

## **Prefatory Note**

The attached document represents the most complete and accurate version available based on original copies culled from the files of the FOMC Secretariat at the Board of Governors of the Federal Reserve System. This electronic document was created through a comprehensive digitization process which included identifying the best-preserved paper copies, scanning those copies,<sup>1</sup> and then making the scanned versions text-searchable.<sup>2</sup> Though a stringent quality assurance process was employed, some imperfections may remain.

Please note that this document may contain occasional gaps in the text. These gaps are the result of a redaction process that removed information obtained on a confidential basis. All redacted passages are exempt from disclosure under applicable provisions of the Freedom of Information Act.

---

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

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

February 2, 1990

Strictly Confidential (FR) Class I FOMC

---

# MONETARY POLICY ALTERNATIVES

---

Prepared for the Federal Open Market Committee

By the staff Board of Governors of the Federal Reserve System

February 2, 1990

MONETARY POLICY ALTERNATIVES

Recent developments

(1) The federal funds rate eased from 8-1/2 percent to the vicinity of 8-1/4 percent immediately after the December FOMC meeting, following the decision at that meeting to seek a slightly more accommodative stance of policy. Funds traded near 8-1/4 percent throughout the intermeeting period, except for some firming in the last week of the year owing to reserve shortfalls and year-end pressures. Adjustment plus seasonal borrowing ran above the \$125 million allowance during the intermeeting period, averaging \$309 million over the three completed maintenance periods. Initially, the above-path borrowing reflected the reserve shortfalls and a propensity for larger institutions to borrow over the long holiday weekends. Most recently, borrowing by the Bank of New England has boosted adjustment credit considerably.<sup>1</sup> Abstracting from borrowing by this institution, adjustment plus seasonal borrowing averaged \$160 million in the statement period ending January 24, and \$125 million through the first eight days of the current maintenance period.

(2) Conditions in capital markets deteriorated over the intermeeting period, as bond yields surged about 1/2 percentage point and stock indexes plunged nearly 8 percent from highs registered at the start of the year. Bond yields began to rise right after the December meeting as incoming information on the economy and prices was seen as pointing away

---

1. The Desk has viewed this borrowing as special-situation borrowing, akin to nonborrowed reserves, though it has not yet been classified officially as extended credit.

from recession and as suggesting little if any moderation in underlying inflation trends. As a result, investors apparently reevaluated prospects for an extended period of policy easing. By mid-January, tightening monetary policy abroad and published reports that certain Board members would not support easing policy at that time sparked a backup in short-term rates and pushed long-term rates up further. A striking aspect of interest rate developments during the intermeeting period was the parallel surge in bond yields worldwide--about 50 basis points in Germany and nearly 100 basis points in Japan, where political worries also came into play. As in the United States, these developments partly reflected growing expectations of a bias toward a less accommodative monetary policy in the context of heightened concerns about inflation. In addition, however, the historic changes now taking place in Europe may have signalled the prospect of significantly greater economic opportunities there, as evidenced by the relatively strong performance of the German stock market. A redirection of global asset demands, particularly out of Japan, to take advantage of the higher expected real returns associated with those opportunities would be consistent with investors requiring higher real returns in U.S. markets and elsewhere, as well as with the observed weakening of both the dollar and the yen against continental European currencies.

(3) Spreads between private and Treasury rates narrowed over the intermeeting interval, except in the junk bond market where they were relatively constant. Returns on private instruments at the 3-month maturity declined about 1/4 point and the 3-month Treasury bill rate rose about

1/8 point; a similar narrowing occurred between longer-term Treasury debt and both investment-grade bonds and mortgage instruments. Some narrowing might have been expected on the basis of the passing of year-end pressures, and the usual lags of rates on private paper behind Treasury yields. But the extent is somewhat surprising, especially in light of concerns about commercial banks' real estate portfolios and the deteriorating condition of a number of highly leveraged borrowers. Supply considerations may have contributed: Corporate and municipal borrowing dropped to unusually low levels, especially in bond markets; at the same time attention began to be given to the possibility of considerable additional government borrowing to support the thrift bailout, and the private sector has had to absorb greater amounts of bills as Federal Reserve and foreign official holdings ran down.

(4) The decline in the dollar against the mark amounted to 3-1/4 percent. However, the dollar was relatively firm against the currencies of Japan and Canada.

; the Desk sold \$600 million against the yen. On a weighted-average basis, the dollar fell 2-1/2 percent over the intermeeting period.

(5) Growth in M2 slowed in January, owing primarily to a decline in transaction deposits.<sup>2</sup> M2 expanded at about a 5 percent rate last month, bringing growth over December and January to 6-1/2 percent, below the 8-1/2 percent pace expected at the December FOMC meeting. As of January, M2 stood just below the upper end of its tentative 1990 range. Growth of the nontransaction component of M2 in January moderated somewhat from its rapid pace of late 1989, despite a pickup of inflows to money market mutual funds, which reportedly benefitted from flows out of weakening stock and bond markets. Demand deposits plunged at a 9 percent annual rate, after a 4 percent growth rate in December, and OCDs grew at only a 1 percent pace in January, down from December's 12 percent rate. Demand deposits have been especially weak over time, and have retreated to their June 1989 level despite the subsequent policy easing.<sup>3</sup> Still, with currency surging at a 14 percent annual rate in January, M1 eked out a gain.<sup>4</sup>

---

2. The monetary data presented throughout this bluebook incorporate benchmark and seasonal factor revisions, as well as a minor redefinition that reclassifies the overnight repurchase liabilities of thrift institutions as a component of non-M1 M2 rather than of non-M2 M3. (The redefinition affects the level of M2 only.) The revised data are summarized in Appendix A. These data should be considered confidential until their release on February 15.

3. The growth of demand deposits has been well below model simulations for several years. On a not-seasonally adjusted basis, demand deposits have shown a pattern of increasing runoffs in January from year to year. (This year's review of seasonal factors brought the growth rate of demand deposits in January up from about -20 percent.) These data are suggestive of a concentration at the start of the year of ongoing switching from compensating balance arrangements to fees on the part of firms.

4. Owing to the increase in currency, the monetary base accelerated to a 10-1/2 percent rate of growth in January from 9-1/2 percent in December.

(6) M3 increased at around a 3-1/4 percent rate in December and January--compared with the 5-1/2 percent pace expected by the Committee--and is slightly below the lower limit of its tentative 1990 range.<sup>5</sup> Runoffs of managed liabilities at thrifts accelerated in December and January relative to November. Commercial bank managed liabilities in M3 dropped over the two months; bank credit declined in December--the first decrease in 10 years--and the modest increase in January was funded through continued brisk inflows of core deposits.

(7) In line with the weakness in bank credit, nonfinancial debt growth likely slowed around year-end. The business sector has trimmed borrowing the most, particularly in the area of highly leveraged transactions, where activity has been slashed by softer business conditions and tighter standards at lenders. Bond issuance has slackened with the rise in interest rates, and C&I lending at banks contracted between November and January. Commercial paper issuance has remained brisk, however, perhaps reflecting the long delay in lowering the prime rate. (C&I lending does appear to have rebounded and commercial paper issuance weakened some in the weeks since the prime was cut.) Federal debt growth slowed temporarily in December and January, and bond issuance also has eased in the municipal sector so far this year. The expansion of consumer credit strengthened in December, as weak auto-related borrowing was offset by increased balances held on credit cards; at banks, growth of consumer

---

5. Foreign currency deposits amounted to \$1.3 billion in January, mostly in large time deposits. Virtually all of these deposits apparently had been in place before this year. Consequently, the subtraction of these deposits, which is being implemented with the current benchmark, is having no effect on recent growth rates.

credit was well maintained into January. Mortgage borrowing appears to have expanded at about a steady 9 percent rate in the fourth quarter. However, bank real estate lending slowed in January, perhaps reflecting the recent backup in interest rates and a tightening of nonprice terms for commercial lending.

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

	Nov.	Dec.	Jan. <sup>P</sup>	Nov. to Jan. <sup>P</sup>	QIV'89 to Jan. <sup>P</sup>
<u>Money and credit aggregates</u> <sup>1</sup>					
M1	2.1	8.2	1.4	4.8	3.8
M2	7.2	7.8	5.1	6.4	6.4
M3	4.6	3.5	3.1	3.3	3.5
Domestic nonfinancial debt	8.9	5.7	7.1	6.4	6.9
Bank credit	3.9	-2.8	5.2	1.2	2.3
<u>Reserve measures</u>					
Nonborrowed reserves <sup>2</sup>	3.1	10.3	-4.3	3.0	1.8
Total reserves	-1.1	8.6	-4.1	2.2	0.6
Monetary base	1.3	9.4	10.5	10.0	8.6
Memo: (Millions of dollars)					
Adjustment plus seasonal borrowing	328	246	254	--	--
Excess reserves	945	923	964	--	--

p - preliminary.

1. Data on the monetary aggregates incorporate the results of the 1990 benchmark and seasonal review.

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.

Long-run strategies

(8) As background for Committee consideration of the ranges for money and credit for 1990, the table below presents three alternative longer-run strategies for monetary policy through 1994 and their consequences for output and prices. Strategy I is the baseline forecast, encompassing the staff greenbook projections and associated policy assumptions for 1990 and 1991, with an extension through 1994 based on the staff's large-scale econometric model, simulated with a presumed policy objective of gradual progress toward price stability over time. In this model, inflation expectations are formed on the basis of past inflation and embody no independent "credibility effects" concerning Federal Reserve intentions. Strategies II and III embody somewhat tighter and easier monetary policies, respectively, as indexed by M2 growth 1 percentage

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>
	(QIV to QIV percent change)					
<b>M2</b>						
I (baseline)	4.6	6-1/2	6	6	6-1/2	6-1/4
II (tighter)		5-1/2	5	5	5-1/2	5-1/4
III (easier)		7-1/2	7	7	7-1/2	7-1/4
<b>Prices: GNP fixed-weight price index</b>						
I	4.1	4-1/4	4-1/4	4	3-1/2	3-1/4
II		4-1/4	4	3	2-1/2	2
III		4-1/4	4-1/2	4-3/4	4-3/4	4-3/4
<b>Real GNP</b>						
I	2.4	1-1/2	2-1/4	2-1/2	2-3/4	2-3/4
II		1	1-1/2	1-3/4	2-3/4	3
III		2	3	3	2-1/2	2-1/2
	(fourth-quarter level)					
<b>Unemployment rate</b>						
I	5.3	6	6	6-1/4	6-1/4	6-1/4
II		6-1/4	6-1/2	7	7	7
III		5-3/4	5-3/4	5-1/2	5-1/2	5-1/2

point above or below the baseline scenario. The outcomes associated with these two strategies are derived as deviations from the baseline using the econometric model.

(9) Under the baseline strategy policy imposes enough restraint, through moderate upward movement in nominal and real interest rates, to keep real GNP growth below its potential through 1991 and until 1992. This induces a gradual increase in the unemployment rate to 6-1/4 percent by 1992, somewhat above its assumed natural rate of 5-1/2 to 5-3/4 percent. The added slack, which is maintained through the projection horizon, fosters an easing of the inflation rate beginning in 1992, although the assumption that the exchange value of the dollar stabilizes in 1992 after a period of moderate depreciation also contributes. Inflation is reduced by about 1/3 percentage point per year, getting down to 3-1/4 percent by 1994. The slowing in inflation and nominal GNP after 1992 occurs despite a slight pickup in M2 growth, which is boosted by a drop in nominal rates in those years (in line with the drop in inflation), and associated small decreases in velocity.

