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MONETARY POLICY ALTERNATIVES

Prepared for the Federal Open Market Committee

By the staff Board of Governors of the Federal Reserve System

December 14, 1990

MONETARY POLICY ALTERNATIVES

Recent Developments

(1) At the beginning of the intermeeting period the Desk implemented a slight easing of reserve market conditions, intended to be associated with the federal funds rate decreasing around 1/4 percentage point to the area of 7-1/2 percent. The funds rate responded sluggishly, however, with the "effective" rate averaging about 20 basis points above that level in the first full maintenance period after the November meeting. The relatively high effective rate initially reflected cautious reserve management by banks and the settlement of the midquarter refunding, and later the increasing premiums paid by foreign banks, particularly Japanese institutions, which were bidding strongly for overnight funds in unreceptive markets. Policy was eased again on December 7, on the heels of the November employment report, which showed surprisingly large job losses and only modest wage gains, and in light of continuing weakness in the monetary aggregates. Since then, federal funds have averaged around the expected 7-1/4 percent. Premiums paid by Japanese banks have narrowed as concerns about year-end pressures abated somewhat [discussed in paragraph (3) below] and reserves have been more abundant relative to depressed demands for excess reserves.¹

1. Adjustment plus seasonal borrowing averaged \$169 million in the first full maintenance period after the November meeting and \$106 million in the second period ended this Wednesday, in both instances somewhat below the borrowing assumptions for those periods. Including a decrease to \$225 million right after the last meeting, the borrowing assumption has been reduced five times--most recently to \$100 million--including two policy-related adjustments of \$25 million each and technical adjustments to reflect the declines in seasonal borrowing.

(2) Market interest rates declined on balance over the intermeeting period, in some cases substantially, as policy eased and evidence mounted that the economy was contracting significantly. Short-term rates, which, at the time of the November meeting, already incorporated expectations of a slightly more accommodative policy, retreated 20 to 40 basis points. Bond yields are off by comparable amounts; with most of the drop occurring since the November employment data were released. Mortgage rates have retreated 1/2 percentage point over the last month to around 9-1/2 percent. Lower interest rates and optimism over a possible peaceful resolution of the Middle East situation contributed to a rise in broad stock indexes of about 3 percent. Bank stocks have done better, buoyed by the reduction in reserve requirements.

(3) In the first half of the intermeeting period, concern about a liquidity squeeze over year-end intensified. In bank funding markets, three-month Eurodollar and domestic CD rates rose some 40 basis points in the last week of November. At that time, Japanese banks reportedly paid as much as 30 percent in the forward market for federal funds over the turn of the year, and domestic banks saw quotes of 15 percent or more, though they did little buying. Commercial paper rates, especially on lower-rated issues, also rose substantially relative to Treasury bill rates in this period. Expectations already had been widespread that year-end credit could be especially scarce this year as institutional investors purged their portfolios of lower quality names, shifting demands toward banks just when those lenders would be trying to minimize assets to bolster capital ratios. Potential year-end borrowers, and in particular the Japanese banks, apparently began to focus on this problem in earnest after

Thanksgiving, and sought to secure funding in advance. In the event, this scramble for financing quickly abated and spreads on bank instruments relative to Treasuries more than retraced their earlier increases. The highest graded commercial paper rates also have fallen substantially relative to Treasuries, but tiering in this market has increased on balance since the November meeting. The retreat in rates was assisted by the announcement of lower reserve requirements, which was perceived as freeing up valuable liquidity around year-end, and, in concert with some leaning to the generous side in the provision of reserves by the Desk, as signalling an intent to provide ample funds through this period. Still, markets remain quite sensitive to the potential for year-end disruptions and in recent days spreads have widened some, and Japanese banks are paying as much as 20 percent for funds over the end of the year.

(4) Despite the easing of U.S. monetary policy, the dollar's weighted average foreign exchange value is up about one percent on balance since the last FOMC meeting, apparently supported in part by precautionary demands for dollars in view of concerns about the availability of dollar funding over year-end. The dollar appreciated more against the yen and sterling; the decrease in oil prices along with expectations of slowing or negative economic growth sparked large bond market rallies in these and other countries. In Japan bond yields fell about 70 basis points, while short-term rates there edged lower. The dollar rose less against the mark, which was generally firm on the basis of continuing very strong economic growth in Western Germany and heightened expectations of further tightening of monetary policy. Three-month interest rates moved up about

30 basis points in Germany, while long-term rates declined about the same amount, less than in other major countries.

(5) M2 contracted slightly in November, leaving this aggregate slightly below the path anticipated by the Committee at its last meeting.² Money market fund shares declined, as did overnight RPs; the former seemed to be associated with investors returning to the capital markets, especially through stock and bond funds, and the latter was probably related to recent declines in securities holdings at large banks. Still, the continued weakness of core deposits, despite the fall in opportunity costs to their lowest levels of the year, was the predominant influence damping M2. Weak nominal income growth this quarter likely accounts in part for the depressed demands for M2, especially as households hold down saving in order to cushion the effect of declining disposable income on consumption.

(6) November's runoff deepened the already considerable weakness of M2; for the year M2 is expected to expand only 3-3/4 percent, down from its 1989 growth rate and well below the middle of its target range (see table below). Expansion of M2 has been held down by the slower growth of income in 1990; in addition, velocity increased nearly 1 percent, despite declines in short-term interest rates. One development damping the effects of lower market interest rates on M2 was wider opportunity costs than historically have been associated with observed movements in interest rates. In light of the thrift resolution process and the reluctance of

2. M1 expanded at a 3-3/4 percent annual rate, after a decline in October. Transactions deposits rebounded but currency slowed sharply, perhaps partly reflecting reductions in recent heavy overseas shipments. Total reserves and the monetary base expanded at 3-3/4 and 4-3/4 percent rates in November, respectively.

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

	September	October	November	QIV'89 to November
<u>Money and credit aggregates</u>				
M1	9.3	-3.1	3.8	4
M2	5.3	0.4	-0.9	3-1/2
M3	0.8	-1.0	-1.4	1-1/2
Domestic nonfinancial debt	6.7	5.1	7-3/4 ^{pe}	7 ^{pe}
Bank credit	0.1	0.9	1.4	5-1/4
<u>Reserve measures</u>				
Nonborrowed reserves ¹	10.5	-5.0	7.6	1/4
Total reserves	6.7	-9.4	3.8	0
Monetary base	14.6	6.9	4.8	8-1/2
<u>Memo:</u> (Millions of dollars)				
Adjustment plus seasonal borrowing	618	392	206	--
Excess reserves	909	847	978	--

pe - preliminary estimate.

