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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

January 31, 1992

MONETARY POLICY ALTERNATIVES

Recent Developments

(1) Just after the December 17 FOMC meeting, the Desk's posture in the reserves market remained unchanged, and federal funds continued to trade around 4-1/2 percent. On December 20, the discount rate was cut by one percentage point to 3-1/2 percent in response to cumulating evidence that economic and financial conditions were pointing to receding inflation pressures. The funds rate immediately fell to its new expected level of 4 percent. Since then, the funds rate has averaged 4.07 percent, incorporating rather mild year-end pressures. Along with the discount rate cut, the allowance for adjustment plus seasonal borrowing was increased by \$50 million to account for the emergence of a 50 basis point spread between the funds rate and the discount rate. At the same time a partly offsetting downward technical adjustment of \$25 million recognized the ongoing downtrend in seasonal borrowing in early winter; another such adjustment was made later in the intermeeting period, to bring the borrowing allowance to its current level of \$75 million. In the last two complete maintenance periods, actual adjustment plus seasonal borrowing ran above its allowance, as reserve shortfalls pushed up adjustment borrowing on settlement days. So far in the current maintenance period, overall discount borrowing has retreated to an average of \$100 million, which has included about \$25 million of special situation borrowing at one small western bank.

(2) Immediately after the 50 basis point easing of the funds rate, other short-term market rates fell about 30 basis points and long rates somewhat less. The prime rate followed the discount rate down by a full percentage point to 6-1/2 percent, but its spread to funding costs still remains high relative to historical experience. Subsequently, market rates, especially in the intermediate- and longer-term

sectors, decreased further through the first week of January on perceptions of continuing economic weakness. The decline in the yield on 30-year Treasury bonds, to a low of around 7-3/8 percent, also was spurred by discussions of a possible curtailment of issuance of long-term Treasuries. Since the first week of the new year, however, interest rates have firmed in response to what are seen as more upbeat prospects for the economy and the fading of market expectations of near-term monetary policy easing, as well as to heightened market concerns about outsized fiscal stimulus. In addition, a flood of issuance of corporate, mortgage-backed, and agency debt has put upward pressure on intermediate- and long-term rates. On balance, 3-month rates are down about 1/4 to 1/2 of a percentage point since the last FOMC meeting, and long rates are about unchanged. At intermediate-term maturities, where the effects of a cyclical rebound and fiscal stimulus might be expected to be most pronounced, Treasury rates are up as much as 25 basis points. A considerable stock market rally was touched off by the policy easing and expectations of a more buoyant economy, with broad indexes up 7 to 11 percent. Aided by lower funding costs and better-than-expected fourth-quarter earnings reports, bank stock prices rose around 15 percent.

(3) The dollar declined further on exchange markets in late December, particularly against the German mark, following the Bundesbank's 1/2 percentage point increase in its official lending rates on December 19 and the System's easing action the next day. In January, however, the dollar rebounded sharply, except against the Japanese yen. Incoming evidence suggesting to market participants that wage and price pressures in Germany may be less than feared, combined with renewed optimism on the U.S. economy, held out the prospect of some reversal in the relative directions of monetary policies. These expectations were

reflected in movements in long-term interest rates: German bond rates declined 15 basis points in January, even as U.S. bond rates reversed their earlier decreases. Over the intermeeting period the dollar rose, on balance, by 2 percent against the mark and by similar amounts against the other currencies in the European Monetary System. Against the yen, however, the dollar declined 2-1/2 percent; most of the movement followed Desk sales on January 17

, against a backdrop of growing friction over bilateral trade issues. On a weighted-average basis, the dollar's exchange value rose by 1-1/4 percent over the intermeeting period.

(4) Growth of the broader monetary aggregates receded in December, and M3 expansion slipped further in January. Over the two months, M2 grew at a 2-3/4 percent rate and M3 at a 1-1/4 percent rate, close to FOMC specifications of 3 percent and 1-1/2 percent, respectively, for the November to March period.<sup>1</sup> These two-month growth rates, especially for M3, were held down in part by unusually large, but transitory, declines around year-end, whose reversal by the latter part of January was not fully reflected in the monthly average.<sup>2</sup> Even after allowing for these temporary distortions, however, growth of the

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1. The money data presented in this document reflect the results of the annual benchmark and seasonal review--discussed in Appendix A--and should be treated as *strictly confidential* until their release to the public, tentatively planned for February 13.

2. In the weeks of December 30 and January 6, money funds in M2 and especially institution-only money funds recorded unusually large outflows on a not seasonally adjusted basis; these outflows were more than offset by the week of January 20. In addition, demand deposits on a not seasonally adjusted basis increased through the two weeks ending January 6, and then decreased in the next two weeks, by unusually small amounts. The revised seasonal factors do not fully smooth out the effects of these variations on monthly growth rates--appropriately so in that these swings partly reflected atypical economic incentives unrelated to regular seasonal patterns, such as the effect on money funds of the jump in stock prices late last year.

broad aggregates remained sluggish, particularly in light of the sharp declines in short-term rates in the fourth quarter. The additional steepening of the yield curve and the continued stock market rally have made the returns on longer-term bond and stock funds still more attractive relative to average returns on M2 balances. Moreover, steep reductions since mid-December in average offering rates on NOW accounts and savings deposits (including MMDAs) likely have held down deposit growth by limiting the impact that the policy easing has had in lowering the average M2 opportunity cost with respect to short-term market rates.

(5) The liquid components of the aggregates nevertheless continued to expand briskly on balance over December and January, perhaps in part because depositors shied away from locking in low returns on small time deposits. M1 grew at a 12 percent average rate.<sup>3</sup> An accelerating outflow of small time deposits was the primary culprit behind a decline in the nontransactions component of M2 over the two months. Growth of M3 was depressed not only by the year-end outflows of money funds but also by a more sizable decrease in large time deposits at commercial banks. Bank credit expansion softened in December, owing to renewed weakness in loans. A further slowing of bank credit growth is suggested by data for the first three weeks of January, as acquisitions of securities have nearly halted. At thrifts, the decline in large time deposits has abated some since November, as total thrift assets likely fell less steeply since RTC resolution activity remained dormant.

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3. Over December and January, the rapid growth of transaction deposits and required reserves sustained average growth in total reserves at a 19 percent annual rate. Combined with currency expansion at a 7-1/2 percent rate, the monetary base grew at an average pace of 10-3/4 percent over the two months.

(6) Growth in the debt of domestic nonfinancial sectors appears to have slowed to a 3-3/4 percent rate in December, and very partial evidence suggests weak growth again in January. The deceleration has mainly reflected a reduced pace of federal borrowing. In addition, sluggish spending and deleveraging by businesses and households seem to have depressed the growth of debt of nonfederal sectors since November even below the anemic 2-3/4 percent pace of earlier in the year. Heavy gross issuance in corporate bond and equity markets largely has represented balance sheet restructurings and refinancings: Businesses have shifted further away from short-term borrowing at banks and from commercial paper, while refundings of callable bonds and reverse LBOs have become more common. For households, the stirring of activity in the housing market and soaring refinancings do not yet seem to have encouraged much faster net mortgage growth, and consumer credit still seems to be trending lower, even with an apparent respite in December. Indicators suggest a stabilization of credit availability, but no significant easing. In the January survey of senior loan officers, banks reported little change of lending terms and standards since last October and quality spreads in open markets have remained stable or narrowed some since the December FOMC meeting.

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

	Nov.	Dec.	Jan. <sup>p</sup>	QIV'91 to P Jan.
<u>Money and credit aggregates</u> <sup>1</sup>				
M1	14.3	9.2	15.0	12.9
M2	5.0	2.8	2.6	3.1
M3	2.6	1.8	.5	1.3
Domestic nonfinancial debt	5.3	3.7	--	--
Bank credit	6.4	4.8	1.9	3.6
<u>Reserve measures</u>				
Nonborrowed reserves <sup>2</sup>	23.8	22.2	13.6	18.2
Total reserves	20.4	24.1	14.1	18.5
Monetary base	6.5	9.3	12.1	10.3
Memo: (Millions of dollars)				
Adjustment plus seasonal borrowing	107	191	217	--
Excess reserves	892	979	1069	--

p - Preliminary estimate.

1. Data on the monetary aggregates incorporate the 1992 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. Reserve data incorporate adjustments for discontinuities associated with changes in reserve requirements.



Alternative Long-Run Strategies

(7) As background for consideration of the annual ranges for money and credit in 1992, the table on the following page presents three alternative long-run strategies for monetary policy through 1996, together with the associated consequences for output, prices, and resource utilization. The baseline path, strategy I, judgmentally extends the greenbook forecast for 1992 and 1993 out through 1996; as in the basic greenbook forecast, it assumes no fiscal stimulus package this year except for the change in tax withholding schedules. Strategies II and III posit somewhat tighter and easier monetary policies as indexed by M2 growth one percentage point below or above the baseline M2 path. The alternative scenarios for output, prices, and unemployment were obtained using simulations of the staff's econometric model of the U.S. economy to establish deviations around the baseline.<sup>4</sup>

(8) In each of the strategies, M2 growth over 1992 remains restrained relative to historical relationships with interest rates and income embodied in the staff's standard money demand equation by the same forces that have depressed M2 growth in recent years--constraints on the availability of depository credit, disruption of depositor rela-

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4. When compared with the long-run strategies presented in previous bluebooks, this table assumes smaller interest sensitivities of both real spending and money demand. Specifically, in view of the overhang of commercial real estate, nonresidential construction is assumed to follow a predetermined path, independent of interest rates. Also, given the apparently anemic response of M2 to the recent large declines in short-term interest rates and M2's opportunity cost--in part because of induced shifts to capital market instruments whose yields have become relatively more attractive--the opportunity-cost elasticity of M2 demand is assumed to be one-half of its econometrically estimated value. With respect to interest rates, the adjustment to the money demand elasticity reinforces the adjustment to the spending elasticity, resulting in a larger short-run response of interest rates to a change in M2 growth. Despite the damped response of spending to interest rates, these larger movements in interest rates produce more sizable near-term output effects for a given change in M2 growth than in past simulations.

tionships caused by RTC resolution activity, shifts out of M2 instruments to higher-yielding capital market instruments, and deleveraging. By 1993, minimal further downward shifting in M2 demand is foreseen. With earnings and capital positions substantially improved by then, banks are assumed to compete more aggressively for both loans and deposits. In addition, longer-term rates are projected to decline, at some point cutting into incentives for shifting into capital market instruments, and stronger balance sheets of households and businesses are restored. In the final four years, growth of M2 moves into conformity with what would be expected given the growth in nominal spending and movements in interest rates. It is assumed that the downward shift in M2 demand in the 1990 to 1992 period is not retraced through the forecast horizon, but rather that the level of M2 velocity has shifted up.

		<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>
			(QIV to QIV percent change)				
M2							
	I (baseline)	3.1	3-1/2	4-1/2	4-1/4	4-1/4	4-1/4
	II (tighter)		2-1/2	3-1/2	3-1/4	3-1/4	3-1/4
	III (easier)		4-1/2	5-1/2	5-1/4	5-1/4	5-1/4
CPI							
	I	2.9	3-1/2	2-3/4	2-1/4	2	1-7/8
	II		3-3/8	2-1/4	1-1/2	1	3/4
	III		3-5/8	3	3	3-1/8	3-1/4
Real GDP							
	I	.2	2	3-1/2	3	2-3/4	2-3/4
	II		1-1/4	2-3/4	2-1/2	3	3-1/2
	III		2-1/2	4-1/2	3-1/2	2-1/2	2
			(fourth-quarter level, percent)				
Unemployment rate							
	I	6.9	7-1/4	6-3/4	6-1/4	6	5-3/4
	II		7-1/2	7-1/4	7	6-3/4	6-1/4
	III		7	6-1/4	5-1/2	5-1/4	5-1/4

(9) After strengthening through 1993, real output growth in the baseline strategy I slows to a 2-3/4 percent rate by 1995, or about

one-half percentage point above potential real GDP growth. Although short-term nominal rates are flat over the entire forecast interval, real short-term interest rates rise from their current unsustainably low level, helping to slow output. By the end of the simulation, real short-term rates reach about 2 percent, their average level during the 1950s and 1960s. Output growth also is held down by a mildly contractionary overall fiscal position of federal, state and local governments. With the unemployment rate declining but remaining above the estimated 5-3/4 percent natural rate for most of the period, inflation gradually slows to around 2 percent in 1995 and 1996.

(10) The tighter policy of strategy II produces virtual price stability during the forecast period. The reduced rate of M2 expansion of this strategy raises nominal interest rates more quickly, thus pushing up real rates and putting upward pressure on the dollar's exchange value. This strategy damps the recovery over the 1992-1994 period in comparison with the baseline. As a slower rate of job creation keeps a larger and more sustained gap between actual unemployment and the natural rate, inflation declines more steeply. Since the staff model does not allow for credibility effects that may accompany the resolute pursuit of price stability, it is possible that this policy could put even greater and prompter downward pressure on both inflation expectations and actual inflation.

(11) Strategy III provides for a more vigorous recovery in output and jobs. Although the output path associated with this strategy remains somewhat subdued compared with the typical post-war recovery, given the current degree of slack in the economy the strategy makes no further progress in reducing inflation beyond the gains projected through 1993. Indeed, inflation accelerates slightly in the last two

years shown, since the unemployment rate drops to below the natural rate by late 1994. Later in the period, nominal income growth in excess of M2 growth is associated with somewhat higher nominal interest rates than are embodied in strategies I and II. Real short-term interest rates, however, remain at a lower level than in strategy I, placing downward pressure on the exchange value of the dollar.