(10) Under the tighter policy of strategy II, inflation is brought down more rapidly, but at the cost of temporarily greater slack in the economy. The slower M2 growth of this strategy requires a more forceful increase in nominal short-term interest rates through 1991. With the accompanying higher real values of both interest and exchange rates relative to the base case, both real domestic demand and net exports are more restrained, and the unemployment rate is farther above its natural rate. Inflation decelerates 1/2 percentage point in 1993 and in 1994, ending up

at 2 percent, more than 1 percentage point below its pace in the base case. By 1994, nominal interest rates have fallen a bit below their base case levels, given the moderation in inflation. Were the results of the early tightening under this alternative to strengthen people's convictions about the Federal Reserve's commitment to attain price stability, nominal interest rates would be still lower and progress against inflation could be achieved with less slack in the economy.

(11) The easier policy of strategy III accommodates real GNP near its potential after 1990, keeping the unemployment rate below 6 percent, in the vicinity of its natural rate. Inflation increases a little through 1992 owing to a more rapid depreciation of the dollar, before stabilizing just below 5 percent. After declining this year, nominal short-term interest rates would need to rise in 1991 and 1992 to hold M2 expansion to only 1 percentage point above the base case, given the faster nominal GNP growth.

(12) Inflation rate predictions derived from the staff's P\* model are presented below for the same three M2 growth strategies. By the end of the forecast horizon, the results of the P\* model are essentially the same as those of the simulations reported above. The pattern of price movements in the intervening years is somewhat different, however. Inflation is slightly lower in the near term in the P\* simulations than in the large-scale model simulations, likely owing to the influence of assumed dollar depreciation on price forecasts in the judgmental projection that provided the baseline for the latter projections. Moreover, the P\* model gives a somewhat different flavor than the other simulations for inflation

in 1995 and beyond. In the baseline case, the price level is equal to P\* at the end of 1994, implying no downward pressures on inflation at that time; but in the large-model simulation the unemployment rate at the end of 1994 is above its natural rate, which is consistent with a further slowing of price increases.

	P* MODEL SIMULATIONS					
	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>
	(QIV to QIV percent change)					
Prices: GNP fixed-weight price index						
I (baseline)	4.1	4	3-3/4	3-3/4	3-1/2	3-1/2
II (tighter)		3-3/4	3-1/2	3	2-1/2	2
III (easier)		4	4-1/4	4-1/2	4-3/4	5

Long-run ranges

(13) The table below shows the tentative ranges adopted last July for growth of money and the debt of nonfinancial sectors over 1990, along with three alternatives.<sup>6</sup> (Appendix B gives the ranges and outcomes for money and debt growth since 1978.) Alternative II might be considered roughly equivalent to the current tentative ranges, with technical adjustments to take account of the effects of thrift restructuring on M3 and of ebbing equity retirements on debt growth, both of which are larger than contemplated when the tentative ranges were adopted. Alternative I would allow for a somewhat easier policy and alternative III somewhat tighter.

TENTATIVE AND ALTERNATIVE 1990 RANGES

	<u>Tentative Ranges</u> <sup>1</sup>	<u>Alt. I</u>	<u>Alt. II</u>	<u>Alt. III</u>	<u>Memo: Staff Forecast</u>
Percent Growth from QIV '89 to QIV '90					
M2	3 to 7	3-1/2 to 7-1/2	3 to 7	2-1/2 to 6-1/2	6-1/2
M3	3-1/2 to 7-1/2	3 to 7	3 to 7	2-1/2 to 6-1/2	4
Debt	6-1/2 to 10-1/2	6 to 10	6 to 10	5-1/2 to 9-1/2	7
Memo:					
M1					4
Nominal GNP					5-3/4

1. Identical to 1989 ranges.

6. All the ranges presented retain the current 4 percentage point width. The uncertain outlook for the thrift industry and the resolution of its problems, which could affect M2, M3, and debt, adds to the usual difficulties of predicting the relationship between each measure and nominal income or prices.

(14) M2 would be expected to grow about 6-1/2 percent in 1990 under the greenbook forecast of 5-3/4 percent nominal GNP growth, with interest rates remaining around recent levels. The lagged effects of decreases in market interest rates through the end of last year should continue to boost M2 demand early in 1990, accounting for the slight decline in velocity for the year (shown on chart 1).<sup>7</sup> The increase in M2 is in the middle of the range of model forecasts. However, the M2 projection is subject to some downside risk from thrift restructuring. As thrifts are closed in 1990, substantial amounts of core deposits are expected to shift to commercial banks; in reaction, banks may trim rates on retail deposits, which would restrain M2. The M1 component of M2 is expected to increase 4 percent in 1990.<sup>8</sup> The rise in M1 velocity would be a little more than its underlying trend, despite the carryover effect of lower interest rates; demand deposits are projected to continue their relatively weak performance, which may reflect ongoing shifts from compensating balances to fees to pay for bank services.

(15) M3 will be substantially affected by the shrinkage of the thrift industry. The extent and effect of the restructuring is difficult to foresee. At this time, the staff projects that total assets at SAIF-insured institutions could decline on the order of \$130 billion this year, as compared with a previous trend of asset growth that would have implied a \$60 to \$70 billion increase. Some of these assets will be absorbed by

---

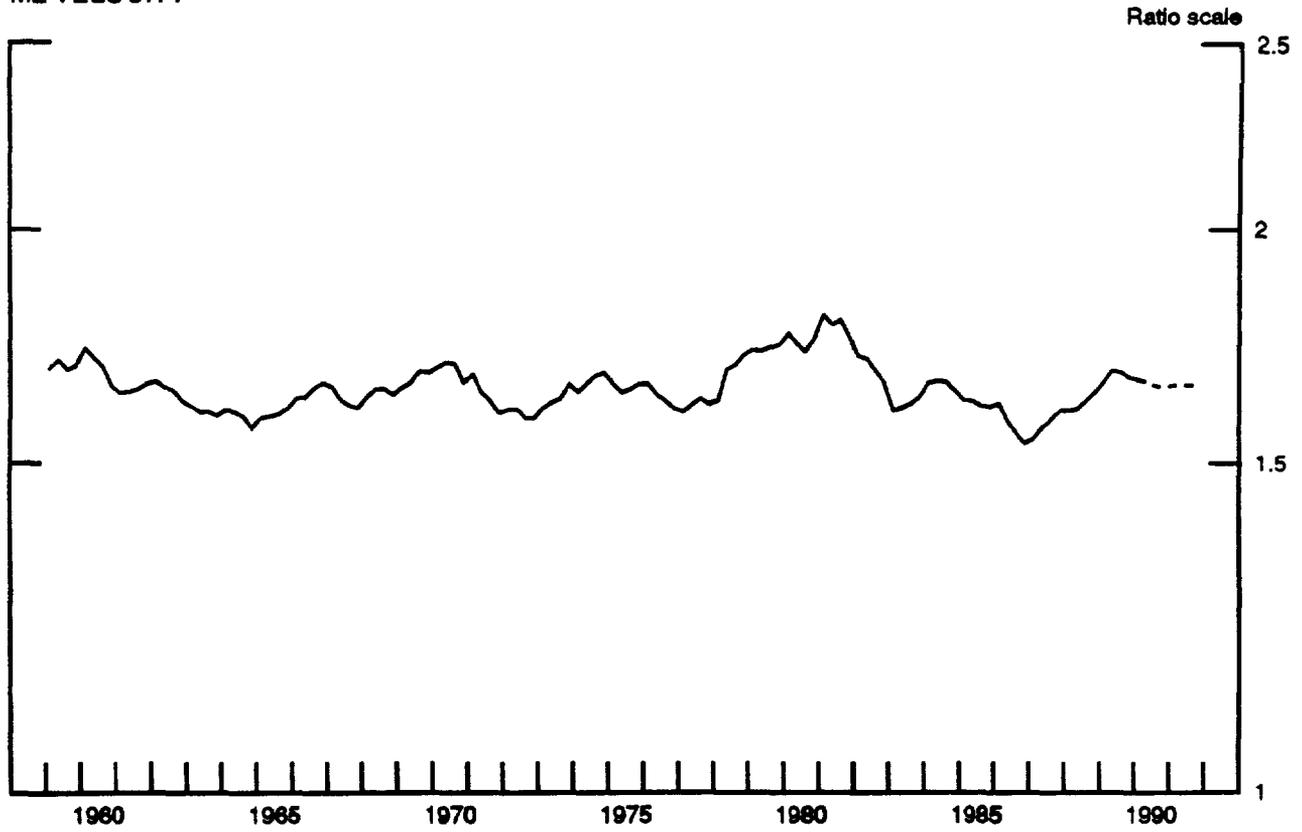
7. The staff M2 forecast makes no allowance for any new tax-favored savings instruments. Currently, IRAs are excluded from the aggregates owing to their extreme illiquidity. In addition, the money projections incorporate negligible shifting from the aggregates to the newly authorized foreign currency deposits.