1. 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.

banks to extend credit, depositories as a whole had no need for increased liabilities, and they offered relatively less attractive deposit rates to discourage retail inflows. Nonetheless, opportunity costs did narrow and the lower opportunity costs that prevailed should have reduced velocity; staff models of money demand overpredict M2 growth by 2 percentage points this year. The reasons for this are unclear. From the depositor's perspective, claims on depositories may look less attractive if there are concerns about the health of depositories and the possibility of deposit contracts being abrogated in a failure. A shift out of M2 is consistent with the unusually high volume of net noncompetitive tenders for Treasury securities this year. Households also may be restraining liquid asset accumulation to limit indebtedness as the return on deposits falls relative to the cost of debt; household indebtedness this year has grown slowly relative to spending. And demand deposits have declined further in 1990 despite the fall in interest rates, as businesses apparently rely less on deposits to compensate banks for services and continue to find ways to economize on clearing balances.

Growth of Monetary and Debt Aggregates
(Q4 to Q4, percent)

	<u>1989</u>	<u>1990</u>	<u>1990 Target Range</u>
M2	4-1/2	3-3/4	3 to 7
M3	3-1/4	1-1/2	1 to 5 ¹
M1	1/2	4	--
Domestic Nonfinancial Debt	7-3/4	7	5 to 9

1. Lowered in July from 2-1/2 to 6-1/2 percent.

(7) M3 contracted slightly again in November and has expanded only 1-1/2 percent in 1990, just above the lower limit of a target range that the Committee reduced by 1-1/2 percentage points in July. The behavior of M3 is directly related to the slump in depository credit. Depository liabilities in M3 have contracted this year, in line with lending, and all of the net inflows to M3 are attributable to currency and money market mutual funds.

(8) Evidence about private borrowing trends in recent months is mixed, though no real strength is apparent and lenders remain very cautious. Some pickup has been seen in business credit in recent weeks, boosted by a surge in bond issuance by investment grade borrowers in response to the drop in long-term rates. However, commercial paper has been declining since the middle of October, as some quality borrowers have turned to bonds and some less favored issuers have opted to tap their bank lines in the face of mounting investor resistance to their paper. Accordingly, bank C&I loans grew at a 5-3/4 percent rate in November, after two months of decline. Banks apparently have continued to tighten lending terms and raise margins, in part by keeping the prime rate unchanged in the face of lower funding costs. Consumer borrowing probably has remained subdued; consumer loans at banks, adjusting for securitization, registered minimal gains in November. Municipal borrowing has been brisk in recent days in response to the bond market rally, though activity in November was sluggish. Credit stress is spreading in the municipal sector, as state and local budget situations worsen. Federal borrowing has continued

strong, with a lull in thrift-related spending offsetting a widening budget gap elsewhere.

(9) Robust federal borrowing boosted the growth of nonfinancial debt to 7 percent for the year, the midpoint of its range. However, a significant portion of the federal borrowing has simply financed acquisitions of thrift assets via the RTC; without this factor debt growth would have been 6-1/2 percent. Private debt growth is likely to come in at only 5-1/2 percent for the year, down from 7-1/2 percent last year. Although reduced demands for credit account for much of the slowing, credit restraint also likely was a factor, having an appreciable effect on borrowing for some real estate purposes and also on corporate restructuring; the decline in net equity retirement accounts for a sizeable share of the deceleration in private debt growth this year.

Policy Alternatives

(10) Two near-term policy alternatives are presented below for Committee consideration. Under alternative B, federal funds would continue to trade in the 7-1/4 percent area and adjustment plus seasonal borrowing would initially be specified at \$100 million.³ Under alternative A, the funds rate would decline to the vicinity of 6-3/4 percent. Alternative A could be implemented through a reduction in the borrowing assumption of only \$25 million to \$75 million or through a half-point cut in the discount rate combined with the same borrowing assumption as specified for alternative B.⁴

(11) Implementing alternative A through a reduction in borrowing would bring the funds rate below the discount rate and borrowing to frictional levels. While technically feasible, this method of easing would have some drawbacks. For one, moving the federal funds rate below the discount rate might add to market uncertainties; it could prompt speculation about whether this unusual situation portended a near-term discount rate change, in part to restore more normal rate relationships, or whether it represented a permanent realignment of the discount rate at a penalty to market rates. In addition, the federal funds rate probably would become a little more volatile. Increases and decreases in borrowing can provide a safety valve, partly offsetting the effects on the federal funds

3. Another \$25 million reduction perhaps would be called for as seasonal borrowing moves down to its normal annual trough in mid-January; this would also apply to alternative A.

4. Because of the unusually low levels of borrowing at present, this reduction is half the difference between alternatives A and B in recent bluebooks.

rate of unexpected shifts in supply and demand for reserves. The potential for such offsets, with their muting effect on funds rate variations, is already quite limited, given the damped responses of borrowing to funds rate fluctuations associated with the current low level of discount window usage. Funds rate volatility would tend to increase a bit if borrowing were reduced to implement alternative A. In any case, over the intermeeting period the Desk's task will be complicated by uncertainties both about year-end effects on required and excess reserve demands and about the impact of the reserve requirement change on demands for excess reserves. The potential for volatility in the funds rate under alternative A would be reduced a little if instead this alternative were implemented through a 1/2 percentage point cut in the discount rate, leaving a larger cushion of borrowing.⁵

(12) Securities markets appear to be anticipating another small policy adjustment at some point in the coming intermeeting period, though not necessarily immediately after the meeting. Hence, market interest and exchange rates would not react much to the unchanged reserve conditions of alternative B, at least initially. Moreover, expectations of further ease likely would be sustained if incoming data confirm the markets' impression of a significant economic downturn. Although borrowers and lenders

5. A more moderate policy easing that involved a 1/2 percentage point cut in the discount rate to 6-1/2 percent, combined with an initial borrowing specification of \$125 million, could lessen a bit further the potential volatility of the funds rate, at least once the market recognized the new intended trading area of 7 percent for the funds rate. In this case, the funds rate would decline 1/4 percentage point, but its spread over the discount rate would return to 1/2 percentage point.

already have made substantial adjustments to their portfolios in anticipation of year-end pressures, strains still could emerge at times in coming weeks. In January, with the threat of year-end pressures and portfolio adjustments behind them, banks may reduce the prime rate. Were current reserve conditions to be maintained through the intermeeting period in the face of weak economic data, markets might begin to reassess the Federal Reserve's intentions, and interest and exchange rates might edge higher-- although favorable effects on inflation expectations would work to moderate any such rise in bond rates.

