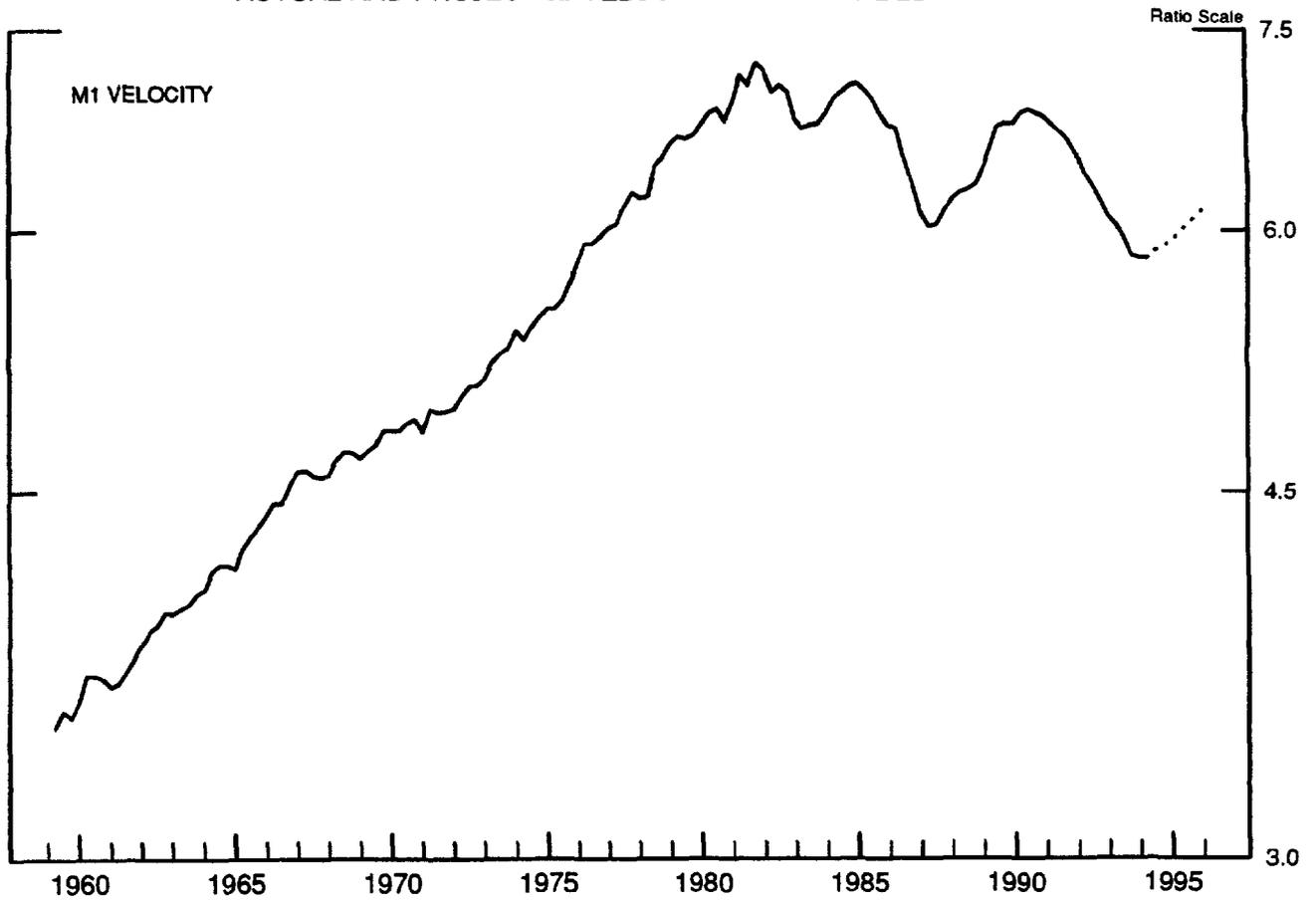
ACTUAL AND PROJECTED VELOCITY OF M2 AND M3\*



\*Projections are based on staff forecasts of GDP and money.

Chart 6

### ACTUAL AND PROJECTED VELOCITY OF M1 AND DEBT\*



\*Projections are based on staff forecasts of GDP, money, and debt.

topping out of the housing market and lessened "cash outs" of equity as refinancing activity declines further. With the gap between corporate financing needs and internally generated funds widening some, business borrowing may firm a little; in contrast to 1993, companies are likely to rely substantially on both short- and long-term debt sources. On the supply side of the credit markets, conditions should remain quite favorable. Narrow quality spreads are likely to persist in securities markets, and banks and other intermediaries may become even more aggressive in pursuit of lending opportunities as the economic expansion continues at a good pace.

(20) In 1995, growth of nonfinancial sector debt is projected to hold at a 5 percent rate. Federal debt growth edges up to a 6-1/2 percent pace, but a slight easing of nonfederal debt expansion, reflecting slower growth in nominal spending, serves as an offset. With opportunity costs essentially flattening, M2 growth is expected to pick up--to 2 percent--despite capital gains on bond funds and the slight further downshift in growth of nominal GDP. The faster M2 expansion partly shows through to M3, which is projected to resume growing at a 1 percent rate.<sup>14</sup>

#### Ranges for 1994

(21) Although in recent years the Committee has de-emphasized monetary and debt aggregates as policy guides, the selection of particular ranges does impart to the Congress and the public the Committee's sense of the prospective growth of these financial quantities

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14. In 1995, M1 decelerates to a 1 percent growth rate, in part owing to substitutions out of M1 and into nontransaction components of M2, as the average interest rate on M1 changes little, while rates on retail time deposits, money funds, and money market deposit accounts rise substantially. With required and total reserves falling at a little more than a 1-1/2 percent rate, the monetary base is expected to slow to a 5-1/2 percent pace for the year.

that is likely to be consistent with the economic outlook of the Governors and Presidents. The table below shows two alternative sets of ranges for money and debt growth over 1994. Alternative I represents the current ranges, while alternative II reduces the upper and lower bounds of all three ranges by 1 percentage point. The alternative II ranges for M2 and M3 better encompass the staff projections, and the center of the alternative II range for debt corresponds to the staff forecast.

Alternative Money and Debt Ranges for 1994  
(percent)

	<u>Alt. I</u> (current ranges)	<u>Alt. II</u>	<u>Memo:</u> <u>Staff</u> <u>Projection</u>
M2	1 to 5	0 to 4	1
M3	0 to 4	-1 to 3	0
Debt	4 to 8	3 to 7	5

(22) Alternative II might be chosen not on the technical grounds used last year of a shift in money demand, but rather to allow more comfortably for the effects on money growth of further increases in short-term interest rates, as in the staff forecast. That is, growth of the money and debt aggregates under this alternative is less likely to fall below the lower ends of these ranges, even if the staff has underestimated either the depressing impact of further increases in the federal funds rate or the prospective underlying weakness in money and credit relative to nominal GDP. Alternative II would also seem to provide scope for an even more pronounced tightening in policy than assumed by the staff, should the Committee wish to lean toward still more policy restraint. Such restraint on demand might be sought to return to a path of disinflation--as in the tighter strategy of the

last section--or could become necessary should an untoward depreciation of the exchange value of the dollar threaten a general inflationary upturn.

(23) Alternative I could be seen as more consistent with a judgment that relatively stable short-term interest rates will adequately foster attainment of the FOMC's objectives for the economy and inflation. The associated forecast for money and debt would involve faster growth rates this year than in the staff projections, placing their probable levels late in the year more clearly within their current ranges. The alternative I ranges also could be viewed as a long-run benchmark for money growth consonant with the attainment of nominal GDP expansion over time consistent with price stability and the return to a more normal behavior of M2 velocity. Even if such velocity behavior does not emerge soon, keeping the current ranges in place rather than lowering them could avoid the necessity of an upward adjustment of the ranges in the future, which could be misperceived as a weakening of the Committee's anti-inflationary resolve. An undershoot of the current ranges this year could perhaps be explained by the continued aberrant behavior of velocity.