8. The monetary base is projected to increase 5 percent in 1990.

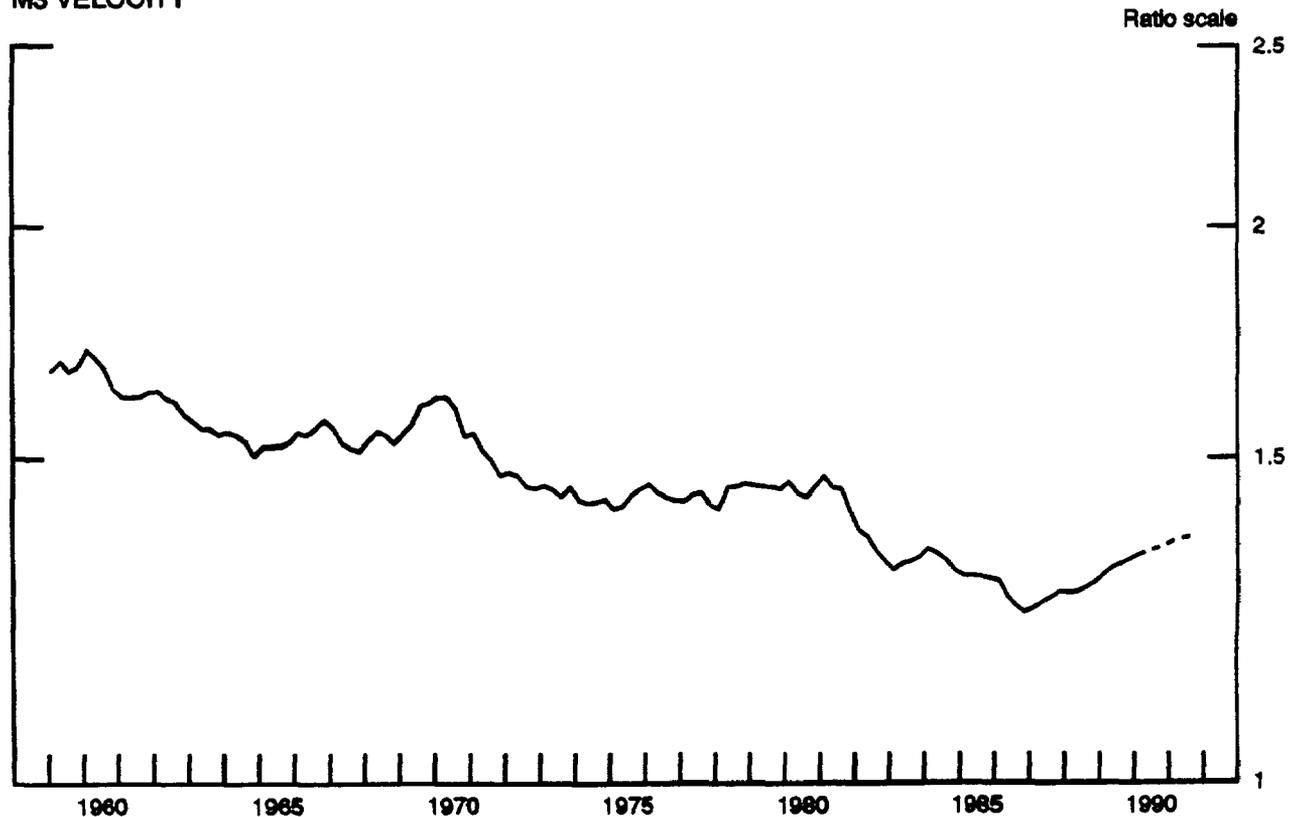
Chart 1

### ACTUAL AND PROJECTED VELOCITY OF M2 AND M3\*

M2 VELOCITY



M3 VELOCITY

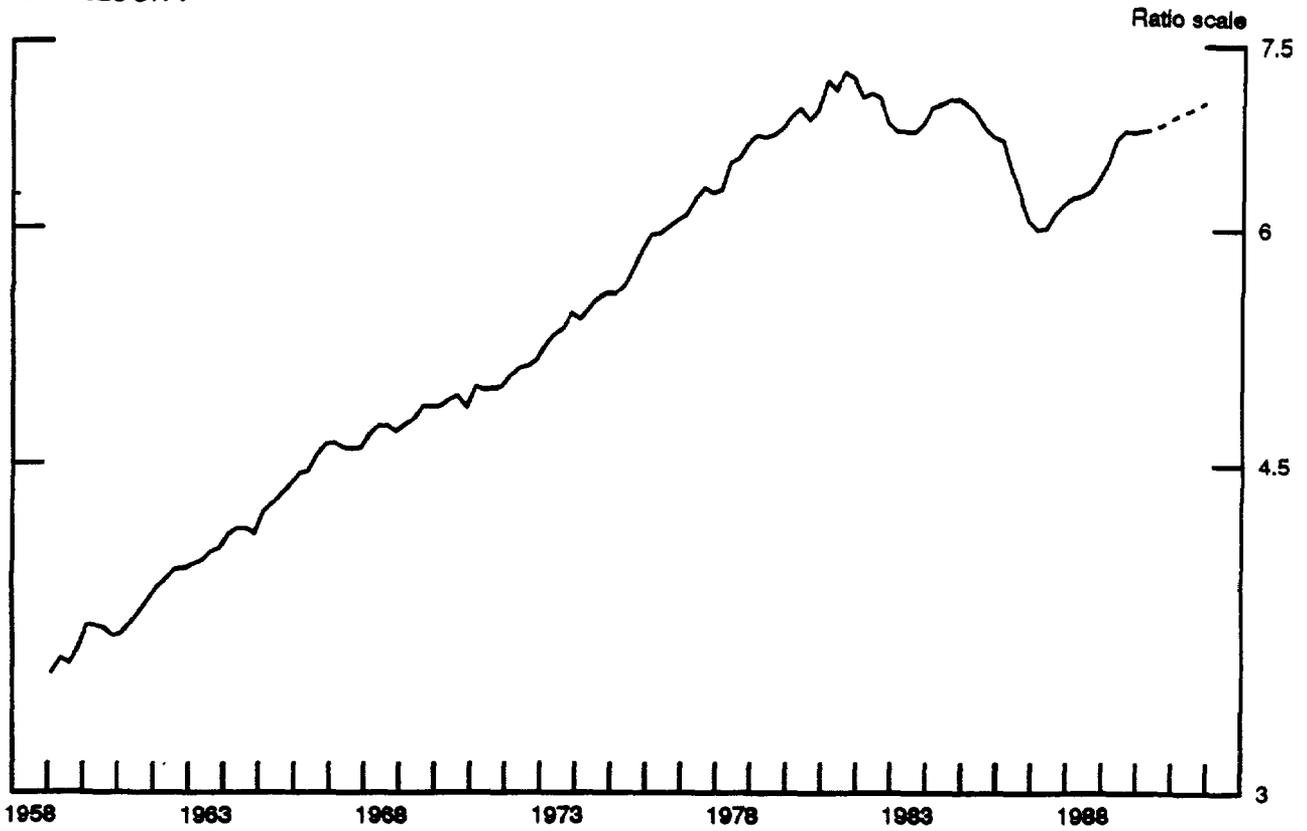


\* Projections are based on staff forecasts of GNP and money.

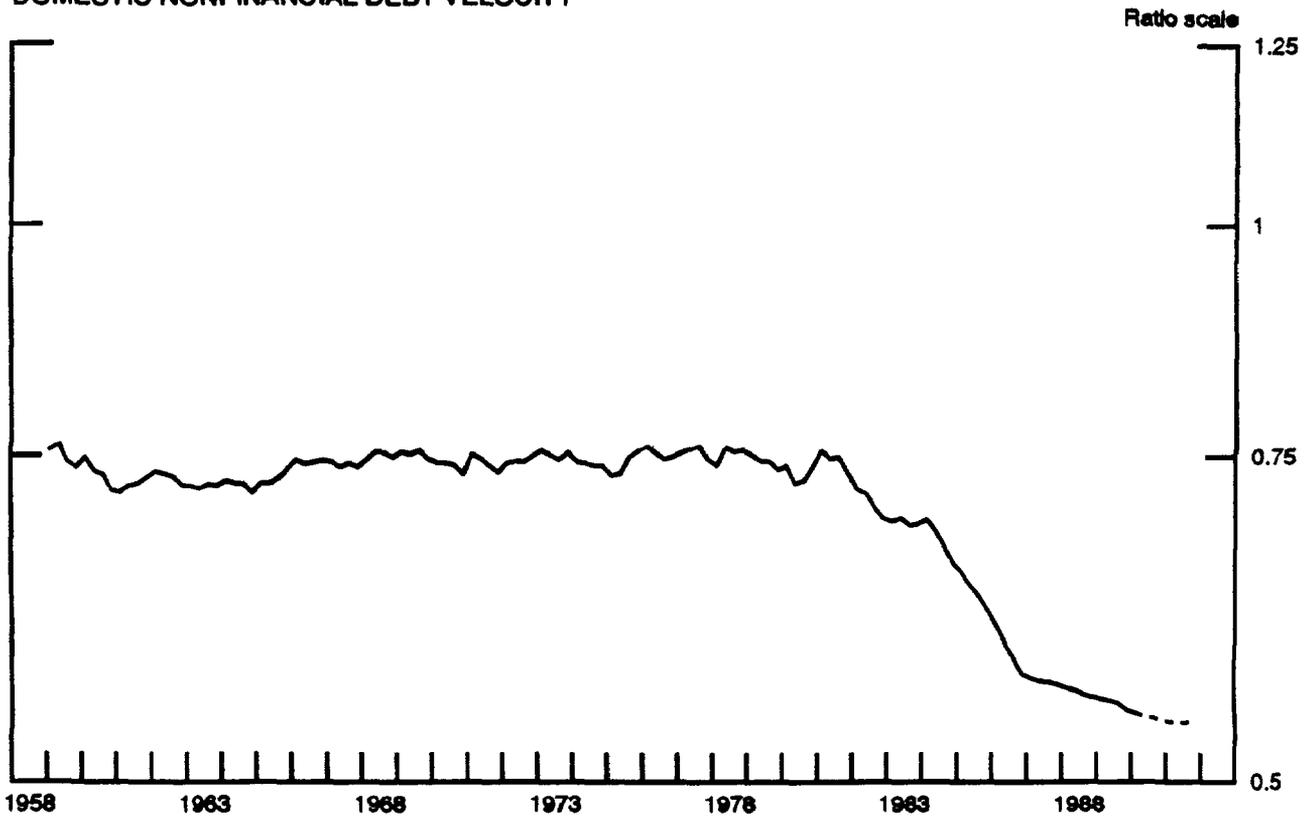
Chart 2

ACTUAL AND PROJECTED VELOCITY OF M1 AND DEBT\*

M1 VELOCITY



DOMESTIC NONFINANCIAL DEBT VELOCITY



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

the RTC as it resolves institutions, and be financed, we assume, by government or agency debt, not by liabilities in M3.<sup>9</sup> Banks are likely to acquire a substantial portion of assets that would otherwise have been held by thrifts, but the bulk, even of those assets outside the RTC, will end up with other holders. The staff expects growth in bank credit outside of mortgage assets to moderate a little further in 1990, as demand eases off with the slowing in nominal income growth and as capital requirements and concern about credit quality reduce the incentives to supply credit. On net the total of credit intermediated through depositories likely will remain quite subdued in 1990. The damping of associated funding needs will be mirrored in substantial runoffs of managed liabilities, including those in M3, holding the growth of M3 once again below that of M2. M3 is projected to grow 4 percent over 1990, up a little from 1989, as the pickup in funding from M2 core deposits replaces some non-M3 managed liabilities as well as those in M3.

(16) Growth of the debt of nonfinancial sectors is projected to slow to 7 percent in 1990 from 8 percent in 1989. To a degree, this reflects greater caution in granting credit in the face of a soft economy and rising credit difficulties. This effect is most apparent in the reduced pace of corporate restructurings, which account for close to half of the deceleration. The restructuring of the thrift industry, which is greatly affecting the channels of mortgage financing, is not expected to have a major impact on the cost and availability of residential mortgage

---

9. For the purposes of the forecast, we have not allowed for working capital to be raised in effect in the brokered deposit market--one of the options under consideration.

credit, though there reportedly are dislocations in access to construction financing. Diversified lenders are likely to continue to fill the gap left by the thrifts, as they apparently did in the second half of 1989, when spreads of rates on mortgages over Treasury issues remained constant over the second half of the year in the face of major decreases in thrift mortgage holdings. Federal government borrowing should decelerate in 1990 as the budget deficit narrows; the latter development is contingent on RTC working capital being raised outside the federal sector.<sup>10</sup> On balance, the slowing of debt growth is not much more than the slowing of nominal GNP, and the velocity of debt (see chart 2) is projected to continue to decline.

(17) As noted above, alternative II could be considered equivalent to the tentative ranges adopted in July. The staff projection of nominal GNP and associated M2 growth over 1990 is little different than in July, so that keeping the 3 to 7 percent range for that aggregate implies, as it did last July, about the same greater scope for a tighter than for an easier policy relative to that in the staff forecast. The reductions in the M3 and debt ranges do not reflect a tighter policy stance. In the case of debt the decrease is roughly comparable to the staff's reduced estimate of net equity retirements, rather than a decrease in funds to finance spending. The reduction in the M3 range recognizes that a smaller share of mortgage flows will be financed by depository institutions. The decline in the M3 range of only 1/2 percentage point represents only 1/4 of the estimated effect of the rechanneling of flows on M3 growth. In the

---

10. Inclusion of \$40 billion of RTC working capital in the debt aggregate would raise its growth by 1/2 percentage point.

absence of the thrift restructuring, the staff likely would be projecting about 6 percent M3 growth, unchanged from that projected last July.