(13) With the easing of the funds rate by 1/2 percentage point under alternative A, other short-term market rates would decline, but by smaller amounts given current market expectations. However, the prime rate likely would be reduced, perhaps promptly, by the full 1/2 percentage point. The policy easing also might make lenders a bit more willing to extend credit to marginal borrowers, in part as lower interest rates improve the economic outlook and borrowers' prospective creditworthiness. Bond yields would continue to move lower, but the extent of the rally would depend in part on the reaction in foreign exchange markets. The dollar would decline, especially if investors saw the action, coming on the heels of recent easing moves, as evidence of an inclination toward a more aggressive easing posture by the Federal Reserve. The reaction of foreign exchange and other financial markets to alternative A may depend on how it is implemented. However, any tendency for a discount rate cut to have an independent announcement effect would be muted in the current

circumstances, given perceptions that for technical reasons an easing of this magnitude would necessarily involve a discount rate cut.

(14) Projected growth of the monetary aggregates under the two alternatives is shown in the table below. (Detailed data appear on the table and charts on the following pages.) Monetary growth rates seem unusually difficult to forecast in current circumstances. The uncertainties about the relationship of money demand to income and opportunity costs, so evident in recent months, are likely to persist. In addition, changes in the regulatory environment--including reduced reserve requirements on certain liabilities, higher deposit insurance premiums, and the phase-in of capital standards--will be affecting to an unpredictable extent bank and thrift decisions with respect to the size of their asset portfolios and the composition of and offering rates on their liabilities.

	<u>Alt. A</u>	<u>Alt. B</u>
Growth from November to March		
M2	5	3-1/2
M3	1	1/2
M1	6	4

(15) In the staff's judgment, M2 growth under the unchanged funds rate of alternative B will pick up to a 3-1/2 percent pace from November to March, placing the aggregate just above the lower bound of the cone associated with the Committee's provisional growth range of 2-1/2 to

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						
1990 October	3321.0	3321.0	4092.7	4092.7	820.0	820.0
November	3318.4	3318.4	4088.0	4088.0	822.6	822.6
December	3325.5	3325.5	4087.3	4087.3	825.5	825.5
1991 January	3337.1	3334.6	4091.0	4090.0	828.6	827.8
February	3352.7	3344.6	4095.8	4092.8	833.2	830.6
March	3373.9	3356.1	4102.0	4095.5	838.9	833.4
Monthly Growth Rates						
1990 October	0.4	0.4	-1.0	-1.0	-3.1	-3.1
November	-0.9	-0.9	-1.4	-1.4	3.8	3.8
December	2.6	2.6	-0.2	-0.2	4.2	4.2
1991 January	4.2	3.3	1.1	0.8	4.5	3.3
February	5.6	3.6	1.4	0.8	6.6	4.1
March	7.6	4.1	1.8	0.8	8.2	4.1
Quarterly Ave. Growth Rates						
1990 Q1	6.4	6.4	2.9	2.9	4.9	4.9
Q2	3.2	3.2	1.1	1.1	3.5	3.5
Q3	3.1	3.1	1.7	1.7	4.1	4.1
Q4	2.1	2.1	0.0	0.0	3.4	3.4
1991 Q1	4.0	2.8	0.7	0.3	5.3	3.8
Sept 90 to Dec. 90	0.7	0.7	-0.9	-0.9	1.7	1.7
Nov. 90 to Mar. 91	5.0	3.4	1.0	0.5	5.9	4.0
Dec. 90 to Mar. 91	5.8	3.7	1.4	0.8	6.5	3.8
Q4 89 to Q4 90	3.8	3.8	1.4	1.4	4.0	4.0
Q4 90 to Q1 91	4.0	2.8	0.7	0.3	5.3	3.8
Q4 90 to Jan. 91	2.8	2.4	0.3	0.1	4.3	3.7
Q4 90 to Feb. 91	3.7	2.8	0.6	0.3	5.1	3.8
Q4 90 to Mar. 91	4.7	3.1	0.9	0.5	5.9	3.9
1990 Target Ranges:	3.0 to 7.0		1.0 to 5.0			
1991 Target Ranges:	2.5 to 6.5		1.0 to 5.0			