**Ranges for 1995**

(24) Two alternative ranges for money and debt growth over 1995, the same as those for 1994, are shown below along with the staff projections for money and debt growth.

**Alternative Money and Debt Ranges for 1995  
(percent)**

	<u>Alt. I.</u>	<u>Alt. II</u>	<u>Memo: Staff projection</u>
M2	1 to 5	0 to 4	2
M3	0 to 4	-1 to 3	1
Debt	4 to 8	3 to 7	5

(25) Many of the same considerations relating to the choice of the ranges this year apply to the selection of provisional ranges for next year. To be sure, the staff's projected stepup in M2 and M3 growth places both aggregates further within the alternative I ranges, reducing the risk of an undershoot. However, considerable uncertainties remain regarding the portfolio behavior of households and the sensitivity of money balances to the structure of interest rates. In addition, the behavior of interest rates that will be needed to promote the Committee's macroeconomic objectives in 1995 is, of course, unclear. Given these uncertainties affecting velocity, a case can be made for carrying over to 1995 whichever set of ranges is selected for 1994, with the intention to reassess the 1995 ranges again next February.

### Short-Run Policy Alternatives

(26) Three alternatives for the near-term stance of policy are presented below for consideration by the Committee. Under alternative B, federal funds would continue to trade around 4-1/4 percent and the allowance for adjustment and seasonal borrowing would remain at \$325 million.<sup>15</sup> The federal funds rate would be boosted 1/4 percentage point to 4-1/2 percent under alternative C, and the borrowing allowance would be raised to \$350 million. Alternative D would increase the federal funds rate 1/2 percentage point to 4-3/4 percent.

(27) The staff forecast of rising interest rates does not necessarily assume tightening at this meeting, but would seem to call for aggressive action later in the quarter should underlying demand for goods and services turn out to be as strong as implied in the staff outlook. Alternative B might be chosen by the Committee if it wished to await confirmation of the strength of aggregate demand, perhaps because there were questions about whether that strength would in fact be forthcoming. This alternative might also be preferred if the Committee felt the staff had overestimated probable inflationary pressures. Market participants seem somewhat uncertain about the likelihood of Committee action at the July meeting; some anticipate that the Federal Reserve will pause a little longer in its process of firming to assess the effects of its actions so far, but on balance they seem to have put the odds on a quarter-point move at greater than 50-50. Accordingly, short-term interest rates are likely to move down a little after the meeting under alternative B. Long-term rates are not likely to decline, however, under this alternative; the dollar

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<sup>15</sup> Under all of the alternatives, increases in the borrowing allowance would likely be needed over the intermeeting period to accommodate rising demands for seasonal credit.

might remain under some downward pressure, and the markets might continue to focus on the potential for greater inflation, especially if data confirm brisk growth.

(28) The Committee could see alternative C as appropriate if it believed that sufficient evidence had accumulated to warrant a continued gradual tightening of policy to prevent the economy from overheating. Because the 25-basis-point firming in the federal funds rate under this alternative is not fully incorporated in current market quotes, other short-term interest rates would probably edge up in response. This action could provide some support for the dollar; however, if it were undertaken in the context of a seriously weakening dollar, and were seen as intended primarily to prop up the currency, it could well be viewed by the market as insufficient. That circumstance aside, greater market confidence that inflation pressures might be restrained could help limit increases in intermediate- and long-term interest rates in response to this alternative. With market portfolios now generally aligned to expectations of gradually rising money market interest rates, the move seems unlikely to prompt further increases in actual and implied volatility in bond markets.

(29) Concerns that the recent behavior of the dollar and commodity prices might imply rising prices more broadly and might be associated with a ratcheting up of inflation expectations could motivate the Committee to select alternative D. The 50-basis-point hike in the funds rate would be seen by market participants as motivated importantly by a desire to bolster the dollar, which might well recover some of its recent losses, especially if the action were implemented through a hike in the discount rate. If the dollar did rebound and the action were seen as lowering the odds on a pickup of

inflation, any increases in bond yields could be quite limited. On the other hand, such an action is not currently anticipated in the market and could prompt increased uncertainty about the future path of interest rates, with adverse effects on bond and possibly stock markets. In any case, banks would be likely to match the increase in the federal funds rate with a similar hike in the prime rate.

(30) Growth of the monetary aggregates under the three alternatives is presented in the table below. (The table and charts on the next three pages contain more detail on the projections.) Under all of the alternatives, M2 growth from June to September is expected to be in a narrow range around a 1-1/2 percent rate and M3 at or just above a 1/2 percent rate. Such growth rates would represent some pickup from the surprisingly weak performance over the March-to-June period. In effect, we are projecting that the relationships of money to income and interest rates prevailing over recent years will reassert themselves. All the alternatives would leave M2 in September a bit above the lower end of its 1-to-5 percent annual range and M3 at the lower edge of its 0-to-4 percent range.

	<u>Alt. B</u>	<u>Alt. C</u>	<u>Alt. D</u>
Growth from June to September			
M2	1-3/4	1-1/2	1-1/4
M3	3/4	1/2	1/2
M1	3-1/2	3	2-1/2

(31) As noted in the previous section, M2 growth will be restrained by the slower pace of nominal income growth projected by the staff in the third quarter as well as by the effects of the previous and expected further widening of opportunity costs. Moreover,

Alternative Levels and Growth Rates for Key Monetary Aggregates

	M2			M3			M1			
	Alt. B	Alt. C	Alt. D	Alt. B	Alt. C	Alt. D	Alt. B	Alt. C	Alt. D	
<b>Levels in Billions</b>										
May-94	3591.3	3591.3	3591.3	4215.4	4215.4	4215.4	1143.2	1143.2	1143.2	
Jun-94	3581.7	3581.7	3581.7	4211.7	4211.7	4211.7	1147.3	1147.3	1147.3	
Jul-94	3585.3	3585.1	3584.9	4216.8	4216.7	4216.6	1150.1	1149.9	1149.7	
Aug-94	3590.6	3589.9	3589.2	4218.1	4217.4	4216.7	1153.6	1153.0	1152.4	
Sep-94	3596.5	3595.0	3593.5	4218.9	4217.7	4216.5	1157.2	1156.0	1154.8	
<b>Monthly Growth Rates</b>										
May-94	0.4	0.4	0.4	-2.4	-2.4	-2.4	2.0	2.0	2.0	
Jun-94	-3.2	-3.2	-3.2	-1.1	-1.1	-1.1	4.3	4.3	4.3	
Jul-94	1.2	1.1	1.1	1.5	1.4	1.4	3.0	2.8	2.6	
Aug-94	1.8	1.6	1.4	0.4	0.2	0.1	3.7	3.2	2.8	
Sep-94	2.0	1.7	1.5	0.3	0.1	-0.1	3.7	3.2	2.5	
<b>Quarterly Averages</b>										
94 Q1	1.8	1.8	1.8	0.2	0.2	0.2	6.0	6.0	6.0	
94 Q2	1.5	1.5	1.5	-0.2	-0.2	-0.2	2.0	2.0	2.0	
94 Q3	0.3	0.3	0.2	0.1	0.0	-0.0	3.4	3.2	2.9	
94 Q4	1.0	0.9	0.8	0.2	0.1	0.1	2.9	2.7	2.5	
<b>Growth Rate</b>										
From	To									
Dec-93	Jun-94	0.8	0.8	0.8	-0.8	-0.8	-0.8	3.3	3.3	3.3
Mar-94	Jun-94	-0.1	-0.1	-0.1	-0.3	-0.3	-0.3	1.7	1.7	1.7
Jun-94	Sep-94	1.7	1.5	1.3	0.7	0.6	0.5	3.5	3.0	2.6
93 Q4	Mar-94	2.0	2.0	2.0	-0.1	-0.1	-0.1	5.6	5.6	5.6
93 Q4	Jun-94	1.1	1.1	1.1	-0.2	-0.2	-0.2	4.0	4.0	4.0
93 Q4	Sep-94	1.3	1.2	1.2	0.1	0.0	0.0	3.8	3.7	3.6
91 Q4	92 Q4	1.9	1.9	1.9	0.5	0.5	0.5	14.3	14.3	14.3
92 Q4	93 Q4	1.4	1.4	1.4	0.6	0.6	0.6	10.5	10.5	10.5
93 Q4	94 Q4	1.2	1.1	1.1	0.1	0.0	0.0	3.6	3.5	3.4
<b>1994 Target Ranges:</b>		1.0 to 5.0			0.0 to 4.0					