(18) The higher upper end of the M2 range in alternative I allows greater scope for an easier monetary policy should the Committee wish to foster a stronger economy in 1990 (more in line with strategy III) albeit with less chance of making progress on inflation in later years. In addition, the higher upper end of the range would provide room for a more expansionary policy to counter an unexpected shortfall in aggregate demand. For example, simulations with the model suggest that 7-1/2 percent M2 growth for the year, and a drop of about 1 percentage point in interest rates, would be needed to achieve the fourth-quarter level of real GNP in the staff forecast if there were a 1/2 percent shortfall in demand in the first half of the year. The lowered M3 and debt ranges still would allow for considerably more rapid M3 and debt growth than in the staff forecast, and thus are consistent with the faster M2 possible under this alternative.

(19) Alternative III would lower all the ranges from their tentative levels, and might be considered most consistent with strategy II above, intended to make more certain progress in slowing inflation. Although the tentative M2 range would allow for a substantially tighter policy than assumed in the forecast, the 6-1/2 percent upper limit of the M2 range of alternative III conveys an intention to respond promptly and forcefully to any tendency for inflation pressures to intensify. The M2 range of this alternative also would tend to constrain any easing response to a weaker economy, signalling a willingness to take risks on that side

to better assure a lessening of price pressures. The M3 and debt growth ranges would be reduced by 1 percentage point to allow room for the slower growth that might be associated with a tighter policy, given expectations for sluggish growth in these measures under the staff forecast.

Short-run policy alternatives

(20) Three short-run alternatives are given below for Committee consideration. Alternative B involves federal funds continuing to trade in the 8-1/4 percent vicinity, in association with adjustment plus seasonal borrowing of \$150 million. The 7-3/4 percent funds rate for alternative A appears roughly consistent with \$100 million of borrowing, while the 8-3/4 percent funds rate of alternative C would be accompanied by about \$200 million of borrowing. The borrowing levels for all three alternatives abstract from any special-situation adjustment borrowing by the Bank of New England, but incorporate an upward technical adjustment of \$25 million in part to take account of the initial stages of the typical upswing in seasonal borrowing from January lows. Further adjustments likely will need to be made later in the intermeeting period as seasonal borrowing continues to rise. Under alternative B, adjustment credit may average only \$75 million, not far above the frictional amount, as the reluctance of depositories to tap the window for such credit is reinforced by questions about the general health of the banking industry that are raised by developments in the real estate and LBO lending areas and by the problems of the Bank of New England. The Desk would be expected to continue to exercise flexibility in its approach to the borrowing assumption.

(21) The anticipated paths for the monetary aggregates from December to March for the three alternatives are shown in the table

below.<sup>11</sup> (More detailed data appear in the table and charts on the following pages.) Under all the alternatives, the outlook for M2 and M3

	<u>Alt. A</u>	<u>Alt. B</u>	<u>Alt. C</u>
Growth from Dec. to March			
M2	7-1/2	7	6-1/2
M3	3-3/4	3-1/2	3-1/4
M1	5-3/4	5	4-1/4
Associated federal funds rate range	6 to 10	6 to 10	7 to 11

growth from December to March appears weaker than at the time of the last FOMC meeting. The easing at that meeting has not shown through in Treasury bill rates as it has in private short-term rates, limiting declines in average opportunity costs on M2 balances. In addition, nominal income has been revised down, and the shortfall in demand deposits is showing through into the broader aggregates. The staff now foresees the level of M2 in March in the vicinity of, rather than noticeably above, the 7 percent upper bound of its tentative annual growth rate range under all the alternatives. Based on the experience in December and January, the outlook is for less buoyant bank credit and larger declines in thrift managed liabilities than foreseen at the last FOMC meeting. As a result, M3 by March is predicted to be around the 3-1/2 percent lower bound of its tentative range under the alternatives, rather than around the midpoint. This projection assumes that the RTC will be relatively inactive until

11. The base for the short-term range has been shifted from November to December, since data for the latter month are now firm.

Alternative Levels and Growth Rates for Key Monetary Aggregates

	M2			M3			M1		
	Alt. A	Alt. B	Alt. C	Alt. A	Alt. B	Alt. C	Alt. A	Alt. B	Alt. C
<b>Levels in billions</b>									
1989 October	3181.5	3181.5	3181.5	4020.4	4020.4	4020.4	788.1	788.1	788.1
November	3200.7	3200.7	3200.7	4035.8	4035.8	4035.8	789.5	789.5	789.5
December	3221.4	3221.4	3221.4	4047.6	4047.6	4047.6	794.9	794.9	794.9
1990 January	3235.1	3235.1	3235.1	4058.0	4058.0	4058.0	795.8	795.8	795.8
February	3258.4	3256.7	3255.0	4071.4	4070.7	4070.0	801.6	801.1	800.6
March	3281.5	3277.1	3272.7	4085.5	4083.5	4081.5	806.1	804.8	803.5
<b>Monthly Growth Rates</b>									
1989 October	6.9	6.9	6.9	1.9	1.9	1.9	7.8	7.8	7.8
November	7.2	7.2	7.2	4.6	4.6	4.6	2.1	2.1	2.1
December	7.8	7.8	7.8	3.5	3.5	3.5	8.2	8.2	8.2
1990 January	5.1	5.1	5.1	3.1	3.1	3.1	1.4	1.4	1.4
February	8.6	8.0	7.4	4.0	3.8	3.6	8.8	8.0	7.2
March	8.5	7.5	6.5	4.2	3.8	3.4	6.7	5.5	4.3
<b>Quarterly Ave. Growth Rates</b>									
1989 Q1	2.3	2.3	2.3	3.9	3.9	3.9	-0.1	-0.1	-0.1
Q2	1.6	1.6	1.6	3.2	3.2	3.2	-4.4	-4.4	-4.4
Q3	6.9	6.9	6.9	3.9	3.9	3.9	1.8	1.8	1.8
Q4	7.1	7.1	7.1	2.3	2.3	2.3	5.1	5.1	5.1
1990 Q1	7.1	6.9	6.6	3.7	3.6	3.5	5.3	5.0	4.7
Nov. 89 to Mar. 90	7.6	7.2	6.8	3.7	3.5	3.4	6.3	5.8	5.3
Dec. 89 to Mar. 90	7.5	6.9	6.4	3.8	3.5	3.3	5.7	5.0	4.3
Jan. 90 to Mar. 90	8.6	7.8	7.0	4.1	3.8	3.5	7.8	6.8	5.8
Q4 88 to Q4 89	4.6	4.6	4.6	3.4	3.4	3.4	0.6	0.6	0.6
Q4 89 to Q1 90	7.1	6.9	6.6	3.7	3.6	3.5	5.2	4.9	4.6
Q4 89 to Jan. 90	6.4	6.4	6.4	3.5	3.5	3.5	3.8	3.8	3.8
Q4 89 to Feb. 90	7.1	6.9	6.7	3.6	3.6	3.5	5.5	5.2	4.9
Q4 89 to Mar. 90	7.5	7.1	6.7	3.8	3.6	3.5	5.8	5.3	4.8
1989 Target Ranges:	3.0 to 7.0			3.5 to 7.5					
1990 Ranges (Tentative):	3.0 to 7.0			3.5 to 7.5					