Chart 1
ACTUAL AND TARGETED M2

Billions of dollars

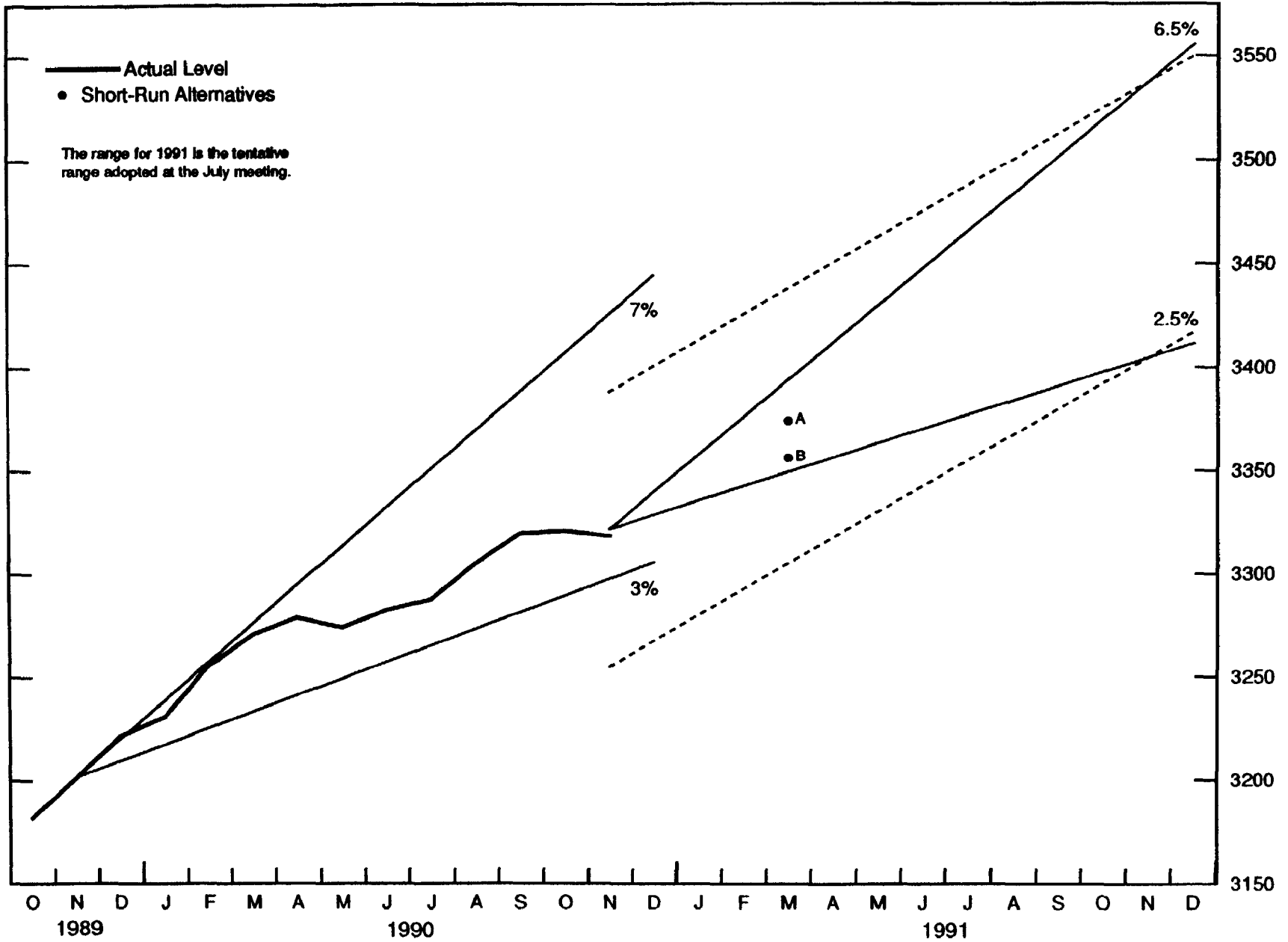


Chart 2
ACTUAL AND TARGETED M3

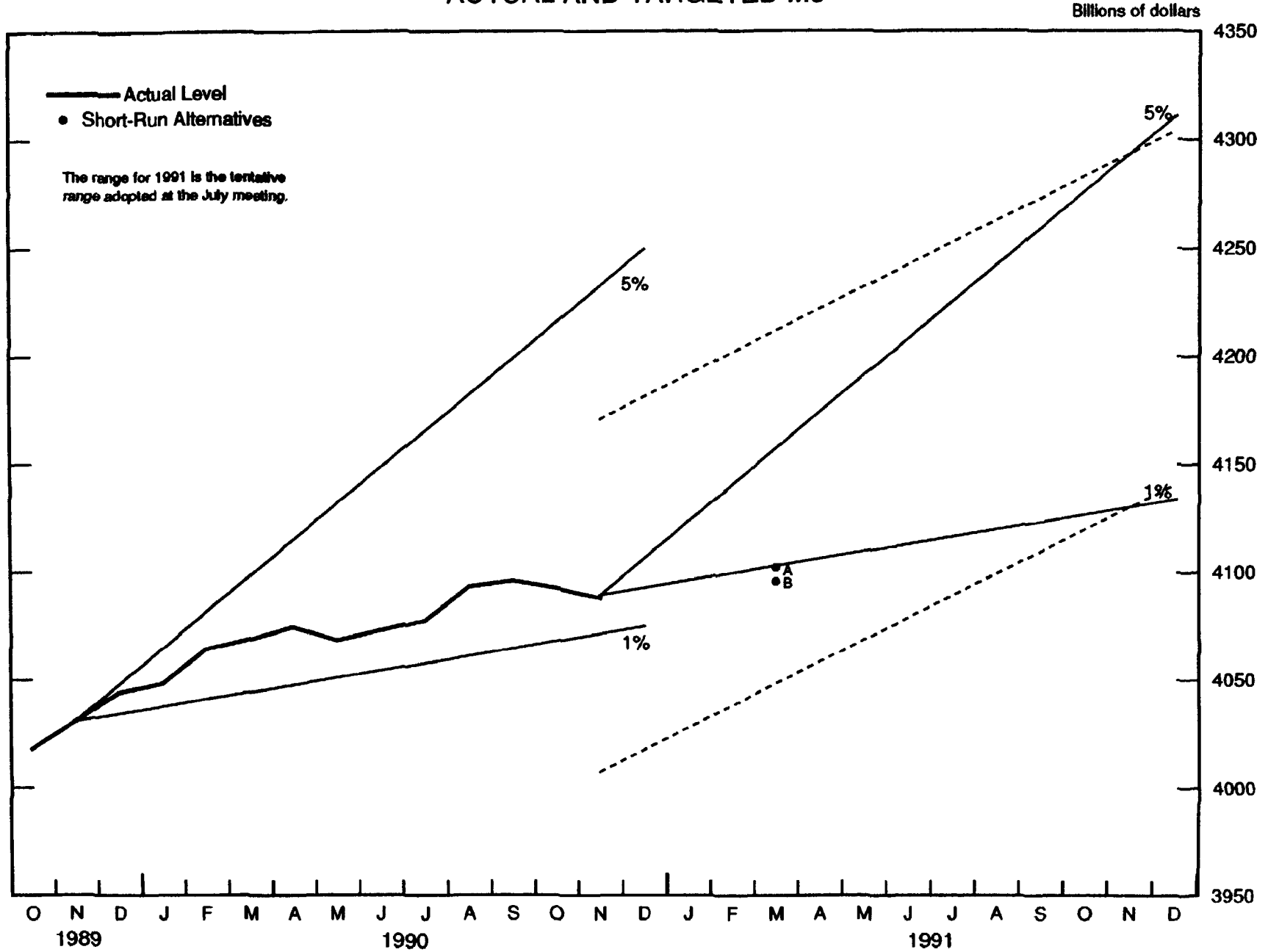


Chart 3
M1

Billions of dollars

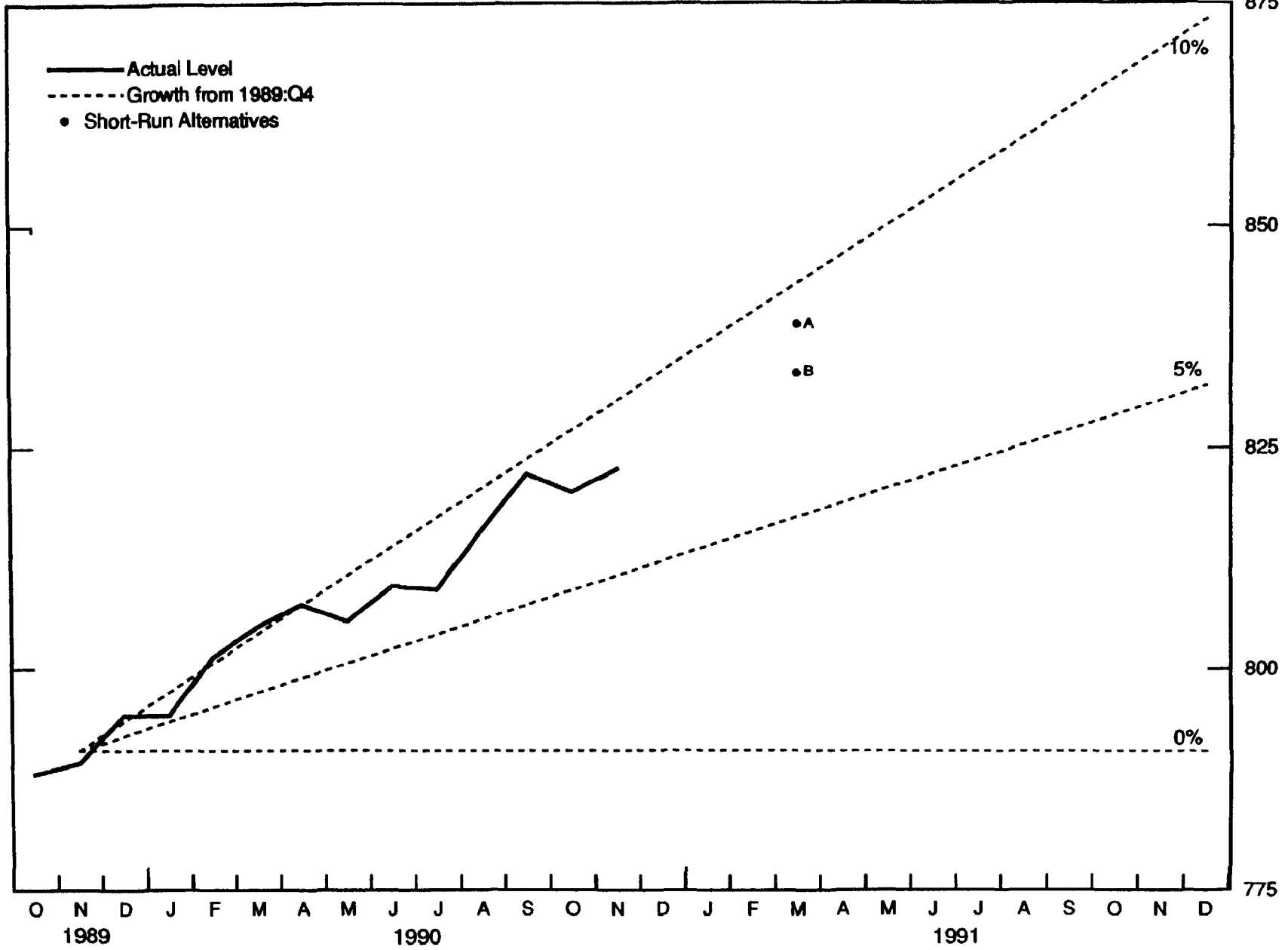
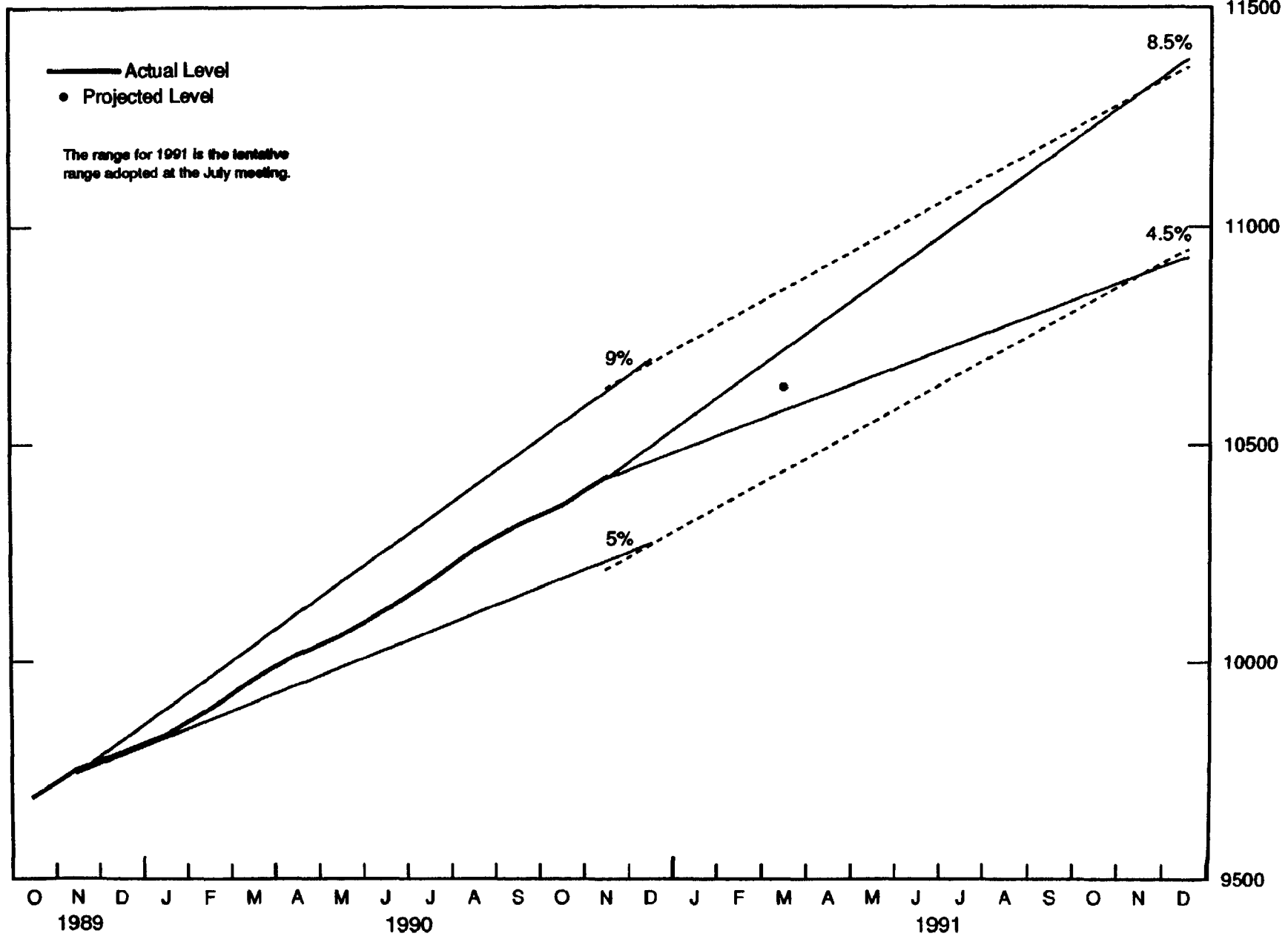


Chart 4
DEBT

Billions of dollars



— Actual Level
• Projected Level

The range for 1991 is the tentative range adopted at the July meeting.

9%

5%

8.5%

4.5%

11500

11000

10500

10000

9500

O N D J F M A M J J A S O N D J F M A M J J A S O N D
1989 1990 1991

6-1/2 percent for 1991.⁶ Stronger growth of nominal income should bolster money balances in the first quarter. In addition, money market mutual funds and, to a lesser extent, retail deposits are expected to respond to the drop in their opportunity costs brought about by the declines in short-term market rates over recent months. Even so, M2 growth on a quarterly average basis would edge up to only a 2-3/4 percent rate in the first quarter, which would be below the projected pace of nominal GNP and represent a reversal of the decline in M2 velocity experienced this quarter.