(12) The next table presents inflation rates derived from two different sets of simulations of the  $P^*$  model, which has been augmented with a variable capturing the relative price of oil.<sup>5</sup> The simulations use the same M2 growth rates as in the exercise above. The upper panel shows simulation results based on the basic  $P^*$  model, which uses an historical average of velocity as an estimate of long-run equilibrium velocity,  $V^*$ .<sup>6</sup> In these simulations, inflation slows substantially under all three strategies to about a 2 percent rate in 1992. All of the strategies virtually eliminate inflation by 1993, and the first two produce price deflation thereafter. The predictions in the lower panel, which allow for shifts in  $V^*$ , are roughly similar to those presented in the previous table.<sup>7</sup> As in the earlier set of forecasts, strategies I and II allow for a continuing disinflation over the whole period, while strategy III permits the inflation process to reignite.

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5. Because a fixed-weight GDP deflator is not yet available, the simulation results have been translated from the GDP deflator now used in the  $P^*$  models to the CPI.

6. For a discussion of this model, see J. Hallman, R. Porter, and D. Small, "Is the Price Level Tied to the M2 Monetary Aggregate in the Long Run?," *American Economic Review*, (September, 1991), pp. 841-858.

7. The velocity shifts are equal in magnitude to the errors in the staff's standard model of the demand for M2, as detailed in the footnote to the table.

P\* Model Simulation of Inflation  
CPI  
(QIV to QIV percent change)

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>
With no adjustment for velocity shifts						
I (baseline)	2.9	2	1/2	-1/4	-1/4	1/4
II (tighter)		1-3/4	0	-1	-1-1/2	-1-1/4
III (easier)		2	3/4	1/2	3/4	1-3/4
With adjustments for velocity shifts <sup>1</sup>						
I (baseline)	2.9	3	2-3/4	2-3/4	2-3/4	2-1/2
II (tighter)		3	2-1/2	2-1/4	1-1/2	1
III (easier)		3-1/4	3-1/4	3-1/2	3-3/4	4

1. Adds 2-1/4 percent to the level of equilibrium M2 velocity in 1990, and 2-1/2 percent in 1991 and again in 1992. No further shifts in velocity are assumed beyond the current year.

Long-Run Ranges

(13) The table below presents three alternative sets of ranges for growth of money and credit over 1992. (Appendix B gives the ranges and outcomes for money and debt growth since 1979.) Alternative I represents the provisional ranges selected by the Committee last July, which are identical to those used in 1991. The staff projections for M2, M3, and debt all are in the lower halves of these ranges. Alternative II allows for a tighter policy stance, lowering each of the ranges 1/2 percentage point. This alternative could be interpreted as according with the more restrictive longer-run strategy II of the previous section, which involves money growth 1 percentage point slower than in the extended staff projection. Any of the alternatives would accommodate strategy III, but the thrust of that easier strategy would be particularly consistent with the 1/2-percentage-point increase in the ranges that define alternative III. An optional targeting approach, which involves linking this year's target ranges to last year's ranges rather than to the actual outcomes, also is discussed in this section.

(14) The staff is projecting that 3-1/2 percent M2 growth in 1992 will be consistent with the 5 percent increase of nominal GDP in the greenbook. The implied rise in velocity this year after no change in 1991, shown in chart 1, reflects the different behavior of interest rates expected for 1992. With nominal short-term interest rates assumed essentially flat in the greenbook projection, opportunity costs would

	Alt. I <sup>1</sup> (Provisional Ranges)	Alt. II	Alt. III	Memo:	
				Staff Forecast	Actual 1991
Growth from QIV '91 to QIV '92					
M2	2-1/2 to 6-1/2	2 to 6	3 to 7	3-1/2	3.1
M3	1 to 5	1/2 to 4-1/2	1-1/2 to 5-1/2	2	1.3
Debt	4-1/2 to 8-1/2	4 to 8	5 to 9	5-1/2	4.7
M1				11-3/4	8.0
Nominal GDP				5	3.2

1. Alternative I ranges are the same as those used for 1991.

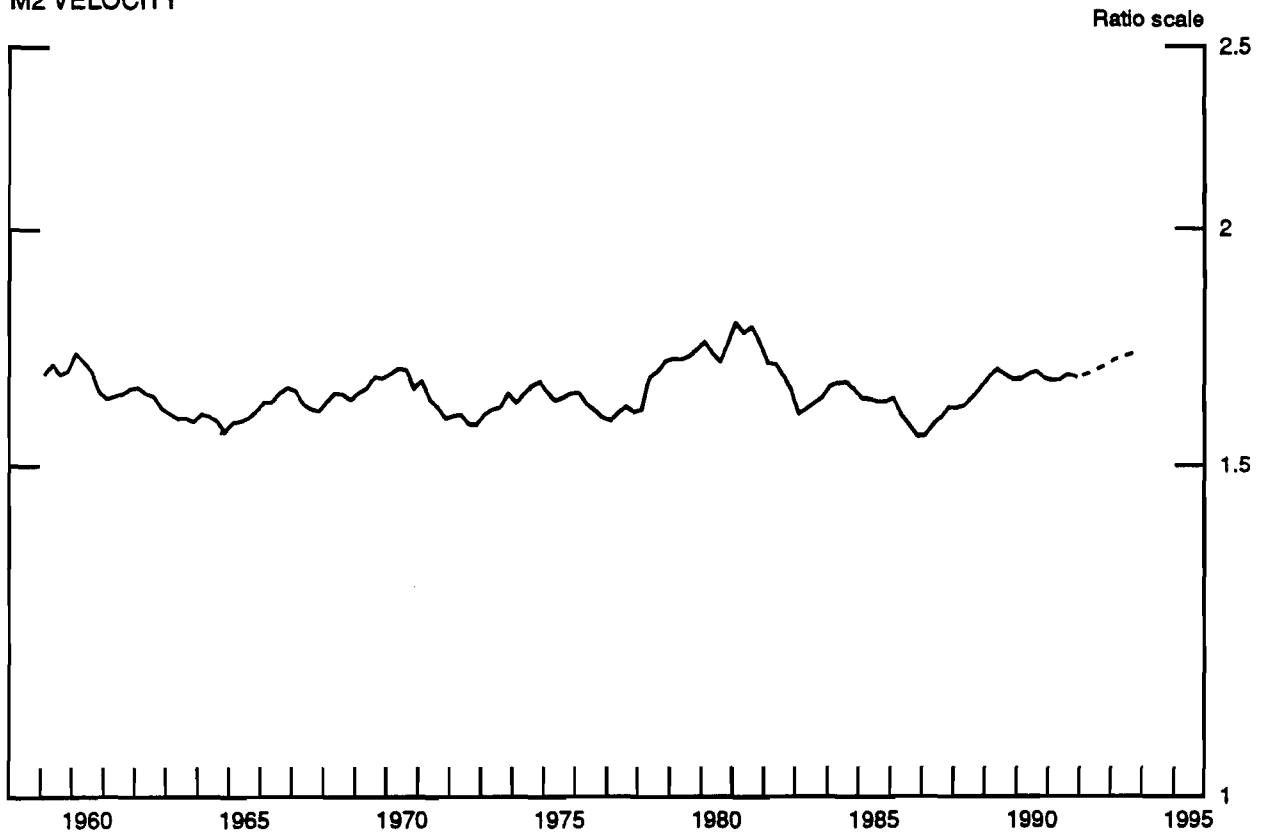
widen substantially in 1992 given the aggressiveness with which institutions are reducing deposit offering rates. The widening opportunity costs and decreasing impetus provided by previous policy easings would work to raise M2 velocity. By contrast, the sharp decline in opportunity costs in 1991 tended to hold down M2 velocity. The rise in velocity in 1992 also embodies another downward shift of money demand, similar in magnitude to that experienced last year.<sup>8</sup> Bank credit should remain subdued--reflecting continuing restraints on supply as well as borrower preferences for longer-term debt and equity--and with needs for funds limited, banks will continue to be relatively

8. The 1992 staff forecast for M2 is about 2-1/2 percentage points below that projected by the standard staff M2 model and about 1/2 percentage points below the model with a yield-curve variable.

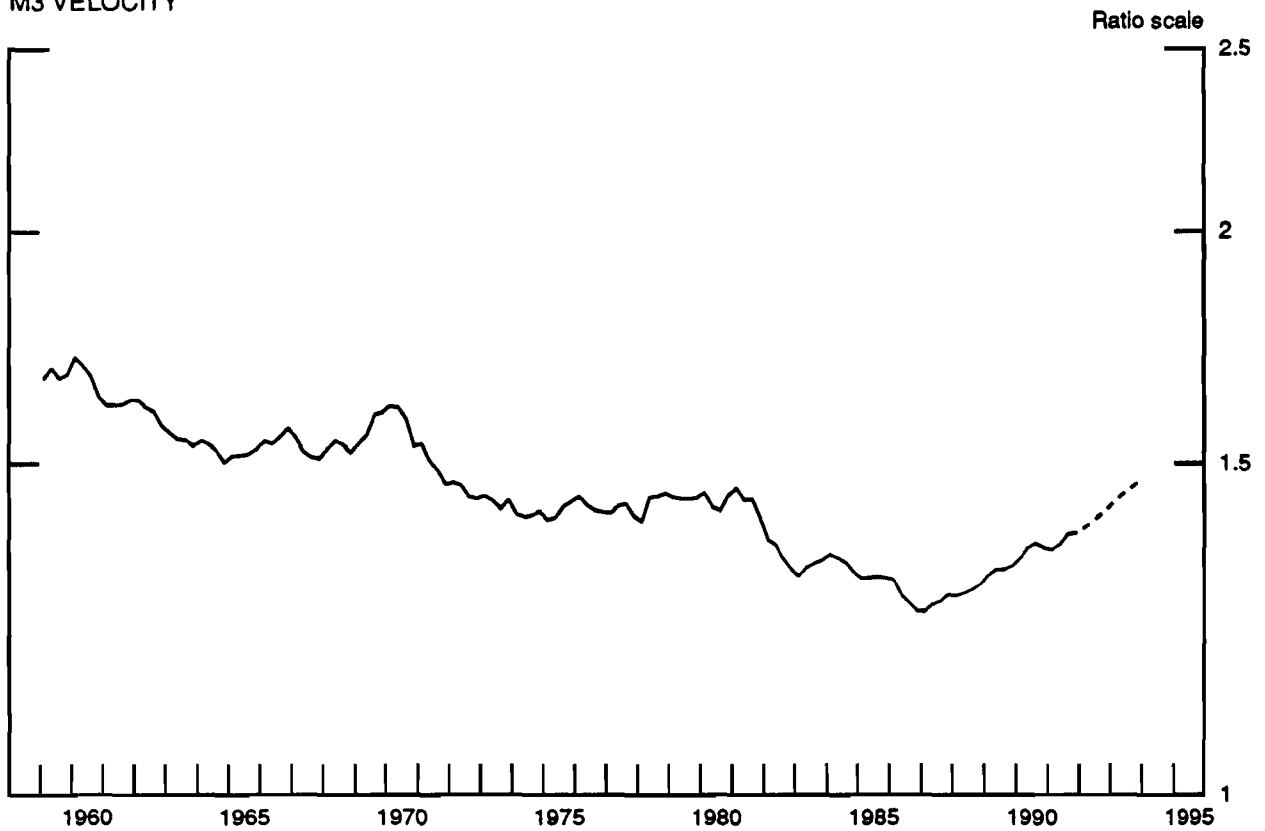
Chart 1

ACTUAL AND PROJECTED VELOCITY OF M2 AND M3\*

M2 VELOCITY



M3 VELOCITY



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



unaggressive in seeking to retain deposits.<sup>9</sup> Given the wide spreads between rates on deposits and rates on other investments and on consumer credit, households are facing conditions favoring the shifting of deposit funds into capital market instruments, the financing of expenditures out of deposits, and the paydown of outstanding debt. The public's demand for retail deposits probably also will be depressed again in 1992 by the activities of RTC and BIF, with the abrogation of deposit contracts and other disruptions to business relationships involved in the process of resolving thrifts and banks. Although depository credit is anticipated to fall this year, the decline is projected to be less than in 1991, reflecting some abatement in the shrinkage of the thrift industry. As a consequence, M3 is projected to rise 2 percent during 1992, somewhat faster than the 1-1/4 percent increase registered last year.