Chart 3  
**ACTUAL AND TARGETED M2**

Billions of dollars

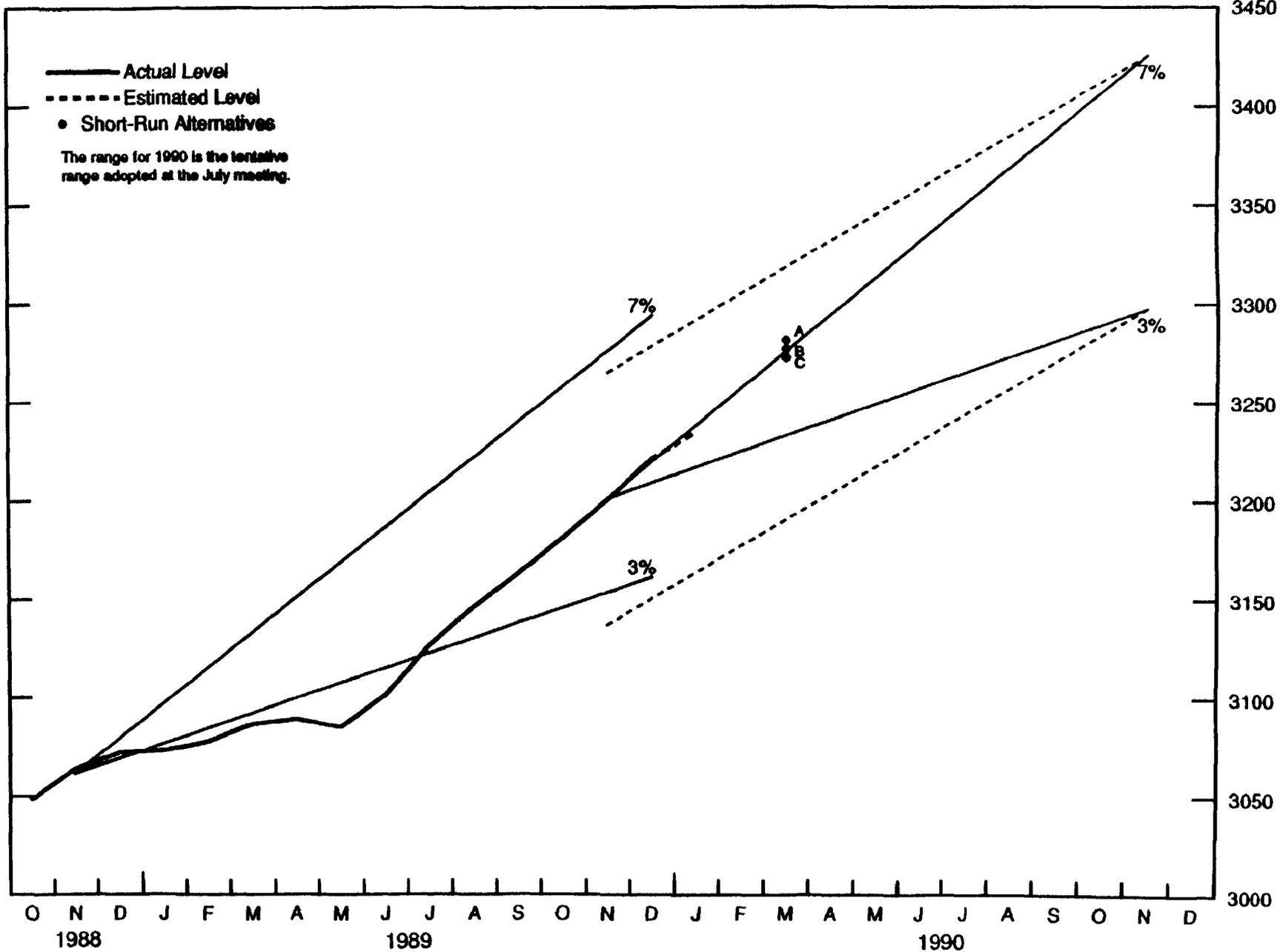


Chart 4  
**ACTUAL AND TARGETED M3**

Billions of dollars

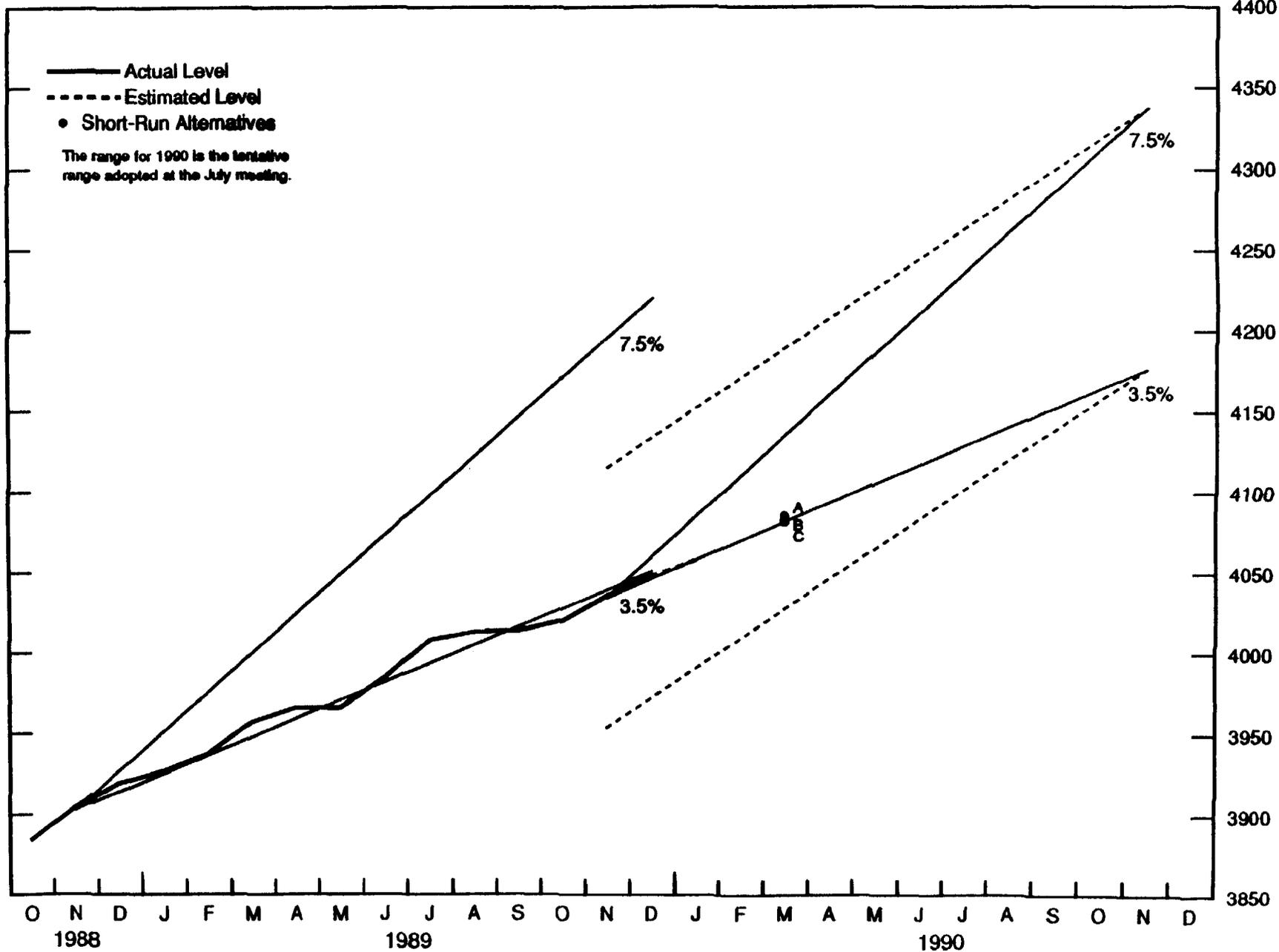


Chart 5  
M1

Billions of dollars

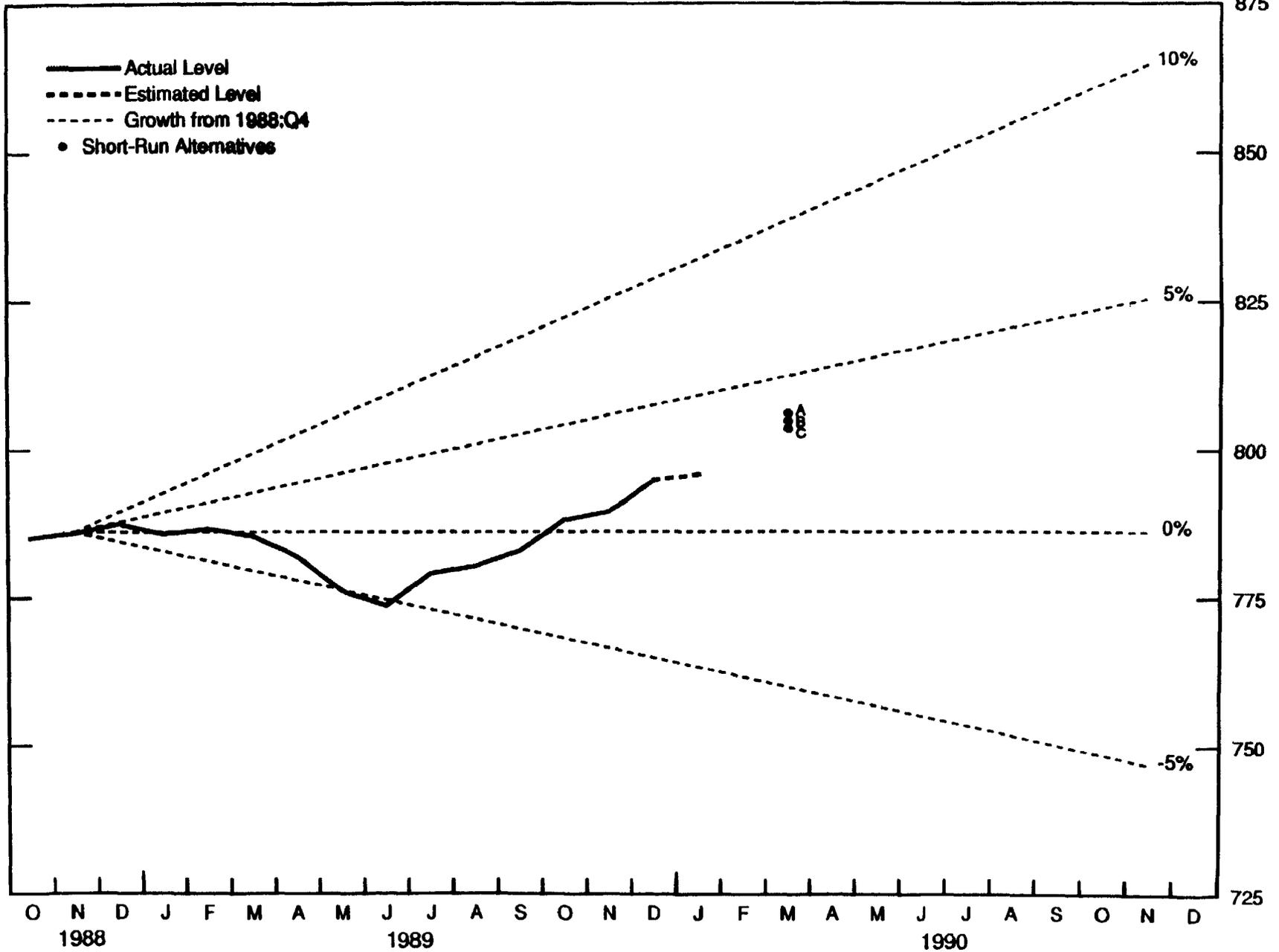
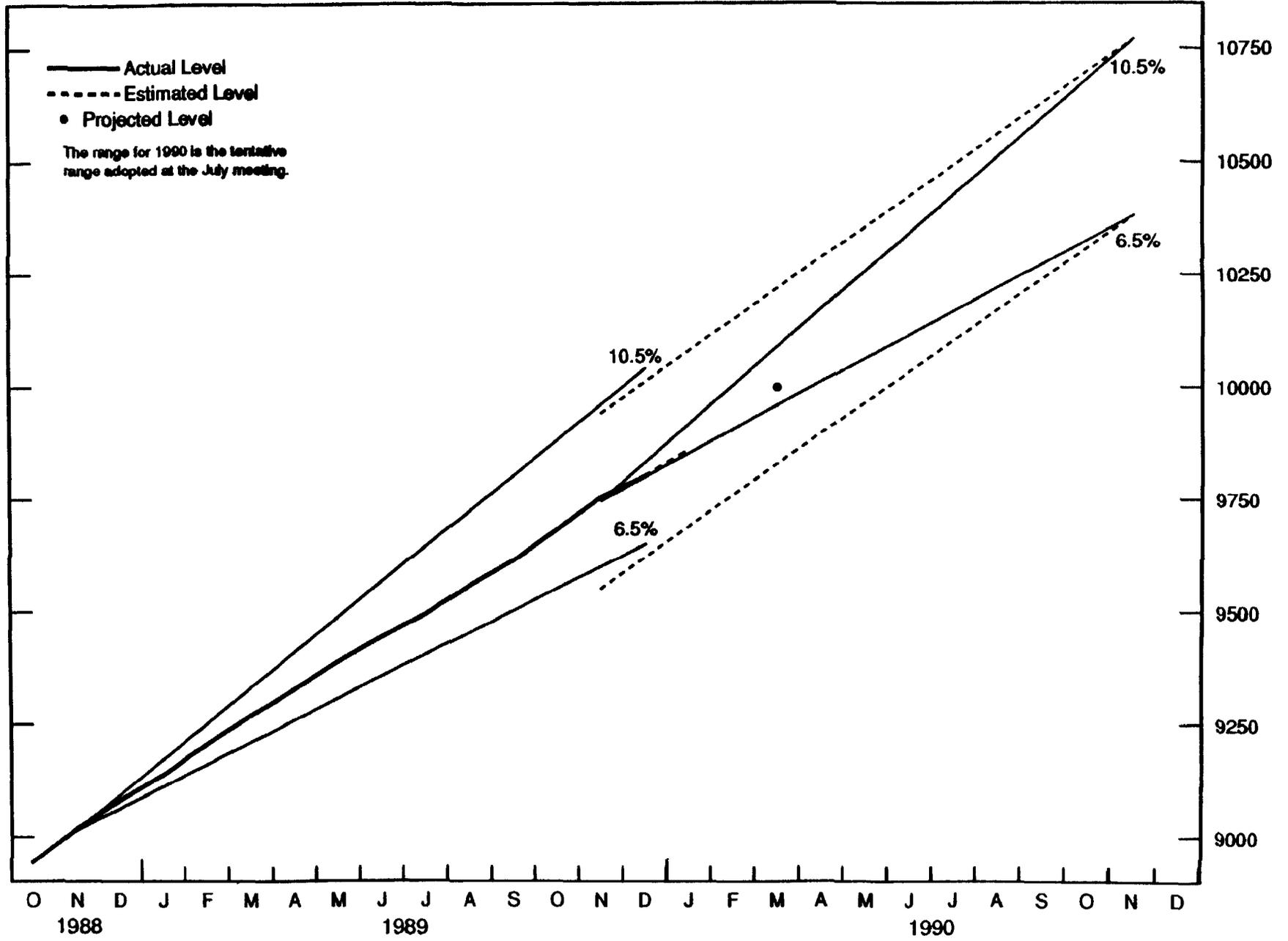


Chart 6  
DEBT

Billions of dollars



very late in the quarter and that capital-impaired thrifts continue to scale down their assets at the trend seen over the second half of last year.

(22) Under alternative B, the continuation of the federal funds rate around 8-1/4 percent would accord with current market expectations for the near term. At some point, the narrow spreads between Treasury bills and private paper will widen, but any tendency for this to occur as runoffs of official accounts abate will be offset to a degree by large bill issuance through the end of March and by the continued potential of a further increase to finance RTC working capital. Treasury bond yields may edge down once the mid-quarter refunding issues are distributed, especially if foreign interest appears to be holding up. However, without a surprise in macroeconomic fundamentals or monetary policy, only limited scope for a flattening of the Treasury yield curve seems in prospect. Increases in bond yields since the last FOMC meeting have restored the more typical upward-sloping term structure, apparently on the basis of expectations that federal funds trading not far from current levels will be consistent with continued economic expansion and underlying inflation persisting at its recent pace.