(16) Some of the acceleration in M2 under alternative B would show through to M3. Nonetheless, M3 expansion would be held to a 1/2 percent rate from November to March, displaying only slightly less weakness than in recent months and coming in below the one percent lower bound of the Committee's provisional growth range for 1991. A variety of factors are expected to continue to limit growth in this aggregate. Thrift credit is projected to contract further; bank credit expansion, though likely to pick up after the turn of the year, should remain subdued, especially if further losses in loan portfolios continue to put pressure on capital positions. In the near term, banks are likely to use some of the reserve balances released by the drop in reserve requirements to pay down managed liabilities and shrink their footings. For a time, this scale effect should dominate the longer-term impact of the reduced reserve cost of issuing nonpersonal time deposits and borrowing from own foreign branches. Finally, the hike in the insurance premium from 12 to 19-1/2

6. M1 growth of 4 percent is foreseen from November to March. With projected growth rates of 6 percent for currency and 3 percent for transaction deposits over the four months, the implied growth of the monetary base would be 5 percent.

basis points on domestic deposits at commercial banks may marginally deter bank intermediation and encourage a shifting of large time deposits into term RPs or offshore.⁷ Of course, M3 would be little affected on net by such shifting since term RPs and term Eurodollars owned by U.S. residents are included in M3.

(17) Debt of nonfederal sectors is projected to grow at only a 4-1/2 percent pace from November to March. This rate is a bit below its recent estimated pace, despite a pickup in corporate borrowing associated with merger-related financing, reflecting weak demand in an environment of continued credit stringency. Household borrowing is expected to slow further as mortgage demands drop off with the housing slump. With federal debt growth remaining around 10 percent, overall domestic nonfinancial debt is anticipated to post about a 6 percent growth rate from November to March, placing this aggregate in the middle portion of the Committee's provisional monitoring range of 4-1/2 to 8-1/2 percent for 1991.

(18) Selection of alternative A would provide added impetus to M2 growth but would affect M3 and credit expansion only a little, at least over the next few months. Opportunity costs on retail balances would fall further, lifting M2 growth to a projected 5 percent rate over the November to March period. By March, M2 would be near the midpoint of the provisional range for next year. With banks slightly more inclined to lend, M3 growth would be stimulated a bit: Its expected 1 percent rate of

7. At the end of the third quarter, a sizable decline in large time deposits was accompanied by a surge in net Eurodollar borrowing. The average level of domestic deposits at the ends of the third and fourth quarters of 1990 determine the base for the assessment of the deposit insurance premium over the first half of 1991.

growth from November to March would place this aggregate at the lower bound of its tentative annual range.

Directive Language

(19) Draft language for the operational paragraph, including the usual options and updating, is shown below. In light of the large number of recommendations for a discount rate reduction from Reserve Bank boards of directors, wording is given in brackets in the first sentence should the Committee wish to make reference in the directive to a possible change in the discount rate. This suggested wording is very similar to that used by the Committee in comparable situations in the past. Of course, the policy record would explain the Committee's approach to implementation and its rationale. In the second sentence, given the evidence of a downturn in business activity, it is suggested that the phrase "trends in economic activity" be substituted for "strength of the business expansion."

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 A POSSIBLE CHANGE IN THE DISCOUNT RATE]. Taking account of progress toward price stability, ~~the~~ TRENDS IN ECONOMIC ACTIVITY, ~~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 inter-meeting period. The contemplated reserve conditions are

expected to be consistent with growth of both M2 and M3 over the period from NOVEMBER THROUGH MARCH September through December at annual rates of about ___ AND ___ 1 to 2 percent, RESPECTIVELY.

December 17, 1990

SELECTED INTEREST RATES

(percent)

		Short-Term								Long-Term							
		federal funds	Treasury bills secondary market			CDs secondary market 3-month	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-year	10-year	30-year			secondary market fixed-rate	primary market fixed-rate	ARM
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
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
90 --	High	8.33	7.96	8.00	7.97	8.58	8.48	8.06	10.50	9.09	9.07	9.13	10.50	7.83	10.99	10.67	8.63
	Low	7.25	6.88	6.75	6.68	7.63	7.80	7.21	10.00	7.43	7.94	8.00	9.55	7.28	9.91	9.56	7.91
Monthly																	
Dec 89		8.45	7.63	7.42	7.21	8.32	8.61	8.22	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	8.05	10.11	8.13	8.21	8.26	9.63	7.43	10.30	9.90	8.39
Feb 90		8.24	7.74	7.70	7.55	8.22	8.22	7.94	10.00	8.39	8.47	8.50	9.84	7.52	10.49	10.20	8.46
Mar 90		8.28	7.90	7.85	7.76	8.35	8.32	7.95	10.00	8.63	8.59	8.56	9.92	7.53	10.61	10.27	8.53
Apr 90		8.26	7.77	7.84	7.80	8.42	8.32	7.99	10.00	8.78	8.79	8.76	10.09	7.62	10.75	10.37	8.55
May 90		8.18	7.74	7.76	7.73	8.35	8.24	7.98	10.00	8.69	8.76	8.73	10.04	7.59	10.68	10.48	8.59
Jun 90		8.29	7.73	7.63	7.53	8.23	8.21	7.96	10.00	8.40	8.48	8.46	9.85	7.47	10.37	10.16	8.50
Jul 90		8.15	7.62	7.52	7.40	8.10	8.09	7.64	10.00	8.26	8.47	8.50	9.96	7.40	10.26	10.04	8.43
Aug 90		8.13	7.45	7.38	7.26	7.97	7.99	7.49	10.00	8.22	8.75	8.86	10.29	7.57	10.41	10.10	8.35
Sep 90		8.20	7.36	7.32	7.24	8.06	8.09	7.47	10.00	8.27	8.89	9.03	10.28	7.72	10.45	10.18	8.28
Oct 90		8.11	7.17	7.16	7.06	8.06	8.04	7.45	10.00	8.07	8.72	8.86	10.23	7.74	10.47	10.18	8.21
Nov 90		7.81	7.06	7.03	6.85	8.03	7.84	7.34	10.00	7.74	8.39	8.54	10.07	7.45	10.25	10.01	8.10
Weekly																	
Sep 5 90		8.25	7.40	7.37	7.25	7.97	7.98	7.47	10.00	8.27	8.87	9.00	10.23	7.68	10.42	10.19	8.29
Sep 12 90		8.12	7.40	7.35	7.24	7.96	7.99	7.47	10.00	8.25	8.83	8.96	10.28	7.64	10.41	10.13	8.26
Sep 19 90		8.18	7.37	7.28	7.22	8.00	8.06	7.46	10.00	8.22	8.87	9.02	10.35	7.73	10.49	10.16	8.30
Sep 26 90		8.26	7.36	7.36	7.29	8.21	8.21	7.47	10.00	8.35	8.99	9.13	10.25	7.81	10.48	10.22	8.28
Oct 3 90		8.23	7.17	7.18	7.13	8.10	8.13	7.47	10.00	8.16	8.77	8.91	10.16	7.75	10.39	10.08	8.25
Oct 10 90		8.20	7.14	7.16	7.09	8.06	8.10	7.47	10.00	8.09	8.76	8.90	10.34	7.83	10.63	10.22	8.24
Oct 17 90		7.96	7.16	7.18	7.10	8.12	8.09	7.43	10.00	8.15	8.82	8.97	10.23	7.75	10.42	10.24	8.19
Oct 24 90		7.99	7.23	7.18	7.06	8.08	8.07	7.45	10.00	8.03	8.65	8.79	10.20	7.64	10.43	10.17	8.17
Oct 31 90		8.17	7.14	7.12	6.98	7.98	7.90	7.42	10.00	7.99	8.66	8.79	10.11	7.55	10.34	10.13	8.15
Nov 7 90		7.97	7.08	7.05	6.87	7.95	7.87	7.38	10.00	7.84	8.55	8.68	10.15	7.53	10.41	10.09	8.09
Nov 14 90		7.94	7.06	7.04	6.86	7.98	7.88	7.34	10.00	7.74	8.45	8.60	10.03	7.42	10.17	10.02	8.11
Nov 21 90		7.80	7.08	7.04	6.83	7.96	7.83	7.35	10.00	7.70	8.32	8.48	10.03	7.41	10.14	9.93	8.08
Nov 28 90		7.56	7.04	6.99	6.81	8.11	7.80	7.27	10.00	7.66	8.28	8.44	10.03	7.35	10.19	9.90	8.08
Dec 5 90		7.60	7.02	6.96	6.82	8.18	8.11	7.26	10.00	7.64	8.23	8.38	9.91	7.33	9.94	9.81	8.04
Dec 12 90		7.25	6.88	6.75	6.68	7.63	7.89	7.21	10.00	7.43	8.01	8.17	9.92	7.28	9.91	9.56	7.91
Daily																	
Dec 7 90		7.25	6.89	6.75	6.68	7.75	8.03	..	10.00	7.45	8.03	8.19	..	..	..	..	..
Dec 13 90		7.25	6.83	6.71	6.67	7.53	7.76	..	10.00	7.42	7.98	8.14	..	..	..	..	..
Dec 14 90		7.25 _p	6.85	6.75	6.64	7.64	7.94	..	10.00	7.47 _p	8.06 _p	8.20 _p	..	..	..	..	..