(15) The growth of domestic nonfinancial sector debt is expected to strengthen a little to 5-1/2 percent in 1992 from 4-3/4 percent in 1991. All of the acceleration is due to faster growth of federal debt. Nonfederal debt growth, at 2-3/4 percent, is projected to remain quite slow. Despite the anticipated pickup in spending, the wide spreads between borrowing and deposit rates at intermediaries that are restraining M2 relative to income also will be holding down debt. In addition, both households and businesses are likely to remain cautious in their use of debt in view of still-strained balance sheets, with

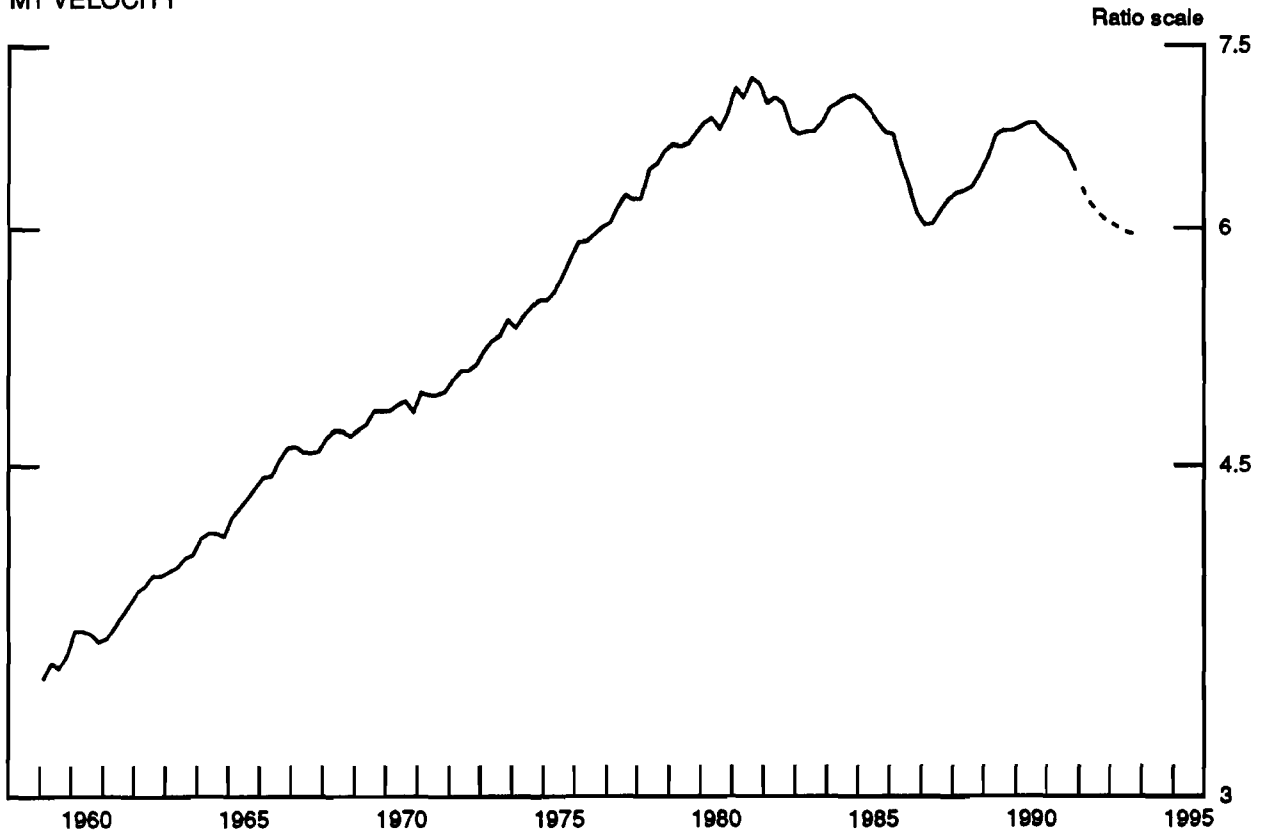
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9. Although banks have sharply reduced rates on liquid deposits, and further cuts are expected, depositors evidently find such accounts to be relatively attractive compared with retail CDs. In addition, the opportunity cost of holding demand deposits has fallen sharply, and compensating balance requirements have risen as earnings credit rates have declined. Consequently, the staff expects the growth of M2 to be concentrated in its liquid components, including M1, which is projected to expand 11-3/4 percent during 1992. As shown in chart 2, M1 velocity is projected to decline again this year. The monetary base would rise 8 percent in 1992.

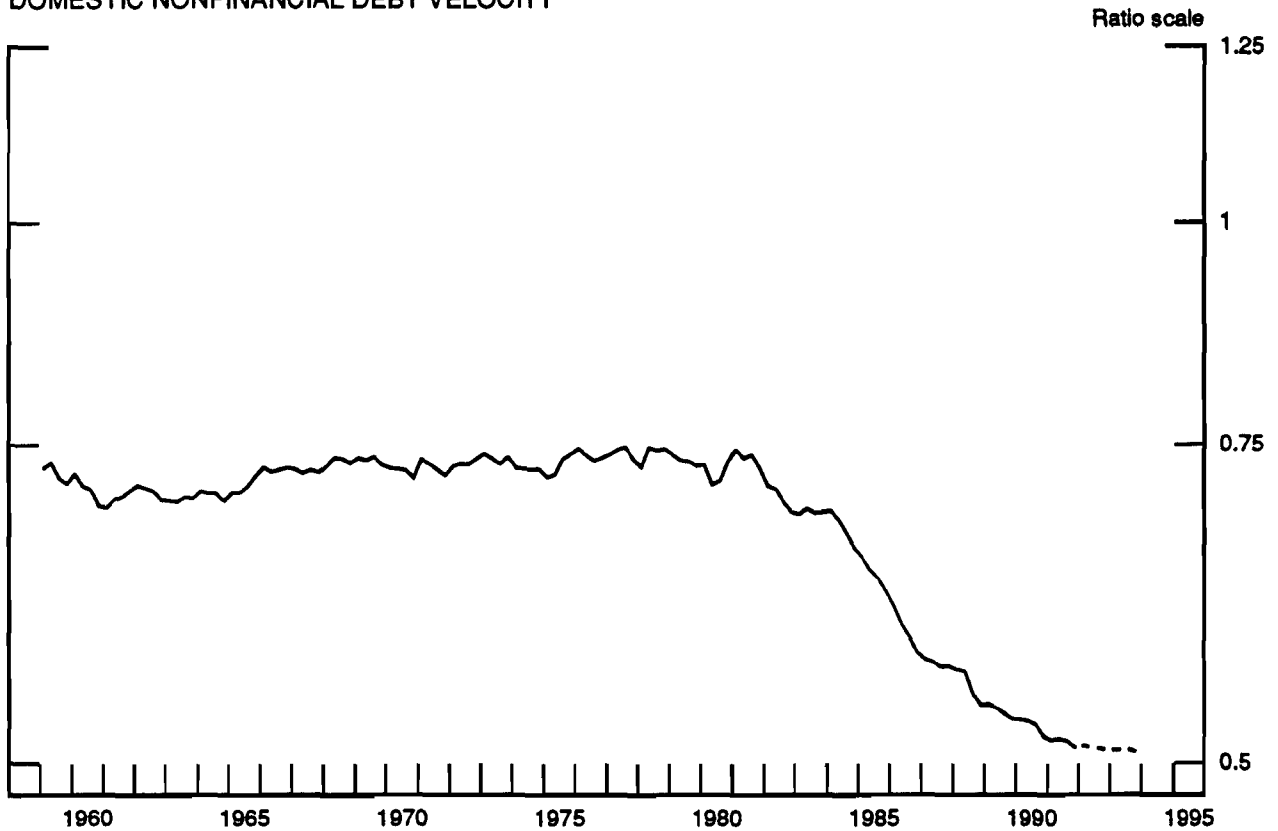
Chart 2

ACTUAL AND PROJECTED VELOCITY OF M1 AND DEBT\*

M1 VELOCITY



DOMESTIC NONFINANCIAL DEBT VELOCITY



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

businesses offering sizable volumes of equity to reduce reliance on borrowed funds. With state and local governmental units under fiscal pressure, some may borrow to finance budget imbalances, but the sector as a whole should continue to limit its borrowing. We do not anticipate added restraint on credit supplies. The financial condition of many banks has strengthened, but given the more stringent treatment of weak depository institutions embodied in the new banking legislation and the overhang of questionable assets at banks, any loosening of terms and standards for credit in 1992 is likely to be modest. Continued weakness in commercial real estate should keep life insurers and some other intermediaries under pressure as well, affecting especially lower-rated business borrowers with limited access to open markets for long-term finance. The restrained growth of debt relative to spending, along with a lengthening of debt maturities and refinancing at lower interest rates, is expected to alleviate strains on the financial positions of many households and businesses.

(16) As noted above, the staff projections for M2, M3, and domestic nonfinancial debt all are in the lower portions of their provisional 1992 or alternative I ranges, as shown in the table on page 13 and by the dots in charts 3 and 4. This configuration gives considerably greater scope for reducing than for raising interest rates should output or inflation deviate from the staff forecast, or should the Committee desire a different outcome. Indeed, given the staff's appraisal of spending propensities and money demand relationships, attaining the midpoint of the M2 range later this year implies a need for a prompt 3/4 percentage point easing in the federal funds rate, which would be expected to boost nominal GDP growth in 1992 from 5 to 5-1/2 percent. Moreover, the provisional ranges provide considerable