Chart 7

# ACTUAL AND TARGETED M2

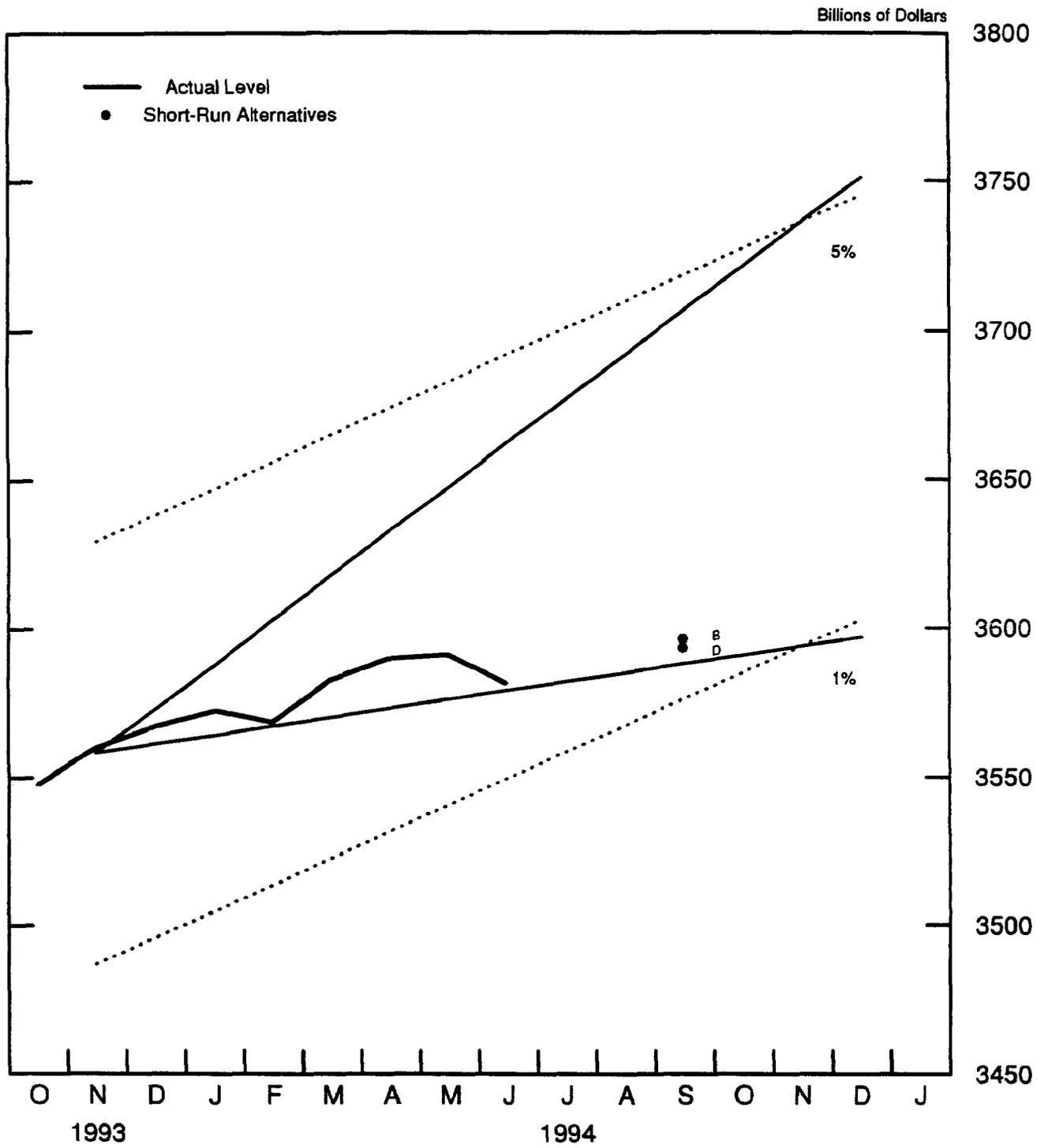


Chart 8

# ACTUAL AND TARGETED M3