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

DEC. 17, 1990

Period	Money stock measures and liquid assets					Bank credit	Domestic nonfinancial debt ¹			
	M1	M2	nontransactions components		M3	L	total loans and investments	U.S. government ¹	other ¹	total ¹
			in M2	in M3 only						
	1	2	3	4	5	6	7	8	9	10
ANN. GROWTH RATES (%) :										
ANNUALLY (Q4 TO Q4)										
1987	6.3	4.3	3.6	12.0	5.8	5.5	7.9	9.0	10.0	9.7
1988	4.3	5.2	5.5	10.6	6.3	7.1	7.7	8.0	9.5	9.2
1989	0.6	4.6	5.9	-1.3	3.3	4.6	7.5	7.5	7.8	7.7
QUARTERLY AVERAGE										
1989-4th QTR.	5.1	7.1	7.7	-16.6	2.0	3.1	8.0	10.3	6.4	7.3
1990-1st QTR.	4.8	6.4	6.9	-10.4	2.9	2.7	5.3	6.8	6.0	6.1
1990-2nd QTR.	3.5	3.2	3.1	-7.3	1.1	1.1	6.5	9.7	6.1	6.9
1990-3rd QTR.	4.1	3.1	2.8	-4.3	1.7	2.6	6.6	14.3	5.3	7.4
MONTHLY										
1989-NOV.	2.0	7.3	9.0	-9.2	3.9	4.1	7.1	11.7	6.6	7.8
DEC.	8.2	7.6	7.5	-10.4	4.0	5.7	1.5	3.6	5.1	4.8
1990-JAN.	0.0	3.5	4.7	-7.6	1.2	0.3	2.9	4.1	5.3	5.0
FEB.	10.0	9.2	8.9	-12.9	4.7	1.9	9.2	8.3	6.8	7.2
MAR.	5.1	5.6	5.8	-15.9	1.4	4.0	10.0	12.8	7.1	8.4
APR.	3.7	3.0	2.7	-3.6	1.7	2.8	5.2	7.6	6.6	6.8
MAY	-2.8	-1.7	-1.3	-2.3	-1.9	-6.7	3.2	7.5	4.6	5.3
JUNE	6.0	3.0	2.0	-5.3	1.4	4.8	7.1	14.9	4.5	6.9
JULY	-0.6	1.9	2.7	-1.1	1.3	2.6	6.9	13.8	6.0	7.8
AUG.	10.1	6.4	5.2	-2.6	4.6	3.1	10.3	18.6	5.5	8.6
SEP.	9.3	5.3	4.0	-18.0	0.8	6.5	0.1	11.1	5.3	6.7
OCT.	-3.1	0.4	1.5	-7.1	-1.0	-1.0	0.9	6.2	4.8	5.1
NOV. p	3.8	-0.9	-2.4	-3.3	-1.4		1.4	16.2	5.1	7.8
LEVELS (\$BILLIONS) :										
MONTHLY										
1990-JULY	809.0	3287.8	2478.8	789.8	4077.6	4920.8	2684.7	2401.7	7781.9	10183.5
AUG.	815.8	3305.3	2489.5	788.1	4093.4	4933.6	2707.8	2438.9	7817.8	10256.6
SEP.	822.1	3319.8	2497.7	776.3	4096.1	4960.2	2708.5	2461.5	7852.1	10313.6
OCT.	820.0	3321.0	2500.9	771.7	4092.7	4956.2	2710.9	2474.3	7885.5	10357.8
NOV. p	822.6	3318.4	2495.8	769.6	4088.0		2714.1	2507.6	7917.2	10424.7
WEEKLY										
1990-NOV. 5	822.3	3315.9	2493.6	773.4	4089.3					
12	820.3	3316.5	2496.2	771.0	4087.5					
19	823.6	3319.0	2495.4	767.5	4086.5					
26 p	825.6	3324.7	2499.1	769.4	4094.1					
DEC. 3 p	819.0	3311.8	2492.8	766.3	4078.1					