Chart 3  
Standard Cones

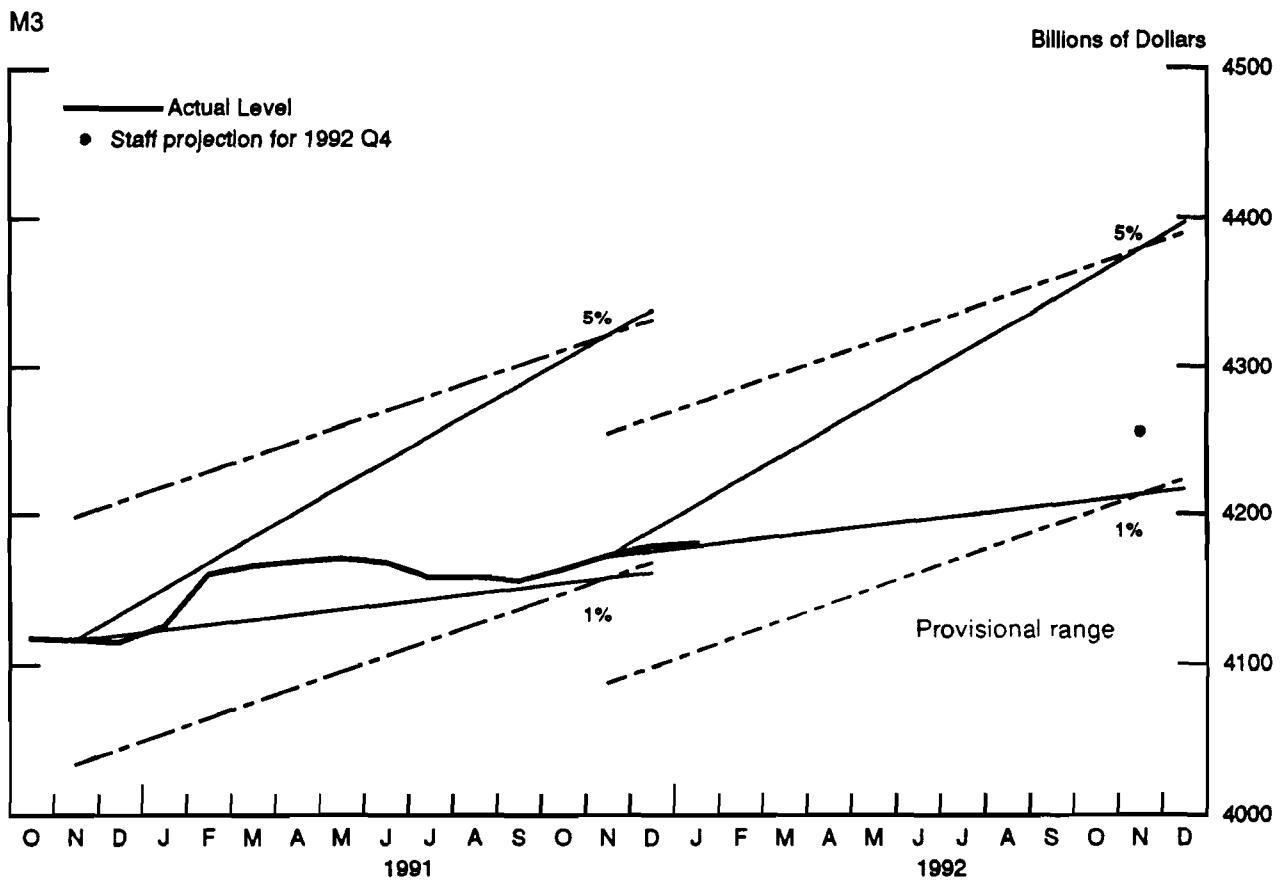
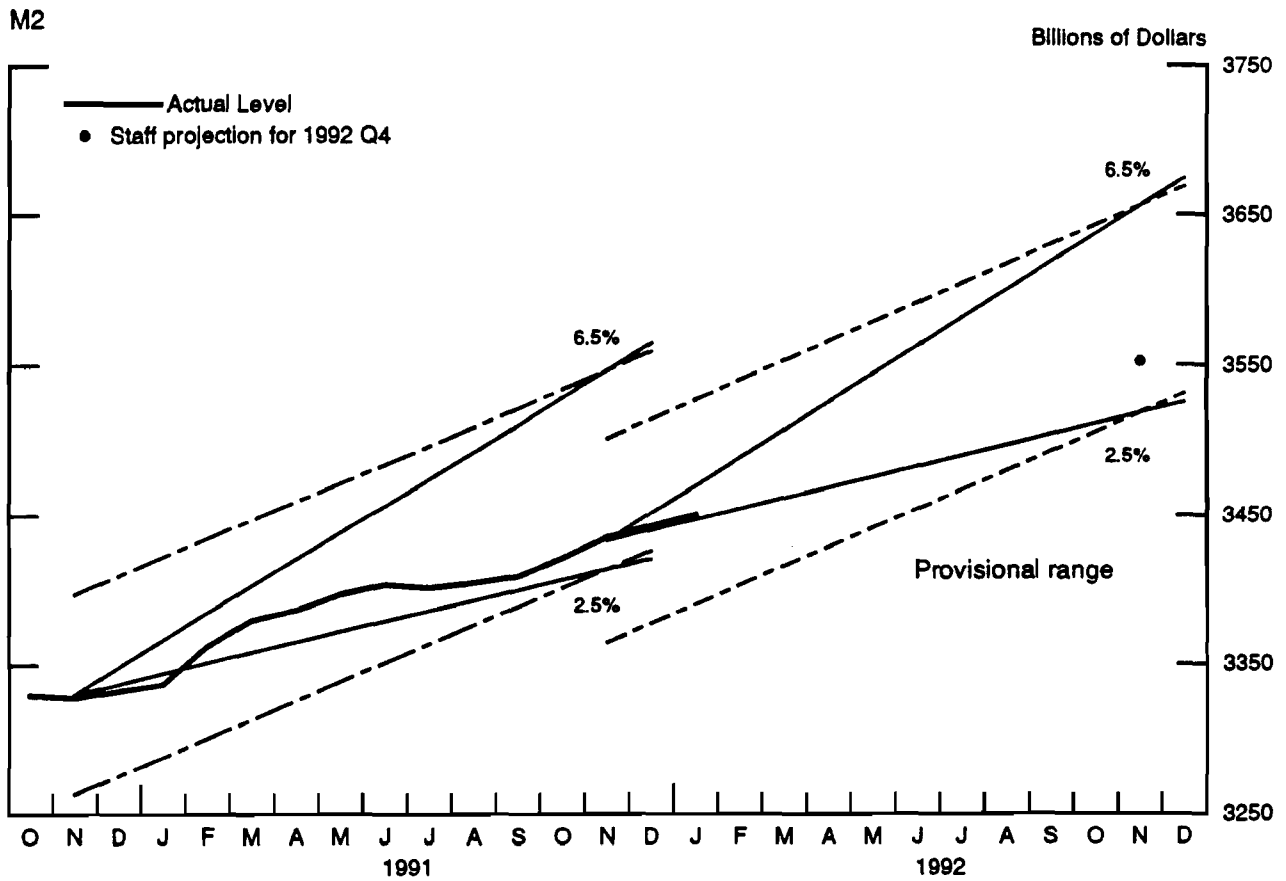
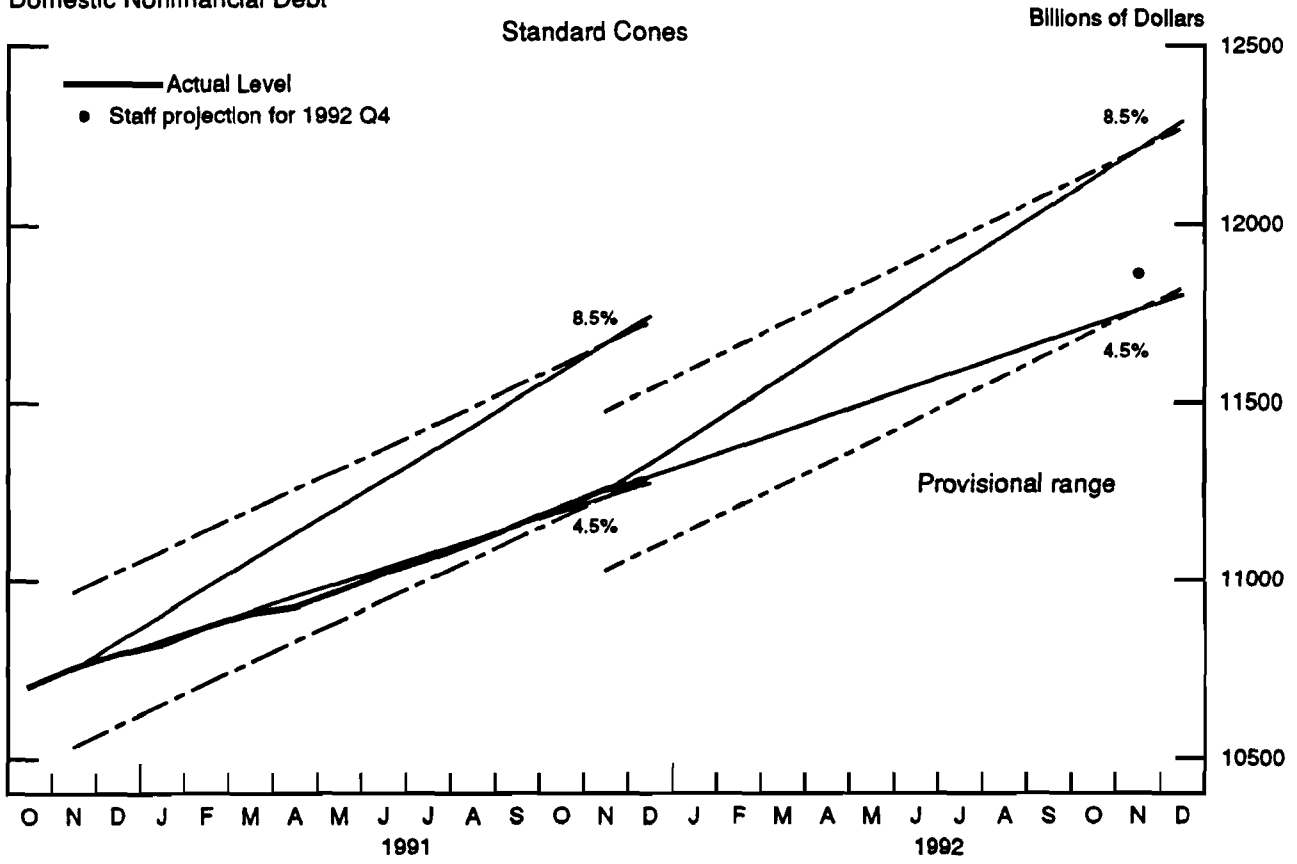
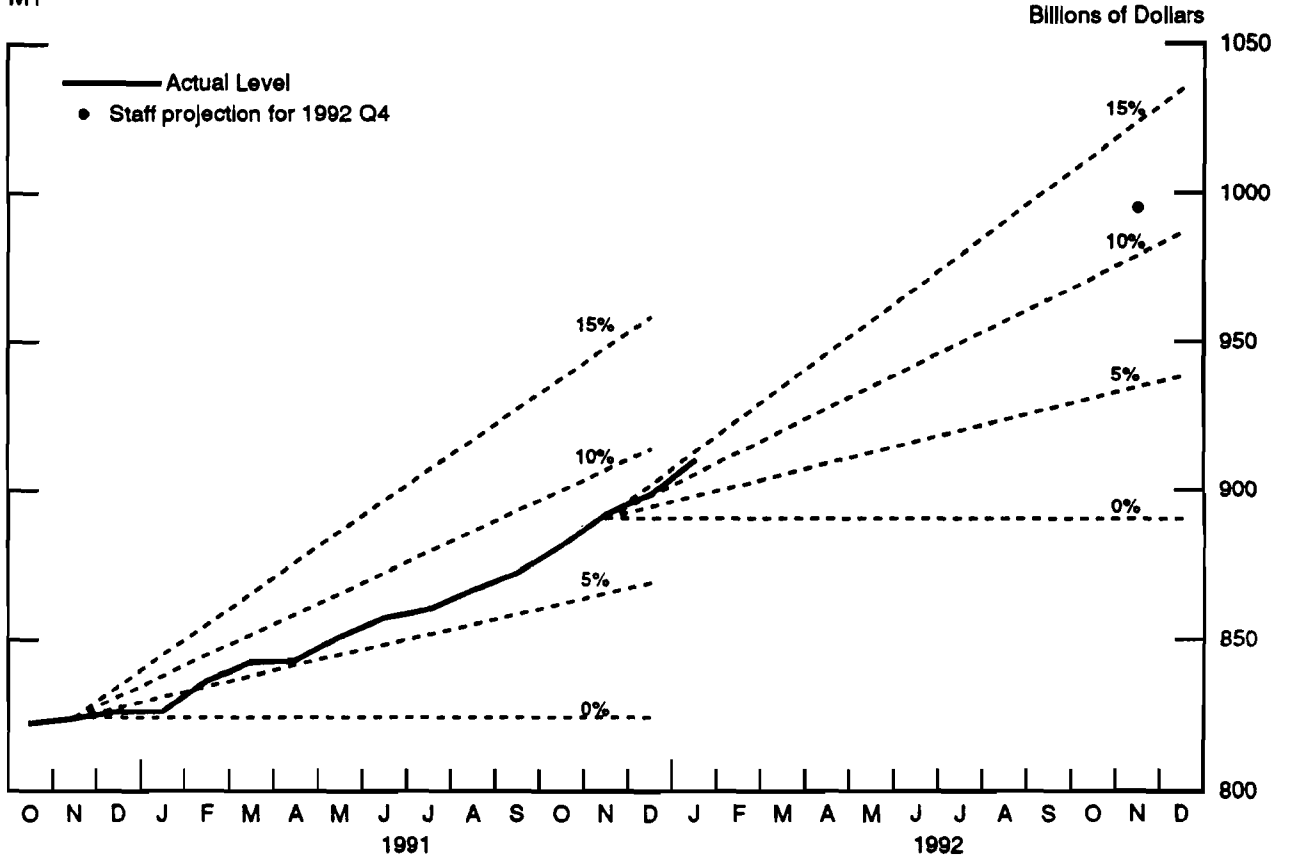


Chart 4

Domestic Nonfinancial Debt



M1



room for additional money growth should velocity not increase as much as projected by the staff. However, an even larger than projected shortfall in money demand, prompted say by especially aggressive reductions in deposit rates, might tend to breach the lower bound of the range without necessarily signalling weakness in the economy.

(17) If the Committee were concerned about this outcome, it might consider alternative II, which would reduce each of the ranges by 1/2 percentage point. In comparison with alternative I, this alternative would more nearly center expected growth of money and credit within the ranges. This alternative would allow more leeway for policy to be tightened, if necessary, during the year, and would emphasize the Committee's commitment to price stability. A disadvantage of this approach is that it may be seen as signalling a lack of concern with weak money and sluggish economic growth last year and appear inconsistent with the Federal Reserve's recent efforts to stimulate a resumption of economic growth.

(18) Alternative III would raise each of the ranges by 1/2 percentage point. It would convey a Committee intention to make up for some of the monetary shortfall last year in order to ensure a reasonably vigorous economic recovery. This alternative would be most appropriate if the Committee viewed the odds as still being tilted toward weaker economic performance than desired, or wanted appreciably more growth of nominal GDP growth in 1992 and 1993 than in the greenbook. Moreover, the higher range would allow for an abatement or even reversal of recent money demand shifts, which would lower M2 velocity relative to the staff forecast. With M2 expected to be only a little above the 3 percent lower bound of its alternative III range by March, adopting this alternative would suggest a strong predilection towards a near-term easing of monetary policy.

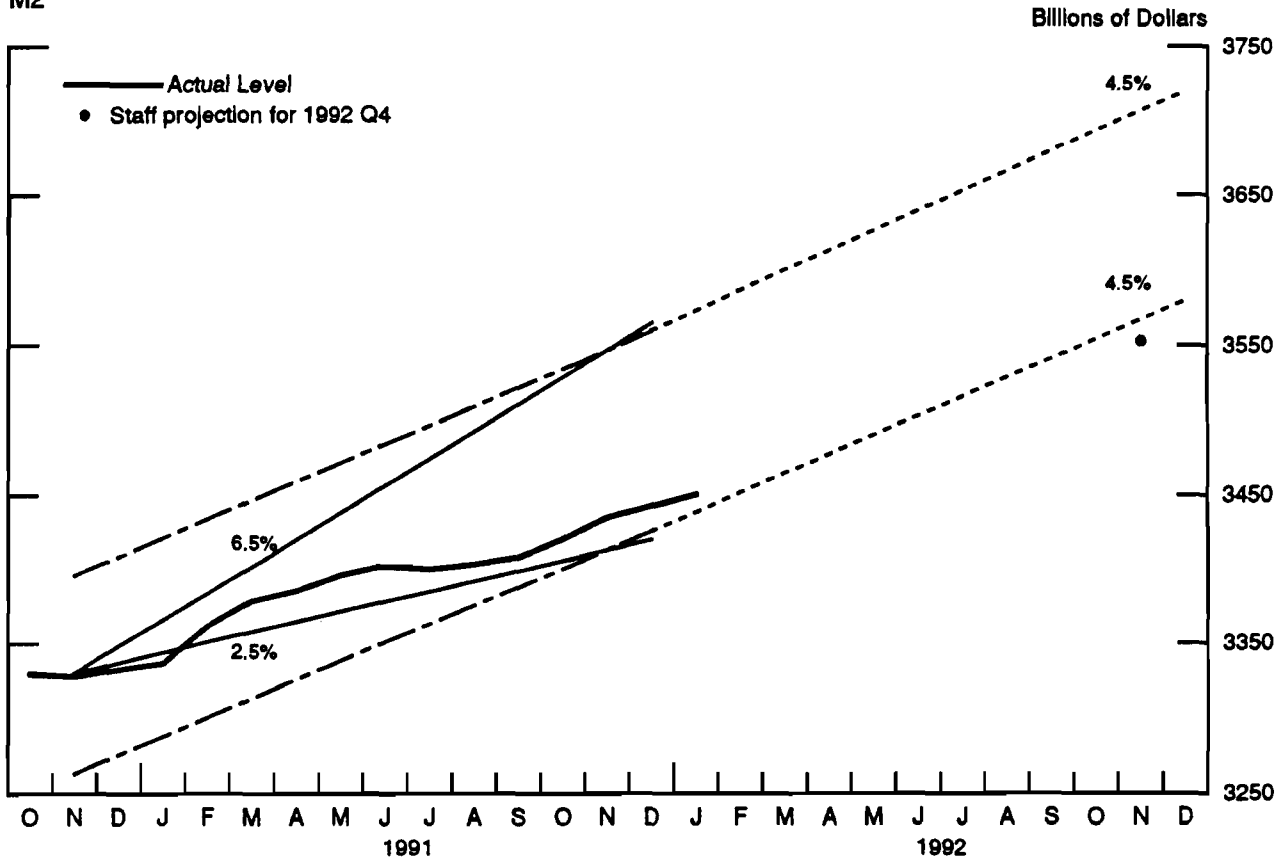
### Tunnel Option

(19) Another option that the Committee might consider would be to link target ranges for 1992 not to the actual outcome for 1991, but to last year's target ranges. Such an approach would be most appropriate if the Committee wanted to make up this year for last year's shortfall in money growth from the midpoints of the ranges. One possibility, depicted in chart 5, would set growth "tunnels," starting from the upper and lower ends of the 1991 ranges. The boundaries of the tunnels in this chart were constructed to represent growth at the midpoint of the provisional ranges--4-1/2 percent for M2 and 3 percent for M3. Both of the monetary aggregates currently are near the lower bounds of their respective tunnels. For M2 to finish 1992 at the midpoint of the range depicted in chart 5, the aggregate would need to expand about 6 percent over the year--about 1-1/2 percentage points to make up last year's shortfall from the midpoint plus the 4-1/2 percent growth consistent with expansion in the middle of the new tunnel. If the staff's assessment of money demand and underlying economic conditions is about right, such an outcome would require a substantial easing of reserve conditions early this year. The tunnel could be tilted downwards by selecting a lower growth rate; such an adjustment might better convey the Federal Reserve's continued commitment to the eventual achievement of price stability, but it probably would still require a marked easing of policy.