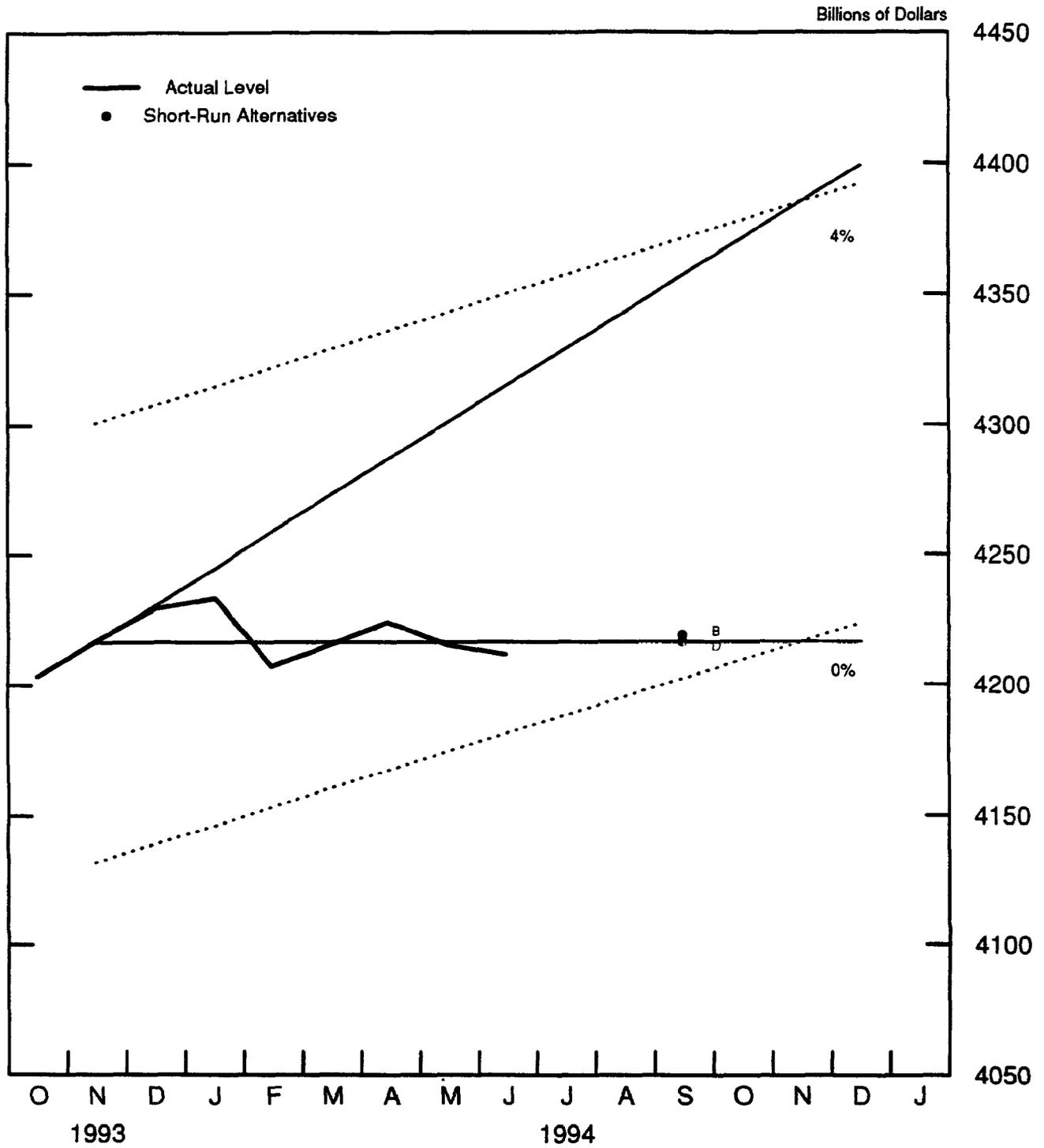


Chart 9

# M1

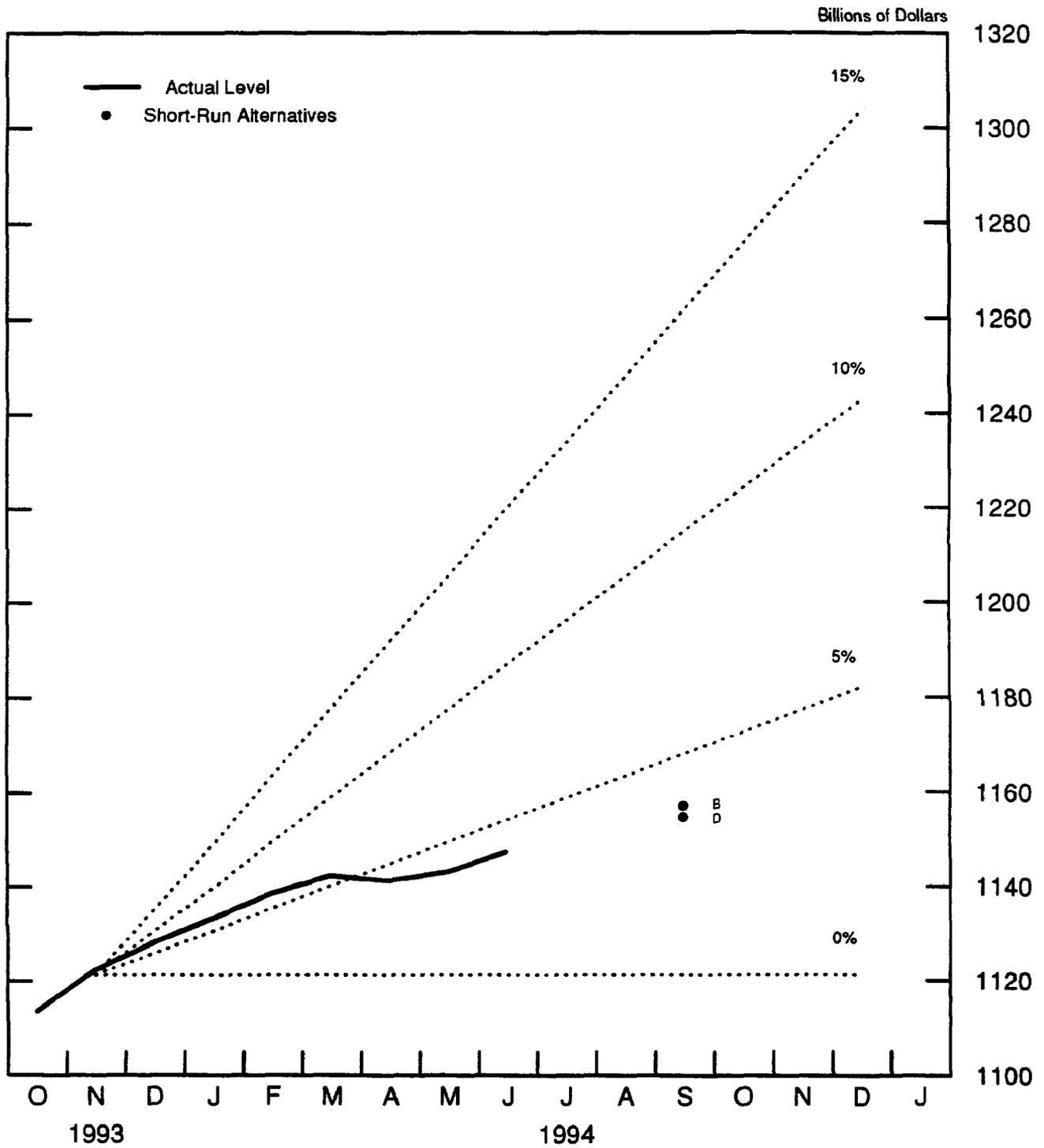
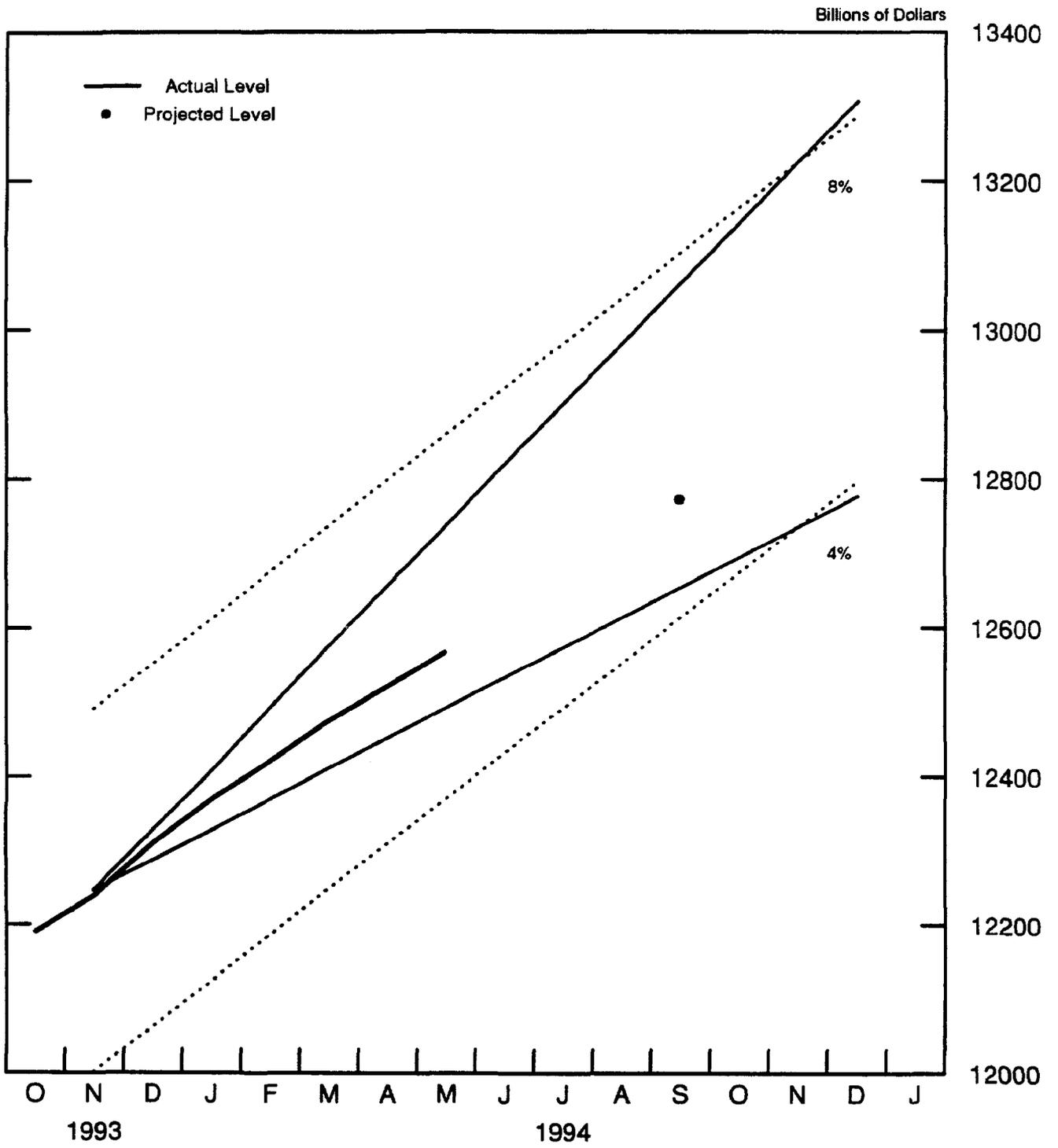