(23) Growth in M2 under alternative B is expected to strengthen in February and March from its January pace, owing largely to a rebound in transaction deposits. Demand deposits in particular should recover appreciably after their sharp January slide considering the presumed increase in desired holdings in response to the fall in short-term interest

rates over the second half of last year.<sup>12</sup> M1 expansion would be brought up to a 6-3/4 percent pace over February and March. Together with a slight pickup in its nontransaction component, M2 is projected to grow at a 7-3/4 percent rate over the two months, and 7 percent from a December base. M2 would continue to outpace nominal GNP in the first quarter, implying a contraction of its velocity at a 1-1/2 percent rate.

(24) Under alternative B, M3 would grow at a 3-1/2 percent rate from December to March. Thrift assets continue to run off rapidly. Bank credit expansion, though picking up a little, is expected to remain moderate, and bank issuance of managed liabilities to continue subdued in the face of stronger core deposit growth. Inflows to institution-only money market mutual funds should pause after the bulge in January, as their yields move down into more normal alignment with market rates. Overall debt of domestic nonfinancial sectors is expected to grow at an 8 percent rate from December to March, placing this aggregate a bit below the midpoint of its 6-1/2 to 10-1/2 percent tentative monitoring range. In the federal sector, borrowing quickens over the balance of the quarter, while the average growth of the overall debt of the other sectors should about maintain the estimated January pace.

(25) The policy easing embodied in alternative A, with the funds rate moving to 7-3/4 percent, would induce a nearly comparable decline in other short-term interest rates. The lowering of U.S. short-term rates

---

12. Currency growth should work as a partial offset, retreating from its rapid January pace. Despite the acceleration in total reserves in line with that of transaction deposits, the monetary base is projected to slip to around an 8 percent average rate of growth in February and March.

would cause a sharp downward adjustment in the foreign exchange value of the dollar. Nonetheless, some declines in bond rates are probable, as investors scale down their forecasts of the intermediate-term path of short rates. But the declines would be muted to the extent that the policy easing and accompanying dollar depreciation were to intensify concerns about future inflation pressures and the scope for further policy easing. M2 demands would be boosted, to perhaps an 8-1/2 percent average rate of growth over February and March, bringing December-to-March growth to 7-1/2 percent and leaving M2 a bit above the 7 percent upper end of its tentative range. M3 would rise at a 4 percent rate over the two months, rapidly enough to engender a December-to-March growth rate of 3-3/4 percent and place this aggregate a little above its 3-1/2 percent tentative lower bound.

(26) By contrast, the 1/2 percentage point increase in the funds rate under alternative C would restrain December-to-March growth of M2 and M3 to 6-1/2 and 3-1/4 percent, respectively, positioning them just below the upper bound and at the lower bound of their respective tentative ranges by March. Most short-term rates would rise in tandem with the federal funds rate; some widening of risk premiums could occur if recessionary concerns reemerged, given already heightened attention to credit problems. Such concerns, along with a sense that policy might be more focused on achieving price stability, would tend to damp the rise in bond yields. Higher interest rates and lower expected inflation could prompt an upward movement in the exchange value of the dollar.

Directive language

(27) Presented below for Committee consideration is draft language relating to the Humphrey-Hawkins ranges for 1990 and to the operating paragraph for the intermeeting period.

1990 RANGES

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability, promote growth in output on a sustainable basis, and contribute to an improved pattern of international transactions. In furtherance of these objectives, the Committee at THIS its meeting in July reaffirmed the ranges it had established RANGES in February for growth of M2 and M3 of \_\_\_ TO \_\_\_ 3 to 7 percent and \_\_\_ TO \_\_\_ 3-1/2 to 7-1/2 percent, respectively, measured from the fourth quarter of 1989 to the fourth quarter of 1990. The monitoring range for growth of total domestic nonfinancial debt also was SET maintained at \_\_\_ TO \_\_\_ 6-1/2 to 10-1/2 percent for the year. For 1990, on a tentative basis, the Committee agreed in July to use the same ranges as in 1989 for growth in each of the monetary aggregates and debt, measured from the fourth quarter of 1989 to the fourth quarter of 1990. The behavior of the monetary aggregates will continue to be evaluated in the light of movements in their velocities, developments in the economy and financial markets, and progress toward price level stability.

OPERATIONAL PARAGRAPH

In the implementation of policy for the immediate future, the Committee seeks to decrease slightly (SOMEWHAT)/ MAINTAIN/INCREASE SLIGHTLY(SOMEWHAT) the existing degree of pressure on reserve positions. Taking account of progress toward price stability, the strength of the business expansion, the behavior of the monetary aggregates, and developments in foreign exchange and domestic financial markets, slightly (SOMEWHAT) greater reserve restraint (WOULD) (MIGHT) or slightly (SOMEWHAT) lesser reserve restraint would (MIGHT) be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consistent with growth of M2 and M3 over the period from ~~November~~ DECEMBER through March at annual rates of about \_\_\_ AND \_\_\_ 8-1/2 and 5-1/2 percent respectively. The Chairman may call for Committee consultation if it appears to the Manager for Domestic Operations that reserve conditions during the period before the next meeting are likely to be associated with a federal funds rate persistently outside a range of \_\_\_ TO \_\_\_ 6 to 10 percent.

## APPENDIX A

### MONEY STOCK REVISIONS

Measures of the money stock have been revised to incorporate a change in the definition of M2, as well as the results of the annual benchmark and seasonal factor review. The attached tables compare growth rates of the old and revised series. These data should be regarded as **strictly confidential** until their release scheduled for February 15.

#### Redefinition

Overnight repurchase agreements issued by thrift institutions, formerly counted with term repurchase agreements in the non-M2 component of M3, have been included in M2 instead. (Overnight repurchase agreements issued by commercial banks have been included in M2 since 1980.) This redefinition has no effect on the levels of M1 or M3, but it does raise the level of M2 by the amount of thrifts' overnight repurchase agreements--between \$2 billion and \$4-1/2 billion in 1989, for example. Because the amount of overnight repurchase agreements issued by thrift institutions declined in 1989, the redefinition accounts for a reduction in the growth of M2 over 1989 of 0.1 percent.

#### Benchmark Revisions

Deposits of commercial banks and thrift institutions have been benchmarked using call reports through June 1989 and other sources. The benchmark revisions had minor effects on monetary growth rates over 1989 and on the quarterly pattern of growth within the year.

#### Seasonal Factor Revisions

The seasonal factor review continued to employ the X-11 ARIMA procedure. Beginning with this review, separate seasonal factors were computed for OCDs at commercial banks and thrift institutions (previously OCDs were seasonally adjusted as a whole). In addition, for the first time, seasonal factors were computed for MMDAs at commercial banks and at thrift institutions, and for general purpose and broker/dealer money market mutual funds (a component of M2) and institution only money market mutual funds (a component of M3). These new procedures had a minimal effect on M1 seasonal factors, and no effect at all on seasonally adjusted M2 or M3 as these broader aggregates are constructed using separate seasonal factors for the non-M1 component of M2 and for the non-M2 component of M3.

Overall, revisions to seasonal factors had little effect on the broad pattern of growth during 1989, though some growth was redistributed from the second half to the first half of the year. For example, on a second quarter to fourth quarter basis, the revised seasonal factors reduce M1 growth by 0.7 percent, M2 growth by 0.5 percent, and M3 growth by 0.5 percent.

Table A.1

Comparison of Revised and Old M1 Growth Rates  
(percent changes at annual rates)

	<u>Revised</u>	<u>Old</u>	<u>Difference</u>	<u>Difference due to</u>	
	(1)	(2)	(1) - (2)	<u>Benchmark</u>	<u>Seasonals</u>
	(1)	(2)	(3)	(4)	(5)
<u>Monthly</u>					
1988--Oct.	0.5	2.6	-2.1	0.0	-2.1
Nov.	1.4	1.8	-0.4	-0.1	-0.3
Dec.	2.3	5.6	-3.3	0.2	-3.5
1989--Jan.	-2.6	-6.1	3.5	0.5	3.0
Feb.	1.4	1.8	-0.4	0.3	-0.7
Mar.	-1.8	-1.8	0.0	0.1	-0.1
Apr.	-5.2	-4.7	-0.5	-0.8	0.3
May	-9.1	-15.0	5.9	0.5	5.4
June	-3.9	-5.0	1.1	0.2	0.9
July	8.4	10.9	-2.5	-0.1	-2.4
Aug.	2.0	0.3	1.7	0.2	1.5
Sept.	4.0	5.7	-1.7	-0.2	-1.5
Oct.	7.8	10.1	-2.3	0.1	-2.4
Nov.	2.1	2.7	-0.6	0.1	-0.7
Dec.	8.2	12.2	-4.0	0.0	-4.0
1990--Jan.	1.4	-2.4	3.8	0.1	3.7
<u>Quarterly</u>					
1988--QIV	1.0	2.3	-1.3	0.0	-1.3
1989--QI	-0.1	-0.4	0.3	0.3	0.0
QII	-4.4	-5.6	1.2	-0.1	1.3
QIII	1.8	1.5	0.3	0.1	0.2
QIV	5.1	6.7	-1.6	0.1	-1.7
<u>Semi-Annual</u>					
1989--QIV '88 to QII '89	-2.3	-3.0	0.7	0.1	0.6
QII '89 to QIV '89	3.5	4.1	-0.6	0.1	-0.7
<u>Annual (QIV TO QIV)</u>					
1988	4.3	4.3	0.0	0.0	0.0
1989	0.6	0.5	0.1	0.1	0.0

Table A.2

Comparison of Revised and Old M2 Growth Rates  
(percent changes at annual rates)

	<u>Revised</u>	<u>Old</u>	<u>Difference</u>	<u>Difference due to</u>		
	(1)	(2)	(1) - (2) (3)	<u>Redefinition</u> (4)	<u>Benchmark</u> (5)	<u>Seasonals</u> (6)
<u>Monthly</u>						
1988--Oct.	3.0	2.8	0.2	-0.2	1.1	-0.7
Nov.	6.0	6.8	-0.8	-0.1	0.5	-1.2
Dec.	3.3	4.0	-0.7	0.0	-0.6	-0.1
1989--Jan.	0.5	-1.4	1.9	0.0	0.6	1.3
Feb.	1.8	1.4	0.4	-0.2	0.0	0.6
Mar.	3.4	3.6	-0.2	0.2	-0.2	-0.2
Apr.	1.0	0.9	0.1	-0.1	-0.3	0.5
May	-1.6	-3.2	1.6	0.0	0.2	1.4
June	6.3	6.1	0.2	-0.3	0.3	0.2
July	9.8	11.1	-1.3	0.0	0.0	-1.3
Aug.	7.6	7.3	0.3	-0.1	0.6	-0.2
Sept.	6.3	6.8	-0.5	-0.3	0.2	-0.4
Oct.	6.9	7.6	-0.7	0.0	0.1	-0.8
Nov.	7.2	8.4	-1.2	0.0	0.3	-1.5
Dec.	7.8	7.8	0.0	0.1	0.2	-0.3
1990--Jan.	5.1	3.5	1.6	-0.2	0.1	1.7
<u>Quarterly</u>						
1988--QIV	3.2	3.6	-0.4	-0.1	0.3	-0.6
1989--QI	2.3	1.9	0.4	-0.1	0.1	0.4
QII	1.6	1.2	0.4	-0.1	0.0	0.5
QIII	6.9	7.1	-0.2	-0.1	0.2	-0.3
QIV	7.1	7.6	-0.5	-0.1	0.2	-0.6
<u>Semi-Annual</u>						
1989--QIV '88 to QII '89	2.0	1.5	0.5	-0.1	0.1	0.5
QII '89 to QIV '89	7.1	7.4	-0.3	-0.1	0.3	-0.5
<u>Annual (QIV TO QIV)</u>						
1988	5.2	5.2	0.0	0.0	0.0	0.0
1989	4.6	4.5	0.1	-0.1	0.1	0.1