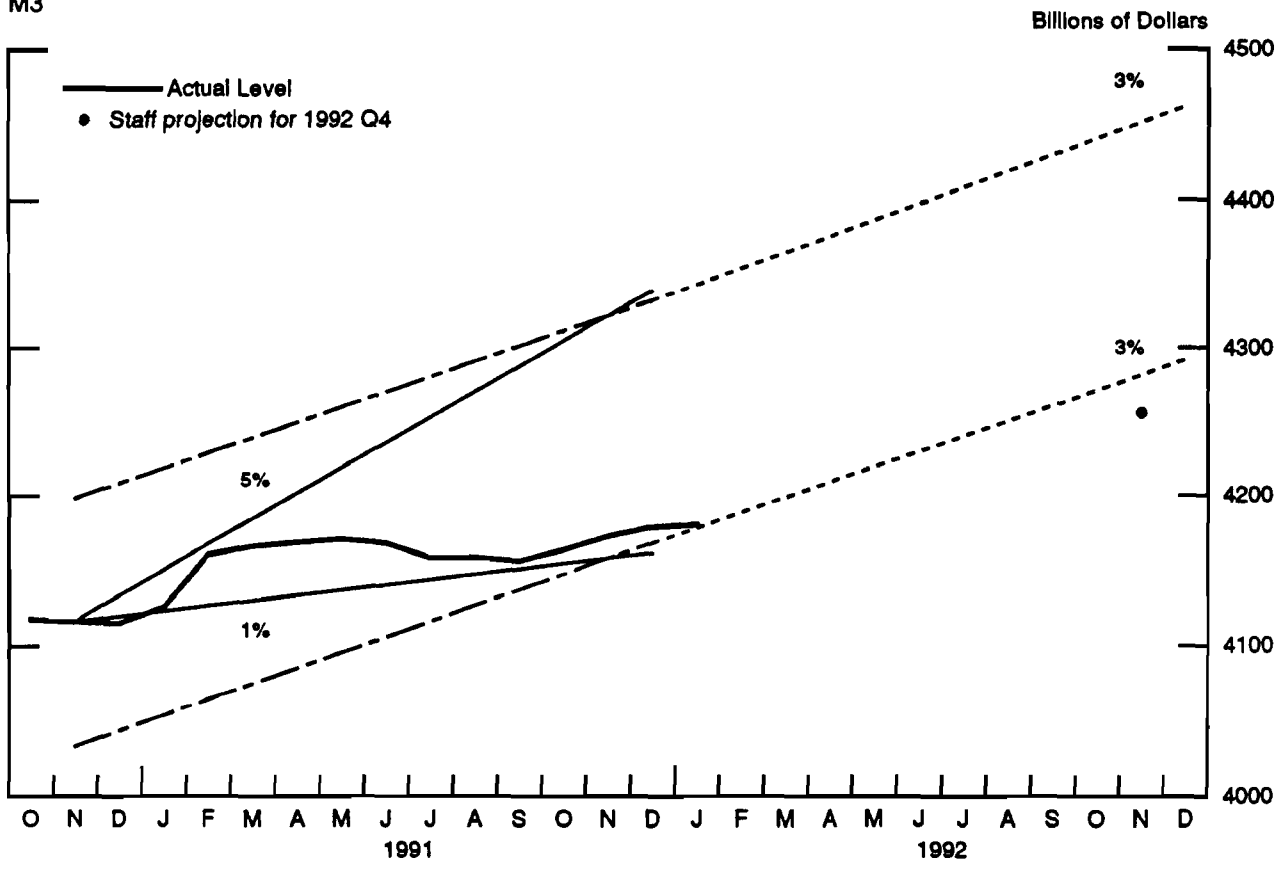
(20) Choice of tunnels carries a presumption of a multiyear strategy for monetary growth. In the past, this approach has been suggested as an element in a strategy that precommits money growth to relatively narrow ranges over many years. Such a strategy implies confidence that the targeted monetary aggregates and ultimate variables of interest to the Committee--such as prices or nominal GDP--move fairly

Chart 5  
Tunnel Option

M2



M3





closely together over the intermediate as well as long term. Under these conditions, making up shortfalls or overshoots in money from targets within a year or so would avoid inadvertent drift in the base for annual target ranges, better providing a nominal anchor to ensure the achievement and maintenance of the Committee's price objectives over time. Choice of this approach in 1992 would be appropriate if last year's shortfall in M2 were seen as associated with an undesirable shortfall of income or transitory shifts in the demand for money. This approach would be less attractive if there were concerns that money and the ultimate targets of the Committee did not always reliably move together, either because of appreciable interest elasticities of money demand or shifts in such demands. Reflecting these features of money demand, in the mid and late 1980s money growth well above the midpoints for a series of years and then well below was consistent with relatively damped variations in growth of nominal GDP. In the current situation, as financial flows are being redirected away from depository institutions, the relationship between spending and the liabilities of those institutions, which make up the bulk of M2 and M3, might be seen as remaining especially uncertain.

### Short-run Policy Alternatives

(21) Two short-run policy alternatives are presented below for Committee consideration. Under alternative B, federal funds would continue to trade around 4 percent, with adjustment plus seasonal borrowing averaging around \$100 million.<sup>10</sup> Under alternative A, the federal funds rate would decline to the 3-1/2 percent area in association with a reduction of the borrowing allowance to \$50 million.

(22) Projected monetary growth under the two alternatives is presented below. Under both alternatives, growth in M2 would strengthen a little over February and March from its December-January pace. Still, growth in M2 would be fairly sluggish, despite the sharp decline in money market rates near the end of last year; indeed, M2 velocity likely would move higher in the first quarter under both alternatives, as holders of M2, responding in part to large declines in offering rates on M2, continue to shift into capital market instruments and to restrain expansion of balance sheets overall. M2 would remain in the lower half of its provisional 1992 range through March under both alternatives, but under alternative A would be on a trajectory to move up in its range over the second quarter. An expected resumption of RTC resolution activity would reappear as a drag on M2 late in the current quarter and would have an even greater effect on M3. Partly as a consequence, M3 would remain in the lower half of its provisional range. In contrast, M1 is expected to continue to expand at a double-digit pace, propelled by further large gains in transaction deposits.

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10. Another technical upward adjustment to the borrowing specification might be called for in March to accommodate rising demands for seasonal credit. However, there is more uncertainty than usual about the extent of any pickup in view of the System's new floating-rate seasonal credit program; this program reduces the interest-rate incentive for banks to favor the seasonal program over other sources of funds.

	<u>Alt. A</u>	<u>Alt. B</u>
Growth from December to March		
M2	3-1/2	3
M3	1-3/4	1-1/2
M1	15-1/2	14-1/2
Growth from 1991Q4 to March		
M2	3-1/2	3-1/4
M3	2	1-3/4
M1	14-1/2	13-3/4

(23) The markets appear to have built in no policy moves in the period just ahead and thus unchanged reserve market conditions under alternative B should have no effect on interest rates. The course of interest rates thus will depend on developments in fiscal policy and the economy. In the former area, investors will be assessing the implications of emerging agreements for the longer-term fiscal outlook. Interest rates could move lower should incoming economic indicators, as in the staff economic forecast, continue to point to a flat economy in the near-term and further gains on inflation. If rates were to edge down, the dollar might come under some downward pressure, but it is not expected to change significantly under this alternative.

(24) Short-term interest rates would fall by nearly the 50 basis point decline in the federal funds rate under alternative A. With the funds rate around or perhaps a little below most assessments of the underlying inflation rate, market participants might see such a policy move as unsustainable, thereby limiting the decline in bond rates. The greater prospects for calls on corporate bonds and prepayments on mortgages would tend to widen spreads on such instruments relative to Treasury yields. The exchange value of the dollar would fall under this alternative as U.S. money market interest rates dropped still further below those of our major trading partners.

Alternative Levels and Growth Rates for Key Monetary Aggregates

	M2		M3		M1	
	Alt. A	Alt. B	Alt. A	Alt. B	Alt. A	Alt. B
Levels in billions						
1991 October	3420.8	3420.8	4162.8	4162.8	880.9	880.9
November	3435.0	3435.0	4171.9	4171.9	891.4	891.4
December	3442.9	3442.9	4178.3	4178.3	898.2	898.2
1992 January	3450.5	3450.5	4180.0	4180.0	909.4	909.4
February	3465.7	3464.3	4191.8	4190.8	923.6	922.8
March	3474.3	3469.9	4197.1	4194.3	933.3	931.0
Monthly Growth Rates						
1991 October	4.3	4.3	2.2	2.2	12.2	12.2
November	5.0	5.0	2.6	2.6	14.3	14.3
December	2.8	2.8	1.8	1.8	9.2	9.2
1992 January	2.6	2.6	0.5	0.5	15.0	15.0
February	5.3	4.8	3.4	3.1	18.7	17.7
March	3.0	2.0	1.5	1.0	12.6	10.7
Quarterly Ave. Growth Rates						
1991 Q1	3.5	3.5	3.4	3.4	5.2	5.2
Q2	4.3	4.3	1.8	1.8	7.3	7.3
Q3	1.1	1.1	-1.2	-1.2	7.5	7.5
Q4	3.3	3.3	1.4	1.4	11.1	11.1
1992 Q1	3.6	3.3	1.8	1.7	14.3	13.9
Sep 91 to Dec 91	4.0	4.0	2.2	2.2	12.0	12.0
Nov 91 to Mar 92	3.4	3.1	1.8	1.6	14.1	13.3
Dec 91 to Mar 92	3.6	3.1	1.8	1.5	15.6	14.6
Q4 90 to Q4 91	3.1	3.1	1.3	1.3	8.0	8.0
Q4 90 to Dec 91	3.1	3.1	1.4	1.4	8.3	8.3
Q4 91 to Jan 92	3.1	3.1	1.3	1.3	12.9	12.9
Q4 91 to Feb 92	3.8	3.7	2.0	1.9	15.0	14.7
Q4 91 to Mar 92	3.6	3.2	1.9	1.7	14.5	13.8
1991 Target Ranges:	2.5 to 6.5		1.0 to 5.0			
1992 Target Ranges:	2.5 to 6.5		1.0 to 5.0			
(Tentative)						