Chart 10  
DEBT



the volume of flows into bond and stock funds is expected to pick up a little as concerns about capital losses in these markets diminish.<sup>16</sup> Partly offsetting these influences should be the gradual levelling out of mortgage refinancing activity. With interest rates on small CDs rising more quickly than those on liquid deposits, inflows to small time deposits should account for an appreciable proportion of M2 growth. Although currency growth also is expected to remain rapid owing to continued strength in foreign demands, transaction deposits are expected to be about flat on balance, as average yields below 2 percent on NOW accounts limit flows into other checkable deposits and as compensating balances fall in response to increases in earnings credit rates. M1 is expected to increase at only a 3-1/2 percent rate from June to September under alternative B.<sup>17</sup>

(32) Expansion of M3 is projected to pick up only slightly in the next few months. Funding needs of depository institutions should remain moderate. Under the staff forecast, bank credit expands at about a 4 percent rate over the second half of the year, with total loan growth rising a little while securities acquisitions fall off; the expansion of thrift balance sheets picks up only slowly. Institution-only money fund shares are likely to continue to decline in response to increasing yields on direct money-market holdings, particularly under alternatives C and D. However, banks may slow their reliance on borrowing from foreign offices and step up issuance of domestic CDs, contributing a little to growth of M3. Overall debt

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16. M2 plus bond and stock mutual funds is projected to increase over coming months at a slightly faster rate than M2.

17. In association with the anemic performance of transaction deposits, total reserves are projected to decline at about a 2 percent rate over the June-to-September period. The monetary base would expand at a 7-1/4 percent rate.

growth is projected to remain close to 5 percent over the remainder of 1994.

Directive Language

(33) Presented below for Committee consideration is draft directive wording relating to the Humphrey-Hawkins ranges for 1994 and 1995 and the operational paragraph for the intermeeting period.

Paragraph for 1994 and 1995 Ranges

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. In furtherance of these objectives, the Committee REAFFIRMED at THIS its meeting THE RANGES IT HAD ESTABLISHED in February established ranges for growth of M2 and M3 of 1 to 5 percent and 0 to 4 percent respectively, measured from the fourth quarter of 1993 to the fourth quarter of 1994. [IN FURTHERANCE OF THESE OBJECTIVES, THE COMMITTEE AT THIS MEETING LOWERED/RAISED THE RANGES IT HAD ESTABLISHED IN FEBRUARY FOR GROWTH OF M2 AND M3 TO RANGES OF \_\_\_ TO \_\_\_ AND \_\_\_ TO \_\_\_ PERCENT RESPECTIVELY, MEASURED FROM THE FOURTH QUARTER OF 1993 TO THE FOURTH QUARTER OF 1994.] The Committee anticipated that developments contributing to unusual velocity increases could persist during the year and that money growth within these ranges would be consistent with its broad policy objectives. The monitoring range for growth of total domestic nonfinancial debt was set MAINTAINED at 4 to 8 percent [LOWERED/RAISED TO \_\_\_ TO \_\_\_ PERCENT] for the year. FOR 1995, THE COMMITTEE AGREED ON TENTATIVE RANGES FOR MONETARY GROWTH, MEASURED FROM THE FOURTH QUARTER OF 1994 TO THE FOURTH QUARTER OF 1995, OF \_\_\_

TO \_\_\_ PERCENT FOR M2 AND \_\_\_ TO \_\_\_ PERCENT FOR M3. THE COMMITTEE PROVISIONALLY SET THE ASSOCIATED MONITORING RANGE FOR GROWTH OF DOMESTIC NONFINANCIAL DEBT AT \_\_\_ TO \_\_\_ PERCENT FOR 1995. The behavior of the monetary aggregates will continue to be evaluated in the light of progress toward price level stability, movements in their velocities, and developments in the economy and financial markets.

OPERATIONAL PARAGRAPH

In the implementation of policy for the immediate future, the Committee seeks to DECREASE SOMEWHAT/MAINTAIN/increase somewhat the existing degree of pressure on reserve positions, taking account of a possible increase in the discount rate. In the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments, slightly (SOMEWHAT) greater reserve restraint MIGHT/WOULD or slightly (SOMEWHAT) lesser reserve restraint might (WOULD) be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consistent with modest growth in M2 and M3 over coming months.

APPENDIX A

ADOPTED LONGER-RUN GROWTH RATE RANGES FOR THE MONETARY AND CREDIT AGGREGATES  
(percent annual rates)

	<u>M1</u>		<u>M2</u>		<u>M3</u>		<u>Domestic Non-financial Debt<sup>1</sup></u>	
QIV 1979 - QIV 1980	4 - 6.5	(7.3) <sup>2,3</sup>	6 - 9	(9.8)	6.5 - 9.5	(9.9)	6 - 9	(7.9)
QIV 1980 - QIV 1981	3.5 - 6	(2.3) <sup>2,4</sup>	6 - 9	(9.4)	6.5 - 9.5	(11.4)	6 - 9	(8.8) <sup>5</sup>
QIV 1981 - QIV 1982	2.5 - 5.5	(8.5) <sup>2</sup>	6 - 9	(9.2)	6.5 - 9.5	(10.1)	6 - 9 <sup>6</sup>	(7.1) <sup>5</sup>
QIV 1982 - QIV 1983	5 - 9 <sup>7</sup>	(7.2)	7 - 10 <sup>8</sup>	(8.3)	6.5 - 9.5	(9.7)	8.5 - 11.5	(10.5)
QIV 1983 - QIV 1984	4 - 8 <sup>9</sup>	(5.2)	6 - 9	(7.7)	6 - 9	(10.5)	8 - 11	(13.4)
QIV 1984 - QIV 1985	3 - 8	(12.7)	6 - 9	(8.6)	6 - 9.5	(7.4)	9 - 12	(13.5)
QIV 1985 - QIV 1986	3 - 8	(15.2)	6 - 9	(8.9)	6 - 9	(8.8)	8 - 11	(12.9)
QIV 1986 - QIV 1987	n.s. <sup>10</sup>	(6.2)	5.5 - 8.5	(4.0)	5.5 - 8.5	(5.4)	8 - 11	(9.6)
QIV 1987 - QIV 1988	n.s.	(4.3)	4 - 8	(5.3)	4 - 8	(6.2)	7 - 11	(8.7)
QIV 1988 - QIV 1989	n.s.	(0.6)	3 - 7	(4.6)	3.5 - 7.5	(3.3)	6.5 - 10.5	(8.1)
QIV 1989 - QIV 1990	n.s.	(4.2)	3 - 7	(3.9)	1 - 5 <sup>11</sup>	(1.8)	5 - 9	(6.9)
QIV 1990 - QIV 1991	n.s.	(8.0)	2.5 - 6.5	(2.8)	1 - 5	(1.2)	4.5 - 8.5	(4.5)
QIV 1991 - QIV 1992	n.s.	(14.3)	2.5 - 6.5	(2.0)	1 - 5	(0.5)	4.5 - 8.5	(4.6)
QIV 1992 - QIV 1993	n.s.	(10.5)	1 - 5 <sup>12</sup>	(1.4)	0 - 4 <sup>12</sup>	(0.6)	4 - 8 <sup>12</sup>	(4.9)
QIV 1993 - QIV 1994 <sup>13</sup>	n.s.	(4.0)	1 - 5	(1.1)	0 - 4	(-0.2)	4 - 8	(5.2)