Table A.3

Comparison of Revised and Old M3 Growth Rates  
(percent changes at annual rates)

	<u>Revised</u>	<u>Old</u>	<u>Difference</u>	<u>Difference due to</u>	
	(1)	(2)	(1) - (2)	<u>Benchmark</u>	<u>Seasonals</u>
	(1)	(2)	(3)	(4)	(5)
<u>Monthly</u>					
1988--Oct.	5.2	5.3	-0.1	1.0	-1.1
Nov.	6.1	6.3	-0.2	0.3	-0.5
Dec.	4.7	5.3	-0.6	-0.5	-0.1
1989--Jan.	2.4	1.4	1.0	0.2	0.8
Feb.	3.3	2.8	0.5	0.1	0.4
Mar.	6.0	6.6	-0.6	0.0	-0.6
Apr.	2.6	2.0	0.6	-0.2	0.8
May	0.0	-2.0	2.0	0.4	1.6
June	5.8	4.8	1.0	0.3	0.7
July	6.9	8.0	-1.1	0.0	-1.1
Aug.	1.5	1.9	-0.4	0.2	-0.6
Sept.	0.2	0.4	-0.2	0.1	-0.3
Oct.	1.9	2.8	-0.9	0.1	-1.0
Nov.	4.6	4.9	-0.3	0.2	-0.5
Dec.	3.5	3.7	-0.2	0.2	-0.4
1990--Jan.	3.1	1.9	1.2	0.1	1.1
<u>Quarterly</u>					
1988--QIV	4.6	4.8	-0.2	0.4	-0.6
1989--QI	3.9	3.7	0.2	0.0	0.2
QII	3.2	2.5	0.7	0.1	0.6
QIII	3.9	4.0	-0.1	0.1	-0.2
QIV	2.3	2.8	-0.5	0.1	-0.6
<u>Semi-Annual</u>					
1989--QIV '88 to QII '89	3.6	3.1	0.5	0.0	0.5
QII '89 to QIV '89	3.1	3.4	-0.3	0.2	-0.5
<u>Annual (QIV TO QIV)</u>					
1988	6.3	6.3	0.0	0.1	-0.1
1989	3.4	3.3	0.1	0.1	0.0

APPENDIX B

**ADOPTED LONGER-RUN GROWTH RATE RANGES FOR THE MONETARY AND CREDIT AGGREGATES**  
 (percent annual rates; numbers in parentheses are actual growth rates as reported at end of policy period in February Monetary Policy Report to Congress)

	<u>M1</u>	<u>M2</u>	<u>M3</u>	<u>Bank Credit or Domestic Non-financial Debt</u> <sup>1</sup>
QIV 1978 - QIV 1979 <sup>2</sup>	3 - 6 (5.5)	5 - 8 (8.3)	6 - 9 (8.1)	7.5 - 10.5 (12.2)
QIV 1979 - QIV 1980	4 - 6.5 (7.3) <sup>3,4</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>3,5</sup>	6 - 9 (9.4)	6.5 - 9.5 (11.4)	6 - 9 (8.8) <sup>6</sup>
QIV 1981 - QIV 1982	2.5 - 5.5 (8.5) <sup>3</sup>	6 - 9 (9.2)	6.5 - 9.5 (10.1)	6 - 9 <sup>7</sup> (7.1) <sup>6</sup>
QIV 1982 - QIV 1983	5 - 9 <sup>8</sup> (7.2)	7 - 10 <sup>9</sup> (8.3)	6.5 - 9.5 (9.7)	8.5 - 11.5 (10.5)
QIV 1983 - QIV 1984	4 - 8 (5.2)	6 - 9 (7.7)	6 - 9 (10.5)	8 - 11 (13.4)
QIV 1984 - QIV 1985	3 - 8 <sup>10</sup> (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>11</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 (3.4)	6.5 - 10.5 (8.1)

n.s.--not specified.

1. Targets are for bank credit until 1983; from 1983 onward targets are for domestic nonfinancial sector debt.

2. At the February 1979 meeting the FOMC adopted a QIV'78 to QIV'79 range for M1 of 1-1/2 to 4-1/2 percent. This range anticipated that shifting to ATS and NOW accounts in New York State would slow M1 growth by 3 percentage points. At the October meeting it was noted that ATS/NOW shifts would reduce M1 by no more than 1-1/2 percentage points. Thus, the longer-run range for M1 was modified to 3-6 percent.

3. 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).

4. 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.

(Footnotes are continued on next page)

(footnotes continued)

5. Adjusted for the effects of shifts out of demand deposits and savings deposits into other checkable 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.

6. Adjusted for shifts of assets from domestic banking offices to International Banking Facilities.

7. Range for bank credit is annualized growth from the December 1981-January 1982 average level through the fourth quarter of 1982.

8. 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.

9. Base period is the February-March 1983 average.

10. 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.

11. No range for M1 was specified at the February FOMC meeting because of uncertainties about its underlying relationship to the behavior of the economy and its sensitivity to economic and financial circumstances.

**SELECTED INTEREST RATES**  
(percent)

	Short-Term								Long-Term							
	federal funds	Treasury bills secondary market			CDs secondary market	comm paper 1-month	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	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	16	
88 -- High	8.87	8.16	8.26	8.40	9.33	9.41	8.18	10.50	9.16	9.36	9.42	10.73	8.34	11.33	10.81	8.54
Low	6.38	5.61	5.81	6.15	6.58	6.50	6.03	8.50	7.33	8.16	8.40	9.63	7.64	9.98	9.84	7.49
89 -- High	9.95	9.04	9.07	8.96	10.23	9.98	9.19	11.50	9.77	9.46	9.26	10.47	7.95	11.73	11.22	9.41
Low	8.38	7.54	7.35	7.15	8.24	8.35	7.87	10.50	7.60	7.78	7.85	9.26	7.19	9.92	9.68	8.34
<b>Monthly</b>																
Feb 89	9.36	8.53	8.55	8.55	9.51	9.29	8.79	10.93	9.32	9.17	9.01	10.25	7.72	11.03	10.65	8.65
Mar 89	9.65	8.82	8.85	8.82	10.09	9.88	8.89	11.50	9.61	9.36	9.17	10.37	7.85	11.47	11.03	9.09
Apr 89	9.84	8.65	8.65	8.64	9.94	9.77	9.14	11.50	9.40	9.18	9.03	10.33	7.73	11.32	11.05	9.40
May 89	9.81	8.43	8.41	8.31	9.59	9.57	9.13	11.50	8.98	8.86	8.83	10.09	7.51	10.90	10.77	9.30
Jun 89	9.53	8.15	7.93	7.84	9.20	9.34	8.96	11.07	8.37	8.28	8.27	9.65	7.35	10.39	10.20	9.03
Jul 89	9.24	7.88	7.61	7.36	8.76	8.95	8.72	10.98	7.83	8.02	8.08	9.54	7.28	10.11	9.88	8.74
Aug 89	8.99	7.90	7.74	7.61	8.64	8.79	8.32	10.50	8.13	8.11	8.12	9.55	7.36	10.38	9.99	8.65
Sep 89	9.02	7.75	7.74	7.65	8.78	8.87	8.25	10.50	8.25	8.19	8.15	9.55	7.52	10.44	10.13	8.71
Oct 89	8.84	7.64	7.62	7.45	8.60	8.66	8.21	10.50	8.02	8.01	8.00	9.39	7.48	10.19	9.95	8.62
Nov 89	8.55	7.69	7.49	7.25	8.39	8.47	8.00	10.50	7.80	7.87	7.90	9.28	7.39	10.06	9.77	8.51
Dec 89	8.45	7.63	7.42	7.21	8.32	8.61	7.90	10.50	7.77	7.84	7.90	9.36	7.31	10.06	9.74	8.39
Jan 90	8.23	7.64	7.55	7.38	8.16	8.20	7.74	10.11	8.13	8.21	8.26	9.63	7.43	10.30	9.90	8.39
<b>Weekly</b>																
Nov 1 89	8.80	7.73	7.55	7.32	8.50	8.60	8.11	10.50	7.90	7.91	7.92	9.29	7.47	10.15	9.82	8.55
Nov 8 89	8.69	7.78	7.60	7.37	8.54	8.61	8.07	10.50	7.94	7.92	7.91	9.27	7.45	10.08	9.79	8.52
Nov 15 89	8.46	7.68	7.51	7.25	8.38	8.44	8.00	10.50	7.77	7.88	7.89	9.31	7.39	9.96	9.72	8.49
Nov 22 89	8.46	7.65	7.43	7.16	8.35	8.43	7.98	10.50	7.72	7.84	7.90	9.26	7.35	10.06	9.74	8.47
Nov 29 89	8.51	7.64	7.43	7.19	8.25	8.35	7.93	10.50	7.75	7.85	7.91	9.26	7.31	10.07	9.74	8.46
Dec 6 89	8.52	7.57	7.35	7.19	8.24	8.51	7.94	10.50	7.74	7.83	7.89	9.29	7.35	10.07	9.76	8.39
Dec 13 89	8.47	7.66	7.39	7.25	8.32	8.57	7.89	10.50	7.78	7.84	7.90	9.33	7.29	9.98	9.75	8.39
Dec 20 89	8.52	7.62	7.41	7.15	8.41	8.72	7.91	10.50	7.70	7.78	7.85	9.40	7.28	10.01	9.69	8.34
Dec 27 89	8.38	7.66	7.51	7.23	8.32	8.60	7.87	10.50	7.83	7.87	7.93	9.54	7.33	10.17	9.78	8.39
Jan 3 90	8.32	7.61	7.52	7.28	8.23	8.48	8.06	10.50	7.90	7.94	8.00	9.55	7.36	10.13	9.83	8.35
Jan 10 90	8.22	7.54	7.45	7.28	8.15	8.19	7.79	10.29	7.94	8.01	8.08	9.57	7.35	10.18	9.80	8.41
Jan 17 90	8.20	7.60	7.50	7.31	8.11	8.14	7.74	10.00	8.04	8.13	8.20	9.65	7.49	10.34	9.90	8.39
Jan 24 90	8.23	7.72	7.60	7.45	8.20	8.20	7.70	10.00	8.24	8.30	8.33	9.75	7.52	10.53	10.05	8.41
Jan 31 90	8.24	7.72	7.67	7.52	8.19	8.21	7.70	10.00	8.37	8.47	8.51	9.83	7.52	10.50	10.17	8.45
<b>Daily</b>																
Jan 26 90	8.24	7.68	7.63	7.51	8.19	8.20	..	10.00	8.38	8.49	8.55	..	..	..	..	..
Feb 1 90	8.25	7.76	7.71	7.54	8.20	8.23	..	10.00	8.35	8.42	8.44	..	..	..	..	..
Feb 2 90	8.25p	7.81	7.75	7.58	8.20	8.23	..	10.00	8.43p	8.47p	8.51p	..	..	..	..	..