Chart 6  
**ACTUAL AND TARGETED M2**

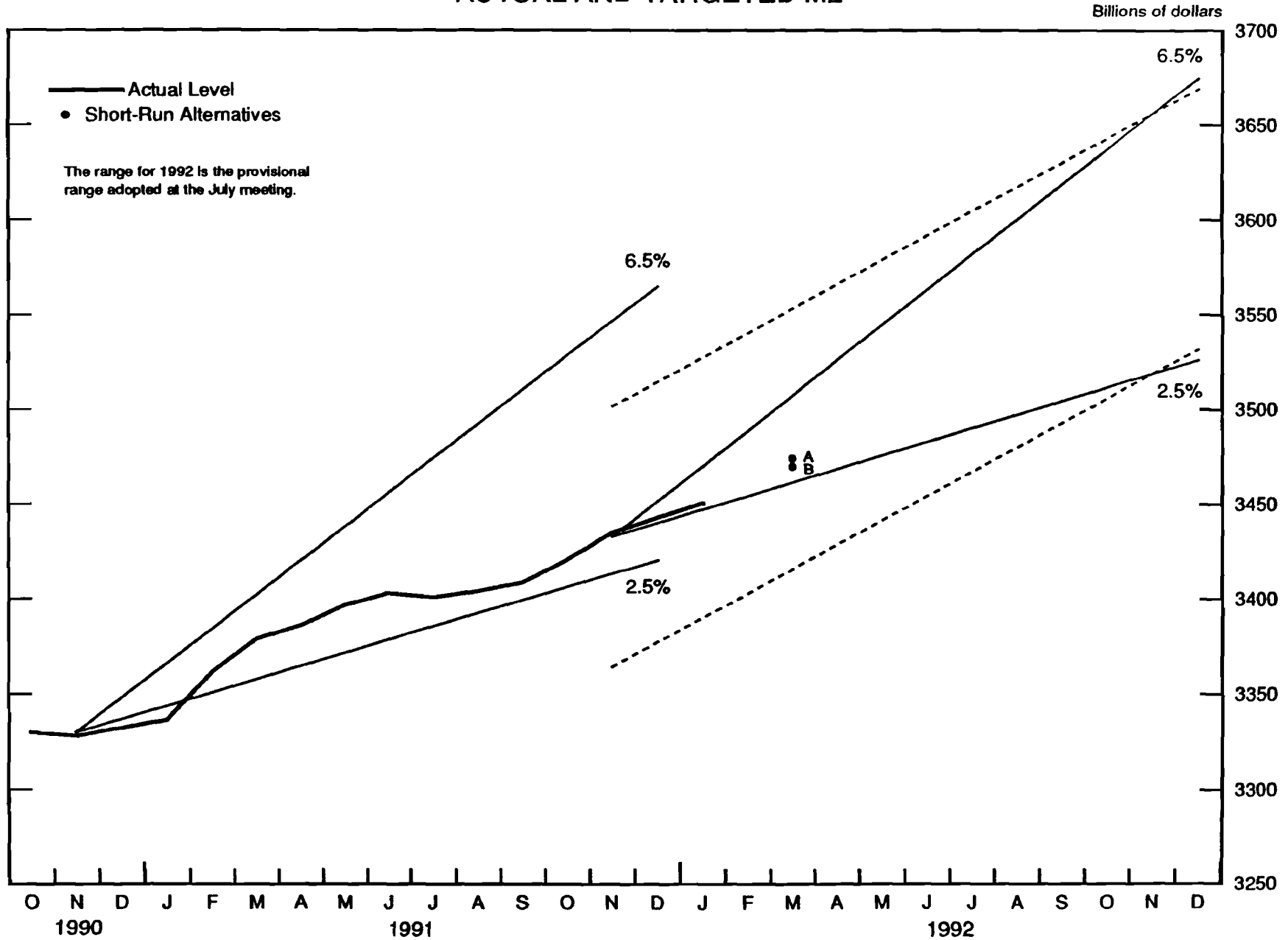


Chart 7  
**ACTUAL AND TARGETED M3**

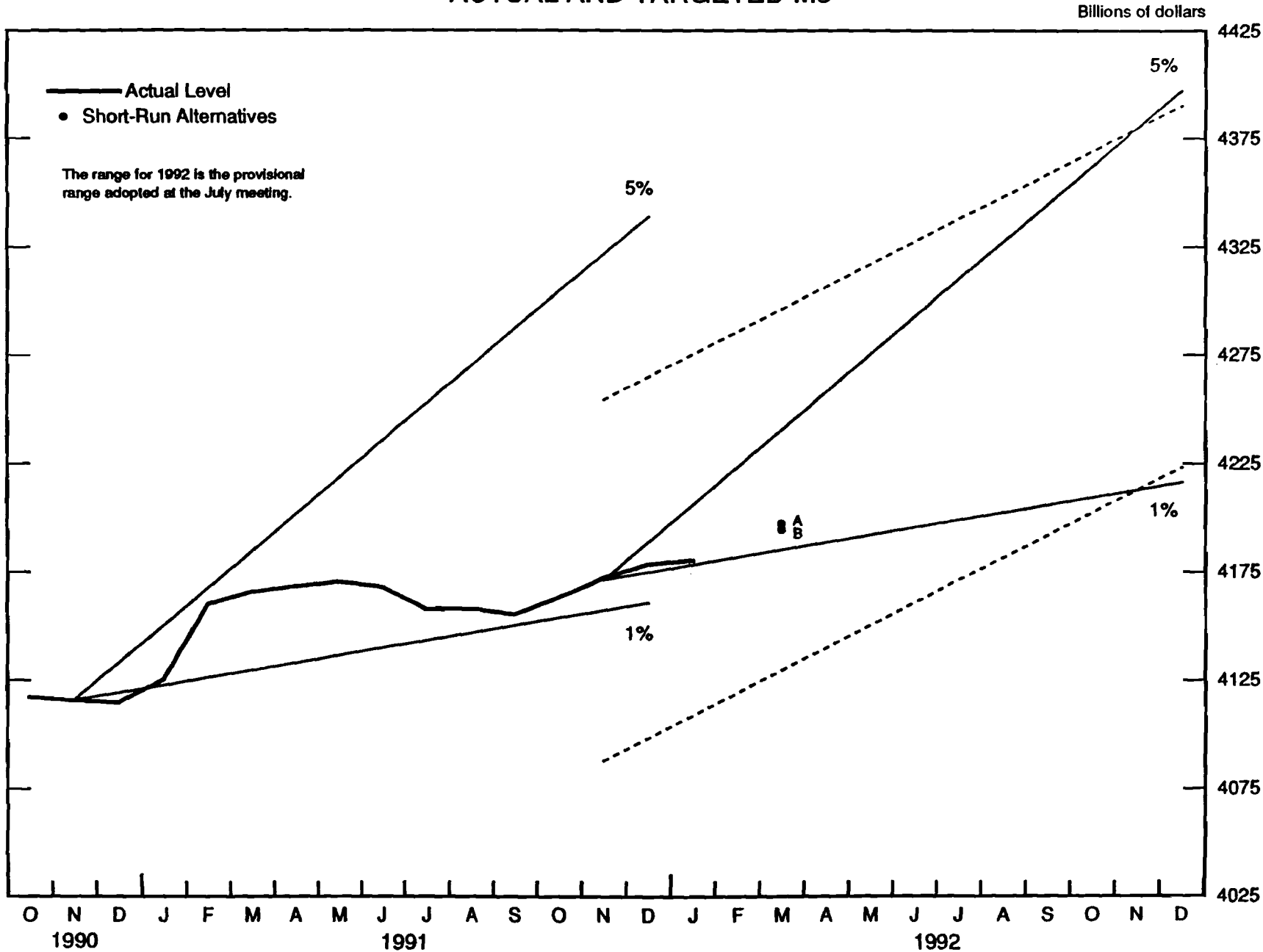


Chart 8  
M1

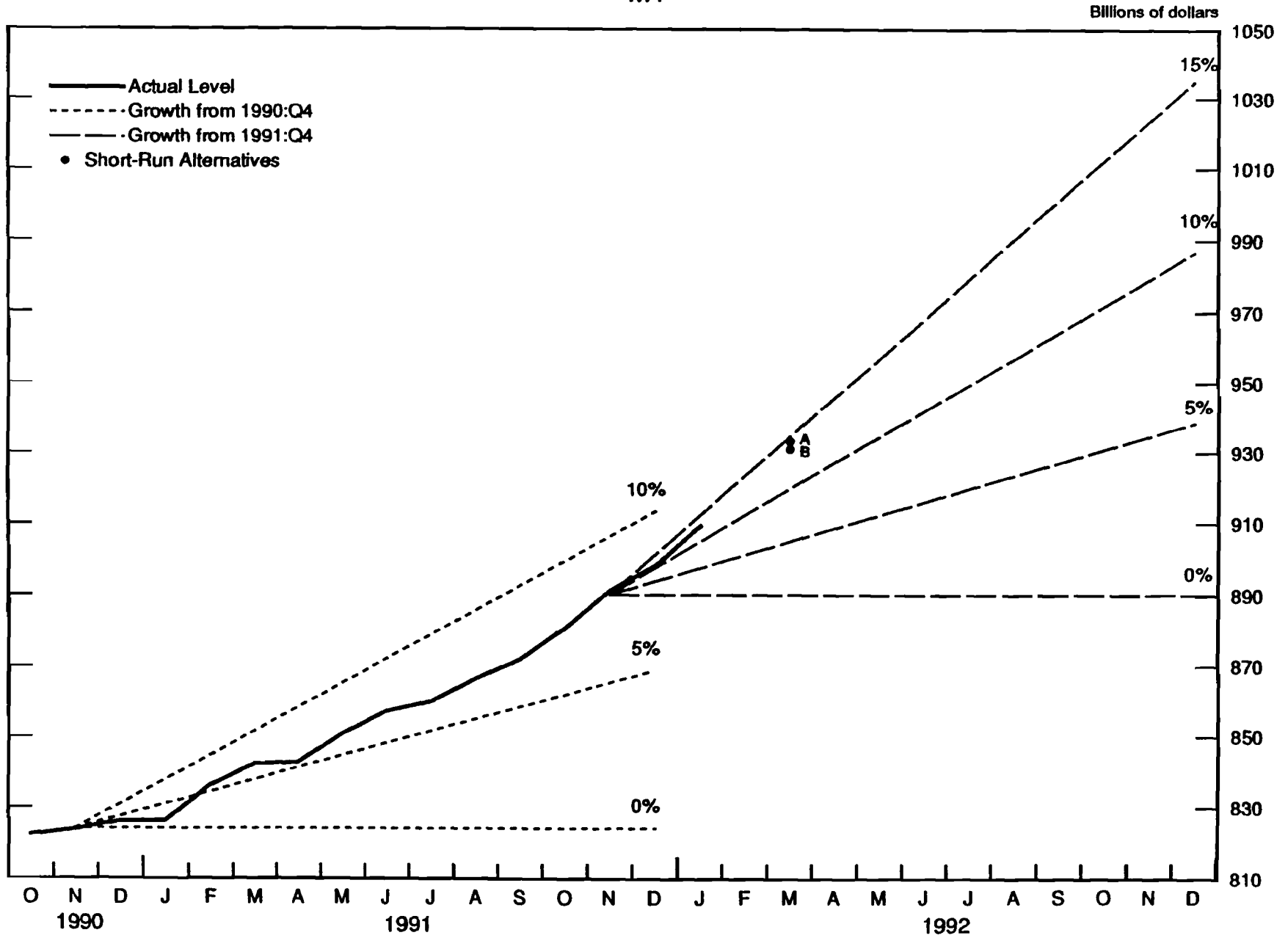
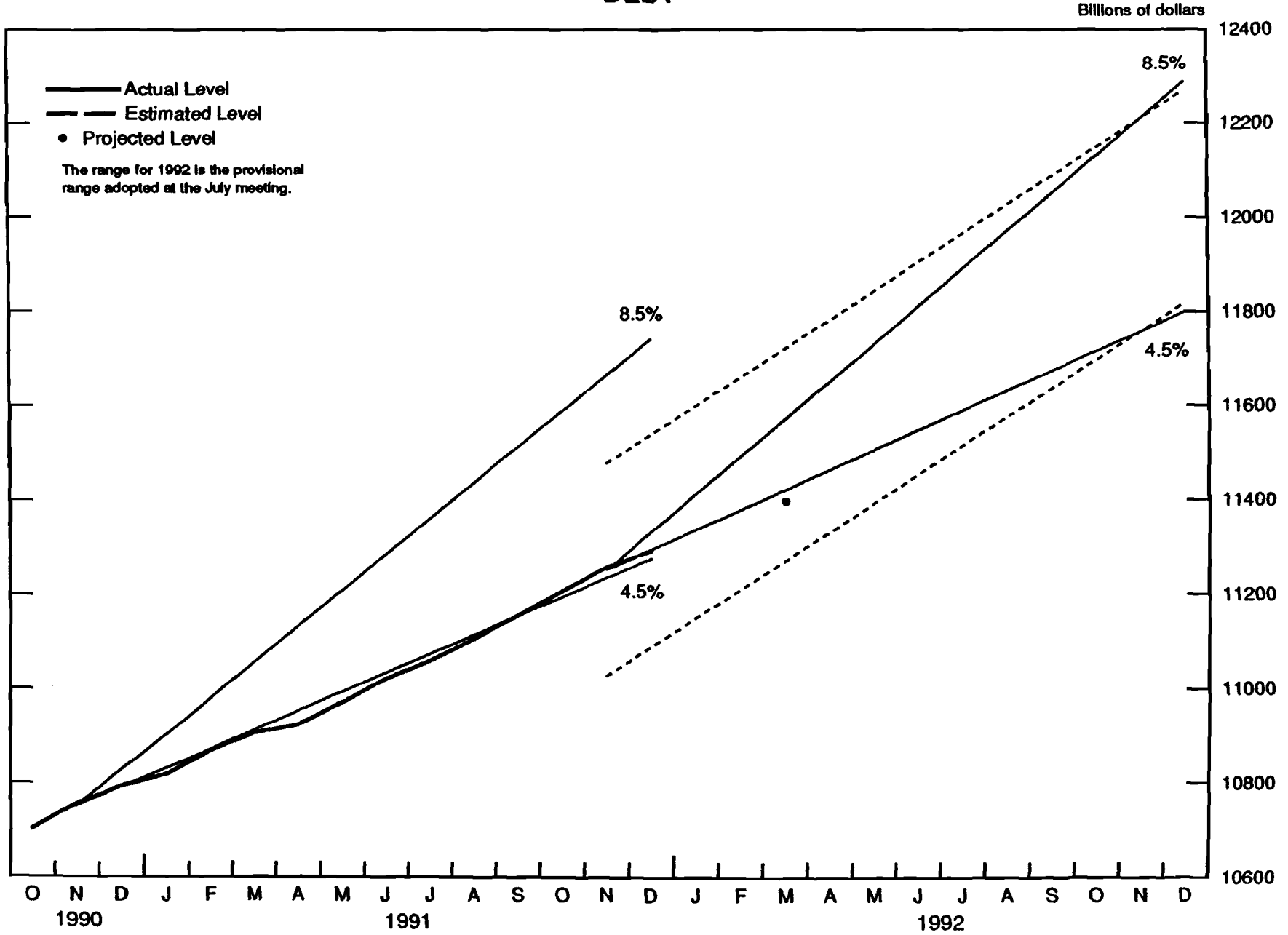


Chart 9  
DEBT





(25) Even with a pickup over February and March, M2 would expand at only a 3 percent annual rate over the December-to-March period under alternative B, below the pace over the last three months of 1991. All of the growth in M2 over coming months would come from the 14-1/4 percent rate of expansion projected in its M1 component.<sup>11</sup> Small denomination time deposits are seen as continuing to run off rapidly over the remainder of the quarter. Recent aggressive cuts in rates on liquid deposits, however, will tend to limit the bulge in such accounts, deflecting some funds outside M2 as well as to other M2 components.<sup>12</sup> Under the easier conditions of alternative A, M2 would be expected to be expanding at a percentage point faster pace in March and into the next quarter; all of the added growth in M2 would occur in M1, other liquid deposits, and M2 money funds.

(26) M3, under alternative B, would expand at only a 2 percent annual rate over February and March, after even slower growth in December and January. Acting to buoy M3, in addition to the February-March pickup in M2, should be further inflows to institution-only money funds, which have managed to damp the decline in their returns relative to short-term market rates by extending maturities. However, sluggish expansion in bank credit and an increase in RTC activity over the quarter will continue to restrain this aggregate. Under alternative A, growth in M3 would strengthen slightly more, to a 2-1/2 percent pace. Under either alternative, activity in bond and mortgage markets would remain brisk. However, such activity will continue to

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11. The expected strength in transactions components results in projected growth in required and total reserves at annual rates of about 17-1/2 percent from December to March, while the monetary base would expand at a 10-1/2 percent rate.