NOTE: Numbers in parentheses are actual growth rates as reported at end of policy period in February Monetary Policy Report to Congress. Subsequent revisions to historical data (not reflected above) have altered growth rates by up to a few tenths of a percent.

n.s.--not specified.

Footnotes on following page

1. Targets are for bank credit until 1983; from 1983 onward targets are for domestic nonfinancial sector debt.
2. The figures shown reflect target and actual growth of M1-B in 1980 and shift-adjusted M1-B in 1981. M1-B was relabeled M1 in January 1982. The targeted growth for M1-A was 3-1/2 to 6 percent in 1980 (actual growth was 5.0 percent); in 1981 targeted growth for shift-adjusted M1-A was 3 to 5-1/2 percent (actual growth was 1.3 percent).
3. When these ranges were set, shifts into other checkable deposits in 1980 were expected to have only a limited effect on growth of M1-A and M1-B. As the year progressed, however, banks offered other checkable deposits more actively, and more funds than expected were directed to these accounts. Such shifts are estimated to have decreased M1-A growth and increased M1-B growth each by at least 1/2 percentage point more than had been anticipated.
4. Adjusted for the effects of shifts out of demand deposits and savings deposits. At the February FOMC meeting, the target ranges for observed M1-A and M1-B in 1981 on an unadjusted basis, expected to be consistent with the adjusted ranges, were -4-1/2 to -2 and 6 to 8-1/2 percent, respectively. Actual M1-B growth (not shift adjusted) was 5.0 percent.
5. Adjusted for shifts of assets from domestic banking offices to International Banking Facilities.
6. Range for bank credit is annualized growth from the December 1981-January 1982 average level through the fourth quarter of 1982.
7. Base period, adopted at the July 1983 FOMC meeting, is QII'83. At the February 1983 meeting, the FOMC had adopted a QIV'82 to QIV'83 target range for M1 of 4 to 8 percent.
8. Base period is the February-March 1983 average.
9. Base period, adopted at the July 1985 FOMC meeting, is QII'85. At the February 1985 meeting, the FOMC had adopted a QIV'84 to QIV'85 target range for M1 of 4 to 7 percent.
10. No range for M1 has been specified since the February 1987 FOMC meeting because of uncertainties about its underlying relationship to the behavior of the economy and its sensitivity to economic and financial circumstances.
11. At the February 1990 meeting, the FOMC specified a range of 2-1/2 to 6-1/2 percent. This range was lowered to 1 to 5 percent at the July 1990 meeting.
12. At the February 1993 meeting, the FOMC specified a range of 2 to 6 percent for M2, 1/2 to 4-1/2 percent for M3, and 4-1/2 to 8-1/2 percent for domestic nonfinancial debt. These ranges were lowered to 1 to 5 percent for M2, 0 to 4 percent for M3, and 4 to 8 percent for domestic nonfinancial debt at the July 1993 meeting.
13. Growth rates in parentheses for the monetary aggregates are from 1993 QIV to June 1994 and for nonfinancial debt are from 1993 QIV to May 1994.

6/30/94 (MARP)