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

DEC. 17, 1990

Period	Currency	Demand deposits	Other checkable deposits	Overnight RPs and Eurodollars NSA ¹	MMDAs	Savings deposits	Small denomination time deposits ²	Money market mutual funds		Large denomination time deposits ³	Term RPs NSA ⁴	Term Eurodollars NSA ⁴	Savings bonds	Short-term Treasury securities	Commer- cial paper ¹	Bankers accep- tances
								general purpose and broker/ dealer ³	Institu- tions only							
								8	9							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
LEVELS (\$BILLIONS) :																
ANNUALLY (4TH QTR.)																
1987	195.0	291.5	260.5	87.6	529.3	416.2	903.6	220.5	87.2	482.3	107.4	92.4	99.8	261.9	258.4	44.5
1988	210.7	287.6	280.4	83.3	504.9	428.2	1021.6	237.5	86.7	538.0	123.2	102.7	108.8	267.1	326.2	40.7
1989	220.8	279.5	283.1	76.1	479.9	407.7	1138.9	308.0	101.5	560.7	105.1	80.2	116.8	322.1	349.7	40.6
MONTHLY																
1989-NOV.	220.4	278.8	282.8	75.3	480.8	407.9	1138.5	309.0	101.1	561.0	108.9	79.3	116.8	318.6	351.3	40.5
DEC.	221.9	279.7	285.7	77.4	483.7	409.0	1142.3	312.4	102.3	558.3	96.9	81.1	117.5	330.3	347.9	41.2
1990-JAN.	224.6	277.3	285.4	81.6	485.0	410.2	1143.0	318.6	103.2	554.5	93.6	73.9	117.7	332.3	343.3	40.7
FEB.	226.6	280.2	287.0	82.4	489.4	413.6	1142.6	325.3	103.7	550.1	96.9	68.4	118.2	324.9	344.7	38.3
MAR.	228.4	279.3	289.5	81.9	494.9	414.6	1146.4	325.9	105.4	544.1	95.2	66.6	119.1	338.9	342.7	37.0
APR.	230.1	277.8	291.8	79.3	498.8	415.8	1148.3	326.8	106.8	538.3	94.8	65.5	119.9	330.3	357.5	35.8
MAY	231.6	274.5	291.5	83.2	500.0	415.0	1150.4	322.3	107.3	535.4	95.8	67.2	120.7	316.5	349.6	35.3
JUNE	233.4	274.5	293.8	82.2	501.2	415.8	1149.0	323.9	107.3	532.9	98.7	64.4	121.5	331.5	349.4	34.6
JULY	235.4	274.7	291.2	84.1	502.5	416.4	1150.2	327.1	108.9	530.6	96.9	65.2	122.4	339.2	348.7	32.9
AUG.	238.4	277.9	291.6	82.7	505.6	416.3	1151.4	335.9	114.0	524.2	98.3	68.4	123.2	339.5	345.1	32.3
SEP.	241.5	279.7	292.6	81.6	507.2	415.9	1151.6	341.9	116.1	516.7	94.5	69.3	123.8	350.4	358.2	31.8
OCT.	244.0	276.8	290.9	84.2	506.4	414.7	1153.1	344.7	119.8	510.2	91.3	69.5	124.5	347.1	359.4	32.5
NOV. p	244.8	277.2	292.3	78.9	507.0	413.7	1152.5	343.3	120.1	505.9	91.0	70.6				

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

NET CHANGES IN SYSTEM HOLDINGS OF SECURITIES¹
Millions of dollars, not seasonally adjusted

December 14, 1990

Period	Treasury bills			Treasury coupons					Federal agencies redemptions (-)	Net change outright holdings total ⁵	Net RPs ⁶	
	Net ² purchases	Redemptions (-)	Net change	Net purchases ^{3 4}				Redemptions (-)				Net Change
				within 1 year	1-5	5-10	over 10					
1987	13,233	9,329	3,905	3,359	9,779	2,441	1,858	370	17,366	276	20,994	-11,033
1988	7,635	2,200	5,435	2,176	4,685	1,404	1,398	—	9,665	587	14,513	1,557
1989	1,468	12,730	-11,263	327	946	258	284	500	1,315	442	-10,390	-1,683
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	9,264	4,930	4,333	155	-24	—	—	500	-369	31	3,934	3,877
1990 --Q1	-3,799	1,400	-5,199	100	100	—	—	—	200	—	-5,000	-4,061
—Q2	10,892	—	10,892	50	100	—	—	—	150	78	10,964	509
—Q3	5,115	—	5,115	—	—	—	—	—	—	70	5,045	95
1989 December	1,883	—	1,883	—	—	—	—	—	—	1	1,883	3,867
1990 January	-1,065	1,000	-2,065	—	—	—	—	—	—	—	-2,065	-8,435
February	-3,277	400	-3,677	—	—	—	—	—	—	—	-3,677	4,417
March	543	—	543	100	100	—	—	—	200	—	742	-43
April	5,796	—	5,796	—	100	—	—	—	100	78	5,818	-1,260
May	3,365	—	3,365	—	—	—	—	—	—	—	3,365	-378
June	1,732	—	1,732	50	—	—	—	—	50	—	1,782	2,146
July	287	—	287	—	—	—	—	—	—	33	254	2,863
August	4,197	—	4,197	—	—	—	—	—	—	37	4,160	1,110
September	631	—	631	—	—	—	—	—	—	—	631	-3,878
October	933	—	933	—	—	—	—	—	—	34	899	-1,224
November	3,341	—	3,341	325	—	—	—	—	325	400	3,266	-379
Weekly												
October 3	—	—	—	—	—	—	—	—	—	—	—	2,822
October 10	21	—	21	—	—	—	—	—	—	—	21	-3,257
October 17	200	—	200	—	—	—	—	—	—	—	200	-170
October 24	625	—	625	—	—	—	—	—	—	34	591	-4,615
October 31	87	—	87	—	—	—	—	—	—	—	87	-4,615
November 7	—	—	—	—	—	—	—	—	—	—	—	-3,137
November 14	356	—	356	—	—	—	—	—	—	—	356	6,460
November 21	84	—	84	—	—	—	—	—	—	—	84	-4,863
November 28	—	—	—	—	—	100	—	—	100	400	-300	3,500
December 5	2,923	—	2,923	—	225	—	—	—	225	—	3,148	-1,959
December 12	151	—	151	—	—	—	—	—	—	—	151	1,844
Memo: LEVEL (bil. \$) ⁷												
December 12			124.8	25.3	59.6	13.2	24.7		122.8		254.1	-2.3

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

2. Outright transactions in market and with foreign accounts.

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

4. Weekly net purchases of Treasury coupons are summed over all maturities.

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

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

7. The levels of agency issues were as follows:

within 1 year	1-5	5-10	over 10	total
2.6	2.6	1.0	0.2	6.4

December 12