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

FEB. 5, 1990

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	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	9	10
<b>ANN. GROWTH RATES (%) :</b>										
<b>ANNUALLY (Q4 TO Q4) :</b>										
1987	6.4	4.2	3.5	11.8	5.7	5.5	8.0	9.0	10.2	9.9
1988	4.3	5.2	5.5	10.2	6.3	7.1	7.6	8.0	9.6	9.2
1989	0.5	4.5	5.9	-1.2	3.3		7.2	7.4	8.3	8.1
<b>QUARTERLY AVERAGE</b>										
1989-1st QTR.	-0.4	1.9	2.6	10.5	3.7	5.0	6.2	7.7	8.6	8.4
1989-2nd QTR.	-5.6	1.2	3.6	7.3	2.5	4.8	6.2	6.9	8.2	7.9
1989-3rd QTR.	1.5	7.1	9.0	-7.0	4.0	4.4	7.7	4.6	8.0	7.2
1989-4th QTR.	6.7	7.6	7.9	-14.9	2.8		7.9	9.6	7.5	8.0
<b>MONTHLY</b>										
1989-JAN.	-6.1	-1.4	0.2	11.8	1.4	1.0	2.8	4.7	8.3	7.5
FEB.	1.8	1.4	1.3	8.0	2.8	3.4	14.4	9.0	8.9	8.9
MAR.	-1.8	3.6	5.4	17.3	6.6	9.0	6.4	11.7	7.0	8.1
APR.	-4.7	0.9	2.9	6.1	2.0	6.6	2.9	5.6	8.2	7.6
MAY	-15.0	-3.2	0.8	2.3	-2.0	-0.9	7.4	4.2	9.1	7.9
JUNE	-4.8	6.1	9.8	0.3	4.8	3.3	5.0	4.3	7.8	7.0
JULY	10.7	11.1	11.2	-2.9	8.0	8.1	10.0	-0.2	8.4	6.4
AUG.	0.3	7.3	9.6	-17.5	1.9	3.9	7.7	8.8	7.9	8.2
SEP.	5.7	6.8	7.2	-22.8	0.4	1.6	6.2	11.0	5.9	7.1
OCT.	10.1	7.6	6.7	-14.6	2.8	3.0	15.2	9.8	8.2	8.6
NOV.	2.7	8.4	10.3	-8.5	4.9	3.1	3.9	11.1	8.2	8.9
DEC.	12.2	7.8	6.3	-12.1	3.7		-2.8	3.6	6.3	5.7
1990-JAN. pe	-2	4	6	-4	2					
<b>LEVELS (\$BILLIONS) :</b>										
<b>MONTHLY</b>										
1989-AUG.	777.4	3135.8	2358.3	863.8	3999.6	4807.5	2534.4	2199.9	7359.0	9558.9
SEP.	781.1	3153.5	2372.4	847.4	4001.0	4813.8	2544.1	2220.1	7395.2	9615.3
OCT.	787.7	3173.4	2385.7	837.1	4010.4	4826.0	2575.5	2238.3	7445.8	9684.1
NOV.	789.5	3195.7	2406.2	831.2	4026.9	4838.3	2583.9	2259.0	7496.6	9755.6
DEC.	797.5	3216.4	2418.9	822.8	4039.2		2577.4	2265.8	7535.8	9801.6
<b>WEEKLY</b>										
1989-DEC.										
4	789.8	3204.5	2414.7	831.2	4035.7					
11	793.3	3208.9	2415.7	826.8	4035.7					
18	795.4	3215.6	2420.2	820.2	4035.8					
25	802.1	3226.5	2424.4	816.1	4042.6					
1990-JAN.										
1	805.2	3221.6	2416.4	823.8	4045.3					
8	794.0	3214.5	2420.5	826.9	4041.4					
15 p	791.2	3217.5	2426.3	821.3	4038.8					
22 p	794.1	3226.5	2432.3	817.8	4044.2					

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

Note: Data on the monetary aggregates do not incorporate the results of the 1990 benchmark and seasonal review.

## Components of Money Stock and Related Measures

seasonally adjusted unless otherwise noted

FEB. 5, 1990

Period	Currency	Demand deposits	Other checkable deposits	Overnight RPs and Eurodollars NSA <sup>1</sup>	MMDAs NSA	Savings deposits	Small denomination time deposits <sup>2</sup>	Money market mutual funds, NSA		Large denomination time deposits <sup>3</sup>	Term RPs NSA <sup>4</sup>	Term Eurodollars NSA <sup>4</sup>	Savings bonds	Short-term Treasury securities	Commercial paper <sup>4</sup>	Bankers acceptances
								general purpose and broker/dealer <sup>4</sup>	Institutions only							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>LEVELS (\$BILLIONS) :</b>																
<b>ANNUALLY (4TH QTR.)</b>																
1987	194.9	292.0	260.8	81.3	529.9	416.7	900.8	219.7	87.2	481.6	110.0	92.4	99.6	263.0	257.0	44.6
1988	210.7	288.4	280.9	76.7	505.6	430.8	1017.6	236.0	86.5	534.7	125.9	102.7	108.7	268.4	323.9	40.8
1989	220.7	280.1	283.3	72.5	480.3	409.0	1133.6	304.7	101.2	558.1	106.9	82.0				
<b>MONTHLY</b>																
1988-DEC.	211.8	288.6	282.3	78.5	502.7	431.3	1025.2	239.4	87.6	537.8	124.1	106.0	109.1	271.3	335.8	40.6
1989-JAN.	213.4	284.0	281.3	81.9	495.2	427.8	1035.7	241.7	89.3	544.4	125.2	100.6	109.7	270.9	334.9	40.6
FEB.	214.3	284.8	280.9	79.0	485.3	424.6	1048.3	247.2	89.6	551.6	128.4	100.0	110.6	265.2	344.2	39.9
MAR.	215.6	284.3	279.1	77.5	480.3	420.8	1061.0	255.5	87.6	558.8	130.9	105.6	111.5	271.7	349.2	41.2
APR.	216.0	281.4	278.5	74.5	471.3	412.8	1083.1	259.3	87.7	567.6	128.8	100.2	112.3	279.5	359.5	41.4
MAY	216.5	278.2	271.4	73.5	457.0	404.7	1105.7	259.3	91.6	572.1	129.2	96.6	112.9	289.5	352.3	41.1
JUNE	217.3	275.0	270.7	76.0	456.9	402.0	1118.5	265.3	95.1	573.1	129.3	92.6	113.8	286.8	351.4	41.1
JULY	218.0	278.8	273.2	77.6	459.8	401.5	1126.3	273.9	98.2	573.1	124.5	91.3	114.6	290.7	351.3	42.0
AUG.	218.4	277.5	274.4	74.9	465.4	402.3	1132.1	284.7	100.6	569.2	118.0	89.0	115.2	294.6	355.3	42.8
SEP.	219.4	277.3	277.3	72.3	469.1	404.3	1132.3	292.4	99.1	563.9	113.7	84.9	115.7	307.5	348.3	41.4
OCT.	219.8	280.4	280.3	72.8	473.0	405.8	1132.5	298.4	98.7	560.7	110.0	80.7	116.1	314.4	344.8	40.2
NOV.	220.3	278.8	282.9	71.8	481.6	409.3	1132.9	306.5	102.0	559.3	110.6	81.3	116.5	306.8	347.5	40.6
DEC.	222.1	281.2	286.7	72.8	486.3	411.8	1135.3	309.1	102.8	554.4	100.0	83.9				

1. Net of money market mutual fund holdings of these items.
  2. Includes retail repurchase agreements. All IRA and Keogh accounts at commercial banks and thrift institutions are subtracted from small time deposits.
  3. Excludes IRA and Keogh accounts.
  4. Net of large denomination time deposits held by money market mutual funds and thrift institutions.
- p-preliminary

Note: Data on the monetary aggregates do not incorporate the results of the 1990 benchmark and seasonal review.

February 5, 1990

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

STRICTLY CONFIDENTIAL (FR)  
CLASS II-FOMC

Period	Treasury bills			Treasury coupons						Federal agencies redemptions (-)	Net change outright holdings total	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					
1984	11,479	7,700	3,779	826	1,938	236	441	--	3,440	256	6,964	1,450
1985	18,096	3,500	14,596	1,349	2,185	358	293	--	4,185	162	18,619	3,001
1986	20,099	1,000	19,099	190	893	236	158	--	1,476	398	20,178	10,033
1987	12,933	9,029	3,905	3,358	9,779	2,441	1,858	70	17,366	276	20,994	-11,033
1988	7,635	2,200	5,435	2,177	4,686	1,404	1,398	--	9,665	587	14,513	1,557
1989	1,466	12,730	-11,264	327	946	258	284	500	1,315	442	-10,391	
1988--Q1	319	2,200	-1,881	--	-800	-175	--	--	-975	155	-3,011	-3,514
Q2	423	--	423	1,092	3,661	1,017	966	--	6,737	130	7,030	5,220
Q3	1,795	--	1,795	--	--	--	--	--	--	77	1,717	1,393
Q4	5,098	--	5,098	1,084	1,824	562	432	--	3,903	224	8,776	-1,541
1989--Q1	-3,842	2,200	-6,042	--	-228	-20	--	--	-248	188	-6,477	-5,591
Q2	2,496	2,400	96	172	1,361	287	284	--	2,104	125	2,075	924
Q3	-6,450	3,200	-9,650	--	-163	-9	--	--	-172	99	-9,921	-893
Q4	9,263	4,930	4,333	155	-24	--	--	500	-369	30	3,934	
1989--April	3,077	--	3,077	172	1,436	286	284	--	2,179	125	-5,131	14,448
May	-10	1,200	-1,210	--	-75	--	--	--	-75	--	-1,285	-23,527
June	-571	1,200	-1,771	--	--	--	--	--	--	--	-1,771	10,002
July	-5,516	2,400	-7,916	--	-13	-9	--	--	-22	45	-7,983	-5,152
August	-934	800	-1,734	--	-150	--	--	--	-150	--	-1,884	617
September	--	--	--	--	--	--	--	--	--	54	54	3,641
October	-1,414	1,400	-2,814	--	-24	--	--	500	-524	30	-3,368	463
November	8,794	3,530	5,264	155	--	--	--	--	155	--	5,419	-453
December	1,883	--	1,883	--	--	--	--	--	--	--	1,883	3,867
1990--January	-1,065	1,000	-2,065	--	--	--	--	--	--	--	-2,065	-8435
Dec. 6	4,876	--	4,876	--	--	--	--	--	--	--	4,876	-13,117
13	947	--	947	--	--	--	--	--	--	--	947	4,000
20	28	--	28	--	--	--	--	--	--	--	28	-2,421
27	659	--	659	--	--	--	--	--	--	--	659	10,418
Jan. 3	436	--	436	--	--	--	--	--	--	--	436	-6,235
10	--	--	--	--	--	--	--	--	--	--	--	-2,001
17	-186	200	-386	--	--	--	--	--	--	--	-386	-5,519
24	-643	400	-1,043	--	--	--	--	--	--	--	-1,043	1,256
31	-660	400	-1,060	--	--	--	--	--	--	--	-1,060	-2,509
Memo: LEVEL (bil.\$) <sup>6</sup> January 31	--	--	104.6	29.4	53.5	12.5	26.7	--	122.2	--	233.3	-8.4

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 coupon issues.

4. Reflects net change and 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
2.0	3.2	1.0	0.2	6.5