**SELECTED INTEREST RATES**  
(percent)

	Short Term								Long-Term							
	federal funds	Treasury bills secondary market			CDs secondary market	comm paper	money market mutual fund	bank prime loan	U S government constant maturity yields			corporate A-utility recently offered	municipal Bond Buyer	conventional home mortgages		
		3-month	6-month	1-year	3-month	1-month			3-year	10-year	30-year			secondary market fixed-rate	primary market fixed-rate	ARM
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
93 -- High	3.24	3.12	3.27	3.48	3.36	3.44	2.92	6.00	5.06	6.73	7.46	8.28	6.44	8.17	8.14	5.36
93 -- Low	2.87	2.82	2.94	3.07	3.06	3.07	2.59	6.00	4.07	5.24	5.83	6.79	5.41	6.72	6.74	4.14
94 -- High	4.27	4.18	4.68	5.14	4.62	4.41	3.64	7.25	6.50	7.34	7.52	8.51	6.60	8.98	8.77	5.58
94 -- Low	2.97	2.94	3.12	3.35	3.11	3.11	2.68	6.00	4.44	5.70	6.25	7.16	5.49	7.02	6.97	4.12
Monthly																
Jun 93	3.04	3.07	3.20	3.39	3.21	3.19	2.62	6.00	4.53	5.96	6.81	7.59	5.87	7.41	7.42	4.64
Jul 93	3.06	3.04	3.16	3.33	3.16	3.15	2.64	6.00	4.43	5.81	6.63	7.43	5.80	7.19	7.21	4.56
Aug 93	3.03	3.02	3.14	3.30	3.14	3.14	2.64	6.00	4.36	5.68	6.32	7.16	5.67	7.05	7.11	4.48
Sep 93	3.09	2.95	3.06	3.22	3.12	3.14	2.65	6.00	4.17	5.36	6.00	6.94	5.50	6.89	6.92	4.36
Oct 93	2.99	3.02	3.12	3.25	3.24	3.14	2.65	6.00	4.18	5.33	5.94	6.91	5.48	6.85	6.83	4.25
Nov 93	3.02	3.10	3.26	3.42	3.35	3.15	2.66	6.00	4.50	5.72	6.21	7.25	5.71	7.32	7.16	4.24
Dec 93	2.96	3.06	3.23	3.45	3.26	3.35	2.70	6.00	4.54	5.77	6.25	7.28	5.59	7.27	7.17	4.23
Jan 94	3.05	2.98	3.15	3.39	3.15	3.14	2.71	6.00	4.48	5.75	6.29	7.24	5.54	7.12	7.06	4.21
Feb 94	3.25	3.25	3.43	3.69	3.43	3.39	2.73	6.00	4.83	5.97	6.49	7.45	5.65	7.35	7.15	4.20
Mar 94	3.34	3.50	3.78	4.11	3.77	3.63	2.86	6.06	5.40	6.48	6.91	7.82	6.16	7.96	7.68	4.55
Apr 94	3.56	3.68	4.09	4.57	4.01	3.81	3.03	6.45	5.99	6.97	7.27	8.20	6.48	8.55	8.32	4.96
May 94	4.01	4.14	4.60	5.03	4.51	4.28	3.29	6.99	6.34	7.18	7.41	8.37	6.46	8.78	8.60	5.46
Weekly																
Mar 16 94	3.19	3.53	3.80	4.10	3.76	3.61	2.83	6.00	5.36	6.46	6.90	7.81	6.06	7.93	7.76	4.60
Mar 23 94	3.31	3.49	3.81	4.13	3.80	3.64	2.86	6.00	5.40	6.46	6.87	7.91	6.16	8.08	7.80	4.60
Mar 30 94	3.49	3.49	3.81	4.18	3.79	3.67	2.93	6.25	5.57	6.66	7.02	8.04	6.39	8.64	8.04	4.65
Apr 6 94	3.69	3.60	3.94	4.45	3.95	3.77	2.97	6.25	5.88	6.96	7.27	8.22	6.55	8.43	8.47	4.96
Apr 13 94	3.37	3.55	3.96	4.45	3.88	3.72	3.00	6.25	5.88	6.90	7.23	8.25	6.50	8.52	8.26	4.96
Apr 20 94	3.59	3.67	4.11	4.59	4.00	3.82	3.04	6.39	6.06	7.05	7.34	8.18	6.45	8.48	8.49	5.06
Apr 27 94	3.59	3.78	4.21	4.64	4.10	3.88	3.13	6.75	6.01	6.89	7.17	8.27	6.42	8.69	8.32	5.15
May 4 94	3.76	3.95	4.37	4.86	4.22	3.95	3.15	6.75	6.21	7.09	7.33	8.51	6.43	8.89	8.53	5.25
May 11 94	3.70	4.18	4.68	5.14	4.61	4.29	3.24	6.75	6.50	7.34	7.52	8.46	6.60	8.98	8.77	5.54
May 18 94	4.02	4.16	4.64	5.07	4.61	4.36	3.31	6.89	6.35	7.19	7.41	8.23	6.41	8.50	8.56	5.58
May 25 94	4.22	4.17	4.57	4.93	4.48	4.32	3.47	7.25	6.22	7.10	7.35	8.30	6.41	8.76	8.53	5.48
Jun 1 94	4.27	4.17	4.63	5.06	4.51	4.35	3.51	7.25	6.32	7.13	7.40	8.19	6.38	8.71	8.55	5.52
Jun 8 94	4.13	4.11	4.52	4.92	4.47	4.35	3.57	7.25	6.16	6.97	7.27	8.21	6.20	8.49	8.25	5.45
Jun 15 94	4.21	4.12	4.51	4.90	4.44	4.32	3.59	7.25	6.19	7.04	7.34	8.32	6.34	8.61	8.33	5.43
Jun 22 94	4.19	4.15	4.53	4.94	4.49	4.35	3.63	7.25	6.28	7.14	7.44	8.41	6.43	8.68	8.46	5.41
Jun 29 94	4.19	4.16	4.58	5.11	4.62	4.41	3.64	7.25	6.38	7.20	7.48	8.49	6.56	8.89	8.57	5.48
Daily																
Jun 24 94	4.17	4.17	4.60	5.10	4.55	4.37	--	7.25	6.38	7.22	7.52	--	--	--	--	--
Jun 29 94	4.15	4.15	4.57	5.18	4.75	4.47	--	7.25	6.45	7.24	7.51	--	--	--	--	--
Jun 30 94	5.00p	4.15	4.65	5.22	4.73	4.50	--	7.25	6.52	7.34	7.63	--	--	--	--	--

NOTE Weekly data for columns 1 through 11 are statement week averages. Data in column 7 are taken from Donoghue's Money Fund Report. Columns 12, 13 and 14 are 1 day quotes for Friday, Thursday or Friday, respectively, following the end of the statement week. Column 13 is the Bond Buyer revenue index. Column 14 is the FNMA purchase yield, plus loan servicing fee, on 30-day mandatory delivery commitments. 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 Credit Aggregate Measures

Seasonally adjusted

JUNE 30, 1994

Period	Money stock measures and liquid assets						Bank credit	Domestic nonfinancial debt <sup>1</sup>		
	M1	M2	nontransactions components		M3	L	total loans and investments <sup>1</sup>	U. S. government <sup>2</sup>	other <sup>2</sup>	total <sup>2</sup>
			In M2	In M3 only						
	1	2	3	4	5	6	7	8	9	10
<b>Annual growth rates(%):</b>										
<b>Annually (Q4 to Q4)</b>										
1991	7.9	2.9	1.2	-6.0	1.2	0.4	3.5	11.3	2.6	4.6
1992	14.3	1.9	-2.4	-6.3	0.5	1.4	3.7	10.7	3.2	5.0
1993	10.5	1.4	-2.3	-3.5	0.6	1.1	4.9	8.4	3.6	4.9
<b>Quarterly Average</b>										
1993-3rd QTR.	12.0	2.5	-1.7	-6.7	1.0	1.0	6.8	9.2	4.6	5.8
1993-4th QTR.	9.4	2.3	-0.8	3.8	2.5	1.9	3.1	5.5	4.6	4.9
1994-1st QTR.	6.0	1.8	-0.1	-8.6	0.2	2.4	6.8	7.1	5.2	5.7
1994-2nd QTR. pe	2	1 1/4	1 1/4	-9	-1 1/4					
<b>Monthly</b>										
1993-JUNE	10.0	2.3	-1.0	-12.1	0.1	0.3	8.9	12.2	5.1	7.0
JULY	11.4	1.7	-2.5	-10.6	-0.3	-0.8	9.0	7.4	5.1	5.7
AUG.	9.4	0.8	-3.0	-4.6	-0.0	2.0	1.7	9.1	3.8	5.2
SEP.	10.7	2.8	-0.8	1.5	2.6	-1.6	3.1	7.0	5.3	5.8
OCT.	9.0	1.2	-2.3	7.2	2.2	2.5	0.9	-1.8	5.4	3.5
NOV.	9.7	4.2	1.6	2.2	3.8	3.1	6.3	9.1	3.1	4.7
DEC.	6.4	2.5	0.7	9.7	3.6	4.7	5.2	13.3	4.6	7.0
1994-JAN.	5.4	1.7	0.0	-2.0	1.2	4.7	7.5	3.0	7.1	6.0
FEB.	5.4	-1.3	-4.4	-41.0	-7.5	-2.7	5.4	5.2	4.6	4.7
MAR.	4.0	4.7	5.0	-10.5	2.4	0.1	10.5	9.0	3.8	5.2
APR.	-1.2	2.4	4.1	2.3	2.5	4.3	10.1	2.9	5.1	4.5
MAY	2.0	0.4	-0.3	-18.6	-2.4		2.2			
JUNE pe	4	-3	-7	11	-1					
<b>Levels (\$Billions):</b>										
<b>Monthly</b>										
1994-JAN.	1133.5	3572.6	2439.1	660.9	4233.5	5151.9	3124.2	3335.8	9035.1	12370.9
FEB.	1138.6	3568.7	2430.2	638.3	4207.0	5140.5	3138.3	3350.3	9069.5	12419.8
MAR.	1142.4	3582.7	2440.3	632.7	4215.3	5141.0	3165.8	3375.4	9097.9	12473.3
APR.	1141.3	3590.0	2448.7	633.9	4224.0	5159.5	3192.5	3383.6	9136.6	12520.2
MAY	1143.2	3591.3	2448.1	624.1	4215.4		3198.3			
<b>Weekly</b>										
1994-MAY 2	1138.3	3581.8	2443.5	629.0	4210.8					
9	1142.3	3588.8	2446.5	625.6	4214.4					
16	1143.5	3591.9	2448.4	622.2	4214.1					
23	1144.1	3597.3	2453.2	622.1	4219.4					
30	1143.5	3590.1	2446.6	624.8	4214.9					
JUNE 6	1145.2	3584.8	2439.6	625.4	4210.2					
13 p	1146.2	3582.3	2436.1	631.6	4213.9					
20 p	1150.2	3580.5	2430.3	630.4	4210.9					