12. Contacts with certain banks that recently had slashed rates on such deposits, though, indicate that they envision only minor effects on balances of longstanding customers.

be directed mostly toward reducing borrowing costs by calling or refinancing existing debt. Indeed, businesses are expected to pay down debt again in the first quarter as capital spending remains weak and equity issuance strong. Although home mortgage borrowing is expected to firm in response to the reduced loan rates and some pickup in housing activity, household debt growth is expected to stay anemic as consumer loans contract. Overall debt growth, at a 3-3/4 percent rate from the fourth quarter of 1991 to March, will be boosted by faster growth in federal debt than in December and January. However, such growth would leave this aggregate below the lower end of its monitoring range.

Directive Language

(27) Presented below for Committee consideration is draft language relating to the Humphrey-Hawkins ranges for 1992 and to the operating paragraph for the intermeeting period.

1992 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 at THIS its meeting ESTABLISHED in July reaffirmed the ranges it had established in February for growth of M2 and M3 of      TO      2-1/2 to 6-1/2 percent and      TO      1 to 5 percent, respectively, measured from the fourth quarter of 1991 1990 to the fourth quarter of 1992 1991. The monitoring range for growth of total domestic nonfinancial debt also was SET maintained at      TO      4-1/2 to 8-1/2 percent for the year. For 1992, on a tentative basis, the Committee agreed in July to use the same ranges as in 1991 for growth in each of the monetary aggregates and debt, measured from the fourth quarter of 1991 to the fourth quarter of 1992. With regard to M3, the Committee anticipated that the ongoing restructuring of thrift depository institutions would continue to depress the growth of this aggregate relative to spending and total credit. 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 SLIGHTLY/maintain/INCREASE SLIGHTLY the existing degree of pressure on reserve positions. 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, (SOMEWHAT) slightly greater reserve restraint might (WOULD) or somewhat (SLIGHTLY) lesser reserve restraint (MIGHT) would 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 DECEMBER November through March at annual rates of about \_\_\_ AND \_\_\_ 3 and 1-1/2 percent, respectively.

## APPENDIX A

### MONEY STOCK REVISIONS

Measures of the money stock have been revised to incorporate 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 to the public, tentatively planned for February 13.

#### Benchmark Revisions

Data for the monetary aggregates have been benchmarked using call reports through September 1991 and other sources. The benchmark revisions boosted the growth rate of M2 by nearly 1/2 percentage point over 1991, but had no effect on the annual growth rate of M3.

The benchmark incorporates corrections for the previous misreporting of brokered time deposits by several large banks. Previously, these deposits had been misclassified as large time deposits, rather than as small time deposits. The reclassification of these deposits boosted both the level and growth rate of M2 in 1991, without affecting M3 as a whole. The benchmark also resulted in substantial upward revisions to IRA/Keogh accounts at credit unions since mid-1990. Because these accounts are netted out of small time deposits, the effect was to lower non-M1 M2; however, this effect was more than offset by upward revisions in other components of M2. In addition, there were some other minor downward revisions to non-M2 M3.

#### Seasonal Factor Revisions

Seasonal factors for the monetary aggregates have been revised using the X-11 ARIMA procedure applied to data through preliminary estimates for January 1992. Owing to changes in the deposit reports (FR2900) effective September 17, 1991, the series for savings deposits and MMDAs have been combined. To be consistent with our previous seasonal adjustment procedure, seasonal factors for this combined series, beginning with January 1990, have been derived from data aggregated over banks and thrifts. Up to December 1989, each of the four series--savings deposits at banks, savings deposits at thrifts, MMDAs at banks and MMDAs at thrifts--continues to be seasonally adjusted individually. Through that date, the four adjusted bank and thrift series are then summed to yield the seasonally adjusted total savings deposits and MMDAs.

Overall, the revisions to seasonal factors had little effect on the broad pattern of growth during 1991, though some growth was redistributed from the first half to the second half of the year. For example, on a second-quarter to fourth-quarter basis, the revised seasonal factors raised M1 growth by 0.5 percent, M2 growth by 0.3 percent, and M3 growth by 0.4 percent, while the growth rates over the first half of 1991 were reduced by like amounts.

Appendix 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>					
1990--Oct.	-0.9	-0.9	0.0	0.3	-0.3
Nov.	2.2	3.1	-0.9	0.0	-0.9
Dec.	3.4	3.1	0.3	-0.3	0.6
1991--Jan.	0.1	1.9	-1.8	-0.4	-1.4
Feb.	14.5	14.1	0.4	0.6	-0.2
Mar.	8.6	9.5	-0.9	0.2	-1.1
Apr.	0.7	-1.3	2.0	0.3	1.7
May	11.5	13.5	-2.0	-0.1	-1.9
June	9.0	9.6	-0.6	0.4	-1.0
July	3.9	1.5	2.4	0.1	2.3
Aug.	9.1	9.2	-0.1	0.0	-0.1
Sept.	7.6	5.4	2.2	-0.2	2.4
Oct.	12.2	12.6	-0.4	0.1	-0.5
Nov.	14.3	15.3	-1.0	0.0	-1.0
Dec.	9.2	8.6	0.6	0.0	0.6
1992--Jan.	15.0	17.0	-2.0	0.0	-2.0
<u>Quarterly</u>					
1990--QIV	3.8	3.4	0.4	0.2	0.2
1991--QI	5.2	5.9	-0.7	-0.1	-0.6
QII	7.3	7.3	0.0	0.2	-0.2
QIII	7.5	6.8	0.7	0.1	0.6
QIV	11.1	10.9	0.2	0.0	0.2
<u>Semi-Annual</u>					
1991--QIV '90 to QII '91	6.3	6.7	-0.4	0.1	-0.5
QII '91 to QIV '91	9.4	8.9	0.5	0.0	0.5
<u>Annual (QIV TO QIV)</u>					
1990	4.2	4.2	0.0	0.0	0.0
1991	8.0	7.9	0.1	0.1	0.0

Appendix 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)	<u>Benchmark</u>	<u>Seasonals</u>
	(1)	(2)	(3)	(4)	(5)
<u>Monthly</u>					
1990--Oct.	0.9	1.0	-0.1	0.2	-0.3
Nov.	-0.6	-0.3	-0.3	-0.1	-0.2
Dec.	1.6	1.5	0.1	-0.2	0.3
1991--Jan.	1.5	1.3	0.2	-0.4	0.6
Feb.	9.0	8.4	0.6	0.9	-0.3
Mar.	6.1	7.4	-1.3	0.2	-1.5
Apr.	2.5	3.0	-0.5	-0.4	-0.1
May	3.8	4.2	-0.4	0.1	-0.5
June	2.3	1.9	0.4	0.2	0.2
July	-0.8	-3.1	2.3	1.2	1.1
Aug.	1.1	0.6	0.5	0.1	0.4
Sept.	1.6	0.6	1.0	0.4	0.6
Oct.	4.3	3.0	1.3	1.7	-0.4
Nov.	5.0	5.1	-0.1	0.1	-0.2
Dec.	2.8	2.5	0.3	0.1	0.2
1992--Jan.	2.6	2.1	0.5	0.0	0.5
<u>Quarterly</u>					
1990--QIV	2.1	2.0	0.1	0.1	0.0
1991--QI	3.5	3.4	0.1	0.1	0.0
QII	4.3	4.7	-0.4	0.0	-0.4
QIII	1.1	0.0	1.1	0.5	0.6
QIV	3.3	2.6	0.7	0.7	0.0
<u>Semi-Annual</u>					
1991--QIV '90 to QII '91	3.9	4.1	-0.2	0.1	-0.3
QII '91 to QIV '91	2.2	1.3	0.9	0.6	0.3
<u>Annual (QIV TO QIV)</u>					
1990	3.8	3.8	0.0	0.0	0.0
1991	3.1	2.7	0.4	0.4	0.0

Appendix 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>					
1990--Oct.	0.5	0.1	0.4	0.3	0.1
Nov.	-0.4	-0.2	-0.2	0.0	-0.2
Dec.	-0.3	0.8	-1.1	-0.5	-0.6
1991--Jan.	3.1	3.7	-0.6	-0.7	0.1
Feb.	10.1	10.4	-0.3	1.1	-1.4
Mar.	1.6	2.5	-0.9	0.3	-1.2
Apr.	0.8	0.6	0.2	-0.3	0.5
May	0.6	0.4	0.2	0.3	-0.1
June	-0.7	-1.9	1.2	0.6	0.6
July	-2.9	-4.4	1.5	0.0	1.5
Aug.	0.1	-0.2	0.3	0.3	0.0
Sept.	-0.8	-1.4	0.6	-0.5	1.1
Oct.	2.2	1.9	0.3	0.2	0.1
Nov.	2.6	3.5	-0.9	-0.5	-0.4
Dec.	1.8	2.5	-0.7	-0.1	-0.6
1992--Jan.	0.5	0.8	-0.3	-0.2	-0.1
<u>Quarterly</u>					
1990--QIV	1.1	0.9	0.2	0.0	0.2
1991--QI	3.4	4.0	-0.6	-0.1	-0.5
QII	1.8	1.8	0.0	0.2	-0.2
QIII	-1.1	-2.0	0.9	0.2	0.7
QIV	1.3	1.4	-0.1	-0.1	0.0
<u>Semi-Annual</u>					
1991--QIV '90 to					
QII '91	2.6	2.9	-0.3	0.1	-0.4
QII '91 to					
QIV '91	0.1	-0.3	0.4	0.0	0.4
<u>Annual (QIV TO QIV)</u>					
1990	1.7	1.7	0.0	0.0	0.0
1991	1.3	1.3	0.0	0.0	0.0



Appendix Table A.4  
 Revisions to the Monetary Aggregates  
 (4th quarter-to-4th quarter seasonally adjusted growth rates)  
 (in percent)

	M1			M2			M3		
	Old	New	Diff	Old	New	Diff	Old	New	Diff
1983	10.4	10.4	-	12.2	12.2	-	9.8	9.9	.1
1984	5.4	5.4	-	8.0	8.0	-	10.7	10.8	.1
1985	12.0	12.0	-	8.7	8.7	-	7.6	7.6	-
1986	15.5	15.5	-	9.2	9.2	-	9.0	9.0	-
1987	6.3	6.3	-	4.3	4.3	-	5.8	5.9	.1
1988	4.3	4.3	-	5.2	5.2	-	6.3	6.4	.1
1989	.6	.6	-	4.7	4.8	.1	3.6	3.6	-
1990	4.2	4.2	-	3.8	3.8	-	1.7	1.7	-
1991	7.9	8.0	.1	2.7	3.1	.4	1.3	1.3	-

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)

	M1	M2	M3	Domestic Nonfinancial Debt <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 (3.3)	6.5 - 10.5 (8.1)
QIV 1989 - QIV 1990	n.s. (4.2)	3 - 7 (3.9)	1 - 5 <sup>12</sup> (1.8)	5 - 9 (6.9)
QIV 1990 - QIV 1991	n.s. (8.0)	2.5 - 6.5 (3.1)	1 - 5 (1.3)	4.5 - 8.5 (4.7)

n.s.--not specified.

1. Targets are for bank credit before 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.

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 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.

12. 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.