1. Adjusted for breaks caused by reclassifications.

2. 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

## Components of Money Stock and Related Measures

JUNE 30, 1994

Seasonally adjusted unless otherwise noted

Period	Currency	Demand deposits	Other checkable deposits	Overnight RPs and Euro-dollars NSA <sup>1</sup>	Savings deposits <sup>2</sup>	Small denomination time deposits <sup>3</sup>	Money market mutual funds		Large denomination time deposits <sup>4</sup>	Term RP's NSA <sup>1</sup>	Term Euro-dollars NSA <sup>1</sup>	Savings bonds	Short-term Treasury securities	Commercial paper <sup>1</sup>	Bankers acceptances
							general purpose and broker/dealer <sup>1</sup>	Institutions only							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Levels (\$Billions):</b>															
<b>Annually (4th Qtr.)</b>															
1991	265.6	286.3	328.8	77.5	1027.8	1082.8	369.7	174.4	433.1	74.7	60.7	137.0	321.1	334.0	24.5
1992	289.7	337.1	380.1	81.2	1177.9	883.0	354.0	206.5	365.3	80.9	47.0	154.4	327.7	366.3	20.5
1993	319.5	382.1	411.9	90.6	1212.1	790.4	346.7	195.4	340.0	94.5	46.6	170.9	325.9	385.2	15.4
<b>Monthly</b>															
1993-MAY	304.4	358.8	396.4	75.2	1195.1	832.4	348.5	198.0	348.2	89.8	48.7	164.7	344.8	371.8	19.2
JUNE	307.2	362.2	399.2	78.5	1200.4	823.9	347.5	194.7	345.3	92.8	45.5	165.9	346.5	370.9	18.5
JULY	309.7	366.4	402.8	81.1	1202.1	814.5	346.6	192.6	341.8	96.4	41.9	167.1	344.3	370.4	17.4
AUG.	312.4	370.9	404.2	82.1	1205.9	806.6	345.5	190.1	341.6	96.0	44.1	168.2	343.8	379.5	16.5
SEP.	315.4	375.4	406.6	85.4	1208.4	799.9	345.0	190.8	340.4	95.6	45.2	169.2	328.0	378.4	16.4
OCT.	317.6	378.4	409.5	89.4	1208.8	794.9	344.4	194.3	341.6	94.2	44.9	170.1	323.7	384.7	16.4
NOV.	319.5	383.2	411.8	90.4	1211.9	790.6	347.0	194.8	339.4	94.0	48.5	170.8	324.6	384.1	15.3
DEC.	321.4	384.8	414.3	91.9	1215.5	785.6	348.8	197.0	339.0	95.3	46.4	171.7	329.3	386.8	14.6
1994-JAN.	325.2	388.3	412.0	94.6	1220.3	779.5	347.8	192.7	341.5	91.3	45.4	172.7	339.2	391.6	14.9
FEB.	329.2	390.3	411.2	92.8	1220.9	774.5	343.7	176.9	335.7	89.3	48.2	173.4	341.9	403.0	15.3
MAR.	332.4	390.0	411.9	97.8	1221.9	771.1	348.4	177.4	330.9	91.2	47.9	174.1	345.8	390.1	15.7
APR.	334.8	388.9	409.5	94.6	1220.7	768.6	361.5	177.0	330.5	94.2	48.8	174.8	360.9	385.6	14.1
MAY	337.6	385.9	411.6	94.6	1215.9	769.2	365.1	169.3	333.1	91.9	48.7				

1. Net of money market mutual fund holdings of these items.
2. Includes money market deposit accounts.
3. Includes retail repurchase agreements. All IRA and Keogh accounts at commercial banks and thrift institutions are subtracted from small time deposits.
4. Excludes IRA and Keogh accounts.
5. Net of large denomination time deposits held by money market mutual funds, depository institutions, U.S. government, and foreign banks and official institutions.

p preliminary

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

July 1, 1994

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					
1991	20,038	1,000	19,038	3,043	6,583	1,280	375	---	11,282	292	27,726	-1,614
1992	13,086	1,600	11,486	1,096	13,118	2,818	2,333	---	19,365	632	30,219	-13,215
1993	17,717	468	17,249	1,223	10,350	4,168	3,457	---	19,198	1,072	35,374	5,974
1993 --Q1	---	---	---	279	1,441	716	705	---	3,141	289	2,851	-461
--Q2	7,749	---	7,749	244	2,490	1,147	1,110	---	4,990	91	12,648	10,624
--Q3	1,268	---	1,268	511	3,700	1,297	817	---	6,326	526	7,067	-8,644
--Q4	8,700	468	8,232	189	2,719	1,008	826	---	4,742	166	12,807	4,455
1994 --Q1	2,164	---	2,164	147	1,413	1,103	618	616	2,665	411	4,418	-11,683
1993 June	7,280	---	7,280	---	---	---	---	---	---	22	7,258	12,027
July	---	---	---	---	200	---	---	---	200	366	-166	-14,435
August	902	---	902	100	1,100	500	100	---	1,800	125	2,577	4,528
September	368	---	368	411	2,400	797	717	---	4,326	35	4,656	1,262
October	1,396	468	927	---	---	---	---	---	---	70	857	-6,723
November	5,911	---	5,911	---	100	---	---	---	100	15	5,996	7,232
December	1,394	---	1,394	189	2,619	1,008	826	---	4,642	81	5,954	3,947
1994 January	---	---	---	---	---	---	---	616	-616	202	-817	-7,757
February	1,264	---	1,264	---	---	---	---	---	---	102	1,163	-3,946
March	900	---	900	147	1,413	1,103	618	---	3,281	108	4,073	40
April	1,101	---	1,101	209	2,817	1,117	896	440	4,599	180	5,520	8,208
May	1,395	---	1,395	155	---	---	---	---	155	70	1,480	5,441
Weekly												
March 9	100	---	100	---	---	---	---	---	---	---	100	-3,656
16	55	---	55	---	---	---	---	---	---	---	55	4,446
23	42	---	42	147	1,413	1,103	618	---	3,281	---	3,324	-4,258
30	351	---	351	---	---	---	---	---	---	10	341	1,314
April 6	370	---	370	---	---	---	---	---	---	50	320	8,695
13	235	---	235	---	---	---	---	---	---	75	160	-6,025
20	669	---	669	209	2,817	1,117	896	440	4,599	4	5,264	2,333
27	---	---	---	---	---	---	---	---	---	51	-51	3,059
May 4	---	---	---	---	---	---	---	---	---	---	---	3,490
11	---	---	---	---	---	---	---	---	---	25	-25	-3,849
18	---	---	---	---	---	---	---	---	---	---	---	2,682
25	350	---	350	5	---	---	---	---	5	45	310	2,161
June 1	1,045	---	1,045	150	---	---	---	---	150	---	1,195	1,471
8	3,750	---	3,750	---	---	---	---	---	---	---	3,750	-5,396
15	---	---	---	---	---	---	---	---	---	26	-26	2,127
22	---	---	---	---	---	---	---	---	---	---	---	435
29	246	---	246	---	---	---	---	---	---	32	214	94
Memo: LEVEL (bil. \$) <sup>6</sup>												
June 29			176.6	205.5	83.7	25.3	33.1		347.6		359.6	5.5

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
1.5	1.8	0.6	0.0	3.9