**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	primary market	
		1	2	3	4	5	6	7	8	9	10	11	12	13	fixed-rate	fixed-rate
90 - High	8.33	7.96	8.00	7.97	8.58	8.60	8.06	10.50	9.09	9.07	9.13	10.50	7.83	10.99	10.67	8.63
- Low	7.16	6.54	6.60	6.51	7.63	7.80	7.16	10.00	7.42	7.94	8.00	9.55	7.28	9.91	9.56	7.86
91 - High	7.46	6.46	6.49	6.43	7.75	8.49	7.37	9.93	7.47	8.35	8.52	9.96	7.40	9.97	9.75	7.78
- Low	4.22	3.84	3.93	4.01	4.25	4.88	4.53	7.07	5.24	6.96	7.58	8.49	6.76	8.38	8.35	6.02
Monthly																
Jan 91	6.91	6.22	6.28	6.25	7.17	7.12	6.92	9.52	7.38	8.09	8.27	9.83	7.32	9.89	9.64	7.74
Feb 91	6.25	5.94	5.93	5.91	6.52	6.53	6.10	9.05	7.08	7.85	8.03	9.54	7.17	9.63	9.37	7.65
Mar 91	6.12	5.90	5.92	6.00	6.45	6.48	6.12	9.00	7.35	8.11	8.29	9.58	7.32	9.81	9.50	7.47
Apr 91	5.91	5.65	5.71	5.85	6.06	6.08	5.89	9.00	7.23	8.04	8.21	9.46	7.24	9.75	9.49	7.38
May 91	5.78	5.46	5.61	5.76	5.91	5.91	5.60	8.50	7.12	8.07	8.27	9.45	7.13	9.73	9.47	7.22
Jun 91	5.90	5.57	5.75	5.96	6.07	6.06	5.49	8.50	7.39	8.28	8.47	9.53	7.30	9.93	9.62	7.24
Jul 91	5.82	5.58	5.70	5.91	5.98	5.98	5.46	8.50	7.38	8.27	8.45	9.55	7.18	9.79	9.57	7.23
Aug 91	5.66	5.33	5.39	5.45	5.65	5.72	5.38	8.50	6.80	7.90	8.14	9.25	7.05	9.44	9.24	7.08
Sep 91	5.45	5.21	5.25	5.26	5.47	5.57	5.24	8.20	6.50	7.65	7.95	9.05	6.97	9.18	9.01	6.87
Oct 91	5.21	4.99	5.04	5.04	5.33	5.29	5.03	8.00	6.23	7.53	7.93	9.02	6.89	9.04	8.86	6.71
Nov 91	4.81	4.56	4.61	4.64	4.94	4.95	4.82	7.58	5.90	7.42	7.92	8.95	6.89	8.86	8.71	6.42
Dec 91	4.43	4.07	4.10	4.17	4.47	4.98	4.61	7.21	5.39	7.09	7.70	8.68	6.87	8.56	8.50	6.19
Weekly																
Oct 16 91	5.28	4.99	5.03	5.03	5.30	5.26	5.02	8.00	6.22	7.50	7.91	9.04	6.91	9.02	8.82	6.71
Oct 23 91	5.24	5.04	5.09	5.11	5.34	5.28	5.02	8.00	6.29	7.61	8.04	9.12	6.93	9.11	8.91	6.66
Oct 30 91	5.10	4.92	4.97	4.97	5.30	5.26	4.97	8.00	6.21	7.59	7.98	8.98	6.86	8.86	8.78	6.58
Nov 6 91	5.05	4.74	4.78	4.78	5.05	5.04	4.93	7.93	6.02	7.50	7.96	8.92	6.87	8.81	8.76	6.46
Nov 13 91	4.74	4.63	4.70	4.72	4.96	4.95	4.81	7.50	5.97	7.41	7.87	8.87	6.86	8.80	8.69	6.40
Nov 20 91	4.89	4.56	4.61	4.63	4.94	4.96	4.78	7.50	5.87	7.35	7.86	9.04	6.91	8.87	8.63	6.34
Nov 27 91	4.68	4.41	4.48	4.52	4.87	4.90	4.70	7.50	5.82	7.42	7.97	8.98	6.93	8.94	8.70	6.34
Dec 4 91	4.79	4.35	4.37	4.42	4.84	5.10	4.66	7.50	5.68	7.29	7.90	8.80	6.96	8.71	8.62	6.29
Dec 11 91	4.54	4.21	4.21	4.27	4.57	5.00	4.63	7.50	5.52	7.22	7.80	8.76	6.90	8.67	8.53	6.23
Dec 18 91	4.49	4.13	4.17	4.21	4.45	4.90	4.59	7.50	5.44	7.20	7.77	8.57	6.84	8.47	8.49	6.21
Dec 25 91	4.22	3.84	3.93	4.01	4.25	4.88	4.53	7.07	5.24	6.96	7.58	8.49	6.76	8.38	8.35	6.02
Jan 1 92	4.19	3.86	3.88	3.95	4.32	5.02	4.51	6.50	5.14	6.79	7.47	8.46	6.68	8.39	8.24	5.94
Jan 8 92	4.19	3.80	3.83	3.89	4.02	4.19	4.40	6.50	5.11	6.80	7.44	8.49	6.53	8.36	8.23	5.79
Jan 15 92	4.01	3.81	3.86	3.95	4.03	4.07	4.19	6.50	5.32	6.93	7.50	8.58	6.66	8.67	8.45	5.89
Jan 22 92	3.87	3.77	3.86	3.94	4.07	4.09	4.14	6.50	5.43	7.09	7.61	8.67	6.70	8.83	8.56	5.90
Jan 29 92	4.01	3.82	3.90	4.00	4.07	4.08	3.99	6.50	5.61	7.22	7.71	8.72	6.76	8.98	8.68	5.93
Daily																
Jan 24 92	3.96	3.81	3.92	4.02	4.09	4.09	--	6.50	5.62	7.25	7.71	--	--	--	--	--
Jan 30 92	4.02	3.83	3.92	4.03	4.08	4.07	--	6.50	5.71	7.31	7.79	--	--	--	--	--
Jan 31 92	4.35p	3.84	3.92	4.02	4.07	4.12	--	6.50	5.65	7.31	7.77	--	--	--	--	--

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. 3, 1992

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>										
1989	0.6	4.7	6.1	-0.6	3.6	4.8	7.5	7.3	7.9	7.7
1990	4.2	3.8	3.7	-6.4	1.7	1.9	5.4	10.3	5.4	6.5
1991	7.9	2.7	1.0	-4.8	1.3		2.9			
<b>QUARTERLY AVERAGE</b>										
1991-1st QTR.	5.9	3.4	2.6	6.4	4.0	3.3	2.7	10.4	2.4	4.2
1991-2nd QTR.	7.3	4.7	3.9	-10.5	1.8	-2.4	2.7	6.8	3.1	3.9
1991-3rd QTR.	6.8	0.0	-2.2	-11.0	-2.0	0.6	1.4	13.8	2.2	4.9
1991-4th QTR.	10.9	2.6	-0.2	-4.3	1.4		4.8			
<b>MONTHLY</b>										
1991-JAN.	1.9	1.3	1.1	14.2	3.7	4.0	-1.0	7.5	1.5	2.8
FEB.	14.1	8.4	6.6	18.6	10.4	6.5	6.3	13.6	3.2	5.6
MAR.	9.5	7.4	6.7	-18.2	2.5	0.1	6.7	6.6	3.3	4.1
APR.	-1.3	3.0	4.4	-9.4	0.6	-7.9	0.1	-1.9	3.1	1.9
MAY	13.5	4.2	1.1	-15.6	0.4	-5.3	-0.6	11.8	3.1	5.2
JUNE	9.6	1.9	-0.7	-18.5	-1.9	5.9	5.5	16.0	2.3	5.5
JULY	1.5	-3.1	-4.7	-9.7	-4.4	1.5	0.0	12.2	1.7	4.2
AUG.	9.2	0.6	-2.4	-3.8	-0.2	-1.6	-0.7	14.9	2.0	5.1
SEP.	5.4	0.6	-1.0	-10.5	-1.4	-2.1	3.2	12.4	3.2	5.4
OCT.	12.6	3.0	-0.2	-2.9	1.9	2.4	6.8	13.6	3.1	5.6
NOV.	15.3	5.1	1.5	-4.0	3.5	6.7	6.4	11.1	3.4	5.3
DEC.	8.6	2.5	0.3	2.7	2.5		4.8			
1992-JAN. pe	17	2	-3	-5	1					
<b>LEVELS (\$BILLIONS) :</b>										
<b>MONTHLY</b>										
1991-AUG.	866.1	3393.7	2527.5	755.8	4149.4	4979.5	2761.6	2665.9	8439.0	11104.9
SEP.	870.0	3395.5	2525.4	749.2	4144.7	4970.6	2768.9	2693.5	8461.4	11154.9
OCT.	879.1	3404.0	2524.9	747.4	4151.3	4980.7	2784.5	2724.0	8483.0	11207.0
NOV.	890.3	3418.4	2528.1	744.9	4163.3	5008.7	2799.3	2749.3	8507.3	11256.6
DEC.	896.7	3425.4	2528.7	746.6	4172.0		2810.6			
<b>WEEKLY</b>										
1991-DEC. 2	901.3	3424.4	2523.0	744.2	4168.6					
9	895.5	3426.0	2530.6	750.3	4176.3					
16	898.5	3434.8	2536.3	753.7	4188.5					
23	898.5	3425.7	2527.1	748.5	4174.2					
30	896.3	3420.3	2524.0	737.9	4158.1					
1992-JAN. 6	892.4	3407.5	2515.1	725.9	4133.4					
13 p	903.5	3422.3	2518.7	748.3	4170.6					
20 p	912.8	3438.4	2525.6	745.9	4184.3					

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

## Components of Money Stock and Related Measures

seasonally adjusted unless otherwise noted

FEB. 3, 1992

Period	Currency	Demand deposits	Other checkable deposits	Overnight RPs and Eurodollars 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 RPs NSA <sup>5</sup>	Term Eurodollars NSA <sup>5</sup>	Savings bonds	Short-term Treasury securities	Commercial paper <sup>1</sup>	Bankers acceptances
							general purpose and broker/dealer <sup>1</sup>	Institutions only							
							7	8							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
<b>LEVELS (\$BILLIONS) :</b>															
<b>ANNUALLY (4TH QTR.)</b>															
1989	220.9	278.9	282.9	76.1	884.9	1142.4	308.9	101.4	565.0	106.6	80.2	116.8	321.5	350.4	40.4
1990	245.1	277.1	292.8	78.6	917.6	1162.5	343.0	121.9	511.6	93.2	70.5	125.2	333.2	359.1	33.8
1991	265.5	286.4	328.7	73.2	1025.2	1075.1	352.9	161.2	461.6	74.6	62.5				
<b>MONTHLY</b>															
1990-DEC.	246.4	276.9	293.8	74.3	916.7	1164.2	345.4	125.7	507.1	89.4	71.4	126.0	335.4	359.4	34.7
1991-JAN.	251.6	272.9	293.9	71.5	917.1	1163.8	354.0	130.1	511.9	87.3	71.9	126.7	333.2	363.2	36.0
FEB.	255.1	276.1	296.9	70.4	926.9	1162.5	358.4	139.3	516.0	85.8	72.6	127.8	331.4	355.9	35.2
MAR.	256.7	277.1	301.0	69.5	939.7	1158.0	364.0	142.0	511.5	82.0	71.1	128.9	327.8	353.0	32.4
APR.	256.6	275.8	301.9	70.1	953.8	1149.4	365.1	145.6	507.2	80.8	68.2	130.1	307.6	338.6	30.7
MAY	256.8	278.7	308.1	68.9	969.2	1138.9	365.8	146.2	503.8	79.5	65.5	131.4	299.6	323.7	28.8
JUNE	257.6	281.0	311.9	68.5	981.0	1126.6	366.5	143.3	498.7	77.0	64.8	132.5	326.8	327.4	27.7
JULY	258.9	278.9	314.1	65.3	990.0	1115.9	363.7	141.8	491.2	78.2	65.9	133.5	337.6	336.8	27.8
AUG.	260.8	279.8	317.8	67.9	996.2	1108.2	358.0	144.8	484.8	78.2	66.9	134.4	335.1	333.5	27.1
SEP.	262.4	279.3	320.6	67.1	1002.7	1101.3	355.1	149.3	476.8	77.1	64.7	135.3	328.9	336.6	25.1
OCT.	264.4	282.6	324.1	70.2	1013.2	1089.0	354.0	155.4	467.3	76.0	63.6	136.2	332.5	335.7	24.9
NOV.	265.3	287.4	329.5	73.7	1025.2	1075.2	352.3	161.0	460.5	75.4	62.4	137.1	342.8	340.7	24.8
DEC.	266.7	289.1	332.6	75.7	1037.2	1061.0	352.3	167.1	457.1	72.5	61.4				

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 and thrift institutions.
- p-preliminary

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

January 31, 1992

Period	Treasury bills			Treasury coupons						Federal agencies redemptions (-)	Net change outright holdings total <sup>4</sup>	Net RPs <sup>5</sup>
	Net <sup>2</sup> purchases	Redemptions (-)	Net change	Net purchases <sup>3</sup>				Redemptions (-)	Net Change			
				within 1 year	1-5	5-10	over 10					
1989	1,468	12,730	-11,263	327	946	258	284	500	1,315	442	-10,390	-1,683
1990	17,448	4,400	13,048	425	50	-100	—	—	375	183	13,240	11,128
1991	20,238	1,000	19,238	3,043	6,583	1,280	375	—	11,282	254	30,260	-1,614
1990 —Q1	-3,799	1,400	-5,199	100	100	—	—	—	200	—	-5,000	-4,061
—Q2	10,892	—	10,892	—	150	—	—	—	150	78	10,964	509
—Q3	5,115	—	5,115	—	—	—	—	—	—	70	5,045	-2,124
—Q4	5,241	3,000	2,241	325	-200	-100	—	—	25	35	2,230	16,805
1991 —Q1	2,160	1,000	1,160	800	2,950	400	—	—	4,150	—	5,310	-16,864
—Q2	4,356	—	4,356	900	550	—	—	—	1,450	91	5,715	992
—Q3	7,664	—	7,664	1,165	650	—	—	—	1,815	55	9,419	152
—Q4	6,058	—	6,058	178	2,433	880	375	—	3,867	109	9,817	14,106
1991 January	-120	1,000	-1,120	—	—	—	—	—	—	—	-1,120	-944
February	1,967	—	1,967	100	—	350	—	—	450	—	2,417	-1,127
March	313	—	313	700	2,950	50	—	—	3,700	—	4,013	-14,793
April	908	—	908	700	550	—	—	—	1,250	91	2,067	1,370
May	3,411	—	3,411	200	—	—	—	—	200	—	3,611	-1,153
June	37	—	37	—	—	—	—	—	—	—	37	775
July	1,359	—	1,359	625	—	—	—	—	625	55	1,929	71
August	5,776	—	5,776	340	—	—	—	—	340	—	6,116	-2,134
September	529	—	529	200	650	—	—	—	850	—	1,374	2,216
October	2,198	—	2,198	—	—	—	—	—	—	14	2,185	6,942
November	3,023	—	3,023	178	2,133	880	375	—	3,567	50	6,540	-8,871
December	837	—	837	—	300	—	—	—	300	45	1,092	16,035
Weekly												
October 30	—	—	—	—	—	—	—	—	—	—	—	914
November 6	2,438	—	2,438	—	—	100	—	—	100	—	2,538	2,650
13	626	—	626	—	350	—	—	—	350	—	977	9,016
20	671	—	671	—	—	400	—	—	400	—	1,071	-11,969
27	1,287	—	1,287	—	400	—	—	—	400	50	1,637	1,550
December 4	593	—	593	178	1,383	380	375	—	2,317	—	2,910	535
11	444	—	444	—	200	—	—	—	200	—	644	1,985
18	—	—	—	—	100	—	—	—	100	—	100	-2,449
25	—	—	—	—	—	—	—	—	—	—	—	8,250
January 1	—	—	—	—	—	—	—	—	—	45	-45	6,050
8	—	—	—	—	—	—	—	—	—	—	—	-16,195
15	-221	—	-221	—	—	—	—	—	—	34	-255	-1,059
22	-498	400	-898	—	—	—	—	—	—	35	-933	5,150
29	-909	800	-1,709	—	—	—	—	—	—	16	-1,725	-5,495
Memo: LEVEL (bil. \$) <sup>6</sup> January 29			135.9	21.4	64.1	14.8	24.5		124.8		275.7	-7.8

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
2.3	2.6	0.8	0.2	